



THOMPSON™
PIPE GROUP

TRENCHLESS PRODUCTS



REINFORCED CONCRETE MICROTUNNELING PIPE



One of the most widely used jacking products in the world, reinforced concrete pipe provides the reliability of a tried and tested product with the trust of a resilient composite material designed for microtunneling applications. Its watertight joint and thick wall allows for jacking under the ground water table and provides ample jacking capacity for long drives. For specialized microtunneling operations a well designed wetcast reinforced concrete microtunneling pipe by Thompson Pipe Group is the product of choice.



ADVANTAGES & APPLICATIONS

ADVANTAGES

- Manufactured using the vertical wetcast method leading to a smoother OD.
- Designed and manufactured to each customer specification and project.
- Can be manufactured with non-structural HDPE & PVC corrosion resistant liner.
- Can be manufactured with structural FRP liner (see Flowcrete™).
- Rigid pipe that maintains roundness during jacking.
- Higher compressive strength mixes can be formulated to increase the allowable jacking forces.
- Thick walled pipe that can be used for curved drives.
- Concrete pipe has less buoyancy than steel or FRP pipe.

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

TECHNICAL DATA

Operating pressure: Application dependent

Main material: Concrete and steel

Estimated Design Life: 100 years

External waterhead: Can be designed for 55 psi+

Standard lengths: 10', 13.12' (4 meters)

Gasket material: EPDM, SBR

Diameter range: 24" – 144"+

Allowable pushing forces: See Table 1-1

Industry Standards: ASTM C76, ASCE 27-17

Note: This guide is for information purposes only. None of the information should be construed as a representation that any of the products are fit for use in a specific condition. Any information regarding the design of the specifications or a pipeline system is taken at the readers risk and Thompson Pipe Group is not liable for any resulting damages. There are no warranties, either express or implied, which extend to the information contained or the products described. For additional information and how to use these pipes in a specific application, please contact a business development manager or the engineering department.

REINFORCED CONCRETE MICROTUNNELING PIPE

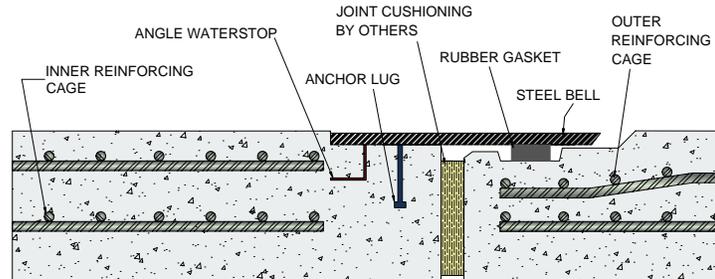


Table 1-1

Internal diameter (in) [D]	Wall Thickness (in) [t]	Outside Diameter (in) [OD]	Allowable Jacking Force (ton)*	Pipe Length [L]	Pipe Weight (lb/lf)
24	3.75	31.5	187	Up to 20 ft	353
27	4.00	35.0	233	Up to 20 ft	422
30	4.25	38.5	283	Up to 20 ft	495
33	4.50	42.0	338	Up to 20 ft	574
36	4.75	45.5	398	Up to 20 ft	658
42	5.25	52.5	532	Up to 20 ft	844
48	5.75	59.5	686	Up to 20 ft	1051
54	6.25	66.5	859	Up to 20 ft	1281
60	6.75	73.5	1052	Up to 20 ft	1533
66	7.25	80.5	1265	Up to 20 ft	1806
72	7.75	87.5	1497	Up to 20 ft	2102
78	8.25	94.5	1748	Up to 16 ft	2420
84	8.75	101.5	2019	Up to 16 ft	2761
90	9.25	108.5	2310	Up to 12 ft	3123
96	9.75	115.5	2620	Up to 12 ft	3507
102	10.25	122.5	2949	Up to 10 ft	3914
108	10.75	129.5	3298	Up to 10 ft	4342
114	11.25	136.5	3667	Up to 8 ft	4640
120	11.75	143.5	4055	Up to 8 ft	4793
126	12.25	150.5	4462	Up to 8 ft	5266
132	12.75	157.5	4890	Up to 8 ft	5761
144	13.75	171.5	5802	Up to 8 ft	6278

* Jacking forces calculated based on ASCE 27-17 based on full face contact of pipe joints.

* Custom diameters and lengths are available.

* Pipe dimensions and design based on ASTM C76 Class V Wall C.

REINFORCED CONCRETE JACKING PIPE



One of the most widely used jacking products in the world, reinforced concrete pipe provides the reliability of a tried and tested product with the trust of a resilient composite material for a variety of structural applications. Made to the ASTM C76 specifications, our dry cast jacking pipe is fit for your run-of-the-mill jacking job.



ADVANTAGES & APPLICATIONS

ADVANTAGES

- Manufactured under the strictest quality controls
- Computer-controlled batching maintains consistency and provides uniform jacking loads for each pipe
- Structural pipe, product is strong and durable
- Flush joint system to allow ease for tunneling through soil
- Trenchless installations are more environmentally friendly than traditional methods
- Higher compressive strength mixes can be formulated to increase the allowable jacking forces, which provides the ability for longer drives

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

TECHNICAL DATA

Operating pressure: Non-Pressure applications

Main material: Concrete and Steel

Estimated Design Life: 100 years

External waterhead: 13psi

Standard lengths: 8', 10'

Gasket material: EPDM

Diameter range: 18" - 144"

Allowable pushing forces: See Table 2-1

Industry Standards: ASTM C76, ASTM C433, ASTM C1885*

REINFORCED CONCRETE JACKING PIPE DRY CAST



Table 2-1

Wall	Internal Diameter (in)	Wall Thickness (in)	Outside Diameter (in)	Jacking Capacity (US ton)*	Pipe Weight (lb/lf)
C wall	18	3.25	24.5	99	238
B+ wall	24	3.25	30.5	173	328
B wall	30	3.50	37.0	190	402
B wall	36	4.00	44.0	257	560
C wall	42	5.25	52.5	466	905
C wall	48	5.75	59.5	293	1060
B wall	54	5.50	65.0	332	1086
C wall	60	6.75	73.5	380	1530
C wall	66	7.25	80.5	463	1800
C wall	72	7.75	87.5	536	2035
C wall	78	8.25	94.5	649	2410
C wall	84	8.75	101.5	799	2660
C wall	90	9.25	108.5	898	3070
B wall	96	9.00	114.0	1021	3180
C wall	102	10.25	122.5	1157	3873
C wall	108	10.75	129.5	1307	4290
C wall	114	11.25	136.5	1461	4750
B wall	120	11.00	142.0	1623	4950
B wall	144	13.00	170.0	2020	6750

* With an eccentric tunneling operation.

FLOW-CRETE™ JACKING PIPE



This composite pipe incorporates an outer load-bearing wall of reinforced concrete and an inner TPG fiberglass reinforced liner pipe. The wall thickness of the RCP is designed to accommodate the jacking loads, distances under consideration, and the dimensions of the equipment used in the jacking process. The TPG FRP liner is built to withstand the required internal pressure and the corrosive environment of sanitary sewers and similar environments. Flow-Crete™ can be supplied with grout injection ports. To distribute jacking forces, the pipe is compatible with standard wooden packers and hydraulic compression rings, when required.



TECHNICAL DATA

Operating pressure: 0 psi to 250+ psi

Main material: Fiberglass Reinforced Plastic Mortar (FRPM) and Reinforced Concrete

Estimated Design Life: 150 years

External waterhead: 277 feet

Standard lengths: 10', 13', 20'

Gasket material: EPDM, SBR

Diameter range: 24" to 144"

Allowable pushing forces: See Table 3-1

Industry Standards FRPM: ASTM D3262, D3754, D3517 and AWWA C950;

Industry Standards RCP: ASCE 27-17, ASTM C76

ADVANTAGES & APPLICATIONS

ADVANTAGES

- Designed and manufactured to each customer specification and project
- Corrosion resistant
- Higher compressive strength mixes can be formulated to increase the allowable jacking forces, which provides the ability for longer drives
- Integrated FRP joint system eliminates joint welding for watertightness
- Straight or curved drives
- Allows a single pass installation for pressure applications
- Redundant gasket system of FRP and RCP
- RCP provides rigid designs in shallow burial applications
- Custom fittings at access pits

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

FLOW-CRETE™ JACKING PIPE

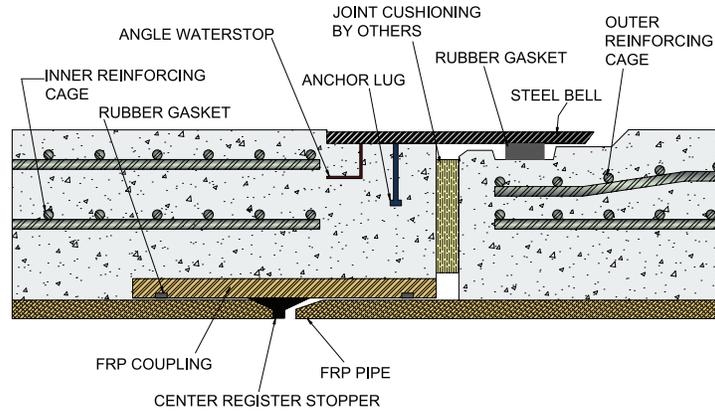


Table 3-1

Nominal Diameter [inches]	Wall Thickness [inches]	Outer Diameter [inches]	Flowtite Inner Diameter [inches]	Weight [lb/ft]	Allowable Jacking Force [US Short tons]*
24	2.86	31.50	24.88	294	94
30	3.25	38.50	30.98	413	170
36	3.60	45.50	37.03	548	255
42	4.01	52.50	43.04	709	368
48	4.36	59.50	49.16	881	394
54	4.47	66.50	55.72	1028	437
60	5.95	73.50	59.66	1452	852
66	6.02	80.50	66.72	1637	841
72	7.51	87.50	70.22	2156	1483
78	7.00	94.50	78.02	2237	1445
84	6.48	101.50	85.82	2297	1374
90	7.97	108.50	90.26	2930	1881
96	9.47	115.50	93.63	3618	2728
102	8.95	122.50	101.43	3715	2476
108	8.43	129.50	109.23	3792	2401
120	11.42	143.50	117.03	5452	4110
126	10.90	150.50	124.83	5589	4058

* FS = 3

- Wall thicknesses and inner diameters are pressure rating dependent. Above table accounts for 100 psi internal pressure rated pipe.
- Custom dimensions and jacking capacities available upon request.

FIBERGLASS JACKING PIPE



Tough, state-of-the-art fiberglass pipe is made to meet your exact jacking needs, with custom outer diameters, lengths, stiffness and pressure grades. If an Intermediate Jacking Station (IJS) is needed for a long run, then IJS leading/trailing pipes can be supplied. For your next jacking project, you owe it to yourself and your clients to take a closer look at fiberglass pipe.



ADVANTAGES & APPLICATIONS

ADVANTAGES

- Lighter than steel and concrete
- Thinner pipe walls=smaller OD than RCP
- High axial compressive strength
- Corrosion resistant pipe
- Compatible with smaller MTBM/GBMs down to 12"
- Larger inner diameters
- Manning's Coefficient $m=.009$

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

TECHNICAL DATA

Operating pressure: 0 psi to 100 psi

Main material: Fiberglass Reinforced Plastic Mortar (FRPM)

Estimated Design Life: More than 150 years

External waterhead: 277 feet

Standard lengths: 3 - 40 ft

Gasket material: EPDM

Diameter range: 12" - 156"

Allowable pushing forces: See Table 4-1

Industry Standards:

ASTM D3262, D3754, D3517, AWWA C950, and AWWA M45

FIBERGLASS JACKING PIPE

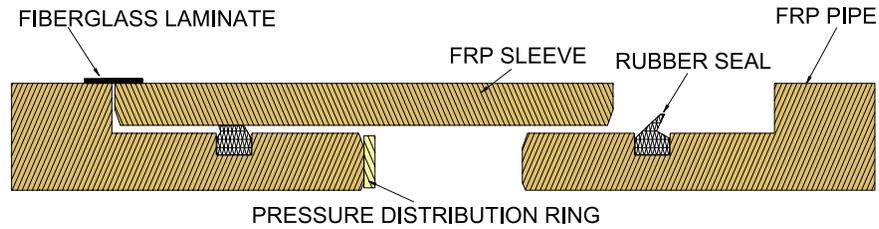


Table 4-1

Nominal Diameter	OD Minimum	Pipe ID	Wall Thickness	Weight	Allowable Jacking Force (FS=3)	Allowable Jacking Force (FS=2.5)
(in.)	(in.)	(in.)	(in.)	(lbs/ft)	(US ton)	(US ton)
12	14.50	12.43	1.00	39.8	41	49
15	17.50	15.41	1.01	49.2	51	62
18	19.50	17.41	1.01	55.1	58	69
24	25.80	22.83	1.45	103.3	126	151
27	28.00	24.92	1.51	116.6	145	176
28	30.00	26.75	1.59	131.9	167	201
30	32.00	28.59	1.67	147.7	191	230
36	38.30	34.45	1.89	200.3	251	301
41	42.90	38.99	1.92	228.9	285	342
42	44.5	40.57	1.93	239.0	298	358
44	45.90	41.91	1.96	250.5	310	372
45	47.70	43.67	1.98	263.3	327	393
48	50.80	46.71	2.01	285.2	351	421
51	53.90	49.71	2.06	310.4	377	452
54	57.10	52.81	2.11	337.2	403	483
57	60.00	55.69	2.12	356.5	427	513
60	62.90	58.55	2.14	377.8	450	540
63	66.00	61.61	2.16	400.6	475	570
66	69.20	64.55	2.29	444.7	503	603
69	72.50	67.77	2.33	474.4	542	650
72	75.40	70.49	2.42	512.2	584	701
78	81.60	76.37	2.58	590.8	669	803
84	87.00	81.47	2.73	666.2	751	901
85	88.60	82.97	2.78	690.8	771	926
90	94.30	88.41	2.91	769.6	857	1028
96	99.50	93.33	3.05	850.8	960	1152
104	108.00	101.59	3.17	960.8	1084	1301
110	114.00	107.15	3.39	1083.4	1209	1451
120	126.00	118.57	3.68	1299.6	1471	1765
126	132.50	124.91	3.76	1397.3	1603	1923

- Customizable dimensions and jacking capacities can be produced on request.
- Consult with manufacturer for larger diameters.

REINFORCED CONCRETE CYLINDER PIPE AWWA C300



First manufactured in 1919, reinforced concrete cylinder pipe (C300) consists of a watertight welded steel cylinder with steel joint rings at each end, one or two circumferential reinforcing cages of steel wire or bars, and a high-strength concrete structural core. The steel cylinder, joint rings and reinforcing cage assembly is encased in portland cement concrete using a vertical casting process. In addition to providing significant structural strength, the concrete encasement provides a passive alkaline environment that protects the embedded steel components from corrosion for the life of the product.



ADVANTAGES & APPLICATIONS

ADVANTAGES

- Designed for each project
- Integrated corrosion protection
- High pressure capacity
- Ease of installation
- High external load capacity
- No special bedding and backfill required
- Customizable fittings
- Rigid pipe - can be used in straight or curved drives
- Push on or welded joint available

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

TECHNICAL DATA

Operating pressure: 0 psi to 260 psi

Main material: Steel and concrete

Estimated Design Life: 100 Years

External waterhead: 260 psi

Standard lengths: 16' - 20'

Gasket material: Polyisoprene, Neoprene, Nitrile

Diameter range: 36" - 144"

Allowable pushing forces: See Table 5-1

Industry Standards: AWWA C300, AWWA M9

REINFORCED CONCRETE CYLINDER PIPE AWWA C300

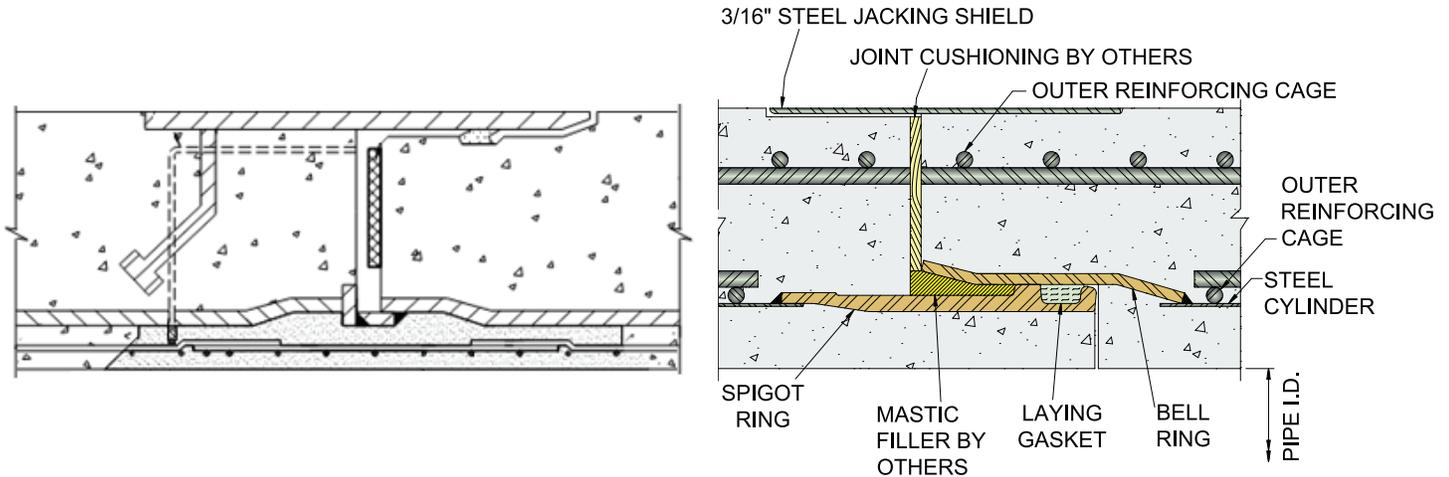


Table 5-1

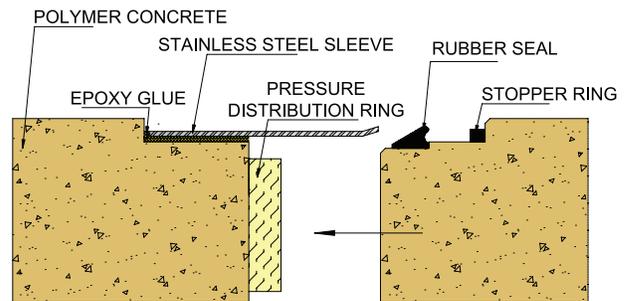
Internal diameter (in) [D]	Typical Wall Thickness (in) [t]	Outside Diameter (in) [OD]	Pipe Length [L]	Jacking Capacity (ton)*	Pipe Weight (lb/lf)
36	4.0	44	Up to 16 ft	147	586
42	4.5	51	Up to 20 ft	226	780
48	5.0	58	Up to 20 ft	306	990
54	5.5	65	Up to 20 ft	371	1220
60	6.0	72	Up to 20 ft	481	1470
66	6.5	79	Up to 20 ft	593	1750
72	7.0	86	Up to 20 ft	718	2050
78	7.5	93	Up to 20 ft	866	2380
84	8.0	100	Up to 20 ft	1002	2730
90	8.0	106	Up to 20 ft	1066	2910
96	9.0	114	Up to 20 ft	1363	3500
102	8.5	119	Up to 16 ft	1299	3480
108	10.1	128	Up to 16 ft	1816	4430
114	9.5	133	Up to 16 ft	1496	4350
120	10.0	140	Up to 20 ft	1730	4820
126	10.5	147	Up to 16 ft	1979	5310
132	11.0	154	Up to 12 ft	2244	5830
144	12.0	168	Up to 12 ft	2819	6930

- * Dependant on available equipment
- Custom designs available to meet project demands

MEYER POLYCRETE POLYMER CONCRETE PIPE



Polycrete polymer concrete pipe is a composite material consisting of polyester resin, quartz sand, silicate aggregate and quartz filler. As portland cement performs poorly in an acidic environment, it is not used as a binding agent. This unique jacking pipe uses a polyester resin to bond the kiln-dried silicate aggregate, thereby creating dense, corrosion-resistant matrix. For special industrial applications where added chemical resistance may be required, Polycrete can be produced using a vinyl ester resin.



ADVANTAGES & APPLICATIONS

ADVANTAGES

- Corrosion resistant material
- High compressive strength
- Longer drives
- Excellent hydraulic characteristics
- Stainless steel jointing system
- Manning's Coefficient $m=0.009$
- Integrated corrosion resistance
- Lower maintenance costs
- Small diameters available-Ideal for use with GBMs

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

TECHNICAL DATA

Operating pressure: Non-pressure

Main material: Polyester resin, quartz sand, silicate aggregate and quartz filler.

Estimated lifetime: 100 years

External waterhead: 80 feet (35 psi)

Standard lengths: 8' or 10'

Gasket material: Elastomeric EPDM or SBR rubber

Diameter range: 8" - 102"

Allowable pushing forces: See Tables 6-1, 6-2, 6-3

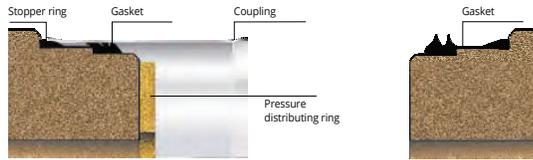
Industry Standards: ASTM D6783

MEYER POLYCRETE POLYMER CONCRETE PIPE



Table 6-1

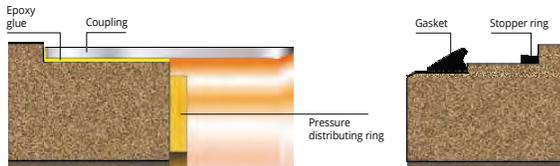
Polymer Concrete Jacking Pipe
Nominal Diameters 9-40
Profile Gasket



Internal Diameter DN		Outer Diameter OD		Wall Thickness T		Length L		Jacking Capacity			Pipe Weight	
(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(m)	(ft)	(SI ton)	(kN)	(US ton)	(kg/m)	(lbs/ft.)
250	9.8	360	14.2	55	2.2	1 and 2	3.3 and 6.6	59	580	65	120	81
300	11.8	400	15.7	50	2.0	1 and 2	3.3 and 6.6	61	600	67	125	84
400	15.7	550	21.7	75	3.0	1 and 2	3.3 and 6.6	145	1430	160	255	171
482	19.0	622	24.5	70	2.8	2.44	8.0	145	1430	160	270	181
500	19.7	660	26.0	80	3.1	2.00	6.6	180	1800	198	335	225
534	21.0	674	26.5	70	2.8	2.44	8.0	160	1600	176	300	202
600	23.6	760	29.9	80	3.1	2.00	6.6	210	2090	231	390	262
700	27.6	860	33.9	80	3.1	2.00	6.6	230	2250	254	445	299
800	31.5	960	37.8	80	3.1	2 to 3	6.6 to 9.8	270	2650	298	505	339
900	35.4	1100	43.3	100	3.9	2 to 3	6.6 to 9.8	380	3800	419	720	484
1000	39.4	1185	46.7	92.5	3.6	2 to 3	6.6 to 9.8	375	3680	413	735	494

Table 6-2

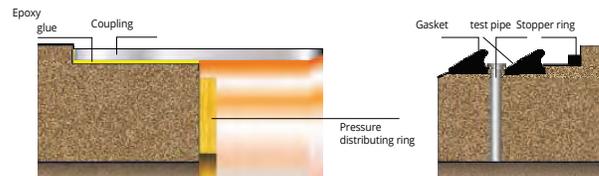
Polymer Concrete Jacking
Pipe Nominal Diameters
40-87 Single Gasket



Internal Diameter DN		Outer Diameter OD		Wall Thickness t		Length L		Jacking Capacity			Pipe Weight	
(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(m)	(ft)	(SI ton)	(kN)	(US ton)	(kg/m)	(lbs/ft.)
1000	39.4	1185	46.7	92	3.6	2 and 3	3.3 and 6.6	360	3560	397	735	494
1000	39.4	1280	50.4	140	5.5	3	9.8	625	6150	689	1155	776
1200	47.2	1485	58.5	142	5.6	3	9.8	725	7110	799	1370	921
1400	55.1	1720	67.7	160	6.3	3	9.8	915	8980	1009	1810	1216
1600	63.0	1940	76.4	170	6.7	3	9.8	1135	11170	1251	2185	1468
1800	70.9	2160	85.0	180	7.1	3	9.8	1340	13145	1477	2580	1734
2000	78.8	2400	94.5	200	7.9	3	9.8	1670	16415	1841	3185	2140
2200	86.6	2630	103.5	215	8.5	3	9.8	1890	18570	2083	735	494

Table 6-3

Polymer Concrete Jacking Pipe
Nominal Diameters 95-102
Double Gasket for Hydrostatic Testing



Internal Diameter DN		Outer Diameter OD		Wall Thickness t		Length L		Jacking Capacity			Pipe Weight	
(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(m)	(ft)	(SI ton)	(kN)	(US ton)	(kg/m)	(lbs/ft.)
2400	94.5	2870	113.0	235	9.3	3	9.8	2240	21980	2469	1155	921
2600	104.4	3100	122.0	250	9.8	3	9.8	2550	25060	2811	1370	921

REINFORCED CONCRETE JACKING BOX DRY CAST



The oldest and most widely used jacking product in the world, reinforced concrete pipe provides the reliability of a tried and tested product with the trust of a resilient composite material designed for tunneling applications. TPG offers box pipe when geometric constraints control the design without compromising hydraulic capacity or structural performance.



ADVANTAGES AND APPLICATIONS

ADVANTAGES

- Manufactured under the strictest quality controls
- Computer-controlled batching maintains consistency and provides uniform jacking loads for each pipe
- Structural pipe, product is strong and durable
- Flush joint system to allow ease for tunneling through soil
- Higher compressive strength mixes can be formulated to increase the allowable jacking forces
- Structural pipe that is less reliant on backfill rain

APPLICATIONS

- **Sewer Systems:** Sanitary and Stormwater sewer pipelines.
- **Water Supply Pipelines:** Water distribution pipelines.
- **Underground Utility Networks:** Conduit for telecommunications, electricity, and fiber optic cables.
- **Crossing Beneath Railroad:** Installing pipelines or conduit beneath railroad.

TECHNICAL DATA

Operating pressure: Non-Pressure

Main material: Reinforced concrete

Estimated lifetime: More than 100 years

External waterhead: 5 psi

Standard lengths: 4', 6', 8'

Gasket material: EPDM

Diameter range: Spans from 3' - 14' and heights 2' to 12'

Allowable pushing forces: Custom options available. See your TPG representative.

Industry Standards: ASTM 1577, 1433, Caltrans D83A & B, and SPPWC 390-1



TRENCHLESS



TRENCHLESS PRODUCTS

972-262-3960

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