



Closed end

Domed Head

Steel zinc plated

Mandrel: Steel zinc plated



Closed end

- Moisture and pressure tight
- Guaranteed mandrel head retention
- Provides a softer setting for more vulnerable

			PART NO							PACK BOX QTY	PACK CARTON BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N			kg
3.2 3.10-3.28	10.0	1.6-4.8	10221 32100	3.30-3.40	6.12-6.58	1.00	1.90	1150	1200	1,000	10,000	1.50
4.0 3.90-4.08	10.2	1.6-4.8	10221 40102	4.10-4.20	7.62-8.22	1.20	2.30	1730	1860	1,000	10,000	2.42
4.8 4.70-4.88	9.2 12.4	0.5-3.2 3.2-6.4	10221 48092 10221 48104	4.90-5.00	9.23-9.83	1.30	2.90	2425	2840	500 500	5,000 5,000	3.08 3.64

Closed end

Domed Head

Stainless steel A2 (304)

Mandrel: Stainless steel A1 (420)



- Moisture and pressure tight
- Guaranteed mandrel head retention
- High strength at high temperatures

			PART NO							PACK BOX QTY	PACK CARTON BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N			kg
3.2 3.10-3.28	6 8 10 12	0.5-1.5 1.5-3.0 3.0-5.0 5.0-7.0	10231 32060 10231 32080 10231 32100 10231 32120	3.30-3.40	6.00-6.50	1.00	1.90	2000	2220	1,000 1,000 1,000 1,000	10,000 10,000 10,000 10,000	1.15 1.29 1.40 1.52
4.0 3.90-4.08	6 8 10 12 16	0.5-1.5 1.5-3.0 3.0-5.0 5.0-6.5 6.5-10.5	10231 40060 10231 40080 10231 40100 10231 40120 10231 40160	4.10-4.20	7.60-8.50	1.20	2.30	3000	4000	1,000 1,000 1,000 1,000 500	10,000 10,000 10,000 10,000 5,000	1.95 2.00 2.15 2.29 2.60
4.8 4.70-4.88	8 10 12 16 20	1.0-3.0 3.0-5.0 5.0-6.5 6.5-10.5 10.5-14.0	10231 48080 10231 48100 10231 48120 10231 48160 10231 48200	4.90-5.00	9.00-10.00	1.30	2.90	4300	4400	500 500 500 500 500	5,000 5,000 5,000 5,000 5,000	3.10 3.26 3.62 3.11 4.54

d = Nominal Diameter Min-Max, Diameter, l = Body Length(+/-0.5mm), g = Grip Range(Min-Max), dh = Hole Size(Min-Max), dk = Flange Diameter(Min-Max), k = Flange Thickness(Max), dm = Nominal Mandrel Diameter S = Nominal Shear Strength, T = Nominal Tensile Strength



Closed end

- Moisture and pressure tight
- Guaranteed mandrel head retention
- Provides a softer setting for more vulnerable



Closed end Domed Head

Aluminium AI 99.5
Mandrel: Aluminium alloy

			PART NO							PACK BOX QTY	PACK CARTON BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N			kg
3.2 3.12-3.28	8 9.5	1.6-3.2 3.2-4.8	10251 32080	3.30-3.40	5.70-6.40	1.40	1.87	445	489	1,000	20,000	0.59
			10251 32095							1,000	20,000	0.68
4.0 3.92-4.08	10 11.5	3.2-4.8 4.8-6.4	10251 40100	4.10-4.20	7.60-8.30	1.70	2.33	578	712	1,000	20,000	0.76
			10251 40115							1,000	20,000	0.89
4.8 4.72-4.88	9.5	1.5-3.2	10251 48095	4.90-5.00	9.00-10.00	2.00	2.78	934	1112	500	10,000	1.14
	11	3.2-4.8	10251 48110							500	10,000	1.26
	12.5	4.8-6.4	10251 48125							500	10,000	1.32
	15	6.4-9.5	10251 48150							500	10,000	1.44
	18	9.5-12.7	10251 48180							500	10,000	1.66

- Moisture and pressure tight
- Guaranteed mandrel head retention
- Good hole filling for good joint construction
- For a flush surface after setting
- Stainless steel mandrel for corrosion



Closed end Domed Head

Aluminium AlMg 5 (5056)
Mandrel: Stainless steel A2

			PART NO							PACK BOX QTY	PACK CARTON BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N			kg
3.2 3.12-3.28	8 9.5 11	1.6-3.2 3.2-4.8 4.8-6.4	10241 32080	3.30-3.40	5.70-6.40	1.00	1.78	1067	1245	1,000	20,000	0.88
			10241 32095							1,000	20,000	0.97
			10241 32110							1,000	20,000	1.00
4.0 3.92-4.08	10 11.5 13	3.2-4.8 4.8-6.4 6.4-8.0	10241 40100	4.10-4.20	7.60-8.30	1.30	2.18	1557	2135	1,000	20,000	1.52
			10241 40115							1,000	20,000	1.57
			10241 40130							1,000	20,000	1.69
4.8 4.72-4.88	8	0.5-3.0	10241 48080	4.90-5.00	9.00-10.00	2.00	2.65	2230	3070	500	10,000	2.36
	9.5	1.6-3.2	10241 48095							500	10,000	
	11	3.2-4.8	10241 48110							500	10,000	2.50
	12.5	4.8-6.4	10241 48125							500	10,000	2.70
	15	6.4-9.5	10241 48150							500	10,000	2.85
	18	9.5-12.7	10241 48180							500	10,000	3.06
	21	12.7-15.9	10241 48210							500	10,000	3.23

d = Nominal Diameter Min-Max, l = Body Length (+/-0.5mm), g = Grip Range (Min-Max), d_h = Hole Size (Min-Max), d_k = Flange Diameter (Min-Max), k = Flange Thickness (Max); d_m = Nominal Mandrel Diameter S = Nominal Shear Strength; T = Nominal Tensile Strength



Closed end Domed Head

Aluminium AlMg 5 (5056)
Mandrel: Steel with protection layer



Closed end

- Moisture and pressure tight
- Guaranteed mandrel head retention
- Good hole filling for good joint construction

			PART NO							PACK BOX QTY	PACK CARTON BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N			kg
3.2 3.12-3.28	6.5	0.5-1.6	10211 32065	3.30-3.40	5.70-6.40	1.40	1.78	1067	1245	1,000	20,000	0.91
	8	1.6-3.2	10211 32080							1,000	20,000	0.96
	9.5	3.2-4.8	10211 32095							1,000	20,000	0.98
	11	4.8-6.4	10211 32110							1,000	20,000	1.01
	12.5	6.4-8.0	10211 32125							1,000	20,000	1.05
4.0 3.92-4.08	8	0.5-3.2	10211 40080	4.10-4.20	7.60-8.30	1.70	2.18	1557	2135	1,000	20,000	1.54
	10	3.2-4.8	10211 40100							1,000	20,000	1.57
	11.5	4.8-6.4	10211 40115							1,000	20,000	1.63
	13	6.4-8.0	10211 40130							1,000	20,000	1.73
	15	8.0-9.5	10211 40150							500	10,000	1.90
4.8 4.72-4.88	8	0.5-3.0	10211 48080	4.90-5.00	9.00-10.00	2.00	2.64	2224	3069	500	10,000	2.36
	9.5	1.6-3.2	10211 48095							500	10,000	2.40
	11	3.2-4.8	10211 48110							500	10,000	2.50
	12.5	4.8-6.4	10211 48125							500	10,000	2.70
	15	6.4-9.5	10211 48150							500	10,000	2.78
	18	9.5-12.7	10211 48180							500	10,000	3.08
	21	12.7-15.9	10211 48210							500	10,000	3.23
	25	1.59-19.1	10211 48250							on request	on request	3.42
6.4 6.29-6.51	13	3.2-6.4	10211 64130	6.50-6.60	12.00-13.00	2.50	3.70	4003	4893	on request	on request	6.92
	16	6.4-9.2	10211 64160							on request	on request	7.38

Closed end 120 Countersunk

Aluminium AlMg 5 (5056)
Mandrel: Steel with protection layer



- Moisture and pressure tight
- Guaranteed mandrel head retention
- Good hole filling for good joint construction
- For a flush surface after setting

			PART NO							PACK BOX QTY	PACK CARTON BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N			kg
3.2 3.12-3.28	8	1.6-3.2	10212 32080	3.30-3.40	5.70-6.20	1.00	1.78	1067	1245	1,000	20,000	0.88
	9.5	3.2-4.8	10212 32095							1,000	20,000	0.97
	11	4.8-6.4	10212 32110							1,000	20,000	1.00
4.0 3.92-4.08	10	3.2-4.8	10212 40100	4.10-4.20	7.60-8.30	1.30	2.18	1557	2135	1,000	20,000	1.52
	11.5	4.8-6.4	10212 40115							1,000	20,000	1.57
	13	6.4-8.0	10212 40130							1,000	20,000	1.69
4.8 4.72-4.88	9.5	0.5-3.2	10212 48095	4.90-5.00	9.00-10.00	1.50	2.64	2224	3069	500	10,000	2.27
	11	3.2-4.8	10212 48110							500	10,000	2.38
	12.5	4.8-6.4	10212 48125							500	10,000	2.48
	15	6.4-9.5	10212 48150							500	10,000	2.60
	18	9.5-12.7	10212 48180							500	10,000	2.88

d = Nominal Diameter Min-Max, Diameter, l = Body Length(+/-0.5mm), g = Grip Range(Min-Max), d_h = Hole Size(Min-Max), d_k = Flange Diameter(Min-Max), k = Flange Thickness(Max), d_m = Nominal Mandrel Diameter S = Nominal Shear Strength; T = Nominal Tensile Strength