

Service factor:

| Table 1                               |  |                                      |  | Driven machine factor                                     |  |                                      |  | f1                                              |        |      |  |
|---------------------------------------|--|--------------------------------------|--|-----------------------------------------------------------|--|--------------------------------------|--|-------------------------------------------------|--------|------|--|
| Driven equipment                      |  | Daily operating time with load(hour) |  | Driven equipment                                          |  | Daily operating time with load(hour) |  |                                                 |        |      |  |
|                                       |  |                                      |  |                                                           |  |                                      |  | ≤ 2                                             | > 2-10 | > 10 |  |
| <b>Sewage treatment</b>               |  |                                      |  | <b>Conveying machine</b>                                  |  |                                      |  |                                                 |        |      |  |
| Concentrator(Central Transmission)    |  | -                                    |  | Bucket conveyor                                           |  | -                                    |  |                                                 | 1.4    | 1.5  |  |
| Compressed filter                     |  | 1.0                                  |  | Winch                                                     |  | 1.4                                  |  |                                                 | 1.6    | 1.6  |  |
| Flocculator                           |  | 0.8                                  |  | Hoist                                                     |  | -                                    |  |                                                 | 1.5    | 1.8  |  |
| Aerator                               |  | -                                    |  | Belt conveyor≤150kW                                       |  | 1.0                                  |  |                                                 | 1.2    | 1.3  |  |
| Collector                             |  | 1.0                                  |  | Belt conveyor≥150kW                                       |  | 1.1                                  |  |                                                 | 1.3    | 1.4  |  |
| Vertical,rotary group                 |  |                                      |  | Elevators for goods*                                      |  | -                                    |  |                                                 | 1.2    | 1.5  |  |
| Blended collector                     |  | 1.0                                  |  | Elevators for customers*                                  |  | -                                    |  |                                                 | 1.5    | 1.8  |  |
| Concentrator                          |  | -                                    |  | Scraper conveyor                                          |  | -                                    |  |                                                 | 1.2    | 1.5  |  |
| Screw pump                            |  | -                                    |  | Automatic ladder                                          |  | 1.0                                  |  |                                                 | 1.2    | 1.4  |  |
| Water wheel machine                   |  | -                                    |  | Rail traveling mechanism                                  |  | -                                    |  |                                                 | 1.5    | -    |  |
| Pump                                  |  |                                      |  | <b>Various frequency device</b>                           |  | -                                    |  |                                                 | 1.8    | 2.0  |  |
| Centrifugal pump                      |  | 1.0                                  |  | <b>Reciprocating compressor</b>                           |  | -                                    |  |                                                 | 1.8    | 1.9  |  |
| Volume-down pump                      |  | 1.3                                  |  | <b>Hoisting mechanism**</b>                               |  |                                      |  |                                                 |        |      |  |
| 1Piston                               |  | 1.2                                  |  | Rotary mechanism*                                         |  |                                      |  |                                                 | 1.4    | 1.8  |  |
| >1Piston                              |  |                                      |  | Pitching mechanism                                        |  |                                      |  |                                                 | 1.1    | 1.4  |  |
| <b>Dredge</b>                         |  |                                      |  | Traveling mechanism                                       |  |                                      |  |                                                 | 1.6    | 2.0  |  |
| Bucket conveyor                       |  | -                                    |  | Lifting mechanism                                         |  |                                      |  |                                                 | 1.1    | 1.4  |  |
| Unloading device                      |  | -                                    |  | Jibcrane                                                  |  |                                      |  |                                                 | 1.2    | 1.6  |  |
| Carterpillar traveling mechanism      |  | 1.2                                  |  | <b>Cooling tower</b>                                      |  |                                      |  |                                                 |        |      |  |
| Bucket digger                         |  |                                      |  | Cooling tower fan                                         |  | -                                    |  |                                                 | -      | 2.0  |  |
| Be used for picking up                |  | -                                    |  | Fan (Shaft flow and centrifugal type)                     |  | -                                    |  |                                                 | 1.4    | 1.5  |  |
| Be used for rough materials           |  | -                                    |  | <b>Food industry</b>                                      |  |                                      |  |                                                 |        |      |  |
| Chopper                               |  | -                                    |  | Sugar production                                          |  |                                      |  |                                                 |        |      |  |
| Traveling mechanism*                  |  | -                                    |  | Sugar-cane cutter*                                        |  | -                                    |  |                                                 | -      | 1.7  |  |
| <b>Plate blender</b>                  |  | -                                    |  | Sugar crane mill                                          |  | -                                    |  |                                                 | -      | 1.7  |  |
|                                       |  | 1.0                                  |  | Beet sugar production                                     |  | -                                    |  |                                                 | -      | 1.2  |  |
| <b>Chemical industry</b>              |  |                                      |  | Beet masher                                               |  | -                                    |  |                                                 | -      | 1.4  |  |
| Extruder                              |  | -                                    |  | Squeeze machine, mechanical refrigerator, cooking machine |  | -                                    |  |                                                 | -      | 1.5  |  |
| Paste mixer                           |  | -                                    |  | Beet cleaner                                              |  | -                                    |  |                                                 | -      | 1.5  |  |
| Rubber calendar                       |  | -                                    |  | Beet chopper                                              |  | -                                    |  |                                                 | -      | 1.5  |  |
| Cooling cylinder                      |  | -                                    |  | <b>Paper-making machinery</b>                             |  |                                      |  |                                                 |        |      |  |
| Material mixer,be used for            |  |                                      |  | Various kinds***                                          |  | -                                    |  |                                                 | 1.8    | 2.0  |  |
| Uniform medium                        |  | 1.0                                  |  | Pulper driving device                                     |  |                                      |  | Supply goods according to customer requirements |        |      |  |
| Non-uniform medium                    |  | 1.4                                  |  | <b>Centrifugal compressor</b>                             |  | -                                    |  |                                                 | 1.4    | 1.5  |  |
| Blender,be used for                   |  |                                      |  | <b>Rope way cable car</b>                                 |  |                                      |  |                                                 |        |      |  |
| Uniform density medium                |  | 1.0                                  |  | Delivery ropeway                                          |  | -                                    |  |                                                 | 1.3    | 1.4  |  |
| Un-uniformed medium                   |  | 1.2                                  |  | Cableway of shuttle system                                |  | -                                    |  |                                                 | 1.6    | 1.8  |  |
| Un-uniformed gas absorption           |  | 1.4                                  |  | T rod elevator                                            |  | -                                    |  |                                                 | 1.3    | 1.4  |  |
| Oven                                  |  | 1.0                                  |  | Continuous cableway                                       |  | -                                    |  |                                                 | 1.4    | 1.6  |  |
| Centrifugal machine                   |  | 1.0                                  |  | <b>Cement industry</b>                                    |  |                                      |  |                                                 |        |      |  |
| <b>Metal processing equipment</b>     |  |                                      |  | Concrete blender                                          |  | -                                    |  |                                                 | 1.5    | 1.5  |  |
| Plate turnover                        |  | 1.0                                  |  | Crusher*                                                  |  | -                                    |  |                                                 | 1.2    | 1.4  |  |
| Steel pushing device                  |  | 1.0                                  |  | Rotary kiln                                               |  | -                                    |  |                                                 | -      | 2.0  |  |
| Winding machine                       |  | -                                    |  | Tube mill                                                 |  | -                                    |  |                                                 | -      | 2.0  |  |
| Cooling bed transverse frame          |  | -                                    |  | Powder concentrator                                       |  | -                                    |  |                                                 | 1.6    | 1.6  |  |
| Roller leveler                        |  | -                                    |  | Roller press                                              |  | -                                    |  |                                                 | -      | 2.0  |  |
| Roller path                           |  |                                      |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Continuous                            |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Interval                              |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Reversing mill                        |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Cutter                                |  |                                      |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Continuous*                           |  | 1.0                                  |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Crank type*                           |  | 1.0                                  |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Continuous casting driving device     |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Rolling mill                          |  |                                      |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Reversing cogging mill                |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Reversing plate slab mill             |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Reversing wire mill                   |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Reversing thin plate mill             |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Reversing middle thickness plate mill |  | -                                    |  |                                                           |  |                                      |  |                                                 |        |      |  |
| Roll gap adjusting and driving device |  | 0.9                                  |  |                                                           |  |                                      |  |                                                 |        |      |  |

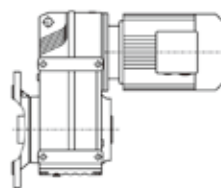
| Table 1                         |                                    |        |      | Driven machine factor                          |                                    |        |      | f <sub>1</sub> |
|---------------------------------|------------------------------------|--------|------|------------------------------------------------|------------------------------------|--------|------|----------------|
| Driven equipment                | Daily running time with load(hour) |        |      | Driven equipment                               | Daily running time with load(hour) |        |      |                |
|                                 | ≤ 2                                | > 2-10 | > 10 |                                                | ≤ 2                                | > 2-10 | > 10 |                |
| Wood industry                   |                                    |        |      | Plastics industry                              |                                    |        |      |                |
| Barking machine                 |                                    |        |      | Miller, compound grinding                      |                                    |        |      |                |
| Feed drive                      | 1.25                               | 1.25   | 1.50 | Coating, film                                  | 1.25                               | 1.25   | 1.25 |                |
| Main drive                      | 1.75                               | 1.75   | 1.75 | Conveying pipe, Pulling rod, thin type         |                                    |        |      |                |
| Conveyor                        |                                    |        |      | Pipe type, Pile drawer                         | 1.25                               | 1.25   | 1.50 |                |
| Burner, repeating saw           | 1.25                               | 1.25   | 1.50 | Continuous mixer, Calender                     | 1.50                               | 1.50   | 1.50 |                |
| Rotary tower, transit transport | 1.50                               | 1.50   | 1.50 | Blow film, to plasticizing                     |                                    |        |      |                |
| Main loading, heavy loading     | 1.75                               | 1.75   | 2.00 | Batch mixer                                    | 1.75                               | 1.75   | 1.75 |                |
| Main original wood, land base   |                                    |        |      | Rubber industry                                |                                    |        |      |                |
| Conveying chain                 |                                    |        |      | Continuous strong inner mixer, Mix roller,     |                                    |        |      |                |
| Floor                           | 1.50                               | 1.50   | 1.50 | Batch feeding mixer (except for double sticks) | 1.50                               | 1.50   | 1.50 |                |
| Green-wood                      | 1.50                               | 1.50   | 1.75 | Refiner, calender                              |                                    |        |      |                |
| Cutting Chain                   |                                    |        |      | Double roller clamp feeding and mixed miller   | 1.25                               | 1.25   | 1.50 |                |
| Saw transmission, traction      | 1.50                               | 1.50   | 1.75 | Batch strong inner mixer,                      |                                    |        |      |                |
| Peeling barrel                  | 1.75                               | 1.75   | 2.00 | Double stick single groove grain stick         | 1.75                               | 1.75   | 1.75 |                |
| Feed drive                      |                                    |        |      | Miller heater, double sticks                   |                                    |        |      |                |
| Edging, wood trimmer            | 1.25                               | 1.25   | 1.50 | Batch feeding mixer                            |                                    |        |      |                |
| Planer feed, assorting table,   |                                    |        |      | Wave stick miller                              | 2.00                               | 2.00   | 2.00 |                |
| Automatic incline lifting       | 1.75                               | 1.75   | 1.75 | Generator and exciter                          | 1.00                               | 1.00   | 1.25 |                |
| Multi-shaft feed, raw wood      |                                    |        |      |                                                | 1.75                               | 1.75   | 2.00 |                |
| Transportation and rotation     |                                    |        |      | Hammer crusher                                 |                                    |        |      |                |
| Transportation                  |                                    |        |      | Sand miller                                    | 1.25                               | 1.25   | 1.50 |                |
| Charging tray                   |                                    |        |      |                                                |                                    |        |      |                |
| Plywood lathe drive             | 1.50                               | 1.50   | 1.75 |                                                |                                    |        |      |                |
| Conveying chain, Lifting        |                                    |        |      |                                                |                                    |        |      |                |

⚠ Note: Determine required power P<sub>2</sub> of the driven equipment:  
 \*)Determine rated power according to maximum torque.  
 \*\*)It's necessary to check thermal capacity.

## Prime mover factor

| Table 2 Factor for prime mover              | f <sub>2</sub> |
|---------------------------------------------|----------------|
| Electric motors, hydraulic motors, turbines | 1.0            |
| Piston engines 4-6 cylinders                | 1.25           |
| Piston engines 1-3 cylinders                | 1.5            |

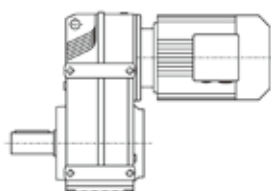
| Table 3 Start factor                             | f <sub>3</sub> |               |            |      |
|--------------------------------------------------|----------------|---------------|------------|------|
| f <sub>3</sub> \ f <sub>1</sub> × f <sub>2</sub> | 1              | 1.25<br>-1.75 | 2-<br>2.75 | ≥ 3  |
| Starts per hour                                  |                |               |            |      |
| ≤ 5                                              | 1              | 1             | 1          | 1    |
| 6-25                                             | 1.2            | 1.12          | 1.06       | 1    |
| 26-60                                            | 1.3            | 1.2           | 1.12       | 1.06 |
| 61-180                                           | 1.5            | 1.3           | 1.2        | 1.12 |
| > 180                                            | 1.7            | 1.5           | 1.3        | 1.2  |



FAF Y

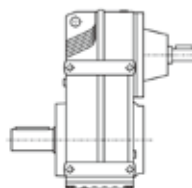
Flanged-mounted hollow shaft parallel shaft helical gear units

F series gear units are available in the following designs:



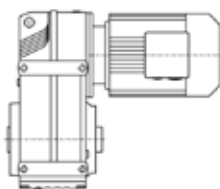
F..Y..

Foot-mounted solid shaft parallel shaft gear units



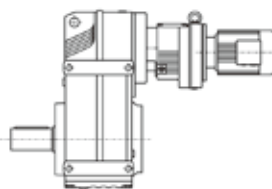
F ( FF, FA, FAF, FAZ ) S...

Parallel shaft helical gear units with solid shaft input



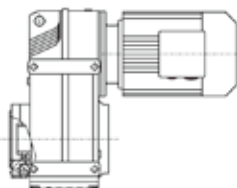
FA..Y..

Hollow shaft helical parallel shaft helical gear units



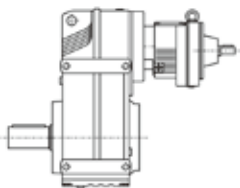
F ( FF, FA, FAF, FAZ ) ...R...Y...

Combi-type parallel shaft helical gear units



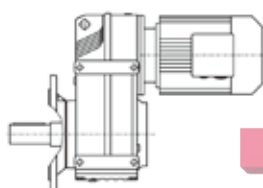
FAZ..Y..

Short-flange-mounted hollow shaft parallel shaft helical gear units



F ( FF, FA, FAF, FAZ ) S...R...

Combi-type parallel shaft helical gear units with solid shaft input



FF..Y..

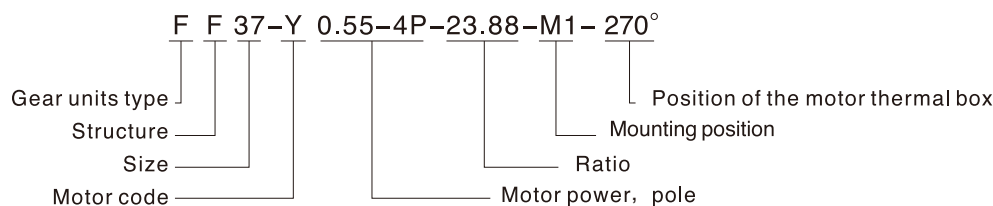
Flange-mounted solid shaft parallel shaft helical gear units



F ( FF, FA, FAF, FAZ ) ...Y...

Customers provide the motor by themselves need connected flange.

## Type Designations:



Gear units type:  
Parallel shaft helical gear units

Structure:

|                                                    |                    |
|----------------------------------------------------|--------------------|
| Foot-mounted solid shaft                           | (-)                |
| Hollow shaft                                       | A                  |
| Flange-mounted solid shaft                         | F                  |
| Flange-mounted hollow shaft                        | AF                 |
| Short-flange-mounted hollow shaft                  | AZ                 |
| Foot-mounted solid shaft with solid shaft input    | S                  |
| Hollow shaft with solid shaft input                | AS                 |
| Flange-mounted solid shaft with solid shaft input  | FS                 |
| Flange-mounted hollow shaft with solid shaft input | AFS                |
| *Hollow shaft with shrink disc                     | H..(H, HF, HZ, HT) |

Size:  
(see selection table)

Motor code:

|                                      |       |
|--------------------------------------|-------|
| Common motor                         | Y(Y2) |
| Flameproof motor                     | B     |
| Direct current motor                 | Z     |
| Brake motor                          | YEJ   |
| Multi-speed motor                    | D     |
| Variable frequency motor             | YVP   |
| Electromagnetic variable speed motor | YCT   |
| Metallurgy hoisting motor            | R     |
| Transduction braking motor           | YVPJ  |
| Roller way                           | G     |

Motor power, pole :  
See selection table

Ratio:  
See selection table

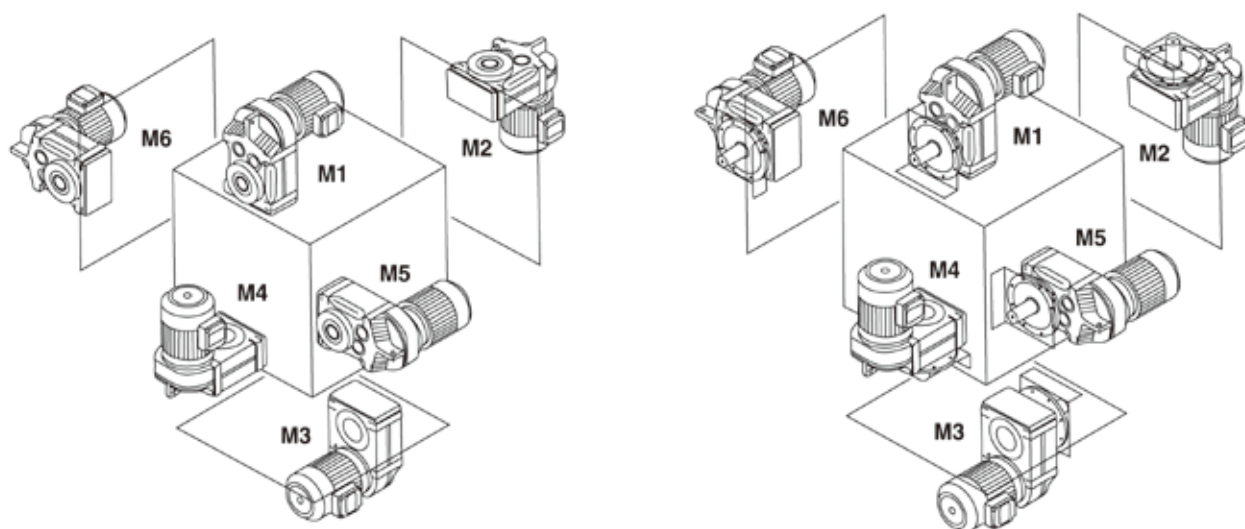
Mounting position:  
M1, M2, M3, M4, M5, M6(See page 03)

Position of the motor thermal box:  
0°, 90°, 180°, 270°(See page 03)

\*Dimensions of hollow shaft with shrink disc, see page 34-35.



## Mounting positions



## Positions of motor terminal box



0°



90°



180°



270°

## Input power rating and permissible torque

| Size                        | 37              | 47          | 57          | 67          | 77          | 87          | 97          | 107         | 127         | 157          |
|-----------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Structure                   | F FA FF FAF FAZ |             |             |             |             |             |             |             |             |              |
| Input power rating(kW)      | 0.18~3          | 0.18~3      | 0.18~5.5    | 0.18~5.5    | 0.37~11     | 0.75~22     | 1.1~30      | 2.2~45      | 7.5~90      | 11~200       |
| Ratio                       | 3.81~128.51     | 5.06~189.39 | 5.18~199.70 | 4.21~228.99 | 4.30~281.71 | 4.12~270.68 | 4.68~280.76 | 6.20~254.40 | 4.63~172.17 | 11.92~267.43 |
| (n·m)<br>Permissible torque | 200             | 400         | 600         | 820         | 1500        | 3000        | 4300        | 7840        | 12000       | 18000        |

## Gear unit weight

| Size            | 37 | 47 | 57 | 67 | 77 | 87  | 97  | 107 | 127 | 157 |
|-----------------|----|----|----|----|----|-----|-----|-----|-----|-----|
| (kgs)<br>Weight | 13 | 18 | 34 | 55 | 90 | 150 | 260 | 402 | 700 | 950 |

The marked weight is average value, it has no constraint force.

Oil

F...:

| Size | Oil level (L) |      |      |      |      |     |
|------|---------------|------|------|------|------|-----|
|      | M1            | M2   | M3   | M4   | M5   | M6  |
| F37  | 1             | 1.2  | 0.7  | 1.2  | 1    | 1.1 |
| F47  | 1.5           | 1.8  | 1.1  | 1.9  | 1.5  | 1.7 |
| F57  | 2.6           | 3.7  | 2.1  | 3.5  | 2.8  | 2.9 |
| F67  | 2.7           | 3.8  | 1.9  | 3.8  | 2.9  | 3.2 |
| F77  | 5             | 7.3  | 4.3  | 8    | 6    | 6.3 |
| F87  | 10            | 13.0 | 7.7  | 13.8 | 10.8 | 11  |
| F97  | 18.5          | 22.5 | 12.6 | 25.2 | 18.5 | 20  |
| F107 | 24.5          | 32   | 19.5 | 37.5 | 27   | 27  |
| F127 | 40.5          | 55   | 34   | 61   | 46.5 | 47  |
| F157 | 69            | 104  | 63   | 105  | 86   | 78  |

FF...:

| Size  | Oil level (L) |      |      |      |      |      |
|-------|---------------|------|------|------|------|------|
|       | M1            | M2   | M3   | M4   | M5   | M6   |
| FF37  | 1             | 1.2  | 0.7  | 1.3  | 1    | 1.1  |
| FF47  | 1.6           | 1.9  | 1.1  | 1.9  | 1.5  | 1.7  |
| FF57  | 2.8           | 3.8  | 2.1  | 3.7  | 2.9  | 3    |
| FF67  | 2.7           | 3.8  | 1.9  | 3.8  | 2.9  | 3.2  |
| FF77  | 5.1           | 7.3  | 4.3  | 8.1  | 6    | 6.3  |
| FF87  | 10.3          | 13.2 | 7.8  | 14.1 | 11   | 11.2 |
| FF97  | 19            | 22.5 | 12.6 | 25.5 | 18.9 | 20.5 |
| FF107 | 25.5          | 32   | 19.5 | 38.5 | 27.5 | 28   |
| FF127 | 41.5          | 56   | 34   | 63   | 46.5 | 49   |
| FF157 | 72            | 105  | 64   | 106  | 87   | 79   |

FA..., FAF..., FAZ...:

| Size   | Oil level (L) |      |      |      |      |      |
|--------|---------------|------|------|------|------|------|
|        | M1            | M2   | M3   | M4   | M5   | M6   |
| F..37  | 1             | 1.2  | 0.7  | 1.2  | 1    | 1.1  |
| F..47  | 1.5           | 1.8  | 1.1  | 1.9  | 1.5  | 1.7  |
| F..57  | 2.7           | 3.8  | 2.1  | 3.6  | 2.9  | 3    |
| F..67  | 2.7           | 3.8  | 1.9  | 3.8  | 2.9  | 3.2  |
| F..77  | 5             | 7.3  | 4.3  | 8    | 6    | 6.3  |
| F..87  | 10            | 13.0 | 7.7  | 13.8 | 10.8 | 11   |
| F..97  | 18.5          | 22.5 | 12.6 | 25.0 | 18.5 | 20   |
| F..107 | 24.5          | 32   | 19.5 | 37.5 | 27   | 27   |
| F..127 | 39            | 55   | 34   | 61   | 45   | 46.5 |
| F..157 | 68            | 103  | 62   | 104  | 85   | 77   |

**ChinaTransmissions**

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>0.18kW</b>         |                     |            |                         |              |           | <b>0.18kW</b>         |                     |            |                         |              |           |
| 0.11                  | 14324               | 13014      | 0.79                    |              |           | 2.5                   | 616                 | 560        | 0.92                    |              |           |
| 0.12                  | 12930               | 11748      | 0.87                    | FA 127R77    | 4         | 2.7                   | 558                 | 507        | 1.01                    |              |           |
| 0.14                  | 11305               | 10271      | 1.00                    | FAF127R77    | 4         | 3.1                   | 499                 | 453        | 1.13                    |              |           |
| 0.16                  | 9797                | 8901       | 1.15                    | F 127R77     | 4         | 3.3                   | 469                 | 426        | 1.20                    | FA 57R37     | 4         |
| 0.18                  | 8478                | 7703       | 1.33                    | FF 127R77    | 4         | 3.6                   | 426                 | 387        | 1.32                    | FAF57R37     | 4         |
| 0.21                  | 7449                | 6768       | 1.51                    |              |           | 4.2                   | 363                 | 330        | 1.55                    | F 57R37      | 4         |
|                       |                     |            |                         |              |           | 4.7                   | 328                 | 298        | 1.72                    | FF 57R37     | 4         |
|                       |                     |            |                         |              |           | 5.3                   | 288                 | 262        | 1.96                    |              |           |
|                       |                     |            |                         |              |           | 6.2                   | 249                 | 226        | 2.3                     |              |           |
|                       |                     |            |                         |              |           | 7.0                   | 220                 | 200        | 2.6                     |              |           |
| 0.16                  | 9408                | 8548       | 0.78                    |              |           | 4.1                   | 371                 | 337        | 1.01                    |              |           |
| 0.18                  | 8448                | 7675       | 0.87                    |              |           | 4.6                   | 331                 | 301        | 1.13                    |              |           |
| 0.21                  | 7281                | 6615       | 1.01                    |              |           | 4.7                   | 322                 | 293        | 1.17                    |              |           |
| 0.24                  | 6406                | 5820       | 1.15                    | FA 107R77    | 4         | 4.9                   | 314                 | 285        | 1.20                    | FA 47R17     | 4         |
| 0.27                  | 5749                | 5223       | 1.28                    | FAF107R77    | 4         | 6.0                   | 253                 | 230        | 1.49                    | FAF47R17     | 4         |
| 0.30                  | 5027                | 4567       | 1.47                    | F 107R77     | 4         | 6.1                   | 250                 | 227        | 1.50                    | F 47R17      | 4         |
| 0.39                  | 3875                | 3521       | 1.90                    | FF 107R77    | 4         | 6.4                   | 238                 | 216        | 1.58                    | FF 47R17     | 4         |
| 0.46                  | 3343                | 3037       | 2.2                     |              |           | 7.4                   | 207                 | 188        | 1.82                    |              |           |
| 0.50                  | 3033                | 2756       | 2.4                     |              |           | 7.9                   | 194                 | 176        | 1.94                    |              |           |
| 0.59                  | 2607                | 2369       | 2.8                     |              |           |                       |                     |            |                         |              |           |
| 0.67                  | 2276                | 2068       | 3.2                     |              |           |                       |                     |            |                         |              |           |
| 0.32                  | 4815                | 4375       | 0.84                    |              |           | 8.2                   | 187                 | 170        | 1.00                    | FA 37R17     | 4         |
| 0.35                  | 4343                | 3946       | 0.9                     |              |           | 8.3                   | 185                 | 168        | 1.02                    | FAF37R17     | 4         |
| 0.41                  | 3743                | 3401       | 1.1                     |              |           | 10                    | 146                 | 133        | 1.28                    | F 37R17      | 4         |
| 0.47                  | 3246                | 2949       | 1.2                     | FA 97R57     | 4         | 11                    | 142                 | 129        | 1.32                    | FF 37R17     | 4         |
| 0.54                  | 2851                | 2590       | 1.4                     | FAF97R57     | 4         |                       |                     |            |                         |              |           |
| 0.61                  | 2495                | 2267       | 1.6                     | F 97R57      | 4         |                       |                     |            |                         |              |           |
| 0.70                  | 2189                | 1989       | 1.8                     | FF 97R57     | 4         |                       |                     |            |                         |              |           |
| 0.80                  | 1914                | 1739       | 2.1                     |              |           |                       |                     |            |                         |              |           |
| 0.90                  | 1697                | 1542       | 2.4                     |              |           |                       |                     |            |                         |              |           |
| 1.0                   | 1475                | 1340       | 2.7                     |              |           | 3.0                   | 536                 | 281.71     | 2.6                     | FA 77        | 6         |
| 1.2                   | 1301                | 1182       | 3.1                     |              |           | 3.2                   | 500                 | 262.93     | 2.8                     | FAF77        | 6         |
|                       |                     |            |                         |              |           | 3.8                   | 429                 | 225.79     | 3.3                     | F 77         | 6         |
|                       |                     |            |                         |              |           |                       |                     |            |                         | FF 77        | 6         |
| 0.48                  | 3171                | 2881       | 0.9                     |              |           |                       |                     |            |                         |              |           |
| 0.54                  | 2834                | 2575       | 1.0                     |              |           | 3.7                   | 435                 | 228.99     | 1.77                    | FA 67        | 6         |
| 0.63                  | 2420                | 2199       | 1.2                     |              |           | 4.4                   | 371                 | 195.39     | 2.1                     | FAF67        | 6         |
| 0.72                  | 2124                | 1930       | 1.3                     | FA 87R57     | 4         | 5.0                   | 325                 | 170.85     | 2.4                     | F 67         | 6         |
| 0.81                  | 1881                | 1709       | 1.5                     | FAF87R57     | 4         |                       |                     |            |                         | FF 67        | 6         |
| 0.93                  | 1643                | 1493       | 1.7                     | F 87R57      | 4         |                       |                     |            |                         |              |           |
| 1.1                   | 1431                | 1300       | 2.0                     | FF 87R57     | 4         | 6.1                   | 266                 | 228.99     | 2.9                     | FA 67        | 4         |
| 1.2                   | 1264                | 1148       | 2.2                     |              |           | 7.1                   | 227                 | 195.39     | 3.4                     | FAF67        | 4         |
| 1.4                   | 1112                | 1010       | 2.5                     |              |           | 8.1                   | 199                 | 170.85     | 3.9                     | F 67         | 4         |
| 1.6                   | 976                 | 887        | 2.9                     |              |           |                       |                     |            |                         | FF 67        | 4         |
| 1.8                   | 859                 | 780        | 3.3                     |              |           |                       |                     |            |                         |              |           |
| 0.8                   | 1902                | 1728       | 0.7                     |              |           | 4.3                   | 380                 | 199.70     | 1.49                    |              |           |
| 0.9                   | 1698                | 1543       | 0.8                     |              |           | 4.6                   | 349                 | 183.60     | 1.62                    | FA 57        | 6         |
| 1.0                   | 1490                | 1354       | 0.9                     |              |           | 5.4                   | 299                 | 157.09     | 1.89                    | FAF57        | 6         |
| 1.2                   | 1316                | 1196       | 1.1                     | FA 77R37     | 4         | 6.2                   | 259                 | 136.16     | 2.2                     | F 57         | 6         |
| 1.3                   | 1156                | 1050       | 1.2                     | FAF77R37     | 4         | 6.7                   | 242                 | 127.27     | 2.3                     | FF 57        | 6         |
| 1.5                   | 998                 | 907        | 1.4                     | F 77R37      | 4         | 7.7                   | 209                 | 110.01     | 2.7                     |              |           |
| 1.7                   | 892                 | 810        | 1.6                     | FF 77R37     | 4         |                       |                     |            |                         |              |           |
| 2.0                   | 781                 | 710        | 1.8                     |              |           | 7.0                   | 232                 | 199.70     | 2.4                     | FA 57        | 4         |
| 2.3                   | 660                 | 600        | 2.1                     |              |           | 7.6                   | 213                 | 183.60     | 2.6                     | FAF57        | 4         |
|                       |                     |            |                         |              |           | 8.8                   | 183                 | 157.09     | 3.1                     | F 57         | 4         |
|                       |                     |            |                         |              |           | 10                    | 158                 | 136.16     | 3.6                     | FF 57        | 4         |
|                       |                     |            |                         |              |           | 11                    | 148                 | 127.27     | 3.8                     |              |           |
| 1.6                   | 944                 | 858        | 0.82                    |              |           | 4.5                   | 360                 | 189.39     | 1.0                     |              |           |
| 1.9                   | 812                 | 738        | 0.95                    |              |           | 4.9                   | 331                 | 174.13     | 1.1                     | FA 47        | 6         |
| 2.2                   | 689                 | 626        | 1.12                    |              |           | 5.7                   | 283                 | 148.98     | 1.3                     | FAF47        | 6         |
| 2.4                   | 630                 | 572        | 1.22                    |              |           | 6.6                   | 245                 | 129.14     | 1.5                     | F 47         | 6         |
| 2.8                   | 550                 | 500        | 1.40                    |              |           | 7.0                   | 229                 | 120.70     | 2.5                     | FF 47        | 6         |
| 2.8                   | 547                 | 497        | 1.41                    | FA 67R37     | 4         |                       |                     |            |                         |              |           |
| 3.1                   | 500                 | 454        | 1.54                    | FAF67R37     | 4         |                       |                     |            |                         |              |           |
| 3.3                   | 470                 | 427        | 1.64                    | F 67R37      | 4         | 7.3                   | 220                 | 189.39     | 1.71                    |              |           |
| 3.5                   | 431                 | 392        | 1.79                    | FF 67R37     | 4         | 8.0                   | 202                 | 174.13     | 1.86                    | FA 47        | 4         |
| 3.8                   | 403                 | 366        | 1.91                    |              |           | 9.3                   | 173                 | 148.98     | 2.2                     | FAF47        | 4         |
| 4.2                   | 367                 | 333        | 2.1                     |              |           | 11                    | 150                 | 129.14     | 2.5                     | F 47         | 4         |
| 4.7                   | 327                 | 297        | 2.4                     |              |           | 12                    | 140                 | 120.70     | 2.7                     | FF 47        | 4         |
| 5.3                   | 287                 | 261        | 2.7                     |              |           |                       |                     |            |                         |              |           |
| 5.8                   | 262                 | 238        | 2.9                     |              |           |                       |                     |            |                         |              |           |
| 7.0                   | 220                 | 200        | 3.5                     |              |           |                       |                     |            |                         |              |           |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>0.18kW</b>         |                     |            |                         |              |           | <b>0.25kW</b>         |                     |            |                         |              |           |
| 7.2                   | 224                 | 117.88     | 0.84                    | FA 37        | 6         | 0.72                  | 2950                | 1930       | 1.0                     |              |           |
| 8.5                   | 191                 | 100.36     | 0.99                    | FAF37        | 6         | 0.81                  | 2613                | 1709       | 1.1                     |              |           |
| 9.8                   | 164                 | 86.53      | 1.14                    | F 37         | 6         | 0.93                  | 2282                | 1493       | 1.2                     | FA 87R57     | 4         |
| 11                    | 153                 | 80.65      | 1.23                    | FF 37        | 6         | 1.1                   | 1987                | 1300       | 1.4                     | FAF87R57     | 4         |
| 12                    | 134                 | 70.50      | 1.40                    |              |           | 1.2                   | 1755                | 1148       | 1.6                     | F 87R57      | 4         |
|                       |                     |            |                         |              |           | 1.4                   | 1544                | 1010       | 1.8                     | FF 87R57     | 4         |
|                       |                     |            |                         |              |           | 1.6                   | 1356                | 887        | 2.1                     |              |           |
|                       |                     |            |                         |              |           | 1.8                   | 1192                | 780        | 2.4                     |              |           |
|                       |                     |            |                         |              |           | 2.1                   | 1030                | 674        | 2.7                     |              |           |
| 11                    | 149                 | 128.51     | 1.26                    |              |           | 1.3                   | 1605                | 1050       | 0.88                    |              |           |
| 12                    | 137                 | 117.88     | 1.37                    |              |           | 1.5                   | 1387                | 907        | 1.02                    |              |           |
| 14                    | 117                 | 100.36     | 1.61                    |              |           | 1.7                   | 1238                | 810        | 1.14                    | FA 77R37     | 4         |
| 16                    | 101                 | 86.53      | 1.87                    |              |           | 2.0                   | 1085                | 710        | 1.30                    | FAF77R37     | 4         |
| 17                    | 94                  | 80.65      | 2.0                     |              |           | 2.3                   | 917                 | 600        | 1.54                    | F 77R37      | 4         |
| 20                    | 82                  | 70.50      | 2.3                     |              |           | 2.6                   | 803                 | 525        | 1.76                    | FF 77R37     | 4         |
| 21                    | 77                  | 66.09      | 2.4                     |              |           | 3.0                   | 717                 | 469        | 1.97                    |              |           |
| 24                    | 68                  | 58.32      | 2.8                     |              |           | 3.4                   | 630                 | 412        | 2.2                     |              |           |
| 25                    | 63                  | 54.54      | 3.0                     |              |           |                       |                     |            |                         |              |           |
| 27                    | 60                  | 51.70      | 3.1                     |              |           | 2.2                   | 980                 | 641        | 0.79                    |              |           |
| 30                    | 55                  | 47.02      | 3.4                     |              |           | 2.4                   | 874                 | 572        | 0.88                    |              |           |
| 32                    | 51                  | 43.83      | 3.7                     |              |           | 2.7                   | 778                 | 509        | 0.99                    |              |           |
| 36                    | 45                  | 38.31      | 4.2                     |              |           | 2.8                   | 764                 | 500        | 1.01                    | FA 67R37     | 4         |
| 39                    | 42                  | 35.91      | 4.5                     | FA 37        | 4         | 3.1                   | 694                 | 454        | 1.11                    | FAF67R37     | 4         |
| 44                    | 37                  | 31.69      | 5.1                     | FAF37        | 4         | 3.2                   | 668                 | 437        | 1.15                    | F 67R37      | 4         |
| 49                    | 33                  | 28.09      | 5.8                     | F 37         | 4         | 3.5                   | 599                 | 392        | 1.29                    | FF 67R37     | 4         |
| 58                    | 28                  | 23.88      | 6.8                     | FF 37        | 4         | 4.2                   | 509                 | 333        | 1.51                    |              |           |
| 59                    | 27                  | 23.63      | 6.8                     |              |           | 4.7                   | 454                 | 297        | 1.70                    |              |           |
| 68                    | 24                  | 20.57      | 7.9                     |              |           | 5.3                   | 399                 | 261        | 1.93                    |              |           |
| 72                    | 22                  | 19.27      | 8.4                     |              |           | 5.8                   | 364                 | 238        | 2.1                     |              |           |
| 82                    | 20                  | 17.03      | 9.5                     |              |           |                       |                     |            |                         |              |           |
| 88                    | 18                  | 15.81      | 10.2                    |              |           | 3.6                   | 592                 | 387        | 0.95                    |              |           |
| 97                    | 17                  | 14.33      | 11                      |              |           | 4.2                   | 504                 | 330        | 0.97                    |              |           |
| 108                   | 15                  | 12.87      | 13                      |              |           | 5.6                   | 381                 | 249        | 1.11                    |              |           |
| 125                   | 13                  | 11.08      | 14                      |              |           | 3.6                   | 584                 | 382        | 1.12                    | FA 57R37     | 4         |
| 133                   | 12                  | 10.42      | 14                      |              |           | 4.2                   | 505                 | 330        | 1.21                    | FAF57R37     | 4         |
| 155                   | 10                  | 8.97       | 16                      |              |           | 4.7                   | 456                 | 298        | 1.24                    | F 57R37      | 4         |
| 185                   | 8.7                 | 7.51       | 16                      |              |           | 5.3                   | 401                 | 262        | 1.48                    | FF 57R37     | 4         |
| 204                   | 7.9                 | 6.81       | 17                      |              |           | 6.2                   | 345                 | 226        | 1.63                    |              |           |
| 227                   | 7.1                 | 6.11       | 18                      |              |           | 7.0                   | 306                 | 200        | 1.84                    |              |           |
| 264                   | 6.1                 | 5.27       | 19                      |              |           | 8.4                   | 254                 | 166        | 2.2                     |              |           |
| 281                   | 5.8                 | 4.95       | 20                      |              |           |                       |                     |            |                         |              |           |
| 326                   | 5.0                 | 4.26       | 21                      |              |           |                       |                     |            |                         |              |           |
| <b>0.25kW</b>         |                     |            |                         |              |           | <b>0.25kW</b>         |                     |            |                         |              |           |
| 0.16                  | 13607               | 8901       | 0.83                    |              |           | 6.0                   | 352                 | 230        | 1.07                    |              |           |
| 0.18                  | 11775               | 7703       | 0.96                    | FA 127R77    | 4         | 6.1                   | 347                 | 227        | 1.08                    |              |           |
| 0.21                  | 10346               | 6768       | 1.09                    | FAF127R77    | 4         | 6.4                   | 330                 | 216        | 1.14                    |              |           |
| 0.23                  | 9131                | 5973       | 1.24                    | F 127R77     | 4         | 7.2                   | 294                 | 192        | 1.28                    | FA 47R17     | 4         |
| 0.27                  | 7760                | 5076       | 1.45                    | FF 127R77    | 4         | 7.4                   | 287                 | 188        | 1.31                    | FAF47R17     | 4         |
| 0.31                  | 6827                | 4466       | 1.7                     |              |           | 7.9                   | 269                 | 176        | 1.40                    | F 47R17      | 4         |
|                       |                     |            |                         |              |           | 8.0                   | 264                 | 173        | 1.42                    | FF 47R17     | 4         |
| 0.24                  | 8897                | 5820       | 0.83                    |              |           | 9.4                   | 226                 | 148        | 1.66                    |              |           |
| 0.27                  | 7984                | 5223       | 0.92                    |              |           | 11                    | 199                 | 130        | 1.89                    |              |           |
| 0.30                  | 6982                | 4567       | 1.06                    |              |           |                       |                     |            |                         |              |           |
| 0.40                  | 5262                | 3442       | 1.40                    | FA 107R77    | 4         | 10                    | 203                 | 133        | 0.92                    | FA 37R17     | 4         |
| 0.46                  | 4643                | 3037       | 1.59                    | FAF107R77    | 4         | 11                    | 197                 | 129        | 0.95                    | FAF37R17     | 4         |
| 0.50                  | 4213                | 2756       | 1.75                    | F 107R77     | 4         | 12                    | 180                 | 118        | 1.04                    | F 37R17      | 4         |
| 0.59                  | 3621                | 2369       | 2.0                     | FF 107R77    | 4         | 14                    | 150                 | 98         | 1.25                    | FF 37R17     | 4         |
| 0.67                  | 3161                | 2068       | 2.3                     |              |           | 16                    | 133                 | 87         | 1.41                    |              |           |
| 0.87                  | 2441                | 1597       | 3.0                     |              |           |                       |                     |            |                         |              |           |
| 0.99                  | 2142                | 1401       | 3.4                     |              |           | 3.0                   | 744                 | 281.71     | 1.9                     | FA 77        | 6         |
| 0.47                  | 4508                | 2949       | 0.90                    |              |           | 3.2                   | 694                 | 262.93     | 2.0                     | FAF77        | 6         |
| 0.54                  | 3959                | 2590       | 1.02                    |              |           | 3.8                   | 596                 | 225.79     | 2.4                     | F 77         | 6         |
| 0.61                  | 3466                | 2267       | 1.17                    | FA 97R57     | 4         | 4.3                   | 524                 | 198.31     | 2.7                     | FF 77        | 6         |
| 0.63                  | 3362                | 2199       | 1.20                    | FAF97R57     | 4         | 4.5                   | 497                 | 188.40     | 2.8                     |              |           |
| 0.80                  | 2658                | 1739       | 1.52                    | F 97R57      | 4         |                       |                     |            |                         |              |           |
| 0.90                  | 2357                | 1542       | 1.71                    | FF 97R57     | 4         |                       |                     |            |                         |              |           |
| 1.0                   | 2032                | 1329       | 2.0                     |              |           |                       |                     |            |                         |              |           |
| 1.2                   | 1807                | 1182       | 2.2                     |              |           |                       |                     |            |                         |              |           |
| 1.3                   | 1578                | 1032       | 2.6                     |              |           |                       |                     |            |                         |              |           |

| Output speed<br>r/min                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Output torque<br>Nm | Ratio<br>i | Service factor<br>f <sub>B</sub> | Type<br>Type | Pole<br>p | Output speed<br>r/min                                                                                                                                                                                                          | Output torque<br>Nm | Ratio<br>i | Service factor<br>f <sub>B</sub> | Type<br>Type | Pole<br>p |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|----------------------------------|--------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|----------------------------------|--------------|-----------|
| <b>0.25kW</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |            |                                  |              |           | <b>0.25kW</b>                                                                                                                                                                                                                  |                     |            |                                  |              |           |
| 3.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 605                 | 228.99     | 1.3                              | FA 67        | 6         | 204                                                                                                                                                                                                                            | 11                  | 6.81       | 12                               | FA 37        | 4         |
| 4.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 516                 | 195.39     | 1.5                              | FAF67        | 6         | 227                                                                                                                                                                                                                            | 10                  | 6.11       | 13                               | FAF37        | 4         |
| 5.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 451                 | 170.85     | 1.7                              | F 67         | 6         | 264                                                                                                                                                                                                                            | 8.5                 | 5.27       | 14                               | F 37         | 4         |
| 5.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 429                 | 162.31     | 1.8                              | FF 67        | 6         | 281                                                                                                                                                                                                                            | 8.0                 | 4.95       | 14                               | FF 37        | 4         |
| 6.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 376                 | 142.40     | 2.1                              |              |           | 326                                                                                                                                                                                                                            | 6.9                 | 4.26       | 15                               |              |           |
| 6.1 370 228.99 2.1 FA 67 4<br>7.1 315 195.39 2.4 FAF67 4<br>8.1 276 170.85 2.8 F 67 4<br>8.6 262 162.31 2.9 FF 67 4<br>9.8 230 142.40 3.4                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |            |                                  |              |           | <b>0.37kW</b>                                                                                                                                                                                                                  |                     |            |                                  |              |           |
| 4.3 527 199.70 1.07<br>4.6 485 183.60 1.16 FA 57 6<br>5.4 415 157.09 1.4 FAF57 6<br>6.2 360 136.16 1.6 F 57 6<br>6.7 336 127.27 1.7 FF 57 6<br>7.7 290 110.01 1.9                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |            |                                  |              |           | 0.21 15312 6768 0.74<br>0.23 13514 5973 0.83 FA 127R77 4<br>0.27 11484 5076 0.98 FAF127R77 4<br>0.31 10104 4466 1.12 F 127R77 4<br>0.36 8751 3868 1.29 FF 127R77 4<br>0.41 7699 3403 1.47<br>0.47 6758 2987 1.67               |                     |            |                                  |              |           |
| 7.0 322 199.70 1.7<br>7.6 296 183.60 1.9 FA 57 4<br>8.8 254 157.09 2.2 FAF57 4<br>10 220 136.16 2.6 F 57 4<br>11 205 127.27 2.7 FF 57 4<br>13 178 110.01 3.2                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |            |                                  |              |           | 0.46 6871 3037 1.07 FA 107R77 4<br>0.50 6235 2756 1.16 FAF107R77 4<br>0.59 5360 2369 1.35 F 107R77 4<br>0.67 4679 2068 1.54 FF 107R77 4<br>0.87 3613 1597 2.0                                                                  |                     |            |                                  |              |           |
| 5.7 393 148.98 1.0 FA 47 6<br>6.6 341 129.14 1.1 FAF47 6<br>7.0 319 120.70 1.2 F 47 6<br>8.1 275 104.33 1.4 FF 47 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |            |                                  |              |           | 0.61 5129 2267 0.79<br>0.70 4505 1991 0.90<br>0.80 3934 1739 1.03 FA 97R57 4<br>0.90 3489 1542 1.16 FAF97R57 4<br>1.0 3032 1340 1.3 F 97R57 4<br>1.2 2674 1182 1.5 FF 97R57 4<br>1.3 2335 1032 1.7<br>1.5 2052 907 2.0         |                     |            |                                  |              |           |
| 7.3 306 189.39 1.2<br>8.0 281 174.13 1.3 FA 47 4<br>9.3 241 148.98 1.6 FAF47 4<br>11 209 129.14 1.8 F 47 4<br>12 195 120.70 1.9 FF 47 4<br>13 168 104.33 2.2<br>16 143 88.65 2.6                                                                                                                                                                                                                                                                                                                                                                                                         |                     |            |                                  |              |           | 1.1 2941 1300 1.0<br>1.2 2597 1148 1.1<br>1.4 2285 1010 1.2 FA 87R57 4<br>1.6 2007 887 1.4 FAF87R57 4<br>1.8 1765 780 1.6 F 87R57 4<br>2.1 1525 674 1.8 FF 87R57 4<br>2.3 1378 609 2.0<br>2.7 1165 515 2.4<br>3.1 1023 452 2.8 |                     |            |                                  |              |           |
| 11 207 128.51 0.9<br>12 190 117.88 1.0<br>14 162 100.36 1.2<br>16 140 86.53 1.3<br>17 130 80.65 1.4<br>20 114 70.50 1.7<br>21 107 66.09 1.8<br>24 94 58.32 2.0<br>25 88 54.54 2.1<br>27 83 51.70 2.3<br>30 76 47.02 2.5<br>32 71 43.83 2.7<br>36 62 38.31 3.0 FA 37 4<br>39 58 35.91 3.2 FAF37 4<br>44 51 31.69 3.7 F 37 4<br>49 45 28.09 4.1 FF 37 4<br>58 39 23.88 4.9<br>59 38 23.63 4.9<br>68 33 20.57 5.7<br>72 31 19.27 6.0<br>82 27 17.03 6.8<br>88 26 15.81 7.4<br>97 23 14.33 8.1<br>108 21 12.87 9.0<br>125 18 11.08 10<br>133 17 10.42 10<br>155 14 8.97 11<br>185 12 7.51 11 |                     |            |                                  |              |           | 1.7 1833 810 0.77<br>2.0 1606 710 0.88<br>2.3 1357 600 1.04 FA 77R37 4<br>2.6 1188 525 1.19 FAF77R37 4<br>3.0 1061 469 1.33 F 77R37 4<br>3.4 932 412 1.51 FF 77R37 4<br>3.9 808 357 1.75<br>4.4 710 314 1.98                   |                     |            |                                  |              |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |            |                                  |              |           | 3.3 966 427 0.80<br>3.8 828 366 0.93 FA 67R37 4<br>4.3 731 323 1.05 FAF67R37 4<br>4.8 656 290 1.17 F 67R37 4<br>5.4 581 257 1.33 FF 67R37 4<br>6.3 498 220 1.55                                                                |                     |            |                                  |              |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |            |                                  |              |           | 5.3 593 262 0.95<br>5.6 563 249 1.00<br>6.2 511 226 1.10 FA 57R37 4<br>7.0 452 200 1.25 FAF57R37 4<br>7.1 446 197 1.27 F 57R37 4<br>7.7 410 181 1.38 FF 57R37 4<br>8.4 376 166 1.50<br>9.1 344 152 1.64<br>10 303 134 1.86     |                     |            |                                  |              |           |



| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>0.37kW</b>         |                     |            |                         |              |           | <b>0.37kW</b>         |                     |            |                         |              |           |
| 8.0                   | 391                 | 173        | 0.96                    | FA 47R17     | 4         | 32                    | 105                 | 43.83      | 1.80                    |              |           |
| 9.5                   | 330                 | 146        | 1.14                    | FAF47R17     | 4         | 36                    | 92                  | 38.31      | 2.1                     |              |           |
| 11                    | 292                 | 129        | 1.29                    | F 47R17      | 4         | 39                    | 86                  | 35.91      | 2.2                     |              |           |
|                       |                     |            |                         | FF 47R17     | 4         | 44                    | 76                  | 31.69      | 2.5                     |              |           |
| 2.4                   | 1400                | 271.92     | 2.0                     | FA 87        | 8         | 49                    | 67                  | 28.09      | 2.8                     |              |           |
| 2.5                   | 1313                | 254.93     | 2.1                     | FAF87        | 8         | 58                    | 57                  | 23.88      | 3.3                     |              |           |
| 2.8                   | 1177                | 228.57     | 2.4                     | F 87         | 8         | 59                    | 56                  | 23.63      | 3.3                     |              |           |
| 3.3                   | 1014                | 196.85     | 2.8                     | FF 87        | 8         | 68                    | 49                  | 20.57      | 3.8                     |              |           |
|                       |                     |            |                         |              |           | 72                    | 46                  | 19.27      | 4.1                     |              |           |
| 3.1                   | 1063                | 271.92     | 2.7                     | FA 87        | 6         | 82                    | 41                  | 17.03      | 4.6                     | FA 37        | 4         |
| 3.3                   | 996                 | 254.93     | 2.8                     | FAF87        | 6         | 88                    | 38                  | 15.81      | 5.0                     | FAF37        | 4         |
| 3.7                   | 893                 | 228.57     | 3.2                     | F 87         | 6         | 97                    | 34                  | 14.33      | 5.5                     | F 37         | 4         |
|                       |                     |            |                         | FF 87        | 6         | 108                   | 31                  | 12.87      | 6.1                     | FF 37        | 4         |
| 3.8                   | 882                 | 225.79     | 1.6                     |              |           | 125                   | 26                  | 11.08      | 6.7                     |              |           |
| 4.3                   | 775                 | 198.31     | 1.8                     | FA 77        | 6         | 133                   | 25                  | 10.42      | 7.0                     |              |           |
| 4.5                   | 736                 | 188.40     | 1.9                     | FAF77        | 6         | 155                   | 21                  | 8.97       | 7.6                     |              |           |
| 5.1                   | 651                 | 166.47     | 2.2                     | F 77         | 6         | 185                   | 18                  | 7.51       | 7.7                     |              |           |
| 6.0                   | 556                 | 142.27     | 2.5                     | FF 77        | 6         | 204                   | 16                  | 6.81       | 8.1                     |              |           |
|                       |                     |            |                         |              |           | 227                   | 15                  | 6.11       | 8.7                     |              |           |
| 4.9                   | 673                 | 281.71     | 2.1                     | FA 77        | 4         | 264                   | 13                  | 5.27       | 9.3                     |              |           |
| 5.3                   | 628                 | 262.93     | 2.2                     | FAF77        | 4         | 281                   | 12                  | 4.95       | 9.5                     |              |           |
| 6.2                   | 540                 | 225.79     | 2.6                     | F 77         | 4         | 326                   | 10                  | 4.26       | 10                      |              |           |
| 7.0                   | 474                 | 198.31     | 3.0                     | FF 77        | 4         |                       |                     |            |                         |              |           |
| 4.4                   | 764                 | 195.39     | 1.01                    | FA 67        | 6         | <b>0.55kW</b>         |                     |            |                         |              |           |
| 5.0                   | 668                 | 170.85     | 1.15                    | FAF67        | 6         | 0.22                  | 21141               | 6286       | 0.80                    |              |           |
| 5.2                   | 634                 | 162.31     | 1.22                    | F 67         | 6         | 0.26                  | 18174               | 5404       | 0.93                    | FA 157R97    | 4         |
| 6.0                   | 556                 | 142.40     | 1.4                     | FF 67        | 6         | 0.50                  | 9336                | 2776       | 1.81                    | FAF157R97    | 4         |
| 7.0                   | 472                 | 120.79     | 1.6                     |              |           | 0.57                  | 8162                | 2427       | 2.1                     | F 157R97     | 4         |
|                       |                     |            |                         |              |           | 0.83                  | 5630                | 1674       | 3.0                     | FF 157R97    | 4         |
| 6.1                   | 547                 | 228.99     | 1.41                    |              |           | 1.1                   | 4399                | 1308       | 3.8                     |              |           |
| 7.1                   | 467                 | 195.39     | 1.65                    | FA 67        | 4         | 1.2                   | 3931                | 1169       | 4.3                     |              |           |
| 8.1                   | 408                 | 170.85     | 1.89                    | FAF67        | 4         |                       |                     |            |                         |              |           |
| 8.6                   | 388                 | 162.31     | 1.99                    | F 67         | 4         | 0.36                  | 13009               | 3868       | 0.87                    | FA 127R77    | 4         |
| 9.8                   | 340                 | 142.40     | 2.3                     | FF 67        | 4         | 0.41                  | 11445               | 3403       | 0.99                    | FAF127R77    | 4         |
| 12                    | 289                 | 120.79     | 2.7                     |              |           | 0.47                  | 10046               | 2987       | 1.12                    | F 127R77     | 4         |
|                       |                     |            |                         |              |           |                       |                     |            |                         | FF 127R77    | 4         |
| 5.4                   | 614                 | 157.09     | 0.92                    | FA 57        | 6         | 0.59                  | 7967                | 2369       | 0.92                    |              |           |
| 6.2                   | 532                 | 136.16     | 1.06                    | FAF57        | 6         | 0.67                  | 6955                | 2068       | 1.06                    |              |           |
| 6.7                   | 497                 | 127.27     | 1.13                    | F 57         | 6         | 0.76                  | 6141                | 1826       | 1.20                    |              |           |
| 7.7                   | 430                 | 110.01     | 1.31                    | FF 57        | 6         | 0.87                  | 5371                | 1597       | 1.37                    | FA 107R77    | 4         |
|                       |                     |            |                         |              |           | 0.99                  | 4712                | 1401       | 1.56                    | FAF107R77    | 4         |
| 7.0                   | 477                 | 199.70     | 1.18                    |              |           | 1.19                  | 3921                | 1166       | 1.88                    | F 107R77     | 4         |
| 7.6                   | 439                 | 183.60     | 1.29                    |              |           | 1.28                  | 3656                | 1087       | 2.0                     | FF 107R77    | 4         |
| 8.8                   | 375                 | 157.09     | 1.50                    | FA 57        | 4         | 1.46                  | 3195                | 950        | 2.3                     |              |           |
| 10                    | 325                 | 136.16     | 1.73                    | FAF57        | 4         | 1.67                  | 2805                | 834        | 2.6                     |              |           |
| 11                    | 304                 | 127.27     | 1.85                    | F 57         | 4         | 2.17                  | 2152                | 640        | 3.4                     |              |           |
| 13                    | 263                 | 110.01     | 2.1                     | FF 57        | 4         |                       |                     |            |                         |              |           |
| 15                    | 223                 | 93.47      | 2.5                     |              |           | 1.04                  | 4507                | 1340       | 0.90                    |              |           |
| 17                    | 199                 | 83.46      | 2.8                     |              |           | 1.18                  | 3975                | 1182       | 1.02                    |              |           |
|                       |                     |            |                         |              |           | 1.35                  | 3471                | 1032       | 1.16                    |              |           |
| 9                     | 356                 | 148.98     | 1.06                    |              |           | 1.5                   | 3050                | 907        | 1.33                    | FA 97R57     | 4         |
| 11                    | 309                 | 129.14     | 1.22                    | FA 47        | 4         | 1.7                   | 2677                | 796        | 1.5                     | FAF97R57     | 4         |
| 13                    | 249                 | 104.33     | 1.51                    | FAF47        | 4         | 2.0                   | 2354                | 700        | 1.7                     | F 97R57      | 4         |
| 16                    | 212                 | 88.65      | 1.77                    | F 47         | 4         | 2.3                   | 2055                | 611        | 2.0                     | FF 97R57     | 4         |
| 18                    | 189                 | 79.15      | 2.0                     | FF 47        | 4         | 2.6                   | 1796                | 534        | 2.3                     |              |           |
| 21                    | 162                 | 67.61      | 2.3                     |              |           | 2.9                   | 1587                | 472        | 2.5                     |              |           |
| 21                    | 155                 | 64.89      | 2.4                     |              |           | 3.4                   | 1379                | 410        | 2.9                     |              |           |
|                       |                     |            |                         |              |           | 3.8                   | 1234                | 367        | 3.3                     |              |           |
| 16                    | 207                 | 86.53      | 0.91                    |              |           | 1.6                   | 2983                | 887        | 0.95                    |              |           |
| 17                    | 193                 | 80.65      | 0.98                    |              |           | 1.8                   | 2623                | 780        | 1.08                    | FA 87R57     | 4         |
| 20                    | 168                 | 70.50      | 1.12                    | FA 37        | 4         | 2.1                   | 2267                | 674        | 1.24                    | FAF87R57     | 4         |
| 21                    | 158                 | 66.09      | 1.19                    | FAF37        | 4         | 2.3                   | 2048                | 609        | 1.38                    | F 87R57      | 4         |
| 24                    | 139                 | 58.32      | 1.35                    | F 37         | 4         | 2.7                   | 1732                | 515        | 1.63                    | FF 87R57     | 4         |
| 25                    | 130                 | 54.54      | 1.44                    | FF 37        | 4         | 3.1                   | 1520                | 452        | 1.86                    |              |           |
| 27                    | 124                 | 51.70      | 1.52                    |              |           | 4.0                   | 1160                | 345        | 2.4                     |              |           |
| 30                    | 112                 | 47.02      | 1.67                    |              |           |                       |                     |            |                         |              |           |



| Output speed | Output torque | Ratio  | Service factor | Type     | Pole | Output speed | Output torque | Ratio | Service factor | Type      | Pole |
|--------------|---------------|--------|----------------|----------|------|--------------|---------------|-------|----------------|-----------|------|
| r/min        | Nm            | i      | f <sub>B</sub> | Type     | p    | r/min        | Nm            | i     | f <sub>B</sub> | Type      | p    |
| 0.55kW       |               |        |                |          |      | 0.55kW       |               |       |                |           |      |
| 2.6          | 1766          | 525    | 0.80           | FA 77R37 | 4    | 21           | 230           | 64.89 | 1.63           | FA 47     | 4    |
| 3.0          | 1577          | 469    | 0.89           | FAF77R37 | 4    | 25           | 199           | 56.09 | 1.89           | FAF47     | 4    |
| 3.4          | 1386          | 412    | 1.02           | F 77R37  | 4    | 29           | 169           | 47.66 | 2.2            | F 47      | 4    |
| 3.9          | 1201          | 357    | 1.17           | FF 77R37 | 4    | 33           | 151           | 42.55 | 2.5            | FF 47     | 4    |
| 4.4          | 1056          | 314    | 1.34           |          |      |              |               |       |                |           |      |
| 5.4          | 864           | 257    | 0.89           | FA 67R37 | 4    | 24           | 207           | 58.32 | 0.91           |           |      |
| 6.3          | 740           | 220    | 1.04           | FAF67R37 | 4    | 25           | 194           | 54.54 | 0.97           |           |      |
| 7.1          | 659           | 196    | 1.17           | F 67R37  | 4    | 27           | 184           | 51.70 | 1.02           |           |      |
| 8.3          | 562           | 167    | 1.37           | FF 67R37 | 4    | 30           | 167           | 47.02 | 1.13           |           |      |
|              |               |        |                |          |      | 32           | 156           | 43.83 | 1.21           |           |      |
|              |               |        |                |          |      | 36           | 136           | 38.31 | 1.38           |           |      |
|              |               |        |                |          |      | 39           | 128           | 35.91 | 1.47           |           |      |
| 2.4          | 2039          | 276.64 | 1.98           | FA 97    | 8    | 44           | 113           | 31.69 | 1.67           |           |      |
| 2.6          | 1878          | 254.79 | 2.2            | FAF97    | 8    | 49           | 100           | 28.09 | 1.88           |           |      |
| 3.0          | 1668          | 226.34 | 2.4            | F 97     | 8    | 58           | 85            | 23.88 | 2.2            |           |      |
|              |               |        |                | FF 97    | 8    | 59           | 84            | 23.63 | 2.2            |           |      |
| 2.5          | 2004          | 271.92 | 1.41           | FA 87    | 8    | 68           | 73            | 20.57 | 2.6            | FA 37     | 4    |
| 2.6          | 1875          | 254.93 | 1.50           | FAF87    | 8    | 72           | 68            | 19.27 | 2.7            | FAF37     | 4    |
| 2.9          | 1684          | 228.57 | 1.67           | F 87     | 8    | 82           | 60            | 17.03 | 3.1            | F 37      | 4    |
| 3.4          | 1450          | 196.85 | 1.94           | FF 87    | 8    | 97           | 51            | 14.33 | 3.7            | FF 37     | 4    |
|              |               |        |                |          |      | 108          | 46            | 12.87 | 4.1            |           |      |
| 3.3          | 1517          | 271.92 | 1.86           | FA 87    | 6    | 125          | 39            | 11.08 | 4.5            |           |      |
| 3.5          | 1422          | 254.93 | 1.98           | FAF87    | 6    | 133          | 37            | 10.42 | 4.7            |           |      |
| 3.9          | 1275          | 228.57 | 2.2            | F 87     | 6    | 155          | 32            | 8.97  | 5.1            |           |      |
| 4.5          | 1098          | 196.85 | 2.6            | FF 87    | 6    | 174          | 28            | 8.01  | 5.2            |           |      |
| 4.9          | 998           | 178.95 | 2.8            |          |      | 185          | 27            | 7.51  | 5.4            |           |      |
|              |               |        |                |          |      | 204          | 24            | 6.81  | 5.6            |           |      |
| 3.9          | 1260          | 225.79 | 1.12           | FA 77    | 6    | 227          | 22            | 6.11  | 5.8            |           |      |
| 4.5          | 1106          | 198.31 | 1.27           | FAF77    | 6    | 264          | 19            | 5.27  | 6.3            |           |      |
| 4.7          | 1051          | 188.40 | 1.34           | F 77     | 6    | 281          | 18            | 4.95  | 6.4            |           |      |
| 5.3          | 929           | 166.47 | 1.52           | FF 77    | 6    | 326          | 15            | 4.26  | 6.8            |           |      |
| 6.2          | 794           | 142.27 | 1.78           |          |      | 365          | 14            | 3.81  | 7.3            |           |      |
| 6.8          | 728           | 130.42 | 1.94           |          |      |              |               |       |                |           |      |
| 6.2          | 802           | 225.79 | 1.76           |          |      | 0.75kW       |               |       |                |           |      |
| 7.0          | 704           | 198.31 | 2.0            |          |      | 0.50         | 12731         | 2776  | 1.33           | FA 157R97 | 4    |
| 7.4          | 669           | 188.40 | 2.1            | FA 77    | 4    | 0.57         | 11130         | 2427  | 1.52           | FAF157R97 | 4    |
| 8.3          | 591           | 166.47 | 2.4            | FAF77    | 4    | 0.83         | 7677          | 1674  | 2.2            | F 157R97  | 4    |
| 9.8          | 505           | 142.27 | 2.8            | F 77     | 4    | 1.1          | 5999          | 1308  | 2.8            | FF 157R97 | 4    |
| 11           | 463           | 130.42 | 3.0            | FF 77    | 4    | 1.2          | 5361          | 1169  | 3.2            |           |      |
| 12           | 407           | 114.45 | 3.5            |          |      |              |               |       |                |           |      |
| 13           | 385           | 108.46 | 3.7            |          |      | 0.47         | 13699         | 2987  | 0.82           |           |      |
| 15           | 337           | 94.93  | 4.2            |          |      | 0.52         | 12350         | 2693  | 0.91           | FA 127R77 | 4    |
|              |               |        |                |          |      | 0.59         | 10896         | 2376  | 1.04           | FAF127R77 | 4    |
| 7.1          | 694           | 195.39 | 1.11           |          |      | 0.68         | 9420          | 2054  | 1.20           | F 127R77  | 4    |
| 8.1          | 607           | 170.85 | 1.27           |          |      | 0.77         | 8246          | 1798  | 1.37           | FF 127R77 | 4    |
| 8.6          | 577           | 162.31 | 1.34           | FA 67    | 4    | 0.86         | 7425          | 1619  | 1.52           |           |      |
| 9.8          | 506           | 142.40 | 1.52           | FAF67    | 4    |              |               |       |                |           |      |
| 12           | 429           | 120.79 | 1.80           | F 67     | 4    | 0.76         | 8374          | 1826  | 0.88           |           |      |
| 13           | 387           | 109.04 | 2.0            | FF 67    | 4    | 0.88         | 7241          | 1597  | 1.02           |           |      |
| 14           | 341           | 95.94  | 2.3            |          |      | 0.99         | 6425          | 1401  | 1.15           | FA 107R77 | 4    |
| 15           | 322           | 90.59  | 2.4            |          |      | 1.1          | 5700          | 1243  | 1.29           | FAF107R77 | 4    |
| 18           | 277           | 77.97  | 2.8            |          |      | 1.3          | 4985          | 1087  | 1.48           | F 107R77  | 4    |
|              |               |        |                |          |      | 1.5          | 4357          | 950   | 1.69           | FF 107R77 | 4    |
| 8.8          | 558           | 157.09 | 1.01           |          |      | 1.7          | 3825          | 834   | 1.93           |           |      |
| 10           | 484           | 136.16 | 1.17           |          |      | 2.2          | 2875          | 627   | 2.6            |           |      |
| 11           | 452           | 127.27 | 1.25           | FA 57    | 4    | 3.3          | 1958          | 427   | 3.8            |           |      |
| 13           | 391           | 110.01 | 1.44           | FAF57    | 4    |              |               |       |                |           |      |
| 15           | 332           | 93.47  | 1.70           | F 57     | 4    | 1.3          | 4733          | 1032  | 0.85           |           |      |
| 17           | 296           | 83.46  | 1.90           | FF 57    | 4    | 1.5          | 4160          | 907   | 0.97           |           |      |
| 19           | 260           | 73.16  | 2.2            |          |      | 1.7          | 3651          | 796   | 1.1            | FA 97R57  | 4    |
| 20           | 243           | 68.38  | 2.3            |          |      | 2.0          | 3210          | 700   | 1.3            | FAF97R57  | 4    |
| 24           | 210           | 59.10  | 2.7            |          |      | 2.3          | 2802          | 611   | 1.4            | F 97R57   | 4    |
|              |               |        |                |          |      | 2.6          | 2449          | 534   | 1.7            | FF 97R57  | 4    |
| 13           | 371           | 104.33 | 1.01           | FA 47    | 4    | 2.9          | 2165          | 472   | 1.9            |           |      |
| 16           | 315           | 88.65  | 1.19           | FAF47    | 4    | 3.4          | 1880          | 410   | 2.1            |           |      |
| 18           | 281           | 79.15  | 1.34           | F 47     | 4    | 3.8          | 1683          | 367   | 2.4            |           |      |
| 21           | 240           | 67.61  | 1.57           | FF 47    | 4    |              |               |       |                |           |      |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>0.75kW</b>         |                     |            |                         |              |           | <b>0.75kW</b>         |                     |            |                         |              |           |
| 2.1                   | 3091                | 674        | 0.91                    | FA 87R57     | 4         | 19                    | 354                 | 73.16      | 1.59                    | FA 57        | 4         |
| 2.3                   | 2793                | 609        | 1.01                    | FAF87R57     | 4         | 20                    | 331                 | 68.38      | 1.70                    | FAF57        | 4         |
| 2.7                   | 2362                | 515        | 1.19                    | F 87R57      | 4         | 24                    | 286                 | 59.10      | 1.97                    | F 57         | 4         |
| 3.1                   | 2073                | 452        | 1.36                    | FF 87R57     | 4         | 28                    | 243                 | 50.22      | 2.3                     | FF 57        | 4         |
| 4.0                   | 1582                | 345        | 1.78                    |              |           | 31                    | 217                 | 44.84      | 2.6                     |              |           |
| 3.9                   | 1637                | 357        | 0.86                    | FA 77R37     | 4         | 17                    | 386                 | 79.72      | 0.97                    |              |           |
| 4.4                   | 1440                | 314        | 0.98                    | FAF77R37     | 4         | 20                    | 330                 | 68.09      | 1.14                    |              |           |
| 5.1                   | 1247                | 272        | 1.13                    | F 77R37      | 4         | 21                    | 317                 | 65.36      | 1.19                    | FA 47        | 4         |
|                       |                     |            |                         | FF 77R37     | 4         | 25                    | 272                 | 56.09      | 1.38                    | FAF47        | 4         |
|                       |                     |            |                         |              |           | 29                    | 231                 | 47.66      | 1.63                    | F 47         | 4         |
| 2.7                   | 2519                | 255.25     | 2.9                     | FA 107       | 8         | 33                    | 206                 | 42.55      | 1.82                    | FF 47        | 4         |
|                       |                     |            |                         | FAF107       | 8         | 38                    | 176                 | 36.34      | 2.1                     |              |           |
|                       |                     |            |                         | F 107        | 8         | 41                    | 165                 | 34.04      | 2.3                     |              |           |
|                       |                     |            |                         | FF 107       | 8         | 48                    | 139                 | 28.67      | 2.7                     |              |           |
| 2.5                   | 2739                | 276.64     | 1.5                     | FA 97        | 8         | 30                    | 228                 | 47.02      | 0.83                    |              |           |
| 2.7                   | 2523                | 254.79     | 1.6                     | FAF97        | 8         | 32                    | 212                 | 43.83      | 0.89                    |              |           |
| 3.0                   | 2241                | 226.34     | 1.8                     | F 97         | 8         | 36                    | 186                 | 38.31      | 1.01                    |              |           |
|                       |                     |            |                         | FF 97        | 8         | 39                    | 174                 | 35.91      | 1.08                    |              |           |
| 3.3                   | 2047                | 276.64     | 2.0                     | FA 97        | 6         | 44                    | 153                 | 31.69      | 1.22                    |              |           |
| 3.6                   | 1885                | 254.79     | 2.1                     | FAF97        | 6         | 49                    | 136                 | 28.09      | 1.38                    |              |           |
| 4.0                   | 1675                | 226.34     | 2.4                     | F 97         | 6         | 58                    | 116                 | 23.88      | 1.63                    |              |           |
|                       |                     |            |                         | FF 97        | 6         | 59                    | 114                 | 23.63      | 1.6                     |              |           |
| 3.3                   | 2012                | 271.92     | 1.40                    | FA 87        | 6         | 68                    | 100                 | 20.57      | 1.9                     |              |           |
| 3.6                   | 1886                | 254.93     | 1.50                    | FAF87        | 6         | 72                    | 93                  | 19.27      | 2.0                     | FA 37        | 4         |
| 4.0                   | 1691                | 228.57     | 1.67                    | F 87         | 6         | 82                    | 82                  | 17.03      | 2.3                     | FAF37        | 4         |
| 4.6                   | 1456                | 196.85     | 1.94                    | FF 87        | 6         | 97                    | 69                  | 14.33      | 2.7                     | F 37         | 4         |
| 5.1                   | 1324                | 178.95     | 2.1                     |              |           | 108                   | 62                  | 12.87      | 3.0                     | FF 37        | 4         |
| 5.7                   | 1181                | 159.61     | 2.4                     |              |           | 125                   | 54                  | 11.08      | 3.3                     |              |           |
|                       |                     |            |                         |              |           | 133                   | 50                  | 10.42      | 3.4                     |              |           |
| 5.1                   | 1317                | 271.92     | 2.1                     | FA 87        | 4         | 155                   | 43                  | 8.97       | 3.8                     |              |           |
| 5.4                   | 1235                | 254.93     | 2.3                     | FAF87        | 4         | 204                   | 33                  | 6.81       | 4.0                     |              |           |
| 6.1                   | 1107                | 228.57     | 2.5                     | F 87         | 4         | 227                   | 30                  | 6.11       | 4.3                     |              |           |
|                       |                     |            |                         | FF 87        | 4         | 264                   | 26                  | 5.27       | 4.6                     |              |           |
| 4.6                   | 1467                | 198.31     | 0.96                    | FA 77        | 6         | 281                   | 24                  | 4.95       | 4.7                     |              |           |
| 4.8                   | 1394                | 188.40     | 1.01                    | FAF77        | 6         | 326                   | 21                  | 4.26       | 5.0                     |              |           |
| 5.5                   | 1232                | 166.47     | 1.14                    | F 77         | 6         | 365                   | 18                  | 3.81       | 5.3                     |              |           |
| 6.4                   | 1053                | 142.27     | 1.34                    | FF 77        | 6         |                       |                     |            |                         |              |           |
| 7.0                   | 965                 | 130.42     | 1.46                    |              |           |                       |                     |            |                         |              |           |
| 6.2                   | 1094                | 225.79     | 1.29                    |              |           | <b>1.1kW</b>          |                     |            |                         |              |           |
| 7.0                   | 961                 | 198.31     | 1.47                    |              |           | 0.50                  | 18539               | 2776       | 0.91                    |              |           |
| 7.4                   | 913                 | 188.40     | 1.55                    | FA 77        | 4         | 0.58                  | 16208               | 2427       | 1.04                    |              |           |
| 8.3                   | 806                 | 166.47     | 1.75                    | FAF77        | 4         | 0.64                  | 14592               | 2185       | 1.16                    |              |           |
| 9.8                   | 689                 | 142.27     | 2.0                     | F 77         | 4         | 0.72                  | 12982               | 1944       | 1.30                    | FA 157R97    | 4         |
| 11                    | 632                 | 130.42     | 2.2                     | FF 77        | 4         | 0.84                  | 11179               | 1674       | 1.51                    | FAF157R97    | 4         |
| 12                    | 554                 | 114.45     | 2.5                     |              |           | 1.1                   | 8735                | 1308       | 1.94                    | F 157R97     | 4         |
| 13                    | 525                 | 108.46     | 2.7                     |              |           | 1.2                   | 7807                | 1169       | 2.2                     | FF 157R97    | 4         |
|                       |                     |            |                         |              |           | 1.5                   | 6364                | 953        | 2.7                     |              |           |
| 8.1                   | 828                 | 170.85     | 0.93                    |              |           | 1.7                   | 5643                | 845        | 3.0                     |              |           |
| 8.6                   | 786                 | 162.31     | 0.98                    |              |           | 3.1                   | 2978                | 446        | 5.7                     |              |           |
| 9.8                   | 690                 | 142.40     | 1.12                    | FA 67        | 4         | 4.7                   | 2010                | 301        | 8.4                     |              |           |
| 12                    | 585                 | 120.79     | 1.32                    | FAF67        | 4         | 0.68                  | 13717               | 2054       | 0.82                    | FA 127R77    | 4         |
| 13                    | 528                 | 109.04     | 1.46                    | F 67         | 4         | 0.78                  | 12007               | 1798       | 0.94                    | FAF127R77    | 4         |
| 14                    | 465                 | 95.94      | 1.66                    | FF 67        | 4         | 0.86                  | 10812               | 1619       | 1.04                    | F 127R77     | 4         |
| 15                    | 439                 | 90.59      | 1.76                    |              |           | 1.0                   | 9356                | 1401       | 1.21                    | FF 127R77    | 4         |
| 18                    | 378                 | 77.97      | 2.0                     |              |           | 1.1                   | 8214                | 1230       | 1.37                    |              |           |
| 21                    | 320                 | 66.13      | 2.4                     |              |           | 1.3                   | 7246                | 1085       | 1.56                    |              |           |
| 23                    | 289                 | 59.70      | 2.7                     |              |           |                       |                     |            |                         |              |           |
| 11                    | 616                 | 127.27     | 0.91                    | FA 57        | 4         | 1.1                   | 8301                | 1243       | 0.89                    | FA 107R77    | 4         |
| 13                    | 533                 | 110.01     | 1.06                    | FAF57        | 4         | 1.3                   | 7259                | 1087       | 1.02                    | FAF107R77    | 4         |
| 15                    | 453                 | 93.47      | 1.25                    | F 57         | 4         | 1.5                   | 6344                | 950        | 1.16                    | F 107R77     | 4         |
| 17                    | 404                 | 83.46      | 1.40                    | FF 57        | 4         | 1.7                   | 5570                | 834        | 1.32                    | FF 107R77    | 4         |
|                       |                     |            |                         |              |           | 1.9                   | 4915                | 736        | 1.50                    |              |           |
|                       |                     |            |                         |              |           | 2.2                   | 4274                | 640        | 1.72                    |              |           |

| Output Speed<br>r/min | Output Torque<br>Nm | Ratio<br>i | Service Factor<br>f <sub>B</sub> | Type     | Pole<br>p | Output Speed<br>r/min | Output Torque<br>Nm | Ratio<br>i | Service Factor<br>f <sub>B</sub> | Type      | Pole<br>p |
|-----------------------|---------------------|------------|----------------------------------|----------|-----------|-----------------------|---------------------|------------|----------------------------------|-----------|-----------|
| <b>1.1kW</b>          |                     |            |                                  |          |           | <b>1.1kW</b>          |                     |            |                                  |           |           |
| 2.0                   | 4675                | 700        | 0.86                             |          |           | 17                    | 589                 | 83.46      | 0.96                             |           |           |
| 2.3                   | 4080                | 611        | 0.99                             | FA 97R57 | 4         | 19                    | 516                 | 73.16      | 1.09                             |           |           |
| 2.6                   | 3566                | 534        | 1.13                             | FAF97R57 | 4         | 20                    | 482                 | 68.38      | 1.17                             | FA 57     | 4         |
| 3.0                   | 3152                | 472        | 1.28                             | F 97R57  | 4         | 24                    | 417                 | 59.10      | 1.35                             | FAF57     | 4         |
| 3.4                   | 2738                | 410        | 1.48                             | FF 97R57 | 4         | 28                    | 354                 | 50.22      | 1.59                             | F 57      | 4         |
| 3.8                   | 2451                | 367        | 1.65                             |          |           | 31                    | 316                 | 44.84      | 1.78                             | FF 57     | 4         |
|                       |                     |            |                                  |          |           | 37                    | 270                 | 38.30      | 2.1                              |           |           |
| 3.1                   | 3019                | 452        | 0.93                             | FA 87R57 | 4         | 39                    | 253                 | 35.87      | 2.2                              |           |           |
| 4.1                   | 2304                | 345        | 1.22                             | FAF87R57 | 4         | 46                    | 213                 | 30.22      | 2.6                              |           |           |
| 4.7                   | 2003                | 300        | 1.41                             | F 87R57  | 4         |                       |                     |            |                                  |           |           |
| 5.6                   | 1663                | 249        | 1.70                             | FF 87R57 | 4         |                       |                     |            |                                  |           |           |
|                       |                     |            |                                  |          |           | 25                    | 396                 | 56.09      | 0.95                             |           |           |
| 2.7                   | 3707                | 255.25     | 1.95                             | FA 107   | 8         | 29                    | 336                 | 47.66      | 1.12                             |           |           |
| 3.2                   | 3123                | 215.04     | 2.3                              | FAF107   | 8         | 33                    | 300                 | 42.55      | 1.25                             |           |           |
| 3.4                   | 2894                | 199.31     | 2.5                              | F 107    | 8         | 39                    | 256                 | 36.34      | 1.47                             | FA 47     | 4         |
| 3.8                   | 2594                | 178.64     | 2.8                              | FF 107   | 8         | 41                    | 240                 | 34.04      | 1.57                             | FAF47     | 4         |
|                       |                     |            |                                  |          |           | 46                    | 216                 | 30.64      | 1.74                             | F 47      | 4         |
| 3.3                   | 3002                | 276.64     | 1.35                             | FA 97    | 6         | 48                    | 205                 | 29.11      | 1.83                             | FF 47     | 4         |
| 3.6                   | 2765                | 254.79     | 1.46                             | FAF97    | 6         | 49                    | 202                 | 28.67      | 1.86                             |           |           |
| 4.0                   | 2456                | 226.34     | 1.65                             | F 97     | 6         | 55                    | 180                 | 25.54      | 2.1                              |           |           |
| 4.8                   | 2045                | 188.50     | 2.0                              | FF 97    | 6         | 65                    | 153                 | 21.66      | 2.5                              |           |           |
| 5.2                   | 1908                | 175.83     | 2.1                              |          |           | 72                    | 138                 | 19.56      | 2.7                              |           |           |
|                       |                     |            |                                  |          |           | 44                    | 224                 | 31.69      | 0.84                             |           |           |
| 5.1                   | 1951                | 276.64     | 2.1                              | FA 97    | 4         | 50                    | 198                 | 28.09      | 0.95                             |           |           |
| 5.5                   | 1797                | 254.79     | 2.2                              | FAF97    | 4         | 59                    | 168                 | 23.88      | 1.12                             |           |           |
| 6.2                   | 1596                | 226.34     | 2.5                              | F 97     | 4         | 68                    | 145                 | 20.57      | 1.30                             |           |           |
|                       |                     |            |                                  | FF 97    | 4         | 73                    | 136                 | 19.27      | 1.38                             |           |           |
| 3.3                   | 2951                | 271.92     | 0.96                             |          |           | 82                    | 120                 | 17.03      | 1.57                             |           |           |
| 3.6                   | 2766                | 254.93     | 1.02                             | FA 87    | 6         | 98                    | 101                 | 14.33      | 1.86                             |           |           |
| 4.0                   | 2480                | 228.57     | 1.14                             | FAF87    | 6         | 109                   | 91                  | 12.87      | 2.1                              | FA 37     | 4         |
| 4.6                   | 2136                | 196.85     | 1.32                             | F 87     | 6         | 126                   | 78                  | 11.08      | 2.3                              | FAF37     | 4         |
| 5.1                   | 1942                | 178.95     | 1.45                             | FF 87    | 6         | 134                   | 73                  | 10.42      | 2.4                              | F 37      | 4         |
| 5.7                   | 1732                | 159.61     | 1.63                             |          |           | 156                   | 63                  | 8.97       | 2.6                              | FF 37     | 4         |
|                       |                     |            |                                  |          |           | 175                   | 56                  | 8.01       | 2.7                              |           |           |
| 5.2                   | 1911                | 271.92     | 1.48                             |          |           | 206                   | 48                  | 6.81       | 2.8                              |           |           |
| 5.5                   | 1798                | 254.93     | 1.57                             |          |           | 229                   | 43                  | 6.11       | 2.9                              |           |           |
| 6.1                   | 1612                | 228.57     | 1.75                             | FA 87    | 4         | 266                   | 37                  | 5.27       | 3.2                              |           |           |
| 7.1                   | 1388                | 196.85     | 2.0                              | FAF87    | 4         | 283                   | 35                  | 4.95       | 3.2                              |           |           |
| 7.8                   | 1262                | 178.95     | 2.2                              | F 87     | 4         | 329                   | 30                  | 4.26       | 3.4                              |           |           |
| 8.8                   | 1126                | 159.61     | 2.5                              | FF 87    | 4         | 367                   | 27                  | 3.81       | 3.7                              |           |           |
| 10                    | 946                 | 134.16     | 3.0                              |          |           |                       |                     |            |                                  |           |           |
| 11                    | 870                 | 123.29     | 3.2                              |          |           |                       |                     |            |                                  |           |           |
|                       |                     |            |                                  |          |           | <b>1.5kW</b>          |                     |            |                                  |           |           |
| 7.1                   | 1399                | 198.31     | 1.01                             |          |           | 0.58                  | 22102               | 2427       | 0.77                             |           |           |
| 7.4                   | 1329                | 188.40     | 1.06                             |          |           | 0.64                  | 19898               | 2185       | 0.85                             |           |           |
| 8.4                   | 1174                | 166.47     | 1.20                             |          |           | 0.72                  | 17703               | 1944       | 0.96                             |           |           |
| 9.8                   | 1003                | 142.27     | 1.41                             | FA 77    | 4         | 0.84                  | 15244               | 1674       | 1.11                             | FA 157R97 | 4         |
| 11                    | 920                 | 130.42     | 1.53                             | FAF77    | 4         | 1.1                   | 11911               | 1308       | 1.42                             | FAF157R97 | 4         |
| 12                    | 807                 | 114.45     | 1.75                             | F 77     | 4         | 1.2                   | 10646               | 1169       | 1.59                             | F 157R97  | 4         |
| 13                    | 765                 | 108.46     | 1.84                             | FF 77    | 4         | 1.5                   | 8679                | 953        | 1.95                             | FF 157R97 | 4         |
| 15                    | 670                 | 94.93      | 2.1                              |          |           | 1.7                   | 7695                | 845        | 2.2                              |           |           |
| 16                    | 603                 | 85.52      | 2.3                              |          |           | 3.1                   | 4062                | 446        | 4.2                              |           |           |
| 19                    | 529                 | 75.02      | 2.7                              |          |           | 4.7                   | 2741                | 301        | 6.2                              |           |           |
|                       |                     |            |                                  |          |           | 0.86                  | 14744               | 1619       | 0.77                             |           |           |
| 12                    | 853                 | 120.79     | 0.9                              |          |           | 1.0                   | 12758               | 1401       | 0.88                             | FA 127R77 | 4         |
| 13                    | 769                 | 109.04     | 1.0                              |          |           | 1.1                   | 11201               | 1230       | 1.01                             | FAF127R77 | 4         |
| 15                    | 677                 | 95.94      | 1.1                              |          |           | 1.3                   | 9881                | 1085       | 1.14                             | F 127R77  | 4         |
| 16                    | 639                 | 90.59      | 1.2                              |          |           | 1.5                   | 8533                | 937        | 1.32                             | FF 127R77 | 4         |
| 18                    | 550                 | 77.97      | 1.4                              | FA 67    | 4         | 1.7                   | 7531                | 827        | 1.50                             |           |           |
| 21                    | 466                 | 66.13      | 1.7                              | FAF67    | 4         | 1.9                   | 6675                | 733        | 1.69                             |           |           |
| 23                    | 421                 | 59.70      | 1.8                              | F 67     | 4         | 2.2                   | 5828                | 640        | 1.94                             |           |           |
| 27                    | 371                 | 52.53      | 2.1                              | FF 67    | 4         |                       |                     |            |                                  |           |           |
| 28                    | 350                 | 49.60      | 2.2                              |          |           | 1.5                   | 8651                | 950        | 0.83                             | FA 107R77 | 4         |
| 33                    | 298                 | 42.23      | 2.6                              |          |           | 1.7                   | 7595                | 834        | 0.95                             | FAF107R77 | 4         |
| 36                    | 271                 | 38.38      | 2.7                              |          |           | 1.9                   | 6702                | 736        | 1.08                             | F 107R77  | 4         |
| 42                    | 234                 | 33.24      | 3.0                              |          |           | 2.2                   | 5710                | 627        | 1.26                             | FF 107R77 | 4         |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>1.5kW</b>          |                     |            |                         |              |           | <b>1.5kW</b>          |                     |            |                         |              |           |
| 2.5                   | 5100                | 560        | 1.42                    | FA 107R77    | 4         | 15                    | 871                 | 90.59      | 0.88                    |              |           |
| 2.9                   | 4453                | 489        | 1.62                    | FAF107R77    | 4         | 18                    | 750                 | 77.97      | 1.03                    |              |           |
| 3.3                   | 3889                | 427        | 1.86                    | F 107R77     | 4         | 21                    | 636                 | 66.13      | 1.21                    |              |           |
| 3.8                   | 3369                | 370        | 2.1                     | FF 107R77    | 4         | 23                    | 574                 | 59.70      | 1.34                    |              |           |
| 2.6                   | 4863                | 534        | 0.83                    | FA 97R57     | 4         | 27                    | 505                 | 52.53      | 1.53                    | FA 67        | 4         |
| 3.0                   | 4298                | 472        | 0.94                    | FAF97R57     | 4         | 28                    | 477                 | 49.60      | 1.62                    | FAF67        | 4         |
| 3.4                   | 3734                | 410        | 1.08                    | F 97R57      | 4         | 33                    | 406                 | 42.23      | 1.90                    | F 67         | 4         |
| 3.8                   | 3342                | 367        | 1.21                    | FF 97R57     | 4         | 36                    | 369                 | 38.38      | 1.99                    | FF 67        | 4         |
| 4.1                   | 3142                | 345        | 0.90                    | FA 87R57     | 4         | 39                    | 349                 | 36.30      | 2.2                     |              |           |
| 4.7                   | 2732                | 300        | 1.03                    | FAF87R57     | 4         | 44                    | 309                 | 32.08      | 2.5                     |              |           |
| 5.6                   | 2268                | 249        | 1.24                    | F 87R57      | 4         | 51                    | 264                 | 27.41      | 2.9                     |              |           |
|                       |                     |            |                         | FF 87R57     | 4         | 56                    | 242                 | 25.13      | 3.2                     |              |           |
| 2.7                   | 4981                | 255.25     | 1.48                    | FA 107       | 8         | 24                    | 568                 | 59.10      | 0.99                    | FA 57        | 4         |
| 3.2                   | 4197                | 215.04     | 1.76                    | FAF107       | 8         | 28                    | 483                 | 50.22      | 1.17                    | FAF57        | 4         |
| 3.5                   | 3890                | 199.31     | 1.89                    | F 107        | 8         | 31                    | 431                 | 44.84      | 1.31                    | F 57         | 4         |
| 3.9                   | 3486                | 178.64     | 2.1                     | FF 107       | 8         | 37                    | 368                 | 38.30      | 1.53                    | FF 57        | 4         |
|                       |                     |            |                         |              |           | 39                    | 345                 | 35.87      | 1.63                    |              |           |
|                       |                     |            |                         |              |           | 46                    | 291                 | 30.22      | 1.94                    |              |           |
| 3.6                   | 3736                | 255.25     | 2.0                     | FA 107       | 6         | 33                    | 409                 | 42.55      | 0.92                    |              |           |
| 4.3                   | 3147                | 215.04     | 2.3                     | FAF107       | 6         | 39                    | 350                 | 36.34      | 1.08                    |              |           |
| 4.6                   | 2917                | 199.31     | 2.5                     | F 107        | 6         | 41                    | 327                 | 34.04      | 1.15                    |              |           |
| 5.2                   | 2615                | 178.64     | 2.8                     | FF 107       | 6         | 46                    | 295                 | 30.64      | 1.28                    |              |           |
| 3.3                   | 4049                | 276.64     | 1.00                    | FA 97        | 6         | 48                    | 280                 | 29.11      | 1.34                    | FA 47        | 4         |
| 3.6                   | 3729                | 254.79     | 1.08                    | FAF97        | 6         | 49                    | 276                 | 28.67      | 1.36                    | FAF47        | 4         |
| 4.1                   | 3313                | 226.34     | 1.22                    | F 97         | 6         | 55                    | 246                 | 25.54      | 1.53                    | F 47         | 4         |
| 4.9                   | 2759                | 188.50     | 1.47                    | FF 97        | 6         | 65                    | 208                 | 21.66      | 1.80                    | FF 47        | 4         |
| 5.2                   | 2574                | 178.83     | 1.57                    |              |           | 72                    | 188                 | 19.56      | 2.0                     |              |           |
| 5.1                   | 2661                | 276.64     | 1.52                    | FA 97        | 4         | 81                    | 166                 | 17.21      | 2.3                     |              |           |
| 5.5                   | 2451                | 254.79     | 1.65                    | FAF97        | 4         | 86                    | 156                 | 16.25      | 2.4                     |              |           |
| 6.2                   | 2177                | 226.34     | 1.86                    | F 97         | 4         | 101                   | 133                 | 13.83      | 2.8                     |              |           |
| 7.4                   | 1813                | 188.50     | 2.2                     | FF 97        | 4         |                       |                     |            |                         |              |           |
| 8.0                   | 1691                | 178.83     | 2.4                     |              |           | 68                    | 198                 | 20.57      | 0.95                    |              |           |
| 5.2                   | 2615                | 271.92     | 1.08                    |              |           | 73                    | 185                 | 19.27      | 1.01                    |              |           |
| 5.5                   | 2452                | 254.93     | 1.15                    |              |           | 82                    | 164                 | 17.03      | 1.15                    |              |           |
| 6.1                   | 2198                | 228.57     | 1.28                    | FA 87        | 4         | 98                    | 138                 | 14.33      | 1.36                    | FA 37        | 4         |
| 7.1                   | 1893                | 196.85     | 1.49                    | FAF87        | 4         | 109                   | 124                 | 12.87      | 1.52                    | FAF37        | 4         |
| 7.8                   | 1721                | 178.95     | 1.63                    | F 87         | 4         | 126                   | 107                 | 11.08      | 1.68                    | F 37         | 4         |
| 8.8                   | 1535                | 159.61     | 1.84                    | FF 87        | 4         | 134                   | 100                 | 10.42      | 1.74                    | FF 37        | 4         |
| 10                    | 1290                | 134.16     | 2.2                     |              |           | 156                   | 86                  | 8.97       | 1.91                    |              |           |
| 13                    | 1053                | 109.49     | 2.7                     |              |           | 175                   | 77                  | 8.01       | 2.1                     |              |           |
| 14                    | 942                 | 97.89      | 3.0                     |              |           | 206                   | 66                  | 6.81       | 2.0                     |              |           |
|                       |                     |            |                         |              |           | 229                   | 59                  | 6.11       | 2.2                     |              |           |
|                       |                     |            |                         |              |           | 266                   | 51                  | 5.27       | 2.3                     |              |           |
|                       |                     |            |                         |              |           | 283                   | 48                  | 4.95       | 2.4                     |              |           |
|                       |                     |            |                         |              |           | 329                   | 41                  | 4.26       | 2.5                     |              |           |
|                       |                     |            |                         |              |           | 367                   | 37                  | 3.81       | 2.7                     |              |           |
| 8.4                   | 1601                | 166.47     | 0.88                    |              |           | <b>2.2kW</b>          |                     |            |                         |              |           |
| 9.8                   | 1368                | 142.27     | 1.03                    |              |           | 1.00                  | 18699               | 1420       | 0.90                    |              |           |
| 11                    | 1254                | 130.42     | 1.12                    |              |           | 1.09                  | 17224               | 1308       | 0.98                    |              |           |
| 12                    | 1101                | 114.45     | 1.28                    |              |           | 1.21                  | 15394               | 1169       | 1.10                    |              |           |
| 13                    | 1043                | 108.46     | 1.35                    |              |           | 1.49                  | 12549               | 953        | 1.35                    |              |           |
| 15                    | 913                 | 94.93      | 1.54                    |              |           | 1.68                  | 11127               | 845        | 1.52                    | FA 157R97    | 4         |
| 16                    | 823                 | 85.52      | 1.71                    | FA 77        | 4         | 1.86                  | 10061               | 764        | 1.68                    | FAF157R97    | 4         |
| 19                    | 722                 | 75.02      | 1.95                    | FAF77        | 4         | 2.1                   | 8954                | 680        | 1.89                    | F 157R97     | 4         |
| 19                    | 695                 | 72.29      | 2.0                     | F 77         | 4         | 2.5                   | 7585                | 576        | 2.2                     | FF 157R97    | 4         |
| 21                    | 637                 | 66.28      | 2.2                     | FF 77        | 4         | 3.2                   | 5873                | 446        | 2.9                     |              |           |
| 24                    | 559                 | 58.16      | 2.5                     |              |           | 4.7                   | 3964                | 301        | 4.3                     |              |           |
| 25                    | 530                 | 55.12      | 2.7                     |              |           | 5.2                   | 3582                | 272        | 4.7                     |              |           |
| 29                    | 464                 | 48.24      | 3.0                     |              |           | 6.1                   | 3042                | 231        | 5.6                     |              |           |
| 32                    | 418                 | 43.46      | 3.4                     |              |           | 7.2                   | 2581                | 196        | 6.6                     |              |           |
| 37                    | 367                 | 38.12      | 3.8                     |              |           | 1.31                  | 14288               | 1085       | 0.79                    | FA 127R77    | 4         |
| 38                    | 352                 | 36.52      | 4.3                     |              |           | 1.52                  | 12339               | 937        | 0.91                    | FAF127R77    | 4         |
| 44                    | 303                 | 31.45      |                         |              |           | 1.72                  | 10890               | 827        | 1.04                    | F 127R77     | 4         |
|                       |                     |            |                         |              |           | 1.94                  | 9652                | 733        | 1.17                    | FF 127R77    | 4         |

| Output speed | Output torque | Ratio  | Service factor | Type                                            | Pole             | Output speed | Output torque | Ratio | Service factor | Type                                            | Pole             |  |  |
|--------------|---------------|--------|----------------|-------------------------------------------------|------------------|--------------|---------------|-------|----------------|-------------------------------------------------|------------------|--|--|
| r/min        | Nm            | i      | f <sub>B</sub> | Type                                            | p                | r/min        | Nm            | i     | f <sub>B</sub> | Type                                            | p                |  |  |
| 2.2kW        |               |        |                |                                                 |                  | 2.2kW        |               |       |                |                                                 |                  |  |  |
| 2.22         | 8428          | 640    | 1.34           | FA 127R77                                       | 4                | 26           | 767           | 55.12 | 1.84           | FA 77<br>FAF77<br>F 77<br>FF 77                 | 4<br>4<br>4<br>4 |  |  |
| 2.62         | 7137          | 542    | 1.58           | FAF127R77                                       | 4                | 29           | 671           | 48.24 | 2.1            |                                                 |                  |  |  |
| 2.90         | 6439          | 489    | 1.75           | F 127R77                                        | 4                | 33           | 604           | 43.46 | 2.1            |                                                 |                  |  |  |
| 3.36         | 5570          | 428    | 2.0            | FF 127R77                                       | 4                | 39           | 509           | 36.52 | 2.3            |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 45           | 438           | 31.45 | 3.0            |                                                 |                  |  |  |
| 2.3          | 8256          | 627    | 0.89           | FA 107R77<br>FAF107R77<br>F 107R77<br>FF 107R77 | 4                | 49           | 400           | 28.59 | 3.4            |                                                 |                  |  |  |
| 2.5          | 7374          | 560    | 1.00           |                                                 | 4                | 56           | 355           | 25.50 | 4.0            |                                                 |                  |  |  |
| 2.9          | 6439          | 489    | 1.14           |                                                 | 4                |              |               |       |                |                                                 |                  |  |  |
| 3.3          | 5623          | 427    | 1.31           |                                                 | 4                |              |               |       |                |                                                 |                  |  |  |
| 3.9          | 4767          | 362    | 1.55           |                                                 | 4                |              |               |       |                |                                                 |                  |  |  |
| 4.3          | 4306          | 327    | 1.71           |                                                 |                  | 24           | 830           | 59.70 | 0.93           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 27           | 731           | 52.53 | 1.06           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 29           | 690           | 49.60 | 1.12           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 34           | 587           | 42.23 | 1.31           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 37           | 534           | 38.38 | 1.37           |                                                 |                  |  |  |
| 3.9          | 4833          | 367    | 0.84           | FA 97R57                                        | 4                | 43           | 462           | 33.24 | 1.50           | FA 67                                           | 4                |  |  |
| 4.9          | 3792          | 288    | 1.07           | FAF97R57                                        | 4                | 44           | 446           | 32.08 | 1.73           | FAF67                                           | 4                |  |  |
| 5.7          | 3253          | 247    | 1.24           | F 97R57                                         | 4                | 52           | 381           | 27.41 | 2.0            | F 67                                            | 4                |  |  |
|              |               |        |                | FF 97R57                                        | 4                | 57           | 350           | 25.13 | 2.2            | FF 67                                           | 4                |  |  |
| 2.8          | 7100          | 255.25 | 1.02           | FA 107                                          | 8                | 64           | 307           | 22.05 | 2.5            |                                                 |                  |  |  |
| 3.3          | 5982          | 215.04 | 1.21           | FAF107                                          | 8                | 68           | 291           | 20.90 | 2.7            |                                                 |                  |  |  |
| 3.6          | 5544          | 199.31 | 1.30           | F 107                                           | 8                | 78           | 254           | 18.29 | 3.0            |                                                 |                  |  |  |
| 4.0          | 4969          | 178.64 | 1.45           | FF 107                                          | 8                |              |               |       |                |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  |              |               |       |                |                                                 |                  |  |  |
| 3.7          | 5363          | 255.25 | 1.35           | FA 107                                          | 6                | 32           | 624           | 44.84 | 0.90           |                                                 |                  |  |  |
| 4.4          | 4518          | 215.04 | 1.60           | FAF107                                          | 6                | 37           | 533           | 38.30 | 1.06           |                                                 |                  |  |  |
| 4.7          | 4188          | 199.31 | 1.72           | F 107                                           | 6                | 40           | 499           | 35.87 | 1.13           |                                                 |                  |  |  |
| 5.3          | 3753          | 178.64 | 1.92           | FF 107                                          | 6                | 47           | 420           | 30.22 | 1.32           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 57           | 347           | 24.96 | 1.56           |                                                 |                  |  |  |
| 5.6          | 3550          | 255.25 | 2.0            | FA 107                                          | 4                | 67           | 294           | 21.17 | 1.92           | FA 57                                           | 4                |  |  |
| 6.6          | 2991          | 215.04 | 2.4            | FAF107                                          | 4                | 74           | 266           | 19.11 | 2.1            | FAF57                                           | 4                |  |  |
| 7.1          | 2772          | 199.31 | 2.6            | F 107                                           | 4                | 84           | 234           | 16.81 | 2.4            | F 57                                            | 4                |  |  |
| 7.9          | 2485          | 178.64 | 2.9            | FF 107                                          | 4                | 89           | 221           | 15.88 | 2.6            | FF 57                                           | 4                |  |  |
| 4.2          | 4755          | 226.34 | 0.85           | FA 97                                           | 6                | 56           | 355           | 25.54 | 1.06           |                                                 |                  |  |  |
| 5.0          | 3960          | 188.50 | 1.02           | FAF97                                           | 6                | 66           | 301           | 21.66 | 1.25           |                                                 |                  |  |  |
| 5.3          | 3694          | 175.83 | 1.09           | F 97                                            | 6                | 73           | 272           | 19.56 | 1.38           |                                                 |                  |  |  |
| 6.0          | 3302          | 157.16 | 1.22           | FF 97                                           | 6                | 83           | 239           | 17.21 | 1.57           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 87           | 226           | 16.25 | 1.66           |                                                 |                  |  |  |
| 5.1          | 3848          | 276.64 | 1.05           | FA 97<br>FAF97<br>F 97<br>FF 97                 | 4<br>4<br>4<br>4 | 103          | 192           | 13.83 | 1.95           | F 47                                            | 4                |  |  |
| 5.6          | 3544          | 254.79 | 1.14           |                                                 |                  | 113          | 175           | 12.57 | 2.2            | FF 47                                           | 4                |  |  |
| 6.3          | 3148          | 226.34 | 1.28           |                                                 |                  | 130          | 151           | 10.89 | 2.5            |                                                 |                  |  |  |
| 7.5          | 2622          | 188.50 | 1.54           |                                                 |                  | 156          | 126           | 9.08  | 2.5            |                                                 |                  |  |  |
| 8.1          | 2445          | 175.83 | 1.65           |                                                 |                  |              |               |       |                |                                                 |                  |  |  |
| 9.0          | 2186          | 157.16 | 1.85           |                                                 |                  | 99           | 199           | 14.33 | 0.94           |                                                 |                  |  |  |
| 10           | 1968          | 141.47 | 2.1            |                                                 |                  | 110          | 179           | 12.87 | 1.05           |                                                 |                  |  |  |
| 11           | 1782          | 128.12 | 2.3            |                                                 |                  | 128          | 154           | 11.08 | 1.16           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 136          | 145           | 10.42 | 1.20           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 158          | 125           | 8.97  | 1.32           |                                                 |                  |  |  |
| 7.2          | 2738          | 196.85 | 1.03           | FA 87<br>FAF87<br>F 87<br>FF 87                 | 4<br>4<br>4<br>4 | 177          | 111           | 8.01  | 1.39           | FA 37                                           | 4                |  |  |
| 7.9          | 2489          | 178.95 | 1.13           |                                                 |                  | 209          | 95            | 6.81  | 1.43           | FAF37                                           | 4                |  |  |
| 8.9          | 2220          | 159.61 | 1.27           |                                                 |                  | 232          | 85            | 6.11  | 1.49           | F 37                                            | 4                |  |  |
| 11           | 1866          | 134.16 | 1.51           |                                                 |                  | 269          | 73            | 5.27  | 1.60           | FF 37                                           | 4                |  |  |
| 12           | 1715          | 123.29 | 1.64           |                                                 |                  | 287          | 69            | 4.95  | 1.64           |                                                 |                  |  |  |
| 13           | 1523          | 109.49 | 1.85           |                                                 |                  | 333          | 59            | 4.26  | 1.75           |                                                 |                  |  |  |
| 15           | 1361          | 97.89  | 2.1            |                                                 |                  | 373          | 53            | 3.81  | 1.86           |                                                 |                  |  |  |
| 16           | 1224          | 88.01  | 2.3            |                                                 |                  |              |               |       |                |                                                 |                  |  |  |
| 19           | 1062          | 76.39  | 2.7            |                                                 |                  |              |               |       |                |                                                 |                  |  |  |
| 21           | 951           | 68.40  | 3.0            |                                                 |                  |              |               |       |                |                                                 |                  |  |  |
| 25           | 789           | 56.75  | 3.6            |                                                 |                  | 1.2          | 20991         | 1169  | 0.81           | FA 157R97<br>FAF157R97<br>F 157R97<br>FF 157R97 | 4<br>4<br>4<br>4 |  |  |
| 28           | 699           | 50.29  | 4.0            |                                                 |                  | 1.5          | 17113         | 953   | 0.99           |                                                 |                  |  |  |
| 31           | 629           | 45.22  | 4.2            |                                                 |                  | 1.7          | 15173         | 845   | 1.12           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 1.9          | 13719         | 764   | 1.23           |                                                 |                  |  |  |
|              |               |        |                |                                                 |                  | 2.1          | 12211         | 680   | 1.39           |                                                 |                  |  |  |
| 12           | 1592          | 114.45 | 0.89           | FA 77<br>FAF77<br>F 77<br>FF 77                 | 4<br>4<br>4<br>4 | 2.5          | 10343         | 576   | 1.64           |                                                 |                  |  |  |
| 13           | 1508          | 108.46 | 0.93           |                                                 |                  |              |               | 3.2   | 8009           | 446                                             | 2.1              |  |  |
| 15           | 1320          | 94.93  | 1.07           |                                                 |                  |              |               | 4.7   | 5405           | 304                                             | 3.1              |  |  |
| 17           | 1189          | 85.52  | 1.19           |                                                 |                  |              |               | 5.2   | 4884           | 272                                             | 3.5              |  |  |
| 19           | 1043          | 75.02  | 1.35           |                                                 |                  |              |               | 6.1   | 4148           | 231                                             | 4.1              |  |  |
| 21           | 922           | 66.28  | 1.53           |                                                 |                  | 7.2          | 3520          | 196   | 4.8            |                                                 |                  |  |  |
| 24           | 809           | 58.16  | 1.74           |                                                 |                  |              |               |       |                |                                                 |                  |  |  |



| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>3kW</b>            |                     |            |                         |              |           | <b>3kW</b>            |                     |            |                         |              |           |
| 1.9                   | 13162               | 733        | 0.86                    | FA 127R77    | 4         | 57                    | 473                 | 24.96      | 1.19                    |              |           |
| 2.2                   | 11492               | 640        | 0.98                    | FAF127R77    | 4         | 67                    | 401                 | 21.17      | 1.40                    |              |           |
| 2.6                   | 9733                | 542        | 1.16                    | F 127R77     | 4         | 74                    | 362                 | 19.11      | 1.56                    | FA 57        | 4         |
| 2.9                   | 8781                | 489        | 1.28                    | FF 127R77    | 4         | 84                    | 319                 | 16.81      | 1.77                    | FAF57        | 4         |
|                       |                     |            |                         |              |           | 89                    | 301                 | 15.88      | 1.87                    | F 57         | 4         |
| 3.3                   | 7668                | 427        | 0.96                    | FA 107R77    | 4         | 105                   | 256                 | 13.52      | 2.2                     | FF 57        | 4         |
| 3.9                   | 6500                | 362        | 1.13                    | FAF107R77    | 4         | 116                   | 233                 | 12.29      | 2.4                     |              |           |
| 4.3                   | 5872                | 327        | 1.26                    | F 107R77     | 4         | 133                   | 202                 | 10.64      | 2.8                     |              |           |
| 5.0                   | 5118                | 285        | 1.44                    | FF 107R77    | 4         |                       |                     |            |                         |              |           |
| 3.8                   | 7161                | 255.25     | 1.03                    | FA 107       | 6         | 73                    | 371                 | 19.56      | 1.01                    |              |           |
| 4.5                   | 6033                | 215.04     | 1.22                    | FAF107       | 6         | 83                    | 326                 | 17.21      | 1.15                    | FA 47        | 4         |
| 4.8                   | 5591                | 199.31     | 1.32                    | F 107        | 6         | 87                    | 308                 | 16.25      | 1.22                    | FAF47        | 4         |
| 5.4                   | 5011                | 178.64     | 1.47                    | FF 107       | 6         | 103                   | 262                 | 13.83      | 1.43                    | F 47         | 4         |
|                       |                     |            |                         |              |           | 113                   | 238                 | 12.57      | 1.58                    | FF 47        | 4         |
| 5.6                   | 4841                | 255.25     | 1.52                    | FA 107       | 4         | 130                   | 207                 | 10.89      | 1.80                    |              |           |
| 6.6                   | 4078                | 215.04     | 1.81                    | FAF107       | 4         | 156                   | 172                 | 9.08       | 1.82                    |              |           |
| 7.1                   | 3780                | 199.31     | 1.95                    | F 107        | 4         |                       |                     |            |                         |              |           |
| 7.9                   | 3388                | 178.64     | 2.2                     | FF 107       | 4         | 128                   | 210                 | 11.08      | 0.85                    |              |           |
| 8.8                   | 3059                | 161.28     | 2.4                     |              |           | 136                   | 198                 | 10.42      | 0.88                    |              |           |
|                       |                     |            |                         |              |           | 158                   | 170                 | 8.97       | 0.97                    |              |           |
| 6.3                   | 4293                | 226.34     | 0.94                    |              |           | 177                   | 152                 | 8.01       | 1.02                    | FA 37        | 4         |
| 7.5                   | 3575                | 188.50     | 1.13                    | FA 97        | 4         | 209                   | 129                 | 6.81       | 1.05                    | FAF37        | 4         |
| 8.1                   | 3335                | 175.83     | 1.21                    | FAF97        | 4         | 232                   | 116                 | 6.11       | 1.10                    | F 37         | 4         |
| 9.0                   | 2981                | 157.16     | 1.36                    | F 97         | 4         | 269                   | 100                 | 5.27       | 1.18                    | FF 37        | 4         |
| 10                    | 2683                | 141.47     | 1.51                    | FF 97        | 4         | 287                   | 94                  | 4.95       | 1.20                    |              |           |
| 11                    | 2430                | 128.12     | 1.66                    |              |           | 333                   | 81                  | 4.26       | 1.28                    |              |           |
| 12                    | 2155                | 113.61     | 1.88                    |              |           | 373                   | 72                  | 3.81       | 1.37                    |              |           |
| 14                    | 1948                | 102.72     | 2.1                     |              |           |                       |                     |            |                         |              |           |
| 16                    | 1721                | 90.77      | 2.3                     |              |           |                       |                     |            |                         |              |           |
| 11                    | 2544                | 134.16     | 1.11                    |              |           | <b>4kW</b>            |                     |            |                         |              |           |
| 12                    | 2338                | 123.29     | 1.21                    |              |           | 1.7                   | 19950               | 845        | 0.85                    |              |           |
| 13                    | 2077                | 109.49     | 1.36                    |              |           | 1.9                   | 18038               | 764        | 0.94                    |              |           |
| 15                    | 1857                | 97.89      | 1.52                    | FA 87        | 4         | 2.1                   | 16055               | 680        | 1.05                    | FA 157R97    | 4         |
| 16                    | 1669                | 88.01      | 1.69                    | FAF87        | 4         | 2.5                   | 13599               | 576        | 1.24                    | FAF157R97    | 4         |
| 19                    | 1449                | 76.39      | 1.9                     | F 87         | 4         | 3.2                   | 10530               | 446        | 1.61                    | F 157R97     | 4         |
| 21                    | 1297                | 68.40      | 2.2                     | FF 87        | 4         | 4.8                   | 7107                | 304        | 2.4                     | FF 157R97    | 4         |
| 25                    | 1076                | 56.75      | 2.6                     |              |           | 5.3                   | 6422                | 272        | 2.6                     |              |           |
| 28                    | 954                 | 50.29      | 2.9                     |              |           | 6.2                   | 5454                | 231        | 3.1                     |              |           |
|                       |                     |            |                         |              |           | 7.3                   | 4628                | 196        | 3.7                     |              |           |
| 17                    | 1622                | 85.52      | 0.87                    |              |           | 2.7                   | 12796               | 542        | 0.88                    | FA 127R77    | 4         |
| 19                    | 1423                | 75.02      | 0.99                    |              |           | 2.9                   | 11545               | 489        | 0.98                    | FAF127R77    | 4         |
| 21                    | 1257                | 66.28      | 1.12                    |              |           | 3.4                   | 9987                | 423        | 1.13                    | F 127R77     | 4         |
| 24                    | 1103                | 58.16      | 1.28                    |              |           | 3.9                   | 8759                | 371        | 1.29                    | FF 127R77    | 4         |
| 26                    | 1045                | 55.12      | 1.35                    | FA 77        | 4         |                       |                     |            |                         |              |           |
| 29                    | 915                 | 48.24      | 1.5                     | FAF77        | 4         | 4.4                   | 7720                | 327        | 0.94                    | FA 107R77    | 4         |
| 33                    | 824                 | 43.46      | 1.54                    | F 77         | 4         | 5.1                   | 6729                | 285        | 1.07                    | FAF107R77    | 4         |
| 37                    | 723                 | 38.12      | 1.71                    | FF 77        | 4         | 6.5                   | 5218                | 221        | 1.38                    | F 107R77     | 4         |
| 39                    | 694                 | 36.52      | 1.95                    |              |           |                       |                     |            |                         |              |           |
| 45                    | 598                 | 31.45      | 2.2                     |              |           |                       |                     |            |                         |              |           |
| 49                    | 545                 | 28.59      | 2.5                     |              |           | 4.2                   | 8594                | 172.33     | 1.31                    | FA 127       | 8         |
| 56                    | 484                 | 25.50      | 2.9                     |              |           | 4.6                   | 7721                | 154.81     | 1.46                    | FAF127       | 8         |
| 66                    | 406                 | 21.43      | 3.5                     |              |           | 5.7                   | 6269                | 125.71     | 1.80                    | F 127        | 8         |
|                       |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 33                    | 819                 | 43.20      | 0.94                    |              |           | 5.6                   | 6365                | 255.25     | 1.16                    |              |           |
| 36                    | 745                 | 39.26      | 0.98                    |              |           | 6.7                   | 5363                | 215.04     | 1.37                    |              |           |
| 42                    | 645                 | 34.01      | 1.08                    |              |           | 7.2                   | 4970                | 199.31     | 1.48                    | FA 107       | 4         |
| 44                    | 608                 | 32.08      | 1.27                    | FA 67        | 4         | 8.1                   | 4455                | 178.64     | 1.65                    | FAF107       | 4         |
| 52                    | 520                 | 27.41      | 1.48                    | FAF67        | 4         | 8.9                   | 4022                | 161.28     | 1.83                    | F 107        | 4         |
| 57                    | 477                 | 25.13      | 1.62                    | F 67         | 4         | 9.8                   | 3653                | 146.49     | 2.02                    | FF 107       | 4         |
| 64                    | 418                 | 22.05      | 1.84                    | FF 67        | 4         | 11                    | 3241                | 129.97     | 2.3                     |              |           |
| 68                    | 396                 | 20.90      | 1.94                    |              |           | 12                    | 2941                | 117.94     | 2.5                     |              |           |
| 78                    | 347                 | 18.29      | 2.2                     |              |           | 14                    | 2528                | 101.38     | 2.9                     |              |           |
| 86                    | 313                 | 16.48      | 2.5                     |              |           |                       |                     |            |                         |              |           |
| 98                    | 274                 | 14.46      | 2.8                     |              |           |                       |                     |            |                         |              |           |



| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>f <sub>B</sub> | Type  | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>f <sub>B</sub> | Type      | Pole<br>p |
|-----------------------|---------------------|------------|----------------------------------|-------|-----------|-----------------------|---------------------|------------|----------------------------------|-----------|-----------|
| <b>4kW</b>            |                     |            |                                  |       |           | <b>5.5kW</b>          |                     |            |                                  |           |           |
| 8.2                   | 4385                | 175.83     | 0.92                             |       |           | 2.5                   | 18699               | 576        | 0.90                             |           |           |
| 9.2                   | 3919                | 157.16     | 1.03                             |       |           | 2.9                   | 16329               | 503        | 1.04                             |           |           |
| 10                    | 3528                | 141.47     | 1.15                             |       |           | 3.2                   | 14479               | 446        | 1.17                             | FA 157R97 | 4         |
| 11                    | 3195                | 128.12     | 1.27                             |       |           | 4.1                   | 11460               | 353        | 1.48                             | FAF157R97 | 4         |
| 13                    | 2833                | 113.61     | 1.43                             | FA 97 | 4         | 4.8                   | 9771                | 301        | 1.73                             | F 157R97  | 4         |
| 14                    | 2561                | 102.72     | 1.58                             | FAF97 | 4         | 5.3                   | 8830                | 272        | 1.92                             | FF 157R97 | 4         |
| 15                    | 2427                | 97.31      | 1.67                             | F 97  | 4         | 6.2                   | 7499                | 231        | 2.3                              |           |           |
| 16                    | 2263                | 90.77      | 1.79                             | FF 97 | 4         | 7.1                   | 6558                | 202        | 2.6                              |           |           |
| 18                    | 2023                | 81.13      | 2.0                              |       |           | 7.3                   | 6363                | 196        | 2.7                              |           |           |
| 20                    | 1821                | 73.03      | 2.2                              |       |           |                       |                     |            |                                  |           |           |
| 22                    | 1649                | 66.14      | 2.5                              |       |           | 3.5                   | 13537               | 417        | 0.83                             |           |           |
|                       |                     |            |                                  |       |           | 3.9                   | 12109               | 373        | 0.93                             | FA 127R87 | 4         |
| 13                    | 2730                | 109.49     | 1.03                             |       |           | 4.6                   | 10129               | 312        | 1.11                             | FAF127R87 | 4         |
| 15                    | 2441                | 97.89      | 1.16                             |       |           | 4.9                   | 9512                | 293        | 1.19                             | F 127R87  | 4         |
| 16                    | 2195                | 88.01      | 1.28                             | FA 87 | 4         | 5.5                   | 8505                | 262        | 1.33                             | FF 127R87 | 4         |
| 19                    | 1905                | 76.39      | 1.48                             | FAF87 | 4         | 6.4                   | 7337                | 226        | 1.54                             |           |           |
| 21                    | 1706                | 68.40      | 1.65                             | F 87  | 4         |                       |                     |            |                                  |           |           |
| 25                    | 1415                | 56.75      | 1.99                             | FF 87 | 4         | 3.4                   | 13732               | 423        | 0.82                             | FA 127R77 | 4         |
| 29                    | 1254                | 50.29      | 2.2                              |       |           | 3.9                   | 12044               | 371        | 0.94                             | FAF127R77 | 4         |
| 32                    | 1128                | 45.22      | 2.5                              |       |           |                       |                     |            |                                  | F 127R77  | 4         |
|                       |                     |            |                                  |       |           |                       |                     |            |                                  | FF 127R77 | 4         |
| 22                    | 1653                | 66.28      | 0.85                             |       |           | 2.7                   | 18293               | 266.76     | 0.92                             |           |           |
| 25                    | 1450                | 58.16      | 0.97                             |       |           | 3.3                   | 14977               | 218.40     | 1.1                              |           |           |
| 26                    | 1374                | 55.12      | 1.03                             |       |           | 4.0                   | 12149               | 177.17     | 1.4                              |           |           |
| 30                    | 1203                | 48.24      | 1.17                             |       |           | 4.4                   | 11269               | 164.33     | 1.5                              | FA 157    | 8         |
| 33                    | 1084                | 43.46      | 1.30                             |       |           | 5.1                   | 9724                | 141.80     | 1.7                              | FAF157    | 8         |
| 38                    | 951                 | 38.12      | 1.48                             | FA 77 | 4         | 5.8                   | 8581                | 125.14     | 2.0                              | F 157     | 8         |
| 43                    | 839                 | 33.64      | 1.68                             | FAF77 | 4         | 6.6                   | 7440                | 108.49     | 2.3                              | FF 157    | 8         |
| 48                    | 744                 | 29.82      | 1.90                             | F 77  | 4         | 7.5                   | 6619                | 96.53      | 2.6                              |           |           |
| 50                    | 717                 | 28.59      | 1.97                             | FF 77 | 4         | 8.3                   | 5959                | 86.90      | 2.8                              |           |           |
| 56                    | 636                 | 25.50      | 2.2                              |       |           | 9.1                   | 5450                | 79.47      | 3.1                              |           |           |
| 57                    | 635                 | 25.47      | 2.2                              |       |           | 10                    | 4742                | 69.15      | 3.6                              |           |           |
| 67                    | 534                 | 21.43      | 2.6                              |       |           | 4.2                   | 11817               | 172.33     | 0.95                             | FA 127    | 8         |
| 73                    | 491                 | 19.70      | 2.9                              |       |           | 4.7                   | 10616               | 154.81     | 1.06                             | FAF127    | 8         |
|                       |                     |            |                                  |       |           | 5.7                   | 8620                | 125.71     | 1.31                             | F 127     | 8         |
| 53                    | 683                 | 27.41      | 1.13                             |       |           | 6.2                   | 7555                | 116.00     | 1.42                             | FF 127    | 8         |
| 57                    | 627                 | 25.13      | 1.23                             |       |           |                       |                     |            |                                  |           |           |
| 65                    | 550                 | 22.05      | 1.40                             |       |           | 6.7                   | 7373                | 215.04     | 0.98                             |           |           |
| 69                    | 521                 | 20.90      | 1.48                             |       |           | 7.2                   | 6834                | 199.31     | 1.06                             | FA 107    | 4         |
| 79                    | 456                 | 18.29      | 1.69                             |       |           | 8.1                   | 6125                | 178.64     | 1.18                             | FAF107    | 4         |
| 87                    | 411                 | 16.48      | 1.88                             |       |           | 8.9                   | 5530                | 161.28     | 1.31                             | F 107     | 4         |
| 100                   | 361                 | 14.46      | 2.1                              | FA 67 | 4         | 9.8                   | 5023                | 146.49     | 1.44                             | FF 107    | 4         |
| 113                   | 318                 | 12.76      | 2.4                              | FAF67 | 4         | 11                    | 4456                | 129.97     | 1.62                             |           |           |
| 127                   | 282                 | 11.31      | 2.7                              | F 67  | 4         |                       |                     |            |                                  |           |           |
| 149                   | 241                 | 9.66       | 3.2                              | FF 67 | 4         | 12                    | 4044                | 117.94     | 1.79                             | FA 107    | 4         |
| 150                   | 240                 | 9.61       | 2.1                              |       |           | 14                    | 3476                | 101.38     | 2.1                              | FAF107    | 4         |
| 158                   | 227                 | 9.11       | 2.4                              |       |           | 16                    | 3171                | 92.47      | 2.3                              | F 107     | 4         |
| 181                   | 199                 | 7.97       | 2.9                              |       |           | 16                    | 3034                | 88.49      | 2.4                              | FF 107    | 4         |
| 201                   | 179                 | 7.18       | 3.3                              |       |           | 17                    | 2880                | 83.99      | 2.5                              |           |           |
| 229                   | 157                 | 6.30       | 3.6                              |       |           |                       |                     |            |                                  |           |           |
| 259                   | 139                 | 5.56       | 4.0                              |       |           | 11                    | 4393                | 128.12     | 0.92                             |           |           |
| 292                   | 123                 | 4.93       | 4.3                              |       |           | 13                    | 3895                | 113.61     | 1.04                             | FA 97     | 4         |
| 342                   | 105                 | 4.21       | 4.5                              |       |           | 14                    | 3522                | 102.72     | 1.15                             | FAF97     | 4         |
|                       |                     |            |                                  |       |           | 15                    | 3336                | 97.31      | 1.21                             | F 97      | 4         |
| 68                    | 528                 | 21.17      | 1.07                             |       |           | 16                    | 3112                | 90.77      | 1.30                             | FF 97     | 4         |
| 75                    | 477                 | 19.11      | 1.18                             |       |           | 17                    | 2985                | 87.06      | 1.35                             |           |           |
| 86                    | 419                 | 16.81      | 1.35                             |       |           | 18                    | 2782                | 81.13      | 1.45                             |           |           |
| 91                    | 396                 | 15.88      | 1.42                             |       |           | 19                    | 2620                | 76.40      | 1.54                             |           |           |
| 107                   | 337                 | 13.52      | 1.67                             | FA 57 | 4         | 21                    | 2504                | 73.03      | 1.68                             |           |           |
| 117                   | 306                 | 12.29      | 1.84                             | FAF57 | 4         | 22                    | 2268                | 66.14      | 1.78                             |           |           |
| 135                   | 265                 | 10.64      | 2.1                              | F 57  | 4         | 25                    | 2011                | 58.65      | 2.0                              |           |           |
| 155                   | 232                 | 9.31       | 1.70                             | FF 57 | 4         | 27                    | 1818                | 53.03      | 2.2                              |           |           |
| 176                   | 204                 | 8.19       | 1.93                             |       |           |                       |                     |            |                                  |           |           |
| 186                   | 193                 | 7.73       | 2.0                              |       |           | 16                    | 3018                | 88.01      | 0.93                             | FA 87     | 4         |
| 219                   | 164                 | 6.58       | 2.4                              |       |           | 19                    | 2619                | 76.39      | 1.08                             | FAF87     | 4         |
| 241                   | 149                 | 5.98       | 2.6                              |       |           | 21                    | 2345                | 68.40      | 1.20                             | F 87      | 4         |
| 278                   | 129                 | 5.18       | 3.0                              |       |           | 25                    | 1946                | 56.75      | 1.45                             | FF 87     | 4         |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>5.5kW</b>          |                     |            |                         |              |           | <b>7.5kW</b>          |                     |            |                         |              |           |
| 29                    | 1724                | 50.29      | 1.64                    |              |           | 8.4                   | 8023                | 85.80      | 2.1                     |              |           |
| 32                    | 1550                | 45.22      | 1.82                    |              |           | 9.2                   | 7337                | 78.46      | 2.3                     | FA 157       | 8         |
| 37                    | 1346                | 39.25      | 2.1                     | FA 87        | 4         | 10.5                  | 6385                | 68.28      | 2.7                     | FAF157       | 8         |
| 41                    | 1205                | 35.14      | 2.3                     | FAF87        | 4         | 12                    | 5634                | 60.25      | 3.0                     | F 157        | 8         |
| 49                    | 1000                | 29.16      | 2.8                     | F 87         | 4         | 13.8                  | 4885                | 52.24      | 3.5                     | FF 157       | 8         |
| 42                    | 1170                | 34.11      | 2.1                     | FF 87        | 4         | 15.5                  | 4346                | 46.48      | 3.9                     |              |           |
| 51                    | 974                 | 28.41      | 2.4                     |              |           | 18                    | 3746                | 40.06      | 4.5                     |              |           |
| 54                    | 909                 | 26.50      | 3.1                     |              |           |                       |                     |            |                         |              |           |
| 61                    | 812                 | 23.68      | 3.5                     |              |           |                       |                     |            |                         |              |           |
| 30                    | 1654                | 48.24      | 0.85                    |              |           | 3.6                   | 18709               | 266.76     | 0.90                    |              |           |
| 33                    | 1490                | 43.46      | 0.95                    |              |           | 4.4                   | 15317               | 218.40     | 1.11                    |              |           |
| 38                    | 1307                | 38.12      | 1.08                    |              |           | 5.4                   | 12425               | 177.17     | 1.36                    |              |           |
| 43                    | 1153                | 33.64      | 1.22                    |              |           | 5.8                   | 11525               | 164.33     | 1.47                    |              |           |
| 48                    | 1022                | 29.82      | 1.38                    | FA 77        | 4         | 6.8                   | 9945                | 141.80     | 1.70                    | FA 157       | 6         |
| 56                    | 874                 | 25.50      | 1.61                    | FAF77        | 4         | 7.7                   | 8776                | 125.14     | 1.93                    | FAF157       | 6         |
| 57                    | 873                 | 25.47      | 1.61                    | F 77         | 4         | 8.8                   | 7609                | 108.49     | 2.2                     | F 157        | 6         |
| 67                    | 735                 | 21.43      | 1.92                    | FF 77        | 4         | 9.9                   | 6770                | 96.53      | 2.5                     | FF 157       | 6         |
| 73                    | 675                 | 19.70      | 2.1                     |              |           | 11                    | 6095                | 86.90      | 2.8                     |              |           |
| 82                    | 600                 | 17.49      | 2.4                     |              |           | 12                    | 5573                | 79.47      | 3.0                     |              |           |
| 92                    | 536                 | 15.64      | 2.6                     |              |           | 14                    | 4850                | 69.15      | 3.5                     |              |           |
| 102                   | 482                 | 14.06      | 2.9                     |              |           | 16                    | 4280                | 61.02      | 4.0                     |              |           |
| 118                   | 418                 | 12.20      | 3.4                     |              |           | 18                    | 3711                | 52.91      | 4.6                     |              |           |
| 65                    | 756                 | 22.05      | 1.02                    |              |           | 5.7                   | 11816               | 126.36     | 0.95                    | FA 127       | 8         |
| 69                    | 717                 | 20.9       | 1.08                    |              |           | 6.2                   | 10776               | 115.24     | 1.05                    | FAF127       | 8         |
| 79                    | 627                 | 18.29      | 1.23                    |              |           | 7.2                   | 9326                | 99.73      | 1.21                    | F 127        | 8         |
| 87                    | 565                 | 16.48      | 1.36                    |              |           | 8.2                   | 8229                | 88.00      | 1.37                    | FF 127       | 8         |
| 100                   | 496                 | 14.46      | 1.50                    |              |           | 5.6                   | 12086               | 172.33     | 0.93                    | FA 127       | 6         |
| 113                   | 438                 | 12.76      | 1.55                    | FA 67        | 4         | 6.2                   | 10857               | 154.81     | 1.04                    | FAF127       | 6         |
| 127                   | 388                 | 11.31      | 1.70                    | FAF67        | 4         | 7.6                   | 8816                | 125.71     | 1.28                    | F 127        | 6         |
| 149                   | 331                 | 9.66       | 1.76                    | F 67         | 4         | 8.3                   | 8135                | 116.00     | 1.39                    | FF 127       | 6         |
| 150                   | 329                 | 9.61       | 2.0                     | FF 67        | 4         | 8.5                   | 7947                | 172.33     | 1.42                    | FA 127       | 4         |
| 158                   | 312                 | 9.11       | 2.1                     |              |           | 9.4                   | 7139                | 154.81     | 1.58                    | FAF127       | 4         |
| 181                   | 273                 | 7.97       | 2.3                     |              |           | 12                    | 5797                | 125.71     | 1.95                    | F 127        | 4         |
| 201                   | 246                 | 7.18       | 2.4                     |              |           |                       |                     |            |                         | FF 127       | 4         |
| 229                   | 216                 | 6.30       | 2.7                     |              |           | 8.2                   | 8238                | 178.64     | 0.88                    |              |           |
| 259                   | 191                 | 5.56       | 2.9                     |              |           | 9.1                   | 7437                | 161.28     | 0.97                    |              |           |
| 292                   | 169                 | 4.93       | 3.1                     |              |           | 10                    | 6755                | 146.49     | 1.07                    |              |           |
| 342                   | 144                 | 4.21       | 3.3                     |              |           | 11                    | 5994                | 129.97     | 1.20                    | FA 107       | 4         |
| 86                    | 576                 | 16.81      | 0.98                    |              |           | 12                    | 5439                | 117.94     | 1.33                    | FAF107       | 4         |
| 91                    | 544                 | 15.88      | 1.04                    |              |           | 14                    | 4675                | 101.38     | 1.54                    | F 107        | 4         |
| 107                   | 464                 | 13.52      | 1.22                    |              |           | 16                    | 4264                | 92.47      | 1.69                    | FF 107       | 4         |
| 117                   | 421                 | 12.29      | 1.34                    | FA 57        | 4         | 16                    | 4081                | 88.49      | 1.77                    |              |           |
| 135                   | 365                 | 10.64      | 1.55                    | FAF57        | 4         | 17                    | 3873                | 83.99      | 1.86                    |              |           |
| 176                   | 281                 | 8.19       | 1.41                    | F 57         | 4         | 20                    | 3436                | 74.52      | 2.1                     |              |           |
| 186                   | 265                 | 7.73       | 1.49                    | FF 57        | 4         | 22                    | 3118                | 67.62      | 2.3                     |              |           |
| 219                   | 226                 | 6.58       | 1.75                    |              |           |                       |                     |            |                         |              |           |
| 241                   | 205                 | 5.98       | 1.93                    |              |           | 15                    | 4487                | 97.31      | 0.90                    |              |           |
| 278                   | 178                 | 5.18       | 2.2                     |              |           | 16                    | 4186                | 90.77      | 0.97                    |              |           |
|                       |                     |            |                         |              |           | 17                    | 4015                | 87.06      | 1.01                    |              |           |
|                       |                     |            |                         |              |           | 18                    | 3741                | 81.13      | 1.08                    |              |           |
|                       |                     |            |                         |              |           | 19                    | 3523                | 76.40      | 1.15                    |              |           |
|                       |                     |            |                         |              |           | 21                    | 3229                | 70.03      | 1.25                    | FA 97        | 4         |
|                       |                     |            |                         |              |           | 22                    | 3050                | 66.14      | 1.33                    | FAF97        | 4         |
|                       |                     |            |                         |              |           | 25                    | 2705                | 58.65      | 1.49                    | F 97         | 4         |
|                       |                     |            |                         |              |           | 28                    | 2445                | 53.03      | 1.65                    | FF 97        | 4         |
|                       |                     |            |                         |              |           | 32                    | 2072                | 44.94      | 1.95                    |              |           |
|                       |                     |            |                         |              |           | 33                    | 2023                | 43.87      | 2.0                     |              |           |
|                       |                     |            |                         |              |           | 37                    | 1810                | 39.26      | 2.2                     |              |           |
|                       |                     |            |                         |              |           | 40                    | 1704                | 36.96      | 2.4                     |              |           |
|                       |                     |            |                         |              |           | 43                    | 1580                | 34.26      | 2.6                     |              |           |
|                       |                     |            |                         |              |           | 44                    | 1514                | 32.83      | 2.7                     |              |           |
|                       |                     |            |                         |              |           | 48                    | 1416                | 30.70      | 2.9                     |              |           |
| <b>7.5kW</b>          |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 4.6                   | 13812               | 312        | 0.82                    | FA 127R87    | 4         |                       |                     |            |                         |              |           |
| 4.9                   | 12971               | 293        | 0.87                    | FAF127R87    | 4         |                       |                     |            |                         |              |           |
| 5.5                   | 11598               | 262        | 0.97                    | F 127R87     | 4         |                       |                     |            |                         |              |           |
| 6.4                   | 10005               | 226        | 1.13                    | FF 127R87    | 4         |                       |                     |            |                         |              |           |
| 7.2                   | 8854                | 200        | 1.27                    |              |           |                       |                     |            |                         |              |           |
| 3.3                   | 20350               | 217.62     | 0.83                    |              |           |                       |                     |            |                         |              |           |
| 4.0                   | 16664               | 178.20     | 1.02                    | FA 157       | 8         |                       |                     |            |                         |              |           |
| 4.4                   | 15238               | 162.96     | 1.11                    | FAF157       | 8         |                       |                     |            |                         |              |           |
| 5.1                   | 13260               | 141.80     | 1.28                    | F 157        | 8         |                       |                     |            |                         |              |           |
| 5.8                   | 11702               | 125.14     | 1.45                    | FF 157       | 8         |                       |                     |            |                         |              |           |
| 6.6                   | 10145               | 108.49     | 1.67                    |              |           |                       |                     |            |                         |              |           |
| 7.5                   | 9027                | 96.53      | 1.87                    |              |           |                       |                     |            |                         |              |           |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type                    | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|---------------------------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>7.5kW</b>          |                     |            |                         |                                 |           | <b>11kW</b>           |                     |            |                         |              |           |
| 26                    | 2617                | 56.75      | 1.08                    | FA 87<br>FAF87<br>F 87<br>FF 87 | 4         | 15                    | 6529                | 96.53      | 2.6                     | FA 157       | 4         |
| 29                    | 2319                | 50.29      | 1.19                    |                                 |           | 17                    | 5877                | 86.90      | 2.9                     | FAF157       | 4         |
| 32                    | 2085                | 45.22      | 1.27                    |                                 |           | 18                    | 5375                | 79.47      | 3.1                     | F 157        | 4         |
| 37                    | 1810                | 39.25      | 1.41                    |                                 |           | 21                    | 4677                | 69.15      | 3.6                     | FF 157       | 4         |
| 42                    | 1620                | 35.14      | 1.51                    |                                 |           | 7.7                   | 12864               | 125.71     | 0.88                    | FA 127       | 6         |
| 50                    | 1345                | 29.16      | 1.75                    |                                 |           | 8.4                   | 11732               | 116.00     | 0.96                    | FAF127       | 6         |
| 51                    | 1327                | 28.41      | 1.74                    |                                 |           | 10                    | 10153               | 99.73      | 1.11                    | F 127        | 6         |
| 55                    | 1222                | 26.50      | 2.3                     |                                 |           | 11                    | 8958                | 88.00      | 1.26                    | FF 127       | 6         |
| 62                    | 1092                | 23.68      | 2.6                     |                                 |           | 13                    | 7737                | 76.00      | 1.46                    |              |           |
| 68                    | 983                 | 21.32      | 2.9                     |                                 |           | 8.5                   | 11656               | 172.33     | 0.97                    |              |           |
| 76                    | 890                 | 19.31      | 3.2                     | FA 77<br>FAF77<br>F 77<br>FF 77 | 4         | 9.4                   | 10471               | 154.81     | 1.08                    | FA 127       | 4         |
| 85                    | 789                 | 17.12      | 3.6                     |                                 |           | 12                    | 8502                | 125.71     | 1.33                    | FAF127       | 4         |
| 94                    | 714                 | 15.48      | 4.0                     |                                 |           | 13                    | 7846                | 116.00     | 1.44                    | F 127        | 4         |
| 43                    | 1551                | 33.64      | 0.91                    |                                 |           | 15                    | 6745                | 99.73      | 1.67                    | FF 127       | 4         |
| 49                    | 1375                | 29.82      | 1.03                    |                                 |           | 17                    | 5952                | 88.00      | 1.90                    |              |           |
| 57                    | 1176                | 25.50      | 1.16                    |                                 |           | 19                    | 5140                | 76.00      | 2.2                     |              |           |
| 57                    | 1175                | 25.47      | 1.20                    |                                 |           | 12                    | 7977                | 117.94     | 0.91                    |              |           |
| 68                    | 988                 | 21.43      | 1.43                    |                                 |           | 14                    | 6857                | 101.38     | 1.05                    |              |           |
| 74                    | 908                 | 19.70      | 1.55                    |                                 |           | 16                    | 6254                | 92.47      | 1.15                    |              |           |
| 83                    | 807                 | 17.49      | 1.75                    |                                 |           | 17                    | 5681                | 83.99      | 1.27                    |              |           |
| 93                    | 721                 | 15.64      | 1.95                    |                                 |           | 20                    | 5040                | 74.52      | 1.43                    | FA 107       | 4         |
| 104                   | 648                 | 14.06      | 2.2                     |                                 |           | 22                    | 4573                | 67.62      | 1.58                    | FAF107       | 4         |
| 120                   | 563                 | 12.20      | 2.5                     |                                 |           | 25                    | 3931                | 58.12      | 1.84                    | F 107        | 4         |
| 134                   | 504                 | 10.93      | 2.8                     |                                 |           | 29                    | 3431                | 50.73      | 2.1                     | FF 107       | 4         |
| 156                   | 431                 | 9.35       | 2.4                     |                                 |           | 34                    | 2910                | 43.03      | 2.5                     |              |           |
| 176                   | 383                 | 8.30       | 2.7                     |                                 |           | 43                    | 2285                | 33.78      | 3.2                     |              |           |
| 197                   | 342                 | 7.42       | 3.0                     |                                 |           | 53                    | 1855                | 27.43      | 3.9                     |              |           |
| 219                   | 308                 | 6.67       | 3.3                     |                                 |           | 58                    | 1712                | 25.31      | 4.2                     |              |           |
| 252                   | 267                 | 5.79       | 3.8                     |                                 |           |                       |                     |            |                         |              |           |
| 281                   | 239                 | 5.19       | 4.2                     |                                 |           |                       |                     |            |                         |              |           |
| 340                   | 198                 | 4.30       | 4.8                     |                                 |           |                       |                     |            |                         |              |           |
| <b>11kW</b>           |                     |            |                         |                                 |           | 22                    | 4473                | 66.14      | 0.90                    |              |           |
| 4.9                   | 19275               | 301        | 0.88                    | FA 157R97                       | 4         | 25                    | 3967                | 58.65      | 1.02                    |              |           |
| 5.4                   | 17418               | 272        | 0.97                    | FAF157R97                       | 4         | 28                    | 3587                | 53.03      | 1.13                    |              |           |
| 6.3                   | 14793               | 231        | 1.14                    | F 157R97                        | 4         | 32                    | 3040                | 44.94      | 1.33                    | FA 97        | 4         |
| 7.2                   | 12936               | 202        | 1.31                    | FF 157R97                       | 4         | 37                    | 2655                | 39.26      | 1.52                    | FAF97        | 4         |
| 7.4                   | 12551               | 196        | 1.35                    |                                 |           | 43                    | 2317                | 34.26      | 1.74                    | F 97         | 4         |
|                       |                     |            |                         |                                 |           | 44                    | 2220                | 32.83      | 1.82                    | FF 97        | 4         |
|                       |                     |            |                         |                                 |           | 48                    | 2076                | 30.70      | 1.95                    |              |           |
|                       |                     |            |                         |                                 |           | 53                    | 1875                | 27.72      | 2.2                     |              |           |
|                       |                     |            |                         |                                 |           | 58                    | 1703                | 25.18      | 2.4                     |              |           |
|                       |                     |            |                         |                                 |           | 65                    | 1511                | 22.34      | 2.7                     |              |           |
| 6.5                   | 14472               | 226        | 0.78                    | FA 127R87                       | 4         |                       |                     |            |                         |              |           |
| 7.3                   | 12807               | 200        | 0.88                    | FAF127R87                       | 4         |                       |                     |            |                         |              |           |
| 8.7                   | 10758               | 168        | 1.05                    | F 127R87                        | 4         |                       |                     |            |                         |              |           |
|                       |                     |            |                         | FF 127R87                       | 4         |                       |                     |            |                         |              |           |
| 5.1                   | 19181               | 141.80     | 0.88                    | FA 157                          | 8         | 37                    | 2655                | 39.25      | 0.96                    |              |           |
| 5.8                   | 16928               | 125.14     | 1.00                    | FAF157                          | 8         | 42                    | 2377                | 35.14      | 1.03                    |              |           |
| 6.7                   | 14675               | 108.49     | 1.15                    | F 157                           | 8         | 50                    | 1972                | 29.16      | 1.20                    |              |           |
| 7.6                   | 13058               | 96.53      | 1.30                    | FF 157                          | 8         | 55                    | 1792                | 26.50      | 1.57                    | FA 87        | 4         |
|                       |                     |            |                         |                                 |           | 62                    | 1602                | 23.68      | 1.76                    | FAF87        | 4         |
|                       |                     |            |                         |                                 |           | 68                    | 1442                | 21.32      | 1.96                    | F 87         | 4         |
|                       |                     |            |                         |                                 |           | 76                    | 1306                | 19.31      | 2.16                    | FF 87        | 4         |
|                       |                     |            |                         |                                 |           | 85                    | 1158                | 17.12      | 2.4                     |              |           |
|                       |                     |            |                         |                                 |           | 94                    | 1047                | 15.48      | 2.7                     |              |           |
|                       |                     |            |                         |                                 |           | 111                   | 887                 | 13.12      | 3.2                     |              |           |
| 5.5                   | 18036               | 177.17     | 0.94                    | FA 157                          | 6         | 74                    | 1332                | 19.70      | 1.06                    |              |           |
| 5.9                   | 16729               | 164.33     | 1.01                    | FAF157                          | 6         | 83                    | 1183                | 17.49      | 1.19                    |              |           |
| 6.8                   | 14435               | 141.80     | 1.17                    | F 157                           | 6         | 93                    | 1058                | 15.64      | 1.33                    |              |           |
| 7.8                   | 12739               | 125.14     | 1.33                    | FF 157                          | 6         | 104                   | 951                 | 14.06      | 1.48                    |              |           |
| 8.9                   | 11044               | 108.49     | 1.53                    |                                 |           | 120                   | 825                 | 12.20      | 1.61                    | FA 77        | 4         |
| 10                    | 9827                | 96.53      | 1.72                    |                                 |           | 134                   | 739                 | 10.93      | 1.71                    | FAF77        | 4         |
| 11                    | 8847                | 86.90      | 1.91                    |                                 |           | 156                   | 632                 | 9.35       | 1.81                    | F 77         | 4         |
| 12                    | 8090                | 79.47      | 2.1                     |                                 |           | 176                   | 561                 | 8.30       | 1.91                    | FF 77        | 4         |
|                       |                     |            |                         |                                 |           | 197                   | 502                 | 7.42       | 2.0                     |              |           |
|                       |                     |            |                         |                                 |           | 219                   | 451                 | 6.67       | 2.3                     |              |           |
|                       |                     |            |                         |                                 |           | 252                   | 392                 | 5.79       | 2.6                     |              |           |
|                       |                     |            |                         |                                 |           | 281                   | 351                 | 5.19       | 2.9                     |              |           |
|                       |                     |            |                         |                                 |           | 340                   | 291                 | 4.30       | 3.3                     |              |           |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>15kW</b>           |                     |            |                         |              |           | <b>15kW</b>           |                     |            |                         |              |           |
| 6.3                   | 20172               | 231        | 0.84                    | FA 157R97    | 4         | 55                    | 2444                | 26.50      | 1.15                    |              |           |
| 7.2                   | 17639               | 202        | 0.96                    | FAF157R97    | 4         | 62                    | 2184                | 23.68      | 1.29                    |              |           |
| 7.4                   | 17115               | 196        | 0.99                    | F 157R97     | 4         | 68                    | 1966                | 21.32      | 1.43                    |              |           |
|                       |                     |            |                         | FF 157R97    | 4         | 76                    | 1781                | 19.31      | 1.58                    |              |           |
| 6.8                   | 19685               | 141.80     | 0.86                    | FA 157       | 6         | 85                    | 1579                | 17.12      | 1.79                    |              |           |
| 7.8                   | 17372               | 125.14     | 0.97                    | FAF157       | 6         | 94                    | 1428                | 15.48      | 1.84                    | FA 87        | 4         |
| 8.9                   | 15061               | 108.49     | 1.12                    | F 157        | 6         | 111                   | 1210                | 13.12      | 1.98                    | FAF87        | 4         |
| 10                    | 13400               | 96.53      | 1.26                    | FF 157       | 6         | 127                   | 1057                | 11.46      | 2.1                     | F 87         | 4         |
| 11                    | 12063               | 86.90      | 1.40                    |              |           | 152                   | 884                 | 9.58       | 2.3                     | FF 87        | 4         |
| 6.7                   | 20143               | 218.40     | 0.84                    |              |           | 173                   | 780                 | 8.46       | 2.5                     |              |           |
| 8.2                   | 16340               | 177.17     | 1.04                    |              |           | 195                   | 692                 | 7.50       | 2.7                     |              |           |
| 8.9                   | 15156               | 164.33     | 1.12                    |              |           | 215                   | 625                 | 6.78       | 2.8                     |              |           |
| 10                    | 13078               | 141.80     | 1.29                    | FA 157       | 4         | 254                   | 530                 | 5.75       | 2.8                     |              |           |
| 12                    | 11542               | 125.14     | 1.47                    | FAF157       | 4         | 291                   | 463                 | 5.02       | 3.1                     |              |           |
| 13                    | 10006               | 108.49     | 1.69                    | F 157        | 4         | 348                   | 387                 | 4.20       | 3.5                     |              |           |
| 15                    | 8903                | 96.53      | 1.90                    | FF 157       | 4         |                       |                     |            |                         |              |           |
| 17                    | 8015                | 86.90      | 2.1                     |              |           | <b>18.5kW</b>         |                     |            |                         |              |           |
| 18                    | 7329                | 79.47      | 2.3                     |              |           | 7.3                   | 21607               | 202        | 0.78                    | FA 157R97    | 4         |
| 21                    | 6378                | 69.15      | 2.7                     |              |           | 7.5                   | 20965               | 196        | 0.81                    | FAF157R97    | 4         |
| 24                    | 5628                | 61.02      | 3.0                     |              |           |                       |                     |            |                         | F 157R97     | 4         |
|                       |                     |            |                         |              |           |                       |                     |            |                         | FF 157R97    | 4         |
| 9.7                   | 13844               | 99.73      | 0.81                    | FA 127       | 6         | 8.3                   | 20016               | 177.17     | 0.85                    |              |           |
| 11                    | 12216               | 88.00      | 0.92                    | FAF127       | 6         | 8.9                   | 18565               | 164.33     | 0.91                    |              |           |
| 13                    | 10550               | 76.00      | 1.07                    | F 127        | 6         | 10                    | 16020               | 141.80     | 1.06                    |              |           |
| 14                    | 9803                | 70.62      | 1.15                    | FF 127       | 6         | 12                    | 14138               | 125.14     | 1.20                    | FA 157       | 4         |
| 15                    | 8941                | 64.41      | 1.26                    |              |           | 14                    | 12257               | 108.49     | 1.38                    | FAF157       | 4         |
| 12                    | 11594               | 125.71     | 0.97                    |              |           | 15                    | 10906               | 96.53      | 1.55                    | F 157        | 4         |
| 13                    | 10699               | 116.00     | 1.05                    | FA 127       | 4         | 17                    | 9818                | 86.90      | 1.72                    | FF 157       | 4         |
| 15                    | 9198                | 99.73      | 1.23                    | FAF127       | 4         | 18                    | 8978                | 79.47      | 1.88                    |              |           |
| 17                    | 8116                | 88.00      | 1.39                    | F 127        | 4         | 21                    | 7812                | 69.15      | 2.2                     |              |           |
| 19                    | 7009                | 76.00      | 1.61                    | FF 127       | 4         | 24                    | 6894                | 61.02      | 2.5                     |              |           |
| 21                    | 6513                | 70.62      | 1.73                    |              |           | 28                    | 5978                | 52.91      | 2.8                     |              |           |
| 16                    | 8528                | 92.47      | 0.85                    |              |           | 13                    | 13105               | 116.00     | 0.86                    |              |           |
| 16                    | 8161                | 88.49      | 0.88                    |              |           | 15                    | 11267               | 99.73      | 1.00                    |              |           |
| 17                    | 7746                | 83.99      | 0.93                    |              |           | 17                    | 9942                | 88.00      | 1.13                    | FA 127       | 4         |
| 20                    | 6873                | 74.52      | 1.05                    |              |           | 19                    | 8586                | 76.00      | 1.31                    | FAF127       | 4         |
| 22                    | 6237                | 67.62      | 1.16                    | FA 107       | 4         | 21                    | 7978                | 70.62      | 1.41                    | F 127        | 4         |
| 25                    | 5360                | 58.12      | 1.35                    | FAF107       | 4         | 23                    | 7277                | 64.41      | 1.55                    | FF 127       | 4         |
| 29                    | 4679                | 50.73      | 1.54                    | F 107        | 4         | 26                    | 6297                | 55.74      | 1.79                    |              |           |
| 34                    | 3969                | 43.03      | 1.82                    | FF 107       | 4         | 30                    | 5557                | 49.19      | 2.0                     |              |           |
| 39                    | 3469                | 37.61      | 2.1                     |              |           |                       |                     |            |                         |              |           |
| 43                    | 3116                | 33.78      | 2.3                     |              |           | 20                    | 8419                | 74.52      | 0.86                    |              |           |
| 46                    | 2933                | 31.80      | 2.5                     |              |           | 22                    | 7639                | 67.62      | 0.94                    |              |           |
| 53                    | 2530                | 27.43      | 2.8                     |              |           | 25                    | 6566                | 58.12      | 1.10                    |              |           |
| 58                    | 2334                | 25.31      | 3.1                     |              |           | 29                    | 5731                | 50.73      | 1.26                    | FA 107       | 4         |
| 67                    | 2007                | 21.76      | 3.6                     |              |           | 34                    | 4861                | 43.03      | 1.49                    | FAF107       | 4         |
|                       |                     |            |                         |              |           | 39                    | 4249                | 37.61      | 1.70                    | F 107        | 4         |
| 32                    | 4145                | 44.94      | 0.98                    |              |           | 44                    | 3817                | 33.78      | 1.89                    | FF 107       | 4         |
| 37                    | 3621                | 39.26      | 1.12                    |              |           | 46                    | 3593                | 31.80      | 2.0                     |              |           |
| 43                    | 3160                | 34.26      | 1.28                    |              |           | 53                    | 3099                | 27.43      | 2.3                     |              |           |
| 44                    | 3028                | 32.83      | 1.33                    |              |           | 58                    | 2859                | 25.31      | 2.5                     |              |           |
| 48                    | 2831                | 30.70      | 1.43                    | FA 97        | 4         | 68                    | 2458                | 21.76      | 2.9                     |              |           |
| 53                    | 2557                | 27.72      | 1.58                    | FAF97        | 4         |                       |                     |            |                         |              |           |
| 58                    | 2322                | 25.18      | 1.74                    | F 97         | 4         | 37                    | 4435                | 39.26      | 0.91                    |              |           |
| 65                    | 2060                | 22.34      | 1.96                    | FF 97        | 4         | 45                    | 3709                | 32.83      | 1.09                    |              |           |
| 72                    | 1869                | 20.27      | 2.2                     |              |           | 53                    | 3132                | 27.72      | 1.29                    |              |           |
| 84                    | 1607                | 17.42      | 2.5                     |              |           | 58                    | 2845                | 25.18      | 1.42                    | FA 97        | 4         |
| 96                    | 1403                | 15.21      | 2.9                     |              |           | 66                    | 2524                | 22.34      | 1.60                    | FAF97        | 4         |
| 113                   | 1190                | 12.90      | 3.4                     |              |           | 73                    | 2290                | 20.27      | 1.77                    | F 97         | 4         |
| 129                   | 1040                | 11.28      | 3.9                     |              |           | 84                    | 1274                | 17.42      | 2.35                    | FF 97        | 4         |
|                       |                     |            |                         |              |           | 97                    | 1718                | 15.21      | 2.77                    |              |           |
|                       |                     |            |                         |              |           | 114                   | 1457                | 12.90      | 3.17                    |              |           |
|                       |                     |            |                         |              |           | 130                   | 1274                | 11.28      | 3.17                    |              |           |

| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type   | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type   | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------|-----------|-----------------------|---------------------|------------|-------------------------|--------|-----------|
| <b>18.5kW</b>         |                     |            |                         |        |           | <b>22kW</b>           |                     |            |                         |        |           |
| 69                    | 2409                | 21.32      | 1.17                    |        |           | 112                   | 1763                | 13.12      | 1.27                    |        |           |
| 76                    | 2182                | 19.31      | 1.29                    |        |           | 128                   | 1540                | 11.46      | 1.43                    |        |           |
| 86                    | 1934                | 17.12      | 1.46                    |        |           | 153                   | 1287                | 9.58       | 1.58                    | FA 87  | 4         |
| 95                    | 1749                | 15.48      | 1.50                    |        |           | 174                   | 1137                | 8.46       | 1.60                    | FAF87  | 4         |
| 112                   | 1482                | 13.12      | 1.61                    | FA 87  | 4         | 196                   | 1008                | 7.50       | 1.70                    | F 87   | 4         |
| 128                   | 1295                | 11.46      | 1.70                    | FAF87  | 4         | 217                   | 911                 | 6.78       | 1.83                    | FF 87  | 4         |
| 153                   | 1082                | 9.58       | 1.80                    | F 87   | 4         | 256                   | 773                 | 5.75       | 1.86                    |        |           |
| 174                   | 956                 | 8.46       | 1.88                    | FF 87  | 4         | 293                   | 674                 | 5.02       | 2.1                     |        |           |
| 196                   | 847                 | 7.50       | 1.90                    |        |           | 350                   | 564                 | 4.20       | 2.4                     |        |           |
| 217                   | 766                 | 6.78       | 2.0                     |        |           | <b>30kW</b>           |                     |            |                         |        |           |
| 256                   | 650                 | 5.75       | 2.2                     |        |           | 14                    | 19876               | 108.49     | 0.85                    |        |           |
| 296                   | 567                 | 5.02       | 2.5                     |        |           | 15                    | 17685               | 96.53      | 0.96                    |        |           |
| 350                   | 474                 | 4.20       | 2.9                     |        |           | 17                    | 15920               | 86.90      | 1.06                    | FA 157 | 4         |
| <b>22kW</b>           |                     |            |                         |        |           | 18                    | 14559               | 79.47      | 1.16                    | FAF157 | 4         |
| 10                    | 19654               | 96.53      | 0.86                    | FA 157 | 6         | 21                    | 12669               | 69.15      | 1.34                    | F 157  | 4         |
| 11                    | 17693               | 86.90      | 0.96                    | FAF157 | 6         | 24                    | 11179               | 61.02      | 1.51                    | FF 157 | 4         |
| 12                    | 16180               | 79.47      | 1.05                    | F 157  | 6         | 28                    | 9693                | 52.91      | 1.75                    |        |           |
| 14                    | 14079               | 69.15      | 1.20                    | FF 157 | 6         | 31                    | 8623                | 47.07      | 2.0                     |        |           |
| <b>22kW</b>           |                     |            |                         |        |           | 36                    | 7433                | 40.57      | 2.3                     |        |           |
| 10                    | 19051               | 141.80     | 0.89                    |        |           | 19                    | 13924               | 76.00      | 0.81                    |        |           |
| 12                    | 16813               | 125.14     | 1.01                    |        |           | 21                    | 12938               | 70.62      | 0.87                    |        |           |
| 14                    | 14576               | 108.49     | 1.16                    |        |           | 23                    | 11800               | 64.41      | 0.96                    |        |           |
| 15                    | 12969               | 96.53      | 1.30                    |        |           | 26                    | 10212               | 55.74      | 1.10                    |        |           |
| 17                    | 11675               | 86.90      | 1.45                    | FA 157 | 4         | 30                    | 9012                | 49.19      | 1.25                    | FA 127 | 4         |
| 18                    | 10677               | 79.47      | 1.58                    | FAF157 | 4         | 35                    | 7783                | 42.48      | 1.45                    | FAF127 | 4         |
| 21                    | 9290                | 69.15      | 1.82                    | F 157  | 4         | 39                    | 6883                | 37.57      | 1.58                    | F 127  | 4         |
| 24                    | 8198                | 61.02      | 2.1                     | FF 157 | 4         | 47                    | 5786                | 31.58      | 1.6                     | FF 127 | 4         |
| 28                    | 7108                | 52.91      | 2.4                     |        |           | 54                    | 4961                | 26.92      | 1.95                    |        |           |
| 31                    | 6324                | 47.07      | 2.7                     |        |           | 58                    | 4672                | 25.50      | 2.4                     |        |           |
| 36                    | 5451                | 40.57      | 3.1                     |        |           | 59                    | 4536                | 24.97      | 2.8                     |        |           |
| 45                    | 4430                | 32.97      | 3.8                     |        |           | 68                    | 3948                | 21.55      | 2.9                     |        |           |
| <b>22kW</b>           |                     |            |                         |        |           | 77                    | 3483                | 19.01      | 3.2                     |        |           |
| 15                    | 13399               | 99.73      | 0.84                    |        |           | 34                    | 7883                | 43.03      | 0.92                    |        |           |
| 17                    | 11823               | 88.00      | 0.95                    |        |           | 39                    | 6890                | 37.61      | 1.05                    |        |           |
| 19                    | 10211               | 76.00      | 1.10                    | FA 127 | 4         | 46                    | 5826                | 31.80      | 1.24                    |        |           |
| 21                    | 9488                | 70.62      | 1.19                    | FAF127 | 4         | 54                    | 5025                | 27.43      | 1.44                    | FA 107 | 4         |
| 23                    | 8653                | 64.41      | 1.30                    | F 127  | 4         | 58                    | 4637                | 25.31      | 1.56                    | FAF107 | 4         |
| 26                    | 7489                | 55.74      | 1.51                    | FF 127 | 4         | 68                    | 3987                | 21.76      | 1.81                    | F 107  | 4         |
| 30                    | 6609                | 49.19      | 1.71                    |        |           | 77                    | 3518                | 19.20      | 2.1                     | FF 107 | 4         |
| 35                    | 5707                | 42.48      | 1.98                    |        |           | 89                    | 3038                | 16.58      | 2.4                     |        |           |
| <b>22kW</b>           |                     |            |                         |        |           | 100                   | 2688                | 14.67      | 2.7                     |        |           |
| 25                    | 7808                | 58.12      | 0.92                    |        |           | 119                   | 2259                | 12.33      | 2.9                     |        |           |
| 29                    | 6816                | 50.73      | 1.06                    |        |           | 148                   | 1825                | 9.96       | 3.3                     |        |           |
| 34                    | 5781                | 43.03      | 1.25                    |        |           | 66                    | 4093                | 22.34      | 0.99                    |        |           |
| 39                    | 5053                | 37.61      | 1.43                    | FA 107 | 4         | 73                    | 3714                | 20.27      | 1.09                    |        |           |
| 44                    | 4540                | 33.78      | 1.59                    | FAF107 | 4         | 84                    | 3191                | 17.42      | 1.27                    |        |           |
| 46                    | 4272                | 31.08      | 1.69                    | F 107  | 4         | 97                    | 2787                | 15.21      | 1.31                    |        |           |
| 54                    | 3685                | 27.43      | 1.96                    | FF 107 | 4         | 114                   | 2363                | 12.90      | 1.44                    | FA 97  | 4         |
| 58                    | 3400                | 25.31      | 2.1                     |        |           | 130                   | 2067                | 11.28      | 1.45                    | FAF97  | 4         |
| 68                    | 2923                | 21.76      | 2.5                     |        |           | 159                   | 1698                | 9.27       | 1.67                    | F 97   | 4         |
| 77                    | 2580                | 19.20      | 2.8                     |        |           | 175                   | 1541                | 8.41       | 1.83                    | FF 97  | 4         |
| <b>22kW</b>           |                     |            |                         |        |           | 203                   | 1325                | 7.23       | 1.85                    |        |           |
| 53                    | 3724                | 27.72      | 1.09                    |        |           | 233                   | 1156                | 6.31       | 1.86                    |        |           |
| 58                    | 3383                | 25.18      | 1.19                    |        |           | 275                   | 980                 | 5.35       | 2.1                     |        |           |
| 66                    | 3001                | 22.34      | 1.35                    | FA 97  | 4         | 314                   | 857                 | 4.68       | 2.2                     |        |           |
| 73                    | 2723                | 20.27      | 1.48                    | FAF97  | 4         |                       |                     |            |                         |        |           |
| 84                    | 2340                | 17.42      | 1.73                    | F 97   | 4         |                       |                     |            |                         |        |           |
| 97                    | 2043                | 15.21      | 2.0                     | FF 97  | 4         |                       |                     |            |                         |        |           |
| 114                   | 1733                | 12.90      | 2.3                     |        |           |                       |                     |            |                         |        |           |
| 130                   | 1515                | 11.28      | 2.7                     |        |           |                       |                     |            |                         |        |           |
| <b>22kW</b>           |                     |            |                         |        |           |                       |                     |            |                         |        |           |
| 69                    | 2864                | 21.32      | 0.98                    | FA 87  | 4         |                       |                     |            |                         |        |           |
| 76                    | 2594                | 19.31      | 1.09                    | FAF87  | 4         |                       |                     |            |                         |        |           |
| 86                    | 2300                | 17.12      | 1.23                    | F 87   | 4         |                       |                     |            |                         |        |           |
| 95                    | 2080                | 15.48      | 1.36                    | FF 87  | 4         |                       |                     |            |                         |        |           |



| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>37kW</b>           |                     |            |                         |              |           | <b>45kW</b>           |                     |            |                         |              |           |
| 17                    | 19503               | 86.90      | 0.87                    |              |           | 54                    | 7525                | 27.57      | 0.98                    |              |           |
| 19                    | 17835               | 79.47      | 0.95                    |              |           | 59                    | 6862                | 25.14      | 1.07                    |              |           |
| 21                    | 15519               | 69.15      | 1.09                    | FA 157       | 4         | 68                    | 5939                | 21.76      | 1.24                    |              |           |
| 24                    | 13694               | 61.02      | 1.24                    | FAF157       | 4         | 77                    | 5241                | 19.2       | 1.41                    |              |           |
| 28                    | 11874               | 52.91      | 1.42                    | F 157        | 4         | 89                    | 4525                | 16.58      | 1.63                    | FA 107       | 4         |
| 31                    | 10564               | 47.07      | 1.60                    | FF 157       | 4         | 101                   | 4004                | 14.67      | 1.80                    | FAF107       | 4         |
| 36                    | 9105                | 40.57      | 1.86                    |              |           | 120                   | 3365                | 12.33      | 1.90                    | F 107        | 4         |
| 45                    | 7399                | 32.97      | 2.3                     |              |           | 149                   | 2719                | 9.96       | 2.0                     | FF 107       | 4         |
| 53                    | 6275                | 27.96      | 2.7                     |              |           | 153                   | 2634                | 9.65       | 2.1                     |              |           |
|                       |                     |            |                         |              |           | 177                   | 2276                | 8.34       | 2.2                     |              |           |
|                       |                     |            |                         |              |           | 201                   | 2012                | 7.37       | 2.3                     |              |           |
|                       |                     |            |                         |              |           | 239                   | 1692                | 6.20       | 2.6                     |              |           |
|                       |                     |            |                         |              |           | <b>55kW</b>           |                     |            |                         |              |           |
| 15                    | 22261               | 99.19      | 0.51                    |              |           | 24                    | 20357               | 61.02      | 0.83                    |              |           |
| 27                    | 12509               | 55.74      | 0.90                    |              |           | 28                    | 17651               | 52.91      | 0.96                    |              |           |
| 35                    | 9534                | 42.48      | 1.18                    |              |           | 31                    | 15703               | 47.07      | 1.08                    | FA 157       | 4         |
| 39                    | 8432                | 37.57      | 1.31                    |              |           | 36                    | 13534               | 40.57      | 1.25                    | FAF157       | 4         |
| 47                    | 7087                | 31.58      | 1.34                    |              |           | 45                    | 10999               | 32.97      | 1.54                    | F 157        | 4         |
| 55                    | 6077                | 26.92      | 1.86                    |              |           | 53                    | 9328                | 27.96      | 1.66                    | FF 157       | 4         |
| 60                    | 5557                | 24.97      | 1.45                    | FA 127       | 4         | 58                    | 8484                | 25.43      | 1.81                    |              |           |
| 69                    | 4836                | 21.55      | 2.3                     | FAF127       | 4         | 67                    | 7393                | 22.16      | 2.3                     |              |           |
| 78                    | 4266                | 19.01      | 2.4                     | F 127        | 4         | 75                    | 6595                | 19.77      | 2.4                     |              |           |
| 90                    | 3699                | 16.48      | 2.8                     | FF 127       | 4         | 88                    | 5621                | 16.85      | 3.0                     |              |           |
| 101                   | 3292                | 14.67      | 3.1                     |              |           |                       |                     |            |                         |              |           |
| 117                   | 2837                | 12.64      | 3.2                     |              |           |                       |                     |            |                         |              |           |
| 144                   | 2305                | 10.27      | 3.3                     |              |           |                       |                     |            |                         |              |           |
| 169                   | 1966                | 8.76       | 3.3                     |              |           |                       |                     |            |                         |              |           |
| 190                   | 1748                | 7.79       | 3.9                     |              |           |                       |                     |            |                         |              |           |
|                       |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 54                    | 6156                | 27.43      | 1.20                    |              |           | 39                    | 12534               | 37.57      | 0.90                    |              |           |
| 58                    | 5680                | 25.31      | 1.30                    |              |           | 47                    | 10535               | 31.58      | 1.07                    |              |           |
| 68                    | 4883                | 21.76      | 1.51                    |              |           | 58                    | 8507                | 25.5       | 1.33                    |              |           |
| 77                    | 4309                | 19.20      | 1.7                     |              |           | 69                    | 7189                | 21.55      | 1.57                    |              |           |
| 89                    | 3721                | 16.58      | 2.0                     | FA 107       | 4         | 78                    | 6342                | 19.01      | 1.63                    |              |           |
| 101                   | 3292                | 14.67      | 2.1                     | FAF107       | 4         | 90                    | 5498                | 16.48      | 1.88                    | FA 127       | 4         |
| 120                   | 2767                | 12.33      | 2.2                     | F 107        | 4         | 101                   | 4894                | 14.67      | 2.1                     | FAF127       | 4         |
| 149                   | 2235                | 9.96       | 2.3                     | FF 107       | 4         | 117                   | 4217                | 12.64      | 2.2                     | F 127        | 4         |
| 153                   | 2166                | 9.65       | 2.4                     |              |           | 144                   | 3426                | 10.27      | 2.3                     | FF 127       | 4         |
| 177                   | 1872                | 8.34       | 2.6                     |              |           | 169                   | 2922                | 8.76       | 2.4                     |              |           |
| 201                   | 1654                | 7.37       | 2.7                     |              |           | 190                   | 2599                | 7.79       | 2.6                     |              |           |
| 239                   | 1391                | 6.20       | 3.1                     |              |           | 220                   | 2242                | 6.72       | 2.9                     |              |           |
|                       |                     |            |                         |              |           | 271                   | 1821                | 5.46       | 3.1                     |              |           |
|                       |                     |            |                         |              |           | 320                   | 1545                | 4.63       | 3.7                     |              |           |
| <b>45kW</b>           |                     |            |                         |              |           | <b>75kW</b>           |                     |            |                         |              |           |
| 21                    | 18874               | 69.15      | 0.90                    |              |           | 31                    | 21413               | 47.07      | 0.79                    |              |           |
| 24                    | 16655               | 61.02      | 1.02                    |              |           | 36                    | 18456               | 40.57      | 0.92                    |              |           |
| 28                    | 14442               | 52.91      | 1.17                    | FA 157       | 4         | 45                    | 14999               | 32.97      | 1.13                    |              |           |
| 31                    | 12848               | 47.07      | 1.32                    | FAF157       | 4         | 53                    | 12719               | 27.96      | 1.22                    | FA 157       | 4         |
| 36                    | 11074               | 40.57      | 1.53                    | F 157        | 4         | 58                    | 11569               | 25.43      | 1.33                    | FAF157       | 4         |
| 45                    | 8999                | 32.97      | 1.88                    | FF 157       | 4         | 67                    | 10081               | 22.16      | 1.68                    | F 157        | 4         |
| 53                    | 7632                | 27.96      | 2.2                     |              |           | 75                    | 8994                | 19.77      | 1.78                    | FF 157       | 4         |
|                       |                     |            |                         |              |           | 88                    | 7665                | 16.85      | 2.2                     |              |           |
|                       |                     |            |                         |              |           | 106                   | 6351                | 13.96      | 2.5                     |              |           |
|                       |                     |            |                         |              |           | 124                   | 5423                | 11.92      | 2.8                     |              |           |
|                       |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 30                    | 13426               | 49.19      | 0.84                    |              |           | 58                    | 11600               | 25.50      | 0.97                    |              |           |
| 35                    | 11595               | 42.48      | 0.97                    |              |           | 69                    | 9803                | 21.55      | 1.2                     |              |           |
| 39                    | 10255               | 37.57      | 1.08                    |              |           | 78                    | 8648                | 19.01      | 1.2                     |              |           |
| 47                    | 8620                | 31.58      | 1.10                    |              |           | 90                    | 7497                | 16.48      | 1.4                     |              |           |
| 55                    | 7391                | 26.92      | 1.18                    |              |           | 101                   | 6674                | 14.67      | 1.5                     | FA 127       | 4         |
| 58                    | 6960                | 25.50      | 1.31                    |              |           | 117                   | 5750                | 12.64      | 1.6                     | FAF127       | 4         |
| 60                    | 6758                | 24.97      | 1.62                    |              |           | 144                   | 4672                | 10.27      | 1.6                     | F 127        | 4         |
| 69                    | 5882                | 21.55      | 1.92                    | FA 127       | 4         | 169                   | 3985                | 8.76       | 1.7                     | FF 127       | 4         |
| 78                    | 5189                | 19.01      | 2.0                     | FAF127       | 4         | 190                   | 3544                | 7.79       | 1.9                     |              |           |
| 90                    | 4498                | 16.48      | 2.3                     | F 127        | 4         | 220                   | 3057                | 6.72       | 2.2                     |              |           |
| 101                   | 4004                | 14.67      | 2.6                     | FF 127       | 4         | 271                   | 2484                | 5.46       | 2.3                     |              |           |
| 117                   | 3450                | 12.64      | 2.7                     |              |           | 320                   | 2106                | 4.63       | 2.7                     |              |           |
| 144                   | 2803                | 10.27      | 2.8                     |              |           |                       |                     |            |                         |              |           |
| 169                   | 2391                | 8.76       | 2.9                     |              |           |                       |                     |            |                         |              |           |
| 190                   | 2126                | 7.79       | 3.2                     |              |           |                       |                     |            |                         |              |           |
| 220                   | 1834                | 6.72       | 3.6                     |              |           |                       |                     |            |                         |              |           |
| 271                   | 1490                | 5.46       | 3.8                     |              |           |                       |                     |            |                         |              |           |

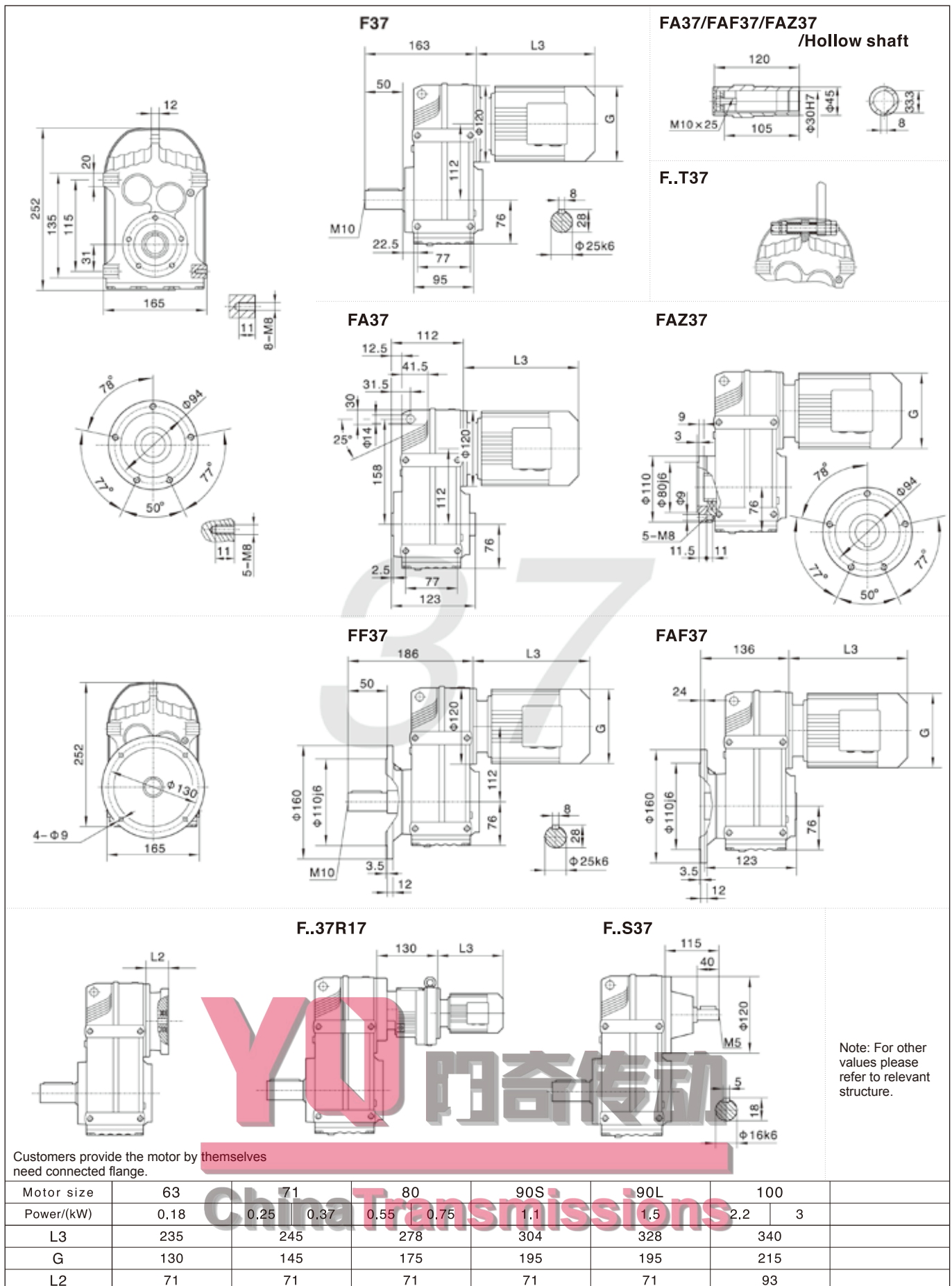
| Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p | Output speed<br>r/min | Output torque<br>Nm | Ratio<br>i | Service factor<br>$f_B$ | Type<br>Type | Pole<br>p |
|-----------------------|---------------------|------------|-------------------------|--------------|-----------|-----------------------|---------------------|------------|-------------------------|--------------|-----------|
| <b>90kW</b>           |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 45                    | 17998               | 32.97      | 0.94                    |              |           |                       |                     |            |                         |              |           |
| 53                    | 15263               | 27.96      | 1.02                    |              |           |                       |                     |            |                         |              |           |
| 58                    | 13882               | 25.43      | 1.11                    | FA 157       | 4         |                       |                     |            |                         |              |           |
| 67                    | 12097               | 22.16      | 1.40                    | FAF157       | 4         |                       |                     |            |                         |              |           |
| 75                    | 10792               | 19.77      | 1.48                    | F 157        | 4         |                       |                     |            |                         |              |           |
| 88                    | 9198                | 16.85      | 1.84                    | FF 157       | 4         |                       |                     |            |                         |              |           |
| 106                   | 7621                | 13.96      | 2.1                     |              |           |                       |                     |            |                         |              |           |
| 124                   | 6507                | 11.92      | 2.3                     |              |           |                       |                     |            |                         |              |           |
| 58                    | 13920               | 25.50      | 0.81                    |              |           |                       |                     |            |                         |              |           |
| 69                    | 11764               | 21.55      | 0.96                    |              |           |                       |                     |            |                         |              |           |
| 78                    | 10378               | 19.01      | 1.00                    |              |           |                       |                     |            |                         |              |           |
| 90                    | 8953                | 16.48      | 1.15                    |              |           |                       |                     |            |                         |              |           |
| 101                   | 8008                | 14.67      | 1.29                    | FA 127       | 4         |                       |                     |            |                         |              |           |
| 117                   | 6900                | 12.64      | 1.33                    | FAF127       | 4         |                       |                     |            |                         |              |           |
| 144                   | 5606                | 10.27      | 1.36                    | F 127        | 4         |                       |                     |            |                         |              |           |
| 169                   | 4782                | 8.76       | 1.59                    | FF 127       | 4         |                       |                     |            |                         |              |           |
| 190                   | 4253                | 7.79       | 1.60                    |              |           |                       |                     |            |                         |              |           |
| 220                   | 3668                | 6.72       | 1.79                    |              |           |                       |                     |            |                         |              |           |
| 271                   | 2981                | 5.46       | 1.89                    |              |           |                       |                     |            |                         |              |           |
| 320                   | 2528                | 4.63       | 2.2                     |              |           |                       |                     |            |                         |              |           |
| <b>110kW</b>          |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 53                    | 18530               | 27.96      | 0.91                    |              |           |                       |                     |            |                         |              |           |
| 67                    | 14686               | 22.16      | 1.15                    | FA 157       | 4         |                       |                     |            |                         |              |           |
| 75                    | 13102               | 19.77      | 1.22                    | FAF157       | 4         |                       |                     |            |                         |              |           |
| 88                    | 11167               | 16.85      | 1.52                    | F 157        | 4         |                       |                     |            |                         |              |           |
| 107                   | 9252                | 13.96      | 1.73                    | FF 157       | 4         |                       |                     |            |                         |              |           |
| 125                   | 7900                | 11.92      | 1.90                    |              |           |                       |                     |            |                         |              |           |
| <b>132kW</b>          |                     |            |                         |              |           |                       |                     |            |                         |              |           |
| 67                    | 17623               | 22.16      | 0.96                    | FA 157       | 4         |                       |                     |            |                         |              |           |
| 75                    | 15723               | 19.77      | 1.02                    | FAF157       | 4         |                       |                     |            |                         |              |           |
| 88                    | 13400               | 16.85      | 1.26                    | F 157        | 4         |                       |                     |            |                         |              |           |
| 107                   | 11102               | 13.96      | 1.44                    | FF 157       | 4         |                       |                     |            |                         |              |           |
| 125                   | 9480                | 11.92      | 1.59                    |              |           |                       |                     |            |                         |              |           |
| <b>160kW</b>          |                     |            |                         |              |           |                       |                     |            |                         |              |           |
|                       |                     |            |                         | FA 157       | 4         |                       |                     |            |                         |              |           |
| 88                    | 16243               | 16.85      | 1.04                    | FAF157       | 4         |                       |                     |            |                         |              |           |
| 107                   | 13457               | 13.96      | 1.19                    | F 157        | 4         |                       |                     |            |                         |              |           |
| 125                   | 11491               | 11.92      | 1.31                    | FF 157       | 4         |                       |                     |            |                         |              |           |
| <b>200kW</b>          |                     |            |                         |              |           |                       |                     |            |                         |              |           |
|                       |                     |            |                         | FA 157       | 4         |                       |                     |            |                         |              |           |
| 88                    | 20304               | 16.85      | 0.83                    | FAF157       | 4         |                       |                     |            |                         |              |           |
| 107                   | 16821               | 13.96      | 0.95                    | F 157        | 4         |                       |                     |            |                         |              |           |
| 125                   | 14363               | 11.92      | 1.05                    | FF 157       | 4         |                       |                     |            |                         |              |           |

| Permissible torque<br>Nm | Output speed<br>r/min | Ratio<br>i | Type<br>T <sub>yp</sub> e                   | Power<br>kW/4 <sub>p</sub> | Permissible torque<br>Nm | Output speed<br>r/min | Ratio<br>i | Type<br>T <sub>yp</sub> e                       | Power<br>kW/4 <sub>p</sub> |                                             |
|--------------------------|-----------------------|------------|---------------------------------------------|----------------------------|--------------------------|-----------------------|------------|-------------------------------------------------|----------------------------|---------------------------------------------|
| 200                      | 5.3                   | 262        | FA 37R17<br>FAF37R17<br>F 37R17<br>FF 37R17 | 0.18                       | 1500                     | 2.3                   | 600        | FA 77R37<br>FAF77R37<br>F 77R37<br>FF 77R37     | 0.55                       |                                             |
|                          | 6.1                   | 229        |                                             |                            |                          | 2.6                   | 525        |                                                 |                            |                                             |
|                          | 7.0                   | 200        |                                             |                            |                          | 3.0                   | 469        |                                                 |                            |                                             |
|                          | 8.2                   | 170        |                                             |                            |                          | 3.4                   | 412        |                                                 |                            |                                             |
|                          | 9.1                   | 153        |                                             | 0.25                       |                          | 3.9                   | 357        |                                                 | 0.75                       |                                             |
|                          | 10                    | 133        |                                             |                            |                          | 4.4                   | 314        |                                                 |                            |                                             |
|                          | 11                    | 129        |                                             |                            |                          |                       |            |                                                 |                            |                                             |
| 400                      | 2.5                   | 563        |                                             | 0.18                       | 3000                     | 0.33                  | 4245       |                                                 | 0.18                       |                                             |
|                          | 2.9                   | 477        |                                             |                            |                          | 0.37                  | 3721       |                                                 |                            |                                             |
|                          | 3.1                   | 445        |                                             |                            |                          | 0.43                  | 3244       |                                                 |                            |                                             |
|                          | 3.6                   | 389        |                                             |                            |                          | 0.48                  | 2881       |                                                 |                            |                                             |
|                          | 4.0                   | 346        |                                             |                            |                          | 0.54                  | 2575       |                                                 |                            |                                             |
|                          | 4.6                   | 304        | FA 47R17<br>FAF47R17<br>F 47R17<br>FF 47R17 | 0.25                       |                          | 0.63                  | 2199       |                                                 | 0.25                       |                                             |
|                          | 4.7                   | 293        |                                             |                            |                          | 0.72                  | 1930       |                                                 |                            |                                             |
|                          | 6.0                   | 230        |                                             |                            |                          | 0.81                  | 1709       | FA 87R57<br>FAF87R57<br>F 87R57<br>FF 87R57     | 0.37                       |                                             |
|                          | 6.4                   | 216        |                                             | 0.37                       |                          | 0.93                  | 1493       |                                                 |                            |                                             |
|                          | 7.4                   | 188        |                                             |                            |                          | 1.1                   | 1300       |                                                 |                            |                                             |
|                          | 7.9                   | 176        |                                             |                            |                          | 1.2                   | 1148       |                                                 |                            |                                             |
|                          | 9.4                   | 148        |                                             | 0.55                       |                          | 1.4                   | 1010       |                                                 |                            |                                             |
|                          | 11                    | 130        |                                             |                            |                          | 1.6                   | 887        |                                                 |                            |                                             |
| 600                      | 1.6                   | 856        |                                             | 0.18                       | 4300                     | 1.8                   | 780        |                                                 | 0.75                       |                                             |
|                          | 1.9                   | 749        |                                             |                            |                          | 2.1                   | 674        |                                                 |                            |                                             |
|                          | 2.1                   | 658        |                                             |                            |                          | 2.3                   | 609        |                                                 | 1.1                        |                                             |
|                          | 2.5                   | 549        |                                             |                            |                          | 2.7                   | 515        |                                                 |                            |                                             |
|                          | 2.9                   | 483        | FA 57R37<br>FAF57R37<br>F 57R37<br>FF 57R37 | 0.25                       |                          | 3.1                   | 452        |                                                 |                            |                                             |
|                          | 3.3                   | 426        |                                             |                            |                          | 4.0                   | 345        |                                                 | 1.5                        |                                             |
|                          | 3.6                   | 382        |                                             |                            |                          | 0.21                  | 6532       |                                                 |                            |                                             |
|                          | 4.2                   | 330        |                                             |                            |                          | 0.24                  | 5696       |                                                 | 0.18                       |                                             |
|                          | 4.7                   | 298        |                                             | 0.37                       |                          | 0.28                  | 5032       |                                                 |                            |                                             |
|                          | 5.3                   | 262        |                                             |                            |                          | 0.32                  | 4375       |                                                 |                            |                                             |
|                          | 6.2                   | 226        |                                             | 0.55                       |                          | 0.35                  | 3946       |                                                 | 0.25                       |                                             |
|                          | 7.0                   | 200        |                                             |                            |                          | 0.41                  | 3404       |                                                 |                            |                                             |
|                          | 8.4                   | 166        |                                             | 0.75                       |                          | 0.47                  | 2949       |                                                 |                            |                                             |
|                          | 9.1                   | 152        |                                             |                            |                          | 0.54                  | 2590       |                                                 | 0.37                       |                                             |
|                          | 10                    | 134        |                                             |                            |                          | 0.61                  | 2267       |                                                 |                            |                                             |
|                          | 820                   | 1.2        | 1126                                        | 4300                       |                          | 0.70                  | 1989       |                                                 |                            | FA 97R57<br>FAF97R57<br>F 97R57<br>FF 97R57 |
| 1.4                      |                       | 984        | 0.80                                        |                            | 1739                     |                       |            |                                                 |                            |                                             |
| 1.6                      |                       | 864        | 0.90                                        |                            | 1542                     |                       |            |                                                 |                            |                                             |
| 1.9                      |                       | 722        | 1.0                                         |                            | 1340                     |                       | 0.75       |                                                 |                            |                                             |
| 2.2                      |                       | 633        | 1.2                                         |                            | 1182                     |                       |            |                                                 |                            |                                             |
| 2.6                      |                       | 527        | 1.3                                         |                            | 1032                     |                       | 1.1        |                                                 |                            |                                             |
| 2.8                      |                       | 500        | 1.5                                         |                            | 907                      |                       |            |                                                 |                            |                                             |
| 3.1                      |                       | 454        | 1.8                                         |                            | 796                      |                       |            |                                                 |                            |                                             |
| 3.5                      |                       | 392        | 2.0                                         |                            | 700                      |                       | 1.5        |                                                 |                            |                                             |
| 4.2                      |                       | 333        | 2.3                                         |                            | 611                      |                       |            |                                                 |                            |                                             |
| 4.7                      |                       | 297        | 2.6                                         |                            | 534                      |                       |            |                                                 |                            |                                             |
| 5.3                      |                       | 261        | 3.0                                         |                            | 472                      |                       | 2.2        |                                                 |                            |                                             |
| 5.8                      |                       | 238        | 3.5                                         |                            | 410                      |                       |            |                                                 |                            |                                             |
| 7.0                      |                       | 200        | 3.9                                         |                            | 367                      |                       |            |                                                 |                            |                                             |
| 1500                     |                       | 0.7        | 2024                                        |                            | 7840                     | 4.9                   | 288        |                                                 | 3                          |                                             |
|                          |                       | 0.81       | 1728                                        |                            |                          | 5.7                   | 247        |                                                 |                            |                                             |
|                          |                       | 0.91       | 1543                                        |                            |                          | 0.12                  | 11347      | FA 107R77<br>FAF107R77<br>F 107R77<br>FF 107R77 | 0.18                       |                                             |
|                          |                       | 1.03       | 1354                                        |                            |                          | 0.14                  | 10039      |                                                 |                            |                                             |
|                          | 1.2                   | 1196       | 0.16                                        | 8548                       |                          |                       |            |                                                 |                            |                                             |
|                          | 1.3                   | 1050       | 0.18                                        | 7675                       |                          |                       |            |                                                 |                            |                                             |
|                          | 1.5                   | 907        |                                             | 0.25                       |                          | 0.21                  | 6615       |                                                 | 0.25                       |                                             |
|                          | 1.7                   | 810        |                                             |                            |                          | 0.24                  | 5820       |                                                 |                            |                                             |
|                          | 2.0                   | 710        |                                             |                            |                          | 0.27                  | 5223       |                                                 |                            |                                             |

All gear units are overloaded in above table. Determination of operating torque should not higher than the gear unit's nominal torque.

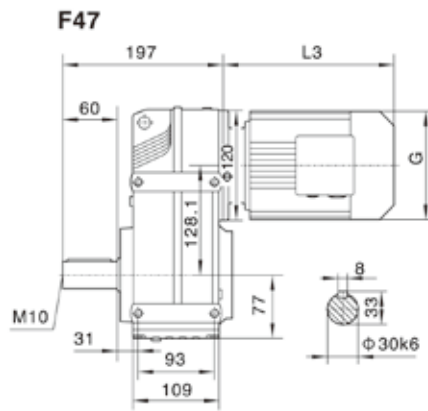
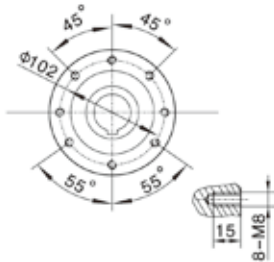
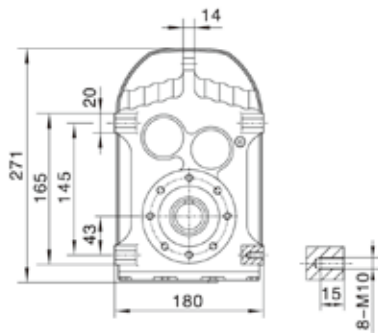
| Permissible torque<br>Nm | Output speed<br>r/min | Ratio<br>i | Type<br>Type                                    | Power<br>kW/4p | Permissible torque<br>Nm | Output speed<br>r/min | Ratio<br>i | Type<br>Type                                    | Power<br>kW/4p |
|--------------------------|-----------------------|------------|-------------------------------------------------|----------------|--------------------------|-----------------------|------------|-------------------------------------------------|----------------|
| 7840                     | 0.30                  | 4567       | FA 107R77<br>FAF107R77<br>F 107R77<br>FF 107R77 | 0.37           | 18000                    | 0.04                  | 31434      | FA 157R97<br>FAF157R97<br>F 157R97<br>FF 157R97 | 0.55           |
|                          | 0.40                  | 3442       |                                                 | 0.05           |                          | 26173                 |            |                                                 |                |
|                          | 0.46                  | 3037       |                                                 | 0.06           |                          | 23464                 |            |                                                 |                |
|                          | 0.50                  | 2756       |                                                 | 0.07           |                          | 20212                 |            |                                                 |                |
|                          | 0.59                  | 2369       |                                                 | 0.08           |                          | 17984                 |            |                                                 |                |
|                          | 0.67                  | 2068       |                                                 | 0.09           |                          | 16358                 |            |                                                 |                |
|                          | 0.76                  | 1826       |                                                 | 0.10           |                          | 13751                 |            |                                                 |                |
|                          | 0.88                  | 1597       |                                                 | 0.11           |                          | 12235                 |            |                                                 |                |
|                          | 1.0                   | 1401       |                                                 | 0.20           |                          | 7065                  |            |                                                 |                |
|                          | 1.1                   | 1243       |                                                 | 0.22           |                          | 6286                  |            |                                                 |                |
|                          | 1.3                   | 1087       |                                                 | 0.26           |                          | 5404                  |            |                                                 |                |
|                          | 1.5                   | 950        |                                                 | 0.14           |                          | 10033                 |            |                                                 |                |
|                          | 1.7                   | 834        |                                                 | 0.16           |                          | 9021                  |            |                                                 |                |
|                          | 1.9                   | 736        |                                                 | 0.17           |                          | 8026                  |            |                                                 |                |
|                          | 2.3                   | 627        |                                                 | 0.29           |                          | 4831                  |            |                                                 |                |
|                          | 2.5                   | 560        |                                                 | 0.34           |                          | 4124                  |            |                                                 |                |
|                          | 2.9                   | 489        |                                                 | 0.50           |                          | 2776                  |            |                                                 |                |
|                          | 3.3                   | 427        |                                                 | 0.57           |                          | 2427                  |            |                                                 |                |
|                          | 4.0                   | 362        |                                                 | 0.64           |                          | 2185                  |            |                                                 |                |
| 4.3                      | 333                   | 0.39       | 3602                                            | 2.2            |                          |                       |            |                                                 |                |
| 12000                    | 0.08                  | 16787      | 0.44                                            |                |                          | 3205                  | 3          |                                                 |                |
|                          | 0.09                  | 14838      | 0.73                                            |                |                          | 1944                  |            |                                                 | 4              |
|                          | 0.11                  | 13014      | 0.85                                            |                |                          | 1674                  |            |                                                 |                |
|                          | 0.12                  | 11748      | 1.00                                            |                |                          | 1420                  |            |                                                 | 5.5            |
|                          | 0.14                  | 10271      | 1.1                                             |                |                          | 1308                  |            |                                                 |                |
|                          | 0.16                  | 8901       | 1.2                                             |                |                          | 1169                  |            |                                                 | 11             |
|                          | 0.18                  | 7703       | 1.5                                             |                |                          | 953                   |            |                                                 |                |
|                          | 0.21                  | 6768       | 1.7                                             |                |                          | 845                   |            |                                                 | 18.5           |
|                          | 0.23                  | 5975       | 1.9                                             |                |                          | 764                   |            |                                                 |                |
|                          | 0.27                  | 5076       | 2.1                                             |                |                          | 680                   |            |                                                 |                |
|                          | 0.31                  | 4466       | 2.5                                             |                |                          | 576                   |            |                                                 |                |
|                          | 0.36                  | 3868       | 2.9                                             |                |                          | 503                   |            |                                                 |                |
|                          | 0.41                  | 3403       | 3.3                                             |                |                          | 446                   |            |                                                 |                |
|                          | 0.47                  | 2987       | 4.9                                             |                |                          | 301                   |            |                                                 |                |
|                          | 0.52                  | 2693       | 5.4                                             |                |                          | 272                   |            |                                                 |                |
|                          | 0.59                  | 2376       | 6.3                                             |                |                          | 231                   |            |                                                 |                |
|                          | 0.68                  | 2054       | 7.2                                             |                |                          | 202                   |            |                                                 |                |
|                          | 0.78                  | 1798       | 4.9                                             |                | 196                      |                       |            |                                                 |                |
|                          | 0.86                  | 1619       | 0.25                                            |                |                          |                       |            |                                                 |                |
|                          | 1.0                   | 1401       |                                                 |                |                          |                       |            |                                                 |                |
|                          | 1.2                   | 1230       |                                                 |                |                          |                       |            |                                                 |                |
|                          | 1.3                   | 1085       | 0.37                                            |                |                          |                       |            |                                                 |                |
|                          | 1.5                   | 937        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 1.7                   | 827        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 1.9                   | 733        | 0.55                                            |                |                          |                       |            |                                                 |                |
|                          | 2.2                   | 640        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 2.7                   | 542        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 2.9                   | 489        | 0.75                                            |                |                          |                       |            |                                                 |                |
|                          | 3.4                   | 423        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 3.9                   | 371        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 3.0                   | 483        | 1.1                                             |                |                          |                       |            |                                                 |                |
|                          | 3.5                   | 417        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 3.9                   | 373        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 4.7                   | 312        | 1.5                                             |                |                          |                       |            |                                                 |                |
|                          | 5.0                   | 293        |                                                 |                |                          |                       |            |                                                 |                |
|                          | 7.3                   | 200        |                                                 |                |                          |                       |            |                                                 |                |

All gear units are overloaded in above table. Determination of operating torque should not higher than the gear unit's nominal torque.

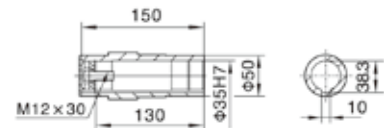


Note:1. The above housings are common parts. The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.

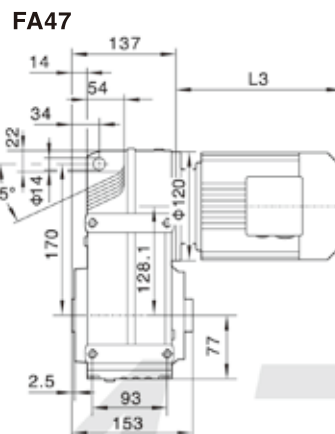
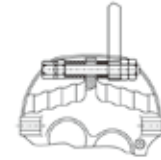




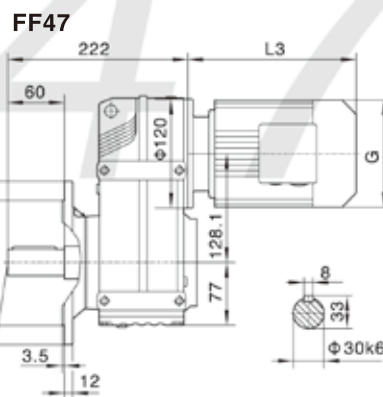
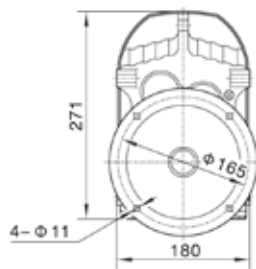
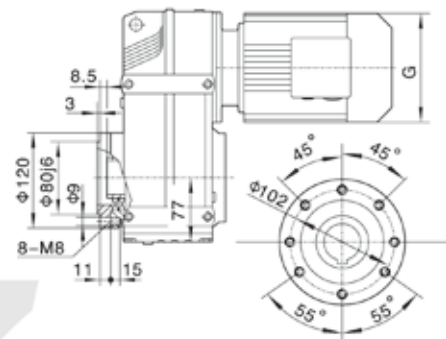
FA47/FAF47/FAZ47  
/Hollow shaft



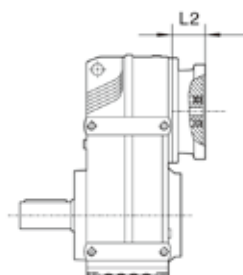
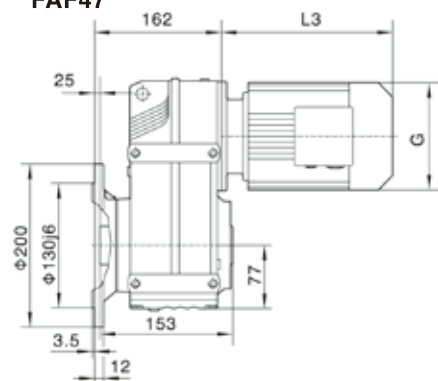
F.T47



FAZ47

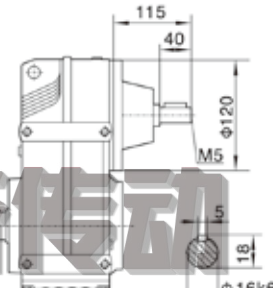
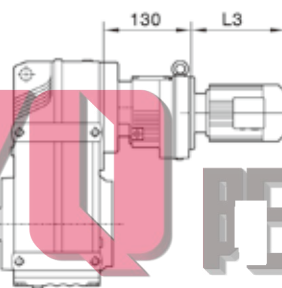


FAF47



F..47R17

F..S47

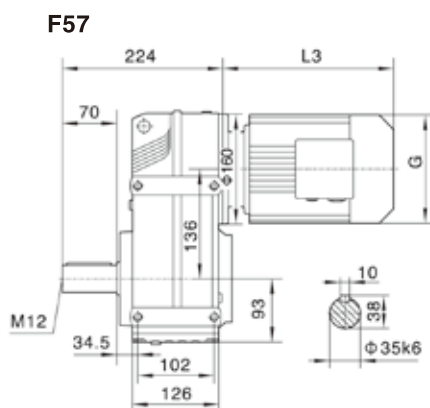
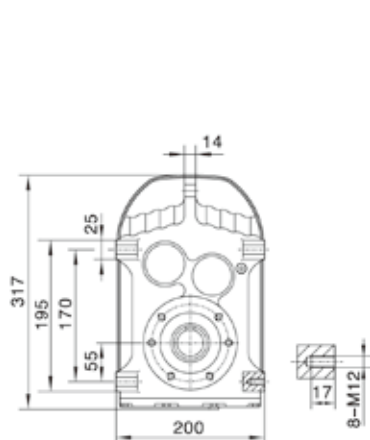


Note: For other values please refer to relevant structure.

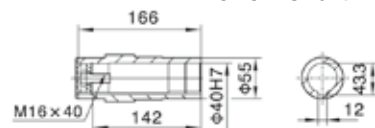
Customers provide the motor by themselves need connected flange.

|                       |      |      |      |      |      |     |     |     |   |
|-----------------------|------|------|------|------|------|-----|-----|-----|---|
| Need connected range: |      |      |      |      |      |     |     |     |   |
| Motor size            | 63   | 71   |      | 80   |      | 90S | 90L | 100 |   |
| Power/(kW)            | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3 |
| L3                    | 235  | 245  |      | 278  |      | 304 | 328 | 340 |   |
| G                     | 130  | 145  |      | 175  |      | 195 | 195 | 215 |   |
| L2                    | 71   | 71   | 71   |      | 71   | 71  | 71  | 93  |   |

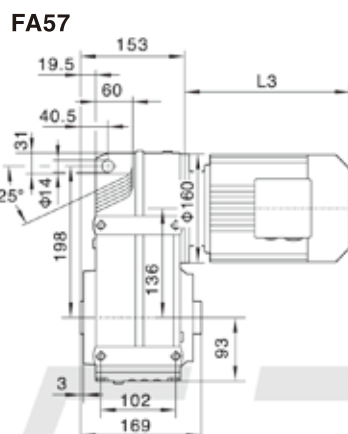
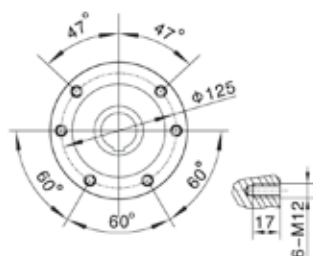
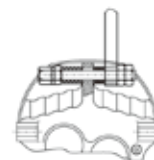
Note: 1. The above housings are common parts. The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.



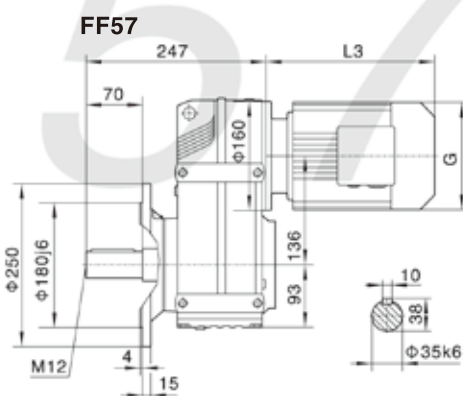
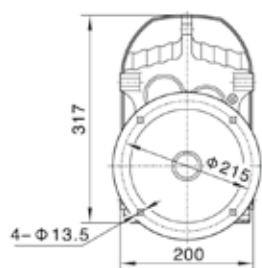
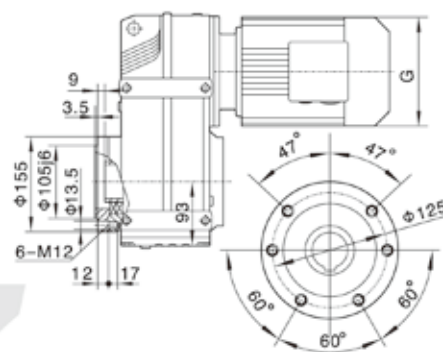
FA57/FAF57/FAZ57  
/Hollow shaft



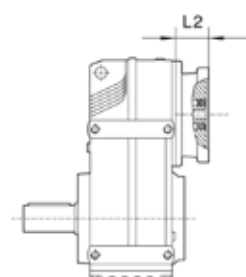
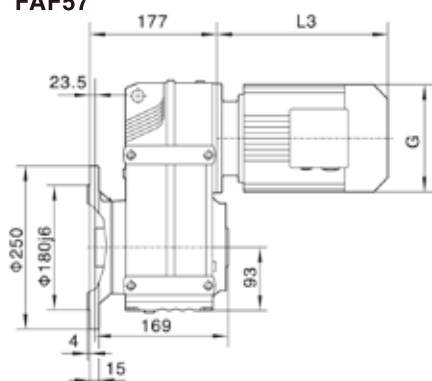
F..T57



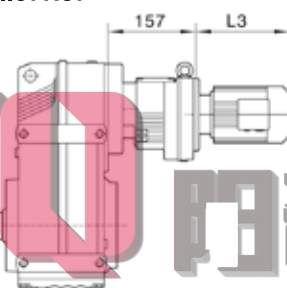
FAZ57



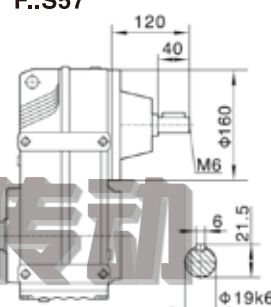
FAF57



F..57R37



F..S57

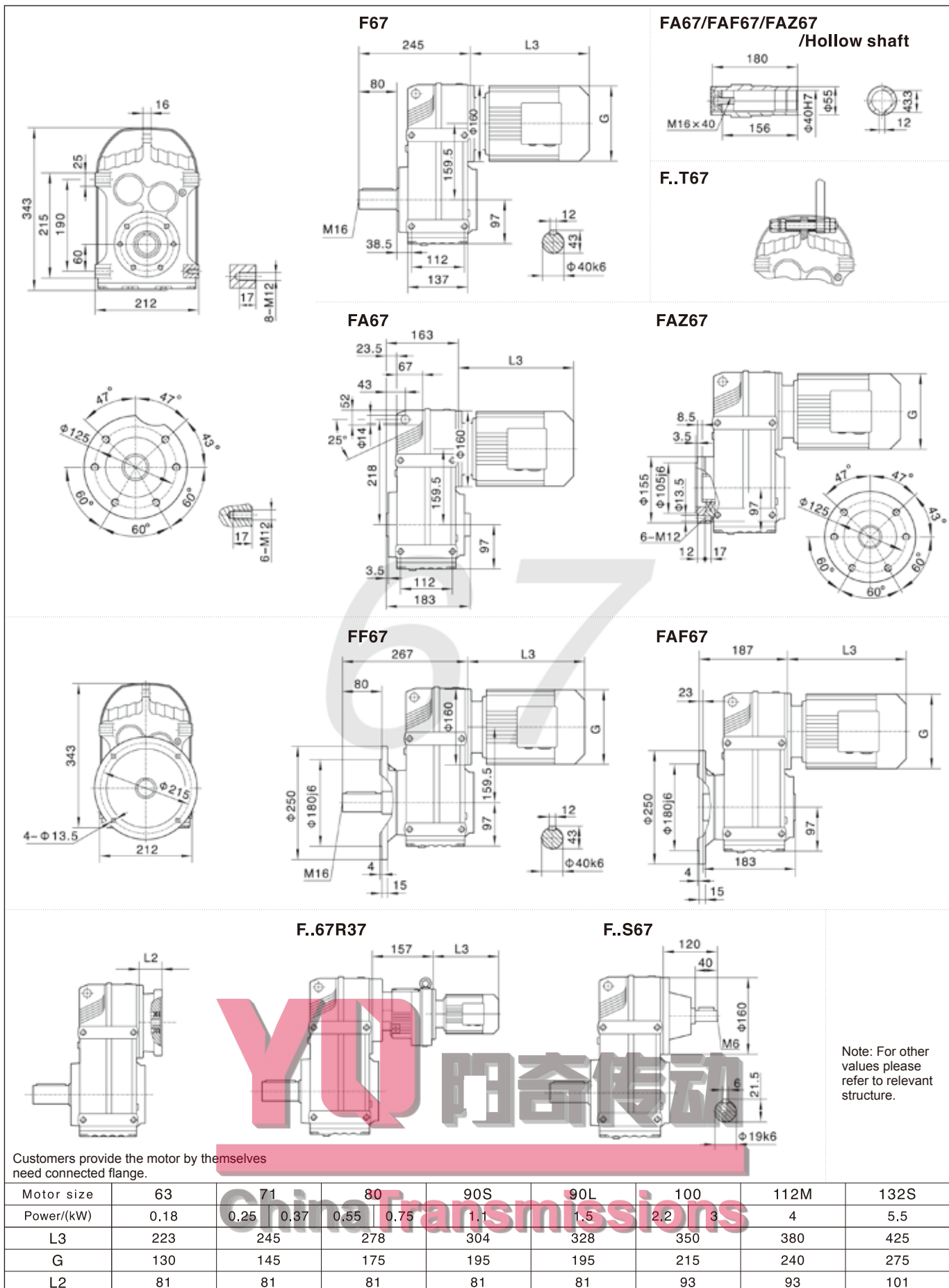


Note: For other values please refer to relevant structure.

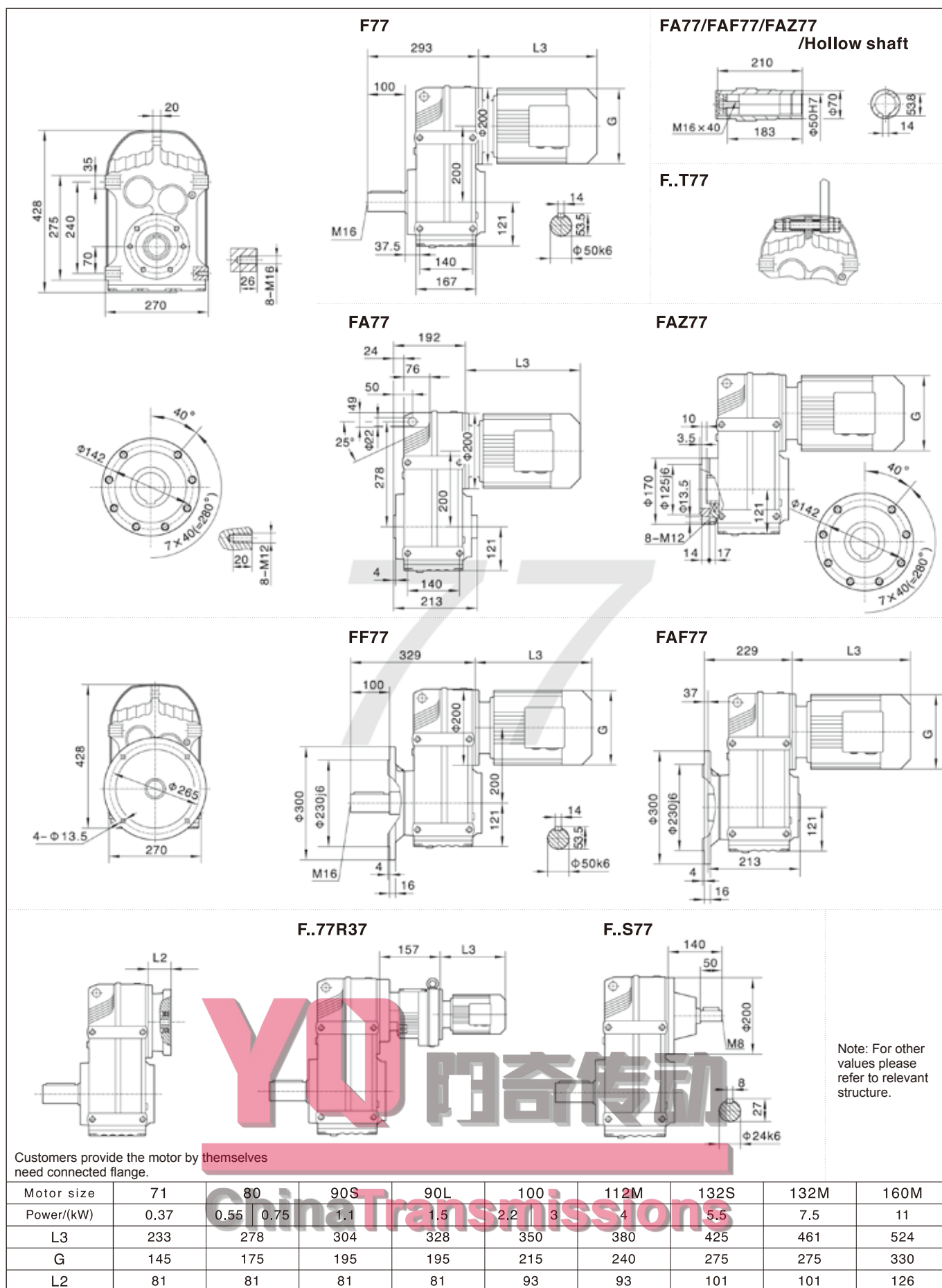
Customers provide the motor by themselves  
need connected flange.

| Motor size | 63   | 71   | 80   | 90S  | 90L  | 100 | 112M | 132S |   |   |     |
|------------|------|------|------|------|------|-----|------|------|---|---|-----|
| Power/(kW) | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5  | 2.2  | 3 | 4 | 5.5 |
| L3         | 223  | 245  | 278  | 304  | 328  | 350 | 380  | 425  |   |   |     |
| G          | 130  | 145  | 175  | 195  | 195  | 215 | 240  | 275  |   |   |     |
| L2         | 81   | 81   | 81   | 81   | 81   | 93  | 93   | 101  |   |   |     |

Note:1. The above housings are common parts.The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.

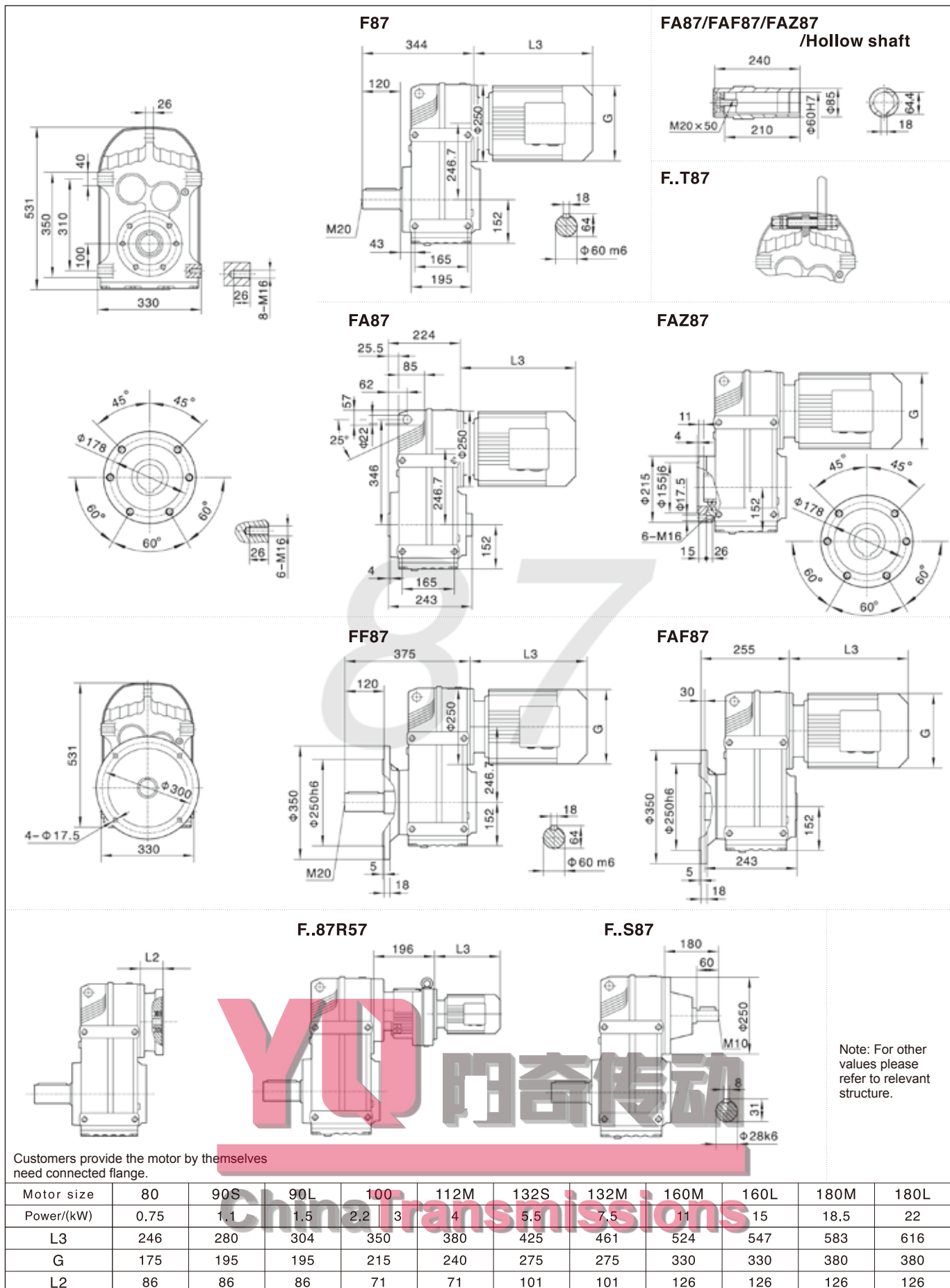


Note:1.The above housings are common parts.The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.



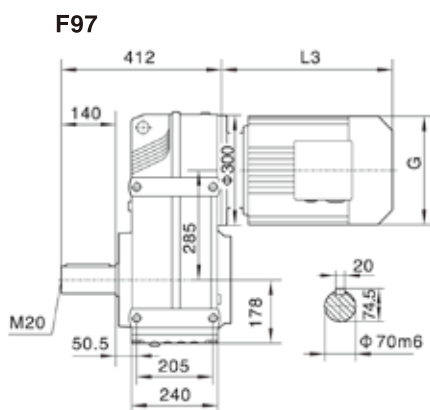
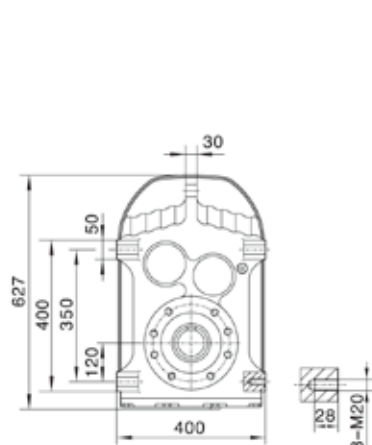
Note:1.The above housings are common parts.The mounting dimensions may consult each other. 2. "F.." means F, FA, FF, FAF, FAZ.





Note: 1. The above housings are common parts. The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.

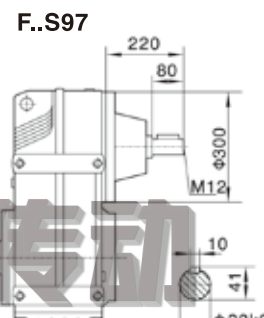
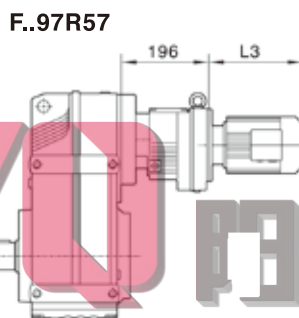
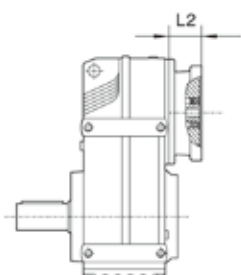
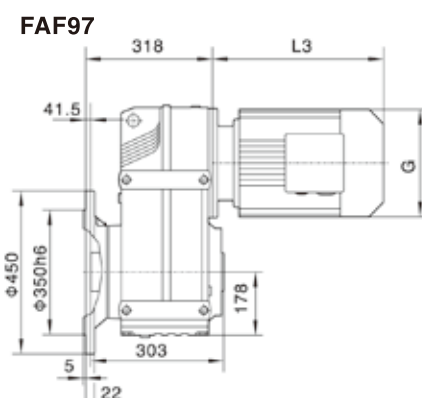
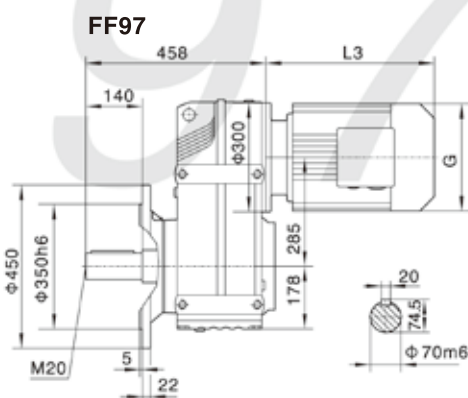
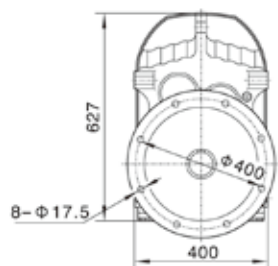
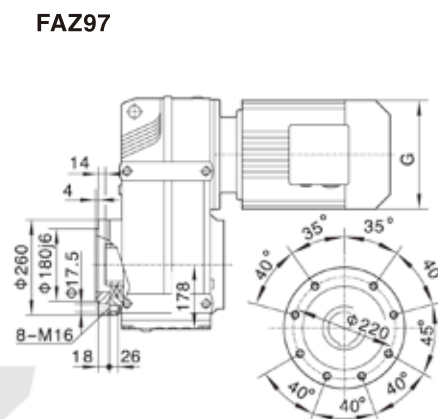
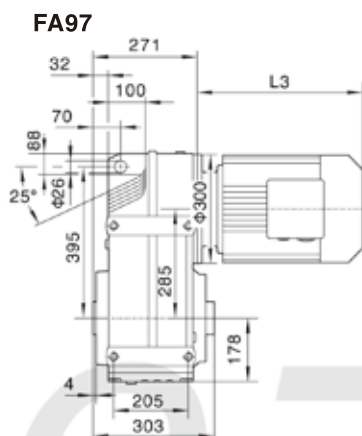




**FA97/FAF97/FAZ97**  
**/Hollow shaft**



F..T97

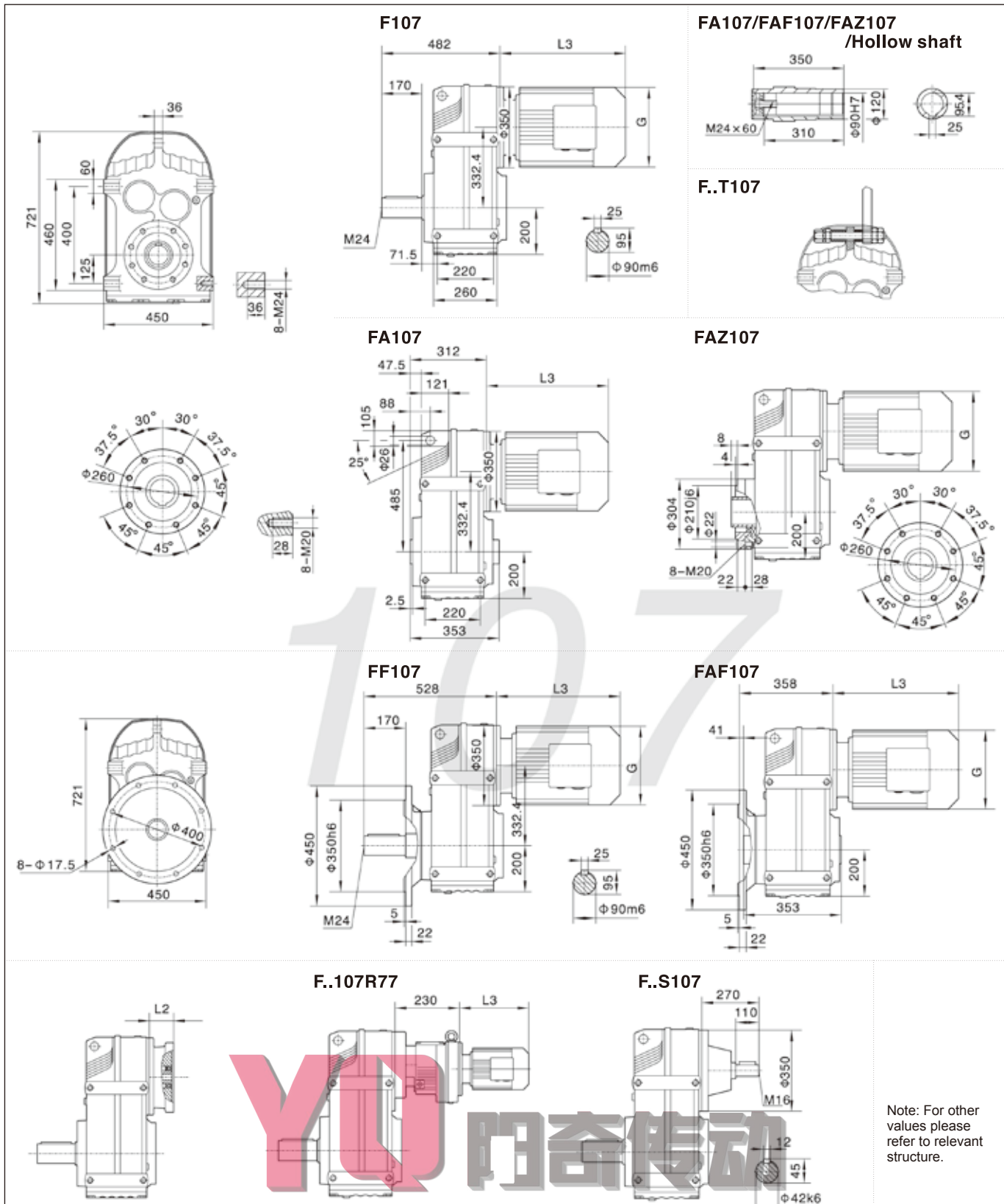


Note: For other values please refer to relevant structure.

Customers provide the motor by themselves  
need connected flange.

|                       |     |     |     |      |      |      |      |      |      |      |     |    |
|-----------------------|-----|-----|-----|------|------|------|------|------|------|------|-----|----|
| Note: selected range: |     |     |     |      |      |      |      |      |      |      |     |    |
| Motor size            | 90S | 90L | 100 | 112M | 132S | 132M | 160M | 160L | 180M | 180L | 200 |    |
| Power/(kW)            | 1.1 | 1.5 | 2.2 | 3    | 4    | 5.5  | 7.5  | 11   | 15   | 18.5 | 22  | 30 |
| L3                    | 280 | 304 | 315 | 334  | 425  | 461  | 524  | 547  | 555  | 588  | 654 |    |
| G                     | 195 | 195 | 215 | 240  | 275  | 275  | 330  | 330  | 380  | 380  | 420 |    |
| L2                    | 86  | 86  | 101 | 101  | 101  | 101  | 126  | 126  | 126  | 126  | 132 |    |

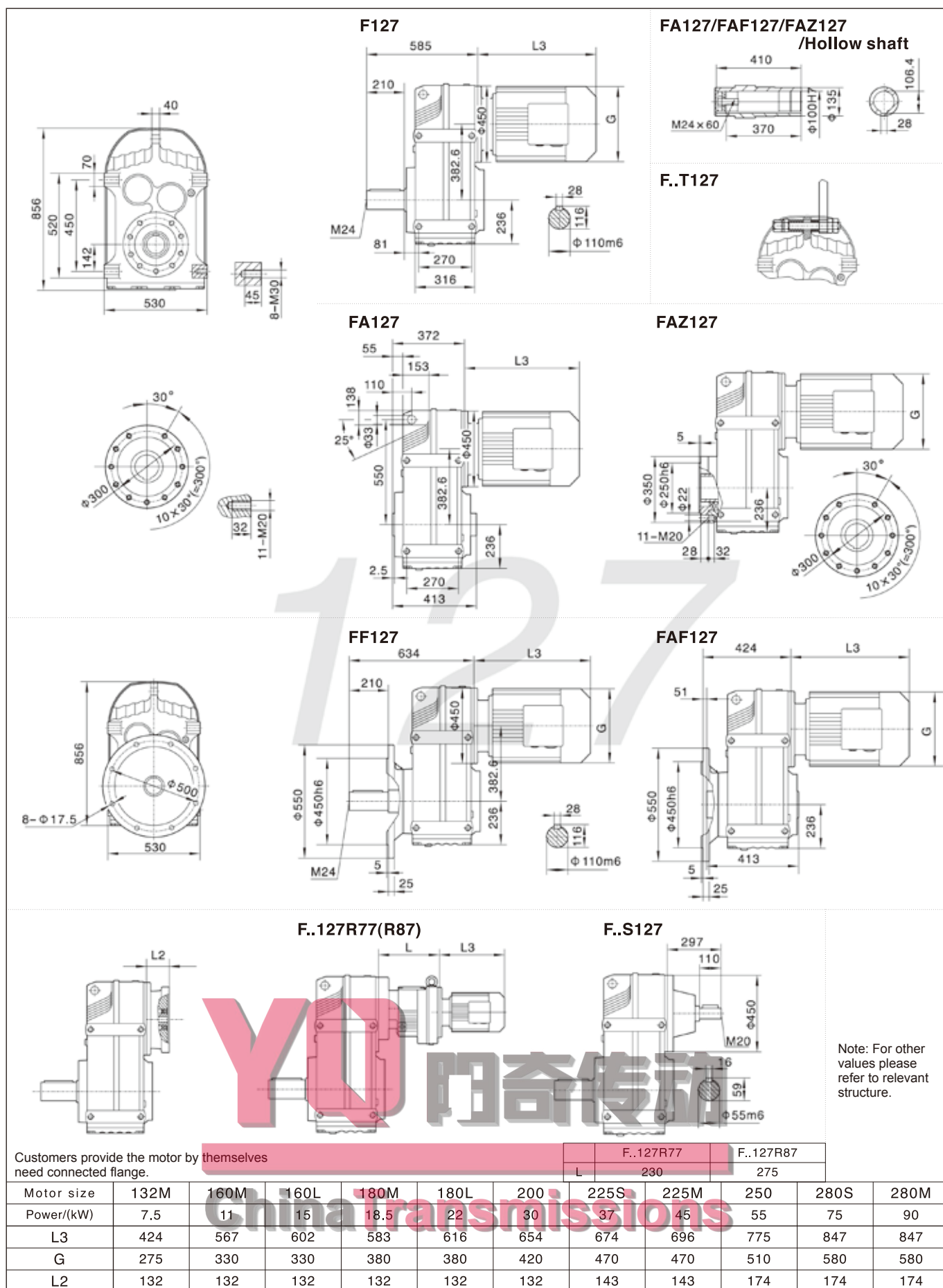
Note:1.The above housings are common parts.The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.



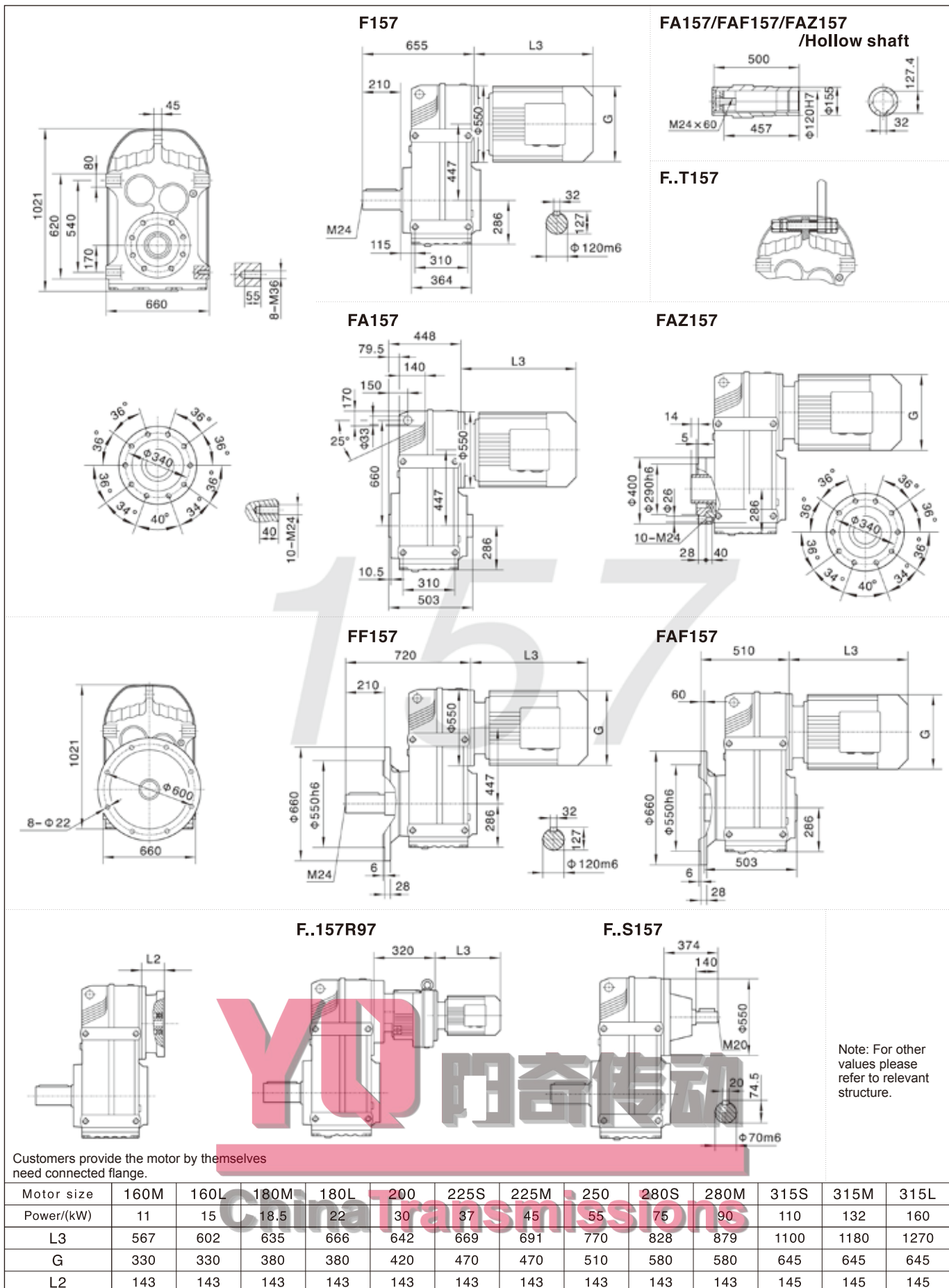
Customers provide the motor by themselves  
need connected flange.

| Motor size | 100   | 112M | 132S | 132M | 160M | 160L | 180M | 180L | 200 | 225S | 225M |
|------------|-------|------|------|------|------|------|------|------|-----|------|------|
| Power/(kW) | 2.2 3 | 4    | 5.5  | 7.5  | 11   | 15   | 18.5 | 22   | 30  | 37   | 45   |
| L3         | 318   | 334  | 386  | 422  | 504  | 519  | 555  | 588  | 654 | 680  | 702  |
| G          | 215   | 240  | 275  | 275  | 330  | 330  | 380  | 380  | 420 | 470  | 470  |
| L2         | 101   | 101  | 101  | 101  | 126  | 126  | 126  | 126  | 132 | 132  | 132  |

Note: 1. The above housings are common parts. The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.



Note:1. The above housings are common parts. The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.



Note: 1. The above housings are common parts. The mounting dimensions may consult each other. 2. "F..." means F, FA, FF, FAF, FAZ.



## Dimensions of shrink disc

