

TEMP: 220 ± 10C			PHASE 1				PHASE 2		PHASE 3	PHASE 4				PHASE 5		
Pipe Details (e _n = Wall Thickness) Max e _n = 130mm			Equalising				Preheating		Changeover Time	Joining (See Note a)				Minimum Cool Time Under Pressure (See Note b)		
			Equalising Pressure BAR			Bead Height (Minimum)				Buildup Time	Joining Pressure BAR			Up to 15°C	15°C to 25°C	25°C to 40°C
D _n	SDR	e _n	Min	Tgt	Max	mm	BAR	Time	Max	Max	Min	Tgt	Max			
63	41	1.5	1	1	1	0.5	0.05	0m 45s	5s	5s	1	1	1	0h 4m	0h 5m	0h 7m
	33	1.9	1	1	1	0.5	0.06	0m 45s	5s	5s	1	1	1	0h 4m	0h 5m	0h 7m
	26	2.4	1	1	1	0.5	0.08	0m 45s	5s	5s	1	1	1	0h 4m	0h 5m	0h 7m
	21	3.0	1	1	2	0.5	0.10	0m 45s	5s	5s	1	1	2	0h 4m	0h 5m	0h 7m
	17	3.7	2	2	2	0.5	0.12	0m 45s	5s	5s	2	2	2	0h 4m	0h 5m	0h 7m
	13.6	4.6	2	2	2	1.0	0.14	0m 45s	5s	5s	2	2	2	0h 4m	0h 5m	0h 7m
	11	5.7	2	3	3	1.0	0.17	0m 58s	5.5s	5.5s	2	3	3	0h 5m	0h 6m	0h 8m
	9	7.0	3	3	3	1.5	0.20	1m 10s	6s	6s	3	3	3	0h 6m	0h 8m	0h 10m
75	7.4	8.5	3	4	4	1.5	0.24	1m 27s	6.7s	6.7s	3	4	4	0h 7m	0h 9m	0h 11m
	41	1.8	1	1	1	0.5	0.07	0m 45s	5s	5s	1	1	1	0h 4m	0h 5m	0h 7m
	33	2.3	1	1	1	0.5	0.09	0m 45s	5s	5s	1	1	1	0h 4m	0h 5m	0h 7m
	26	2.9	2	2	2	0.5	0.11	0m 45s	5s	5s	2	2	2	0h 4m	0h 5m	0h 7m
	21	3.6	2	2	2	0.5	0.13	0m 45s	5s	5s	2	2	2	0h 4m	0h 5m	0h 7m
	17	4.4	2	2	3	0.5	0.16	0m 45s	5s	5s	2	2	3	0h 4m	0h 5m	0h 7m
	13.6	5.5	3	3	3	1.0	0.20	0m 58s	5.5s	5.5s	3	3	3	0h 5m	0h 6m	0h 8m
	11	6.8	3	4	4	1.0	0.24	1m 10s	6s	6s	3	4	4	0h 6m	0h 7m	0h 9m
90	9	8.3	4	4	5	1.5	0.28	1m 21s	6.5s	6.5s	4	4	5	0h 7m	0h 8m	0h 11m
	7.4	10.1	5	5	5	1.5	0.33	1m 43s	7.4s	7.4s	5	5	5	0h 8m	0h 10m	0h 13m
	41	2.2	1	2	2	0.5	0.10	0m 45s	5s	5s	1	2	2	0h 4m	0h 5m	0h 7m
	33	2.7	2	2	2	0.5	0.12	0m 45s	5s	5s	2	2	2	0h 4m	0h 5m	0h 7m
	26	3.5	2	2	3	0.5	0.16	0m 45s	5s	5s	2	2	3	0h 4m	0h 5m	0h 7m
	21	4.3	3	3	3	0.5	0.19	0m 45s	5s	5s	3	3	3	0h 4m	0h 5m	0h 7m
	17	5.3	3	3	4	1.0	0.23	0m 51s	5.3s	5.3s	3	3	4	0h 4m	0h 6m	0h 7m
	13.6	6.6	4	4	5	1.0	0.28	1m 10s	6s	6s	4	4	5	0h 6m	0h 7m	0h 9m
110	11	8.2	5	5	5	1.5	0.34	1m 21s	6.5s	6.5s	5	5	5	0h 7m	0h 8m	0h 11m
	9	10.0	6	6	7	1.5	0.41	1m 43s	7.4s	7.4s	6	6	7	0h 8m	0h 10m	0h 13m
	7.4	12.2	7	7	8	2.0	0.48	2m 0s	8s	8s	7	7	8	0h 10m	0h 12m	0h 16m
	41	2.7	2	2	2	0.5	0.15	0m 45s	5s	5s	2	2	2	0h 4m	0h 5m	0h 7m
	33	3.3	3	3	3	0.5	0.18	0m 45s	5s	5s	3	3	3	0h 4m	0h 5m	0h 7m
	26	4.2	3	3	4	0.5	0.23	0m 45s	5s	5s	3	3	4	0h 4m	0h 5m	0h 7m
	21	5.2	4	4	4	1.0	0.28	0m 51s	5.3s	5.3s	4	4	4	0h 4m	0h 6m	0h 7m
	17	6.5	5	5	5	1.0	0.34	1m 4s	5.8s	5.8s	5	5	5	0h 5m	0h 7m	0h 8m
	13.6	8.1	6	6	7	1.5	0.42	1m 21s	6.5s	6.5s	6	6	7	0h 7m	0h 8m	0h 11m
	11	10.0	7	8	8	1.5	0.51	1m 43s	7.4s	7.4s	7	8	8	0h 8m	0h 10m	0h 13m
	9	12.2	8	9	10	2.0	0.60	2m 0s	8s	8s	8	9	10	0h 10m	0h 12m	0h 16m
	7.4	14.9	10	11	11	2.0	0.71	2m 27s	8.8s	9.2s	10	11	11	0h 11m	0h 14m	0h 19m

TEMP: 220 ± 10C			PHASE 1				PHASE 2		PHASE 3	PHASE 4				PHASE 5		
Pipe Details (e _n = Wall Thickness) Max e _n = 130mm			Equalising				Preheating		Changeover Time	Joining (See Note a)				Minimum Cool Time Under Pressure (See Note b)		
			Equalising Pressure BAR			Bead Height (Minimum)				Buildup Time	Joining Pressure BAR			Up to 15°C	15°C to 25°C	25°C to 40°C
D _n	SDR	e _n	Min	Tgt	Max	mm	BAR	Time	Max	Max	Min	Tgt	Max			
125	41	3.0	3	3	3	0.5	0.19	0m 45s	5s	5s	3	3	3	0h 4m	0h 5m	0h 7m
	33	3.8	3	4	4	0.5	0.24	0m 45s	5s	5s	3	4	4	0h 4m	0h 5m	0h 7m
	26	4.8	4	4	5	1.0	0.29	0m 45s	5s	5s	4	4	5	0h 4m	0h 5m	0h 7m
	21	6.0	5	5	6	1.0	0.36	0m 58s	5.5s	5.5s	5	5	6	0h 5m	0h 6m	0h 8m
	17	7.4	6	7	7	1.5	0.44	1m 10s	6s	6s	6	7	7	0h 6m	0h 8m	0h 10m
	13.6	9.2	8	8	9	1.5	0.54	1m 32s	6.9s	6.9s	8	8	9	0h 7m	0h 9m	0h 12m
	11	11.4	9	10	10	1.5	0.65	1m 55s	7.8s	7.8s	9	10	10	0h 9m	0h 11m	0h 14m
	9	13.9	11	12	12	2.0	0.78	2m 16s	8.5s	8.7s	11	12	12	0h 11m	0h 13m	0h 17m
140	7.4	16.9	13	14	15	2.0	0.92	2m 49s	9.4s	10.1s	13	14	15	0h 12m	0h 16m	0h 21m
	41	3.4	3	4	4	0.5	0.24	0m 45s	5s	5s	3	4	4	0h 4m	0h 5m	0h 7m
	33	4.2	4	4	5	0.5	0.29	0m 45s	5s	5s	4	4	5	0h 4m	0h 5m	0h 7m
	26	5.4	5	6	6	1.0	0.37	0m 51s	5.3s	5.3s	5	6	6	0h 4m	0h 6m	0h 7m
	21	6.7	6	7	7	1.0	0.45	1m 10s	6s	6s	6	7	7	0h 6m	0h 7m	0h 9m
	17	8.2	8	8	9	1.5	0.55	1m 21s	6.5s	6.5s	8	8	9	0h 7m	0h 8m	0h 11m
	13.6	10.3	9	10	11	1.5	0.67	1m 43s	7.4s	7.4s	9	10	11	0h 8m	0h 10m	0h 13m
	11	12.7	11	12	13	2.0	0.82	2m 5s	8.2s	8.3s	11	12	13	0h 10m	0h 13m	0h 16m
160	9	15.6	14	15	16	2.0	0.97	2m 38s	9.1s	9.7s	14	15	16	0h 12m	0h 15m	0h 20m
	7.4	18.9	16	17	18	2.0	1.15	3m 10s	10s	11s	16	17	18	0h 14m	0h 18m	0h 23m
	41	3.9	4	5	5	0.5	0.31	0m 45s	5s	5s	4	5	5	0h 4m	0h 5m	0h 7m
	33	4.8	5	6	6	1.0	0.38	0m 45s	5s	5s	5	6	6	0h 4m	0h 5m	0h 7m
	26	6.2	7	7	8	1.0	0.48	1m 4s	5.8s	5.8s	7	7	8	0h 5m	0h 7m	0h 8m
	21	7.6	8	9	9	1.5	0.59	1m 16s	6.3s	6.3s	8	9	9	0h 6m	0h 8m	0h 10m
	17	9.4	10	11	11	1.5	0.72	1m 32s	6.9s	6.9s	10	11	11	0h 7m	0h 9m	0h 12m
	13.6	11.8	12	13	14	1.5	0.88	2m 0s	8s	8s	12	13	14	0h 9m	0h 12m	0h 15m
180	11	14.5	15	16	17	2.0	1.07	2m 27s	8.8s	9.2s	15	16	17	0h 11m	0h 14m	0h 19m
	9	17.8	18	19	20	2.0	1.27	2m 59s	9.7s	10.6s	18	19	20	0h 13m	0h 17m	0h 22m
	7.4	21.6	21	23	24	2.5	1.50	3m 37s	10.8s	12.2s	21	23	24	0h 16m	0h 20m	0h 27m
	41	4.4	6	6	6	0.5	0.39	0m 45s	5s	5s	6	6	6	0h 4m	0h 5m	0h 7m
	33	5.5	7	7	8	1.0	0.48	0m 51s	5.3s	5.3s	7	7	8	0h 4m	0h 6m	0h 7m
	26	6.9	9	9	10	1.0	0.61	1m 10s	6s	6s	9	9	10	0h 6m	0h 7m	0h 9m
	21	8.6	10	11	12	1.5	0.74	1m 27s	6.7s	6.7s	10	11	12	0h 7m	0h 9m	0h 11m
	17	10.6	13	14	14	1.5	0.90	1m 49s	7.6s	7.6s	13	14	14	0h 9m	0h 11m	0h 14m
	13.6	13.2	16	17	18	2.0	1.11	2m 11s	8.4s	8.5s	16	17	18	0h 10m	0h 13m	0h 17m
	11	16.4	19	20	22	2.0	1.35	2m 43s	9.3s	9.9s	19	20	22	0h 12m	0h 16m	0h 20m
	9	20.0	23	24	26	2.5	1.61	3m 21s	10.4s	11.5s	23	24	26	0h 15m	0h 19m	0h 25m
	7.4	24.3	27	29	30	2.5	1.90	4m 4s	11.6s	13.4s	27	29	30	0h 18m	0h 22m	0h 30m

TEMP: 220 ± 10C			PHASE 1				PHASE 2		PHASE 3	PHASE 4				PHASE 5		
Pipe Details (e _n = Wall Thickness) Max e _n = 130mm			Equalising				Preheating		Changeover Time	Joining (See Note <i>a</i>)				Minimum Cool Time Under Pressure (See Note <i>b</i>)		
			Equalising Pressure BAR			Bead Height (Minimum)				Buildup Time	Joining Pressure BAR		Up to 15°C	15°C to 25°C	25°C to 40°C	
D _n	SDR	e _n	Min	Tgt	Max	mm	BAR	Time	Max	Max	Min	Tgt	Max			
200	41	4.9	7	7	8	1.0	0.48	0m 45s	5s	5s	7	7	8	0h 4m	0h 5m	0h 7m
	33	6.1	8	9	10	1.0	0.59	1m 4s	5.8s	5.8s	8	9	10	0h 5m	0h 7m	0h 8m
	26	7.7	10	11	12	1.5	0.75	1m 16s	6.3s	6.3s	10	11	12	0h 6m	0h 8m	0h 10m
	21	9.5	13	14	15	1.5	0.91	1m 38s	7.2s	7.2s	13	14	15	0h 8m	0h 10m	0h 13m
	17	11.8	16	17	18	1.5	1.11	2m 0s	8s	8s	16	17	18	0h 9m	0h 12m	0h 15m
	13.6	14.7	19	21	22	2.0	1.37	2m 27s	8.8s	9.2s	19	21	22	0h 11m	0h 14m	0h 19m
	11	18.2	23	25	27	2.0	1.66	3m 5s	9.9s	10.8s	23	25	27	0h 13m	0h 17m	0h 23m
	9	22.2	28	30	32	2.5	1.98	3m 42s	11s	12.4s	28	30	32	0h 16m	0h 21m	0h 28m
	7.4	27.0	33	35	38	3.0	2.35	4m 31s	12.4s	14.5s	33	35	38	0h 20m	0h 25m	0h 33m