

G-CAST[®]



Precast Concrete Jacking Pipes



G-Cast Overview

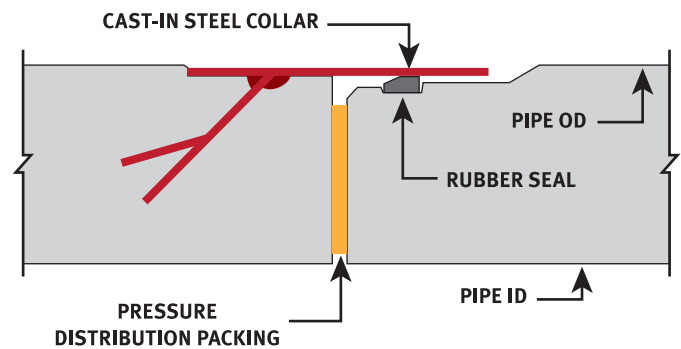
G-Cast produces a comprehensive range of precast reinforced concrete jacking pipes to suit the modern generation of jacking techniques and systems. Standard pipes are manufactured with flexible joint incorporating well proven butt end joint with cast-in integral steel collar. Pipes are manufactured to British Standard B.S. 5911:Part 1, Malaysian Standard MS EN 1916 or equivalent, using either spinning or vertical wet-cast process.

Special Pipes

- Special pipes can be designed and manufactured to suit individual project requirements

Special pipes for INTERMEDIATE JACKING STATION

- Concrete cladded COMPOSITE WATER STEEL PIPE for jacking operation
- Pipes can be manufactured using PFA cement (MASCRETE), OPC or Sulphate Resistance Portland Cement / SRPC
- Pipe Internal Lining : High alumina cement / HAC lining, HDPE lining, PVC lining, SACRIFICIAL lining, EPOXY coating
- Pipe External Lining : SACRIFICIAL lining, EPOXY coating



FLEXIBLE PIPE JOINT

This joint incorporates the well proven steel collar and elastomeric sealing gasket to ensure a watertight and yet flexible type joint. This butt end joint design ensures that the jacking forces are transmitted over the maximum area of the pipe, thus reducing the possibility of damage during jacking operation.

CONCRETE

Concrete of characteristic strength 50 N/mm².

CAST-STEEL COLLAR

Standard cast-in steel collars are of mild steel type. Stainless steel may be provided on request.

SEALS

Standard flexible joint seals are manufactured from natural rubber. EPDM type is available on request.

BENTONITE INJECTION PORTS

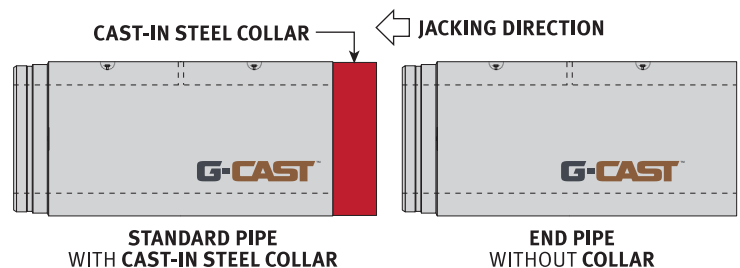
Pipes can be supplied with or without threaded injection/grouting ports.

PRESSURE DISTRIBUTION PACKING

A pressure distribution packing is to be positioned between every pipe to ensure even distribution of the jacking load.

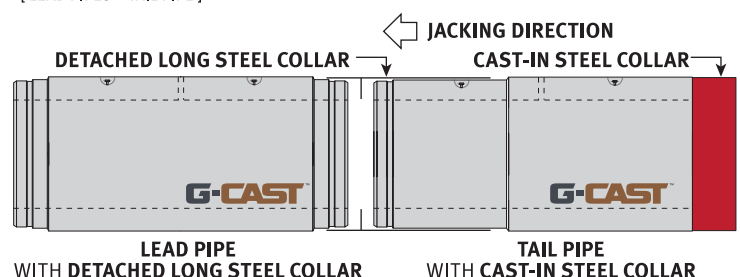
PIPES FOR NORMAL JACKING OPERATION

[STANDARD PIPES + END PIPE]



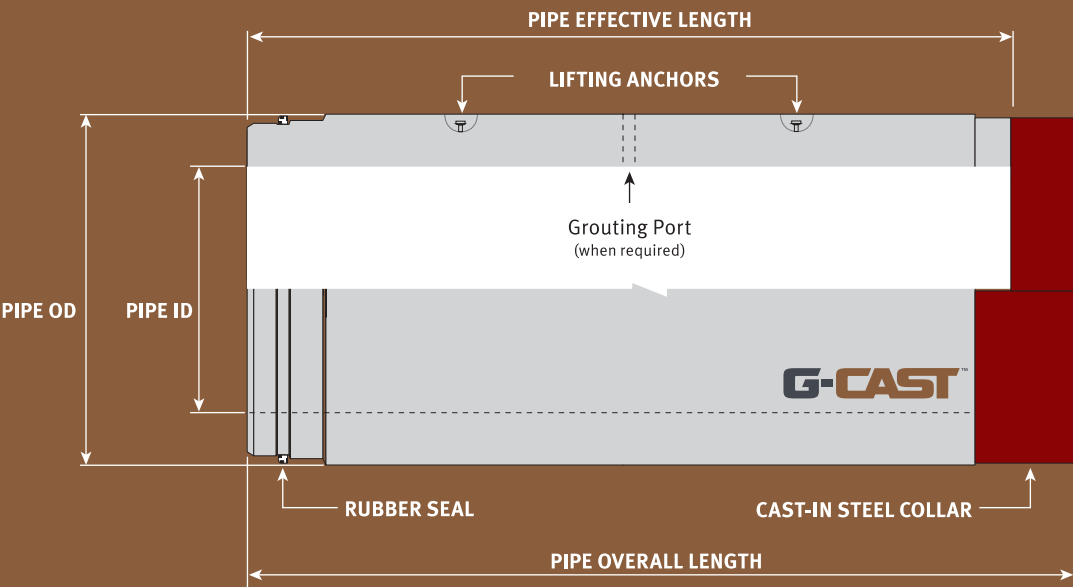
PIPES FOR INTERMEDIATE JACKING STATION

[LEAD PIPES + TAIL PIPE]



Product Specification

Diameter Range	300 - 4800mm
Strength Class	120-360; X, Y, Z, Z-PLUS(1.5Z, 2Z, ETC) ; L, M, H, H-PLUS(1.5H, 2H, ETC)



Strength Class	Nominal Diameter (mm)	Pipe ID (mm)	Pipe OD (mm)	Wall Thickness (mm)	Pipe Overall Length (Metre)	Pipe Effective Length (Metre)	Pipe Weight (Ton)	Allowable Jacking Force (Ton)
120 150 180 240 300 360 Z 1.5Z 2.0Z 2.5Z 3.0Z H 1.5H 2.0H 2.5H 3.0H	300	300	520	110	3.050	2.960	1.03	170
	375	375	520	72.5	3.050	2.960	0.74	102
	400	400	540	70	3.050	2.960	0.75	102
	450	450	610	80	3.050	2.960	0.97	142
			650	100			1.25	204
	525	525	690	82.5	3.050	2.940	1.13	172
	600	600	775	87.5	3.050	2.940	1.36	213
	750	750	960	105	3.050	2.940	2.03	345
	900	900	1,200	150	3.050	2.940	3.56	690
	1,050	1,050	1,250	100	3.050	2.940	2.60	457
			1,320	135			3.62	681
	1,200	1,200	1,430	115	3.050	2.940	3.42	605
			1,480	140			4.25	792
	1,350	1,350	1,600	125	3.050	2.940	4.17	757
	1,500	1,500	1,780	140	3.050	2.940	5.20	964
	1,650	1,650	1,970	160	3.050	2.940	6.55	1,255
	1,800	1,800	2,120	160			7.10	1,361
			2,140	170	3.050	2.940	7.58	1,472
			2,200	200			9.05	1,799
	2,100	2,100	2,470	185	2.645	2.520	8.20	1,891
	2,400	2,400	2,730	165	2.645	2.520	8.21	1,855
	2,500	2,500	2,840	170	2.645	2.520	8.80	2,062
	2,700	2,700	3,064	182	2.645	2.520	10.17	2,346
	3,000	3,000	3,440	220	2.145	2.020	11.01	3,271
	3,600	3,600	4,060	230	2.145	2.020	13.70	4,185
	3,900	3,900	4,400	250	2.145	2.020	16.13	4,815
	4,000	4,000	4,520	260	2.145	2.020	17.22	5,169

- NOTES**
- The "Allowable Jacking Force" quoted above is for guidance only with assumption that the jacking load / thrust is evenly distributed over the full circumference of the pipe end with zero joint deflection, and concrete cube strength at 50 N/mm² with a factor of safety of 3.0.
 - Non standard pipes can be designed and manufactured to meet individual customer requirements such as pipe outside diameter (to suit the size of cutter head of the tunneling machine), special strength classes for high depth of fill, etc.

G-CAST CONCRETE SDN BHD (971228-X)

Head Office:

Menara Chin Hin, Level 22-23, 8th Stellar,
No. 1, Jalan Naga Emas, Sri Petaling,
57000 Kuala Lumpur, Malaysia

T : +603-7982 8168

E : info@g-cast.com.my

www.g-cast.com.my

Factory :

- Lot 22993, MCKIP Kawasan Industri Malaysia-China Kuantan, Jalan Gebeng By Pass, 26080 Kuantan, Pahang.
- Lot 23030, Seksyen 20, Jalan Kampung Mohd Taib, Kawasan Industri Sungai Choh, 48000 Rawang, Selangor.
- Lot 647, Jalan Kulai Kota Tinggi, Mukim Ulu Sungai Johor, Kota Tinggi, Johor.
- Lot 12448-12473, Kawasan Perindustrian Bidor, Mukim Bidor, Daerah Batang Padang, 35500 Perak.
- No. 1, Jalan Starken, Batu 5, Jalan Mawai, 81900 Kota Tinggi, Johor.



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