



# BiDirectionAll Pig

Sizes: 4- to 60-inch



T.D. Williamson

Bulletin No: **3000.005.03**

Version: 11.2021

Supersedes: 3000.005.02 (01.2007)



■ **BiDirectionAll Pig**



■ **BiDirectionAll Pig**  
with optional brush wraps

## Description

TDW's BiDirectionAll Pig is designed to be used in pipeline construction during the hydrostatic test phase for air or water displacement applications. This pig is bidirectional, which allows the pig to run in either direction. It is designed to allow the user to fill the line with hydro test water and then displace the water without having to remove the pig. It can be used as a bidirectional cleaning pig by adding optional brushes.

## Features

Each pig is equipped with six discs. The lead and trailing discs are the guide/support discs, which provide support to the pig. Since the outside diameter of the guide disc is smaller, it eases the loading of the pig by providing a guide.

Each pig is equipped with four scraper/seal discs, which provide an excellent seal during a new construction displacement application. The discs have also proven to provide excellent scraping action for cleaning purposes.

All discs are made from TDW's special polyurethane material designed to provide an excellent seal and long wear. The guide/support discs are slightly harder than the scraper/seal discs to enhance the pig's performance.

The BiDirectionAll Pig may be run in either direction if the application requires. The seal/scraper disc will easily reverse its seal position when the flow direction is changed.

## Options

T. D. Williamson is committed to providing you with the exact product to assist you in planning, budgeting and meeting the specifications for your individual application needs.

BiDirectionAll Pigs are available in sizes 4" (100 mm) and larger. To help you obtain the proper pig for your application, check to see if the selection is capable of traversing your particular pipeline components (bends, valves, tees, etc.).

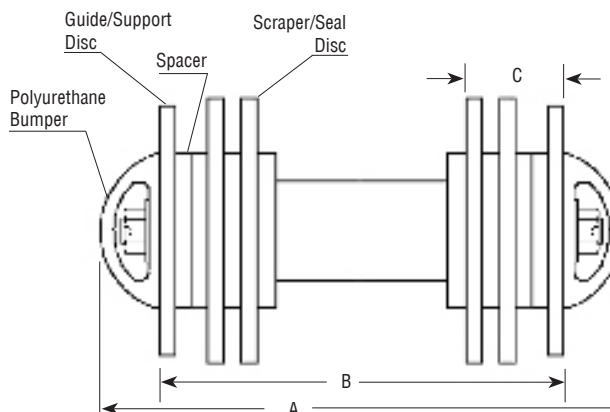
- Gauging plates are available in aluminum, slotted aluminum or steel and can be made to the diameter specified by you.
- Circular brush cleaning assemblies may be added to the front and/or rear sections of the pig.
- Magnetic cleaning assemblies may be added to retrieve any ferrous material.
- The BiDirectionAll Pig can be equipped to mount tracking transmitters. Certain limitations may apply in smaller sizes due to mounting space.
- In sizes 24" and larger, the Bi-DirectionAll Series II Pig will traverse diameter reductions up to 10% in the form of dents or buckles. The Bi-DirectionAll Series III Pig will traverse diameter reductions up to 20%.
- In sizes 16" and larger, the BiDirectionAll Pig may be equipped with non-metallic bumpers.
- In sizes 16" and larger, the Bi-DirectionAll Pig may be equipped with bolt seals, which minimize leaking around the disc-mounting bolts.

# Series I BiDirectionAll Pig

## Series I Sizes 4" through 14"

Series I BiDirectionAll Pigs are designed to be used in pipeline construction during the hydrostatic test phase for air or water displacement applications. Series I BiDirectionAll Pigs traverse 1.5 DR bends when configured as shown.

Polyurethane bumpers are standard on 6"-14" pigs. Non-metallic bumpers are optional on the 4" pig.



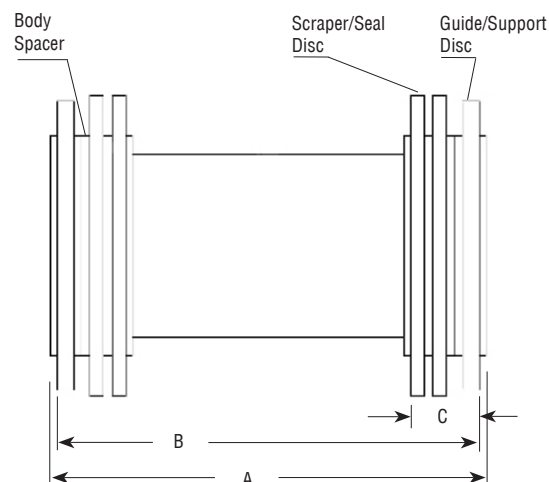
Inches	mm	Wt./Lbs.	Wt./Kg	Part Number	A	B	C
4	100	5	3	01-0670-0004-00	7.9 (200)	5.7 (145)	1.9 (50)
6	150	13	6	01-0670-0006-00	12.5 (320)	8.5 (215)	2.8 (70)
8	200	25	11	01-0670-0008-00	15.7 (400)	11.2 (285)	3.1 (80)
10	250	45	19	01-0670-0010-00	19.8 (500)	14.0 (355)	3.1 (80)
12	300	50	23	01-0670-0012-00	22.6 (575)	16.8 (425)	4.0 (100)
14	350	55	25	01-0670-0014-00	25.4 (645)	19.6 (500)	4.0 (100)

# Series II BiDirectionAll Pig

Replacement discs are less costly for the Series II BiDirectionAll Pigs. The internal diameter of the Series II Pig body is larger and therefore the discs contain less urethane to achieve the same outside diameter as the Series III Pigs. However, Series III Pigs should be used when pipe diameter reductions exceed 10%.

Series II BiDirectionAll Pigs traverse 1.5 DR bends when configured as shown.

## Series II Sizes 24" through 60"

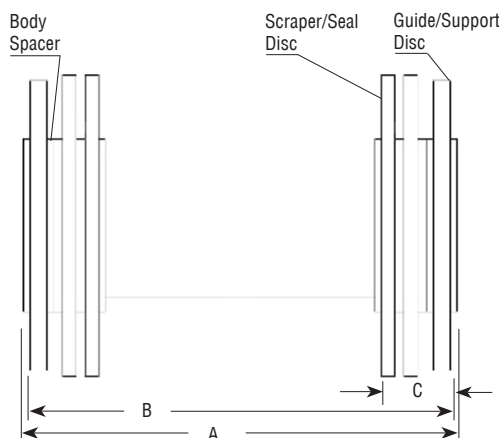


Inches	mm	Wt./Lbs.	Wt./Kg	Part Number	A	B	C
24	600	174	79	01-0671-0024-00	34.6 (880)	33.6 (855)	5.1 (130)
26	650	200	91	01-0671-0026-00	37.4 (950)	36.4 (925)	5.1 (130)
28	700	230	105	01-0671-0028-00	40.2 (1020)	39.2 (995)	5.1 (130)
30	750	285	130	01-0671-0030-00	41.0 (1040)	40.0 (1065)	6.4 (160)
32	800	312	142	01-0671-0032-00	45.8 (1165)	44.8 (1140)	6.4 (160)
34	850	387	176	01-0671-0034-00	48.6 (1235)	47.6 (1210)	7.0 (180)
36	900	433	197	01-0671-0036-00	51.4 (1305)	50.4 (1280)	7.0 (180)
40	1000	515	234	01-0671-0040-00	55.0 (1395)	54 (1370)	7.0 (180)
42	1050	704	320	01-0671-0042-00	55.8 (1415)	54.6 (1385)	7.0 (180)
48	1200	937	426	01-0671-0048-00	63.6 (1615)	62.4 (1585)	7.2 (180)
56	1400	1360	618	01-0671-0056-00	74.0 (1880)	72.8 (1850)	8.7 (220)
60	1500	1522	692	01-0671-0060-00	76.2 (1935)	75.0 (1905)	8.7 (220)

# Series III BiDirectionAll Pig

## Series III Sizes 16" through 60"

Series III BiDirectionAll Pigs will traverse diameter reductions up to 20% and 1.5 DR bends when configured as shown.



Inches	mm	Wt./Lbs.	Wt./Kg	Part Number	A	B	C
16	400	73	33	01-0670-0016-00	23.4 (595)	22.4 (570)	5.1 (130)
18	450	97	44	01-0670-0018-00	26.2 (665)	25.2 (640)	5.9 (150)
20	500	125	57	01-0670-0020-00	29.2 (740)	28.0 (710)	6.2 (160)
22	550	163	74	01-0670-0022-00	31.8 (810)	30.8 (780)	6.2 (160)
24	600	196	89	01-0670-0024-00	34.6 (880)	33.6 (855)	6.8 (170)
26	650	235	107	01-0670-0026-00	37.4 (950)	36.4 (925)	7.5 (190)
28	700	288	131	01-0670-0028-00	40.2 (1020)	39.2 (995)	8.2 (210)
30	750	328	149	01-0670-0030-00	43.0 (1090)	42.0 (1065)	7.9 (200)
32	800	378	172	01-0670-0032-00	45.8 (1165)	44.8 (1140)	8.2 (210)
34	850	436	198	01-0670-0034-00	48.6 (1235)	47.6 (1210)	9.0 (230)
36	900	506	230	01-0670-0036-00	51.4 (1305)	50.4 (1280)	9.5 (240)
40	1000	651	296	01-0670-0040-00	55.0 (1395)	54.0 (1370)	9.5 (260)
42	1050	843	383	01-0670-0042-00	56.1 (1425)	54.6 (1385)	10 (255)
48	1200	1126	512	01-0670-0048-00	63.9 (1625)	62.4 (1585)	11.2 (285)
56	1400	1888	858	01-0670-0056-00	74.3 (1885)	72.8 (1850)	15.5 (395)
60	1500	2222	1010	01-0670-0060-00	76.5 (1945)	75.0 (1905)	16.2 (410)

# BiDirectionAll Pig



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## Replacement Parts

Size		Support/ Guide DiscScraper/Seal Disc					
Inches	mm	Wt./Lbs.	Wt./Kg.	Part Number	Wt./Lbs.	Wt./Kg.	Part Number
<b>Series I</b>							
4	100	0.2	0.1	00-7699-0004-00	0.2	0.1	00-7698-0004-00
6	150	0.6	0.3	00-7699-0006-00	0.5	0.2	00-7698-0006-00
8	200	1.0	0.5	00-7699-0008-00	0.9	0.4	00-7698-0008-00
10	250	1.6	0.7	00-7699-0010-00	1.4	0.6	00-7698-0010-00
12	300	3.5	1.6	00-7699-0012-00	2.7	1.2	00-7698-0012-00
14	350	4.3	2.0	00-7699-0014-00	3.2	1.5	00-7698-0014-00
<b>Series II</b>							
24	600	8.8	4.0	00-7696-0024-00	7.3	3.3	00-7695-0024-00
26	650	11.4	5.2	00-7696-0026-00	9.2	4.2	00-7695-0026-00
28	700	11.7	5.3	00-7696-0028-00	9.5	4.3	00-7695-0028-00
30	750	19.1	8.7	00-7696-0030-00	14.3	6.5	00-7695-0030-00
32	800	15.0	6.8	00-7696-0032-00	12.8	5.8	00-7695-0032-00
34	850	26.2	11.9	00-7696-0034-00	23.1	10.5	00-7695-0034-00
36	900	28.2	12.8	00-7696-0036-00	24.9	11.3	00-7695-0036-00
38	950	29.0	13.2	00-7696-0038-00	25.7	11.7	00-7695-0038-00
40	1000	30.8	14.0	00-7696-0040-00	27.3	12.4	00-7695-0040-00
42	1050	50.6	23.0	00-7696-0042-00	36.7	16.7	00-7695-0042-00
48	1200	85.8	39.0	00-7696-0048-00	66.9	30.4	00-7695-0048-00
60	1500	93.1	42.3	00-7696-0060-00	72.6	33.0	00-7695-0060-00
<b>Series III</b>							
16	400	5.1	2.3	00-7699-0016-00	4.2	1.9	00-7698-0016-00
18	450	5.9	2.7	00-7699-0018-00	5.1	2.3	00-7698-0018-00
20	500	9.2	4.2	00-7699-0020-00	7.9	3.6	00-7698-0020-00
22	550	10.3	4.7	00-7699-0022-00	8.8	4.0	00-7698-0022-00
24	600	16.5	7.5	00-7699-0024-00	13.0	5.9	00-7698-0024-00
26	650	18.5	8.4	00-7699-0026-00	14.5	6.6	00-7698-0026-00
28	700	27.3	12.4	00-7699-0028-00	22.4	10.2	00-7698-0028-00
30	750	26.8	12.2	00-7699-0030-00	21.6	9.8	00-7698-0030-00
32	800	35.2	16.0	00-7699-0032-00	28.8	13.1	00-7698-0032-00
34	850	38.3	17.4	00-7699-0034-00	31.0	14.1	00-7698-0034-00
36	900	52.4	23.8	00-7699-0036-00	40.3	18.3	00-7698-0036-00
40	1000	61.4	27.9	00-7699-0040-00	47.1	21.4	00-7698-0040-00
42	1050	80.5	36.6	00-7699-0042-00	59.2	26.9	00-7698-0042-00
48	1200	115.9	52.7	00-7699-0048-00	81.8	37.2	00-7698-0048-00
56	1400	169.0	76.8	00-7699-0056-00	144.0	65.5	00-7698-0056-00
60	1500	227.0	103.0	00-7699-0060-00	196.0	89.2	00-7698-0060-00

Ordering Information

# BiDirectionAll Pig



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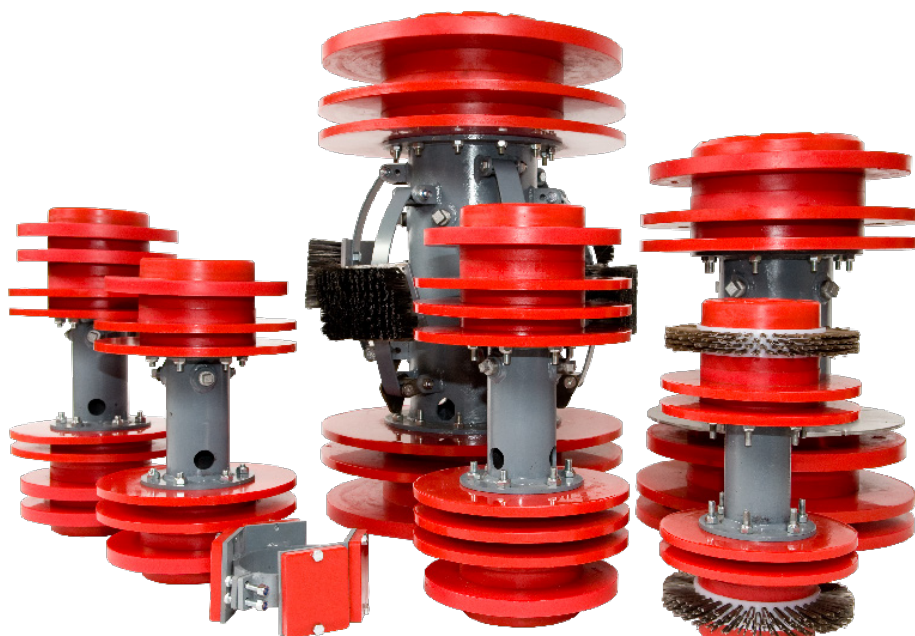
# Series IV BiDirectionAll Pig

## Sizes: 4- to 60-inch



T.D. Williamson

Bulletin No: **3000.009.01**  
Version: 11.2021  
Supersedes: 3000.009.00 (11.2008)



■ Series IV BiDirectionAll Pigs

### Description

Specifically designed for pipeline commissioning applications, TDW's Series IV BiDirectionAll Pig is available in all design variations—including dewatering, gauging, cleaning, and magnetic configurations—needed to pre-commission and commission pipelines. Custom-built using high quality materials, each Series IV BiDirectionAll Pig is tailored to meet very specific dimensional requirements. As with all TDW pigs, each Series IV BiDirectionAll Pig is fitted with Formula SI<sup>®</sup> polyurethane discs, providing excellent wear resistance and optimal performance.

### Features

Each pig is equipped with six discs as its standard configuration, though other configurations are possible. The lead and trailing discs are the guide/support discs, which support the pig. Since the outside diameter of the guide disc is smaller, it eases the loading of the pig by providing a guide. The four scraper/seal discs provide an excellent seal during new construction and displacement applications. The guide/support discs are slightly harder than the scraper/seal discs to enhance the pig's performance.

As its name implies, the BiDirectionAll Pig may be run in either direction if the application requires. The seal/scraper discs will easily reverse their seal position when the flow direction changes. In addition, each pig features a steel nameplate, and the steel body of each pig has the capability to be fitted with most tracking transmitters. Each pig also features pluggable bypass ports allowing flow through the pig to be adjusted, optimizing performance.

### Options

T.D. Williamson is committed to providing you with the precise pig to assist you in planning, budgeting and meeting the specifications for your application. Custom configurations and special materials are easily accommodated.

BiDirectionAll Pigs are available in sizes 4 inch (100 mm) and larger. Series IV BiDirectionAll Pigs are available in the following standard configurations:

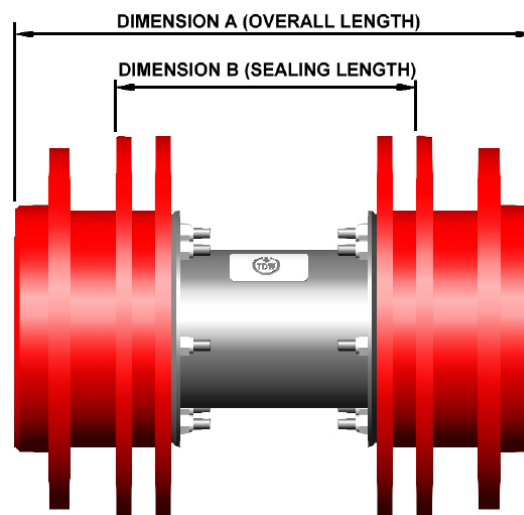
- Dewatering pigs with four seals and two guide discs. See page 2.
- Gauging pigs with four seals, two guide discs and an aluminum gauge plate precision machined to suit your requirements. See page 3.
- Cleaning pigs with four seals and two circular brushes (on sizes up to 20 inches). See page 4.
- Cleaning pigs of 16 inches and larger complete with four seals, two guide discs and a spring-mounted brush assembly. See page 5.
- Magnetic cleaning pigs with four seals, two guide discs and a magnetic bracelet. See page 6.

Other options include multi-diameter pigs, pigs designed to negotiate special fittings, such as check valves and wye fittings, high seal pigs with 6 seal discs and 2 guide discs, and long run pigs with 4 guide discs and 4 seal discs. Contact TDW for more information.



# Series IV BiDirectionAll Dewatering Pig

These pigs feature four seals and two guide discs, making them suitable for applications such as light to medium batching, line filling and dewatering. All sizes 12-inch and larger have a mounting flange suitable for a TDW transmitter. The discs alone provide an excellent scraping action, and these pigs can be used as light utility cleaning pigs. Each disc package can be rearranged to suit your requirements. The bodies are supplied with pluggable bypass holes.



■ Series IV BiDirectionAll Dewatering Pig

Size (Inches)	Part Number	Dimension A		Dimension B		Approximate Weight	
		Inches	mm	Inches	mm	Lbs	Kg
4	01-0677-0004-00	8.58	218	4.53	115	3.31	1.5
6	01-0677-0006-00	12.32	313	7.01	178	11.02	5
8	01-0677-0008-00	14.88	378	8.39	213	19.84	9
10	01-0677-0010-00	18.03	458	10.28	261	33.07	15
12	01-0677-0012-00	20.63	524	12.87	327	57.32	26
14	01-0677-0014-00	19.25	489	12.87	327	63.93	29
16	01-0677-0016-00	24.17	614	14.57	370	99.21	45
18	01-0677-0018-00	26.73	679	17.09	434	125.66	57
20	01-0677-0020-00	26.73	679	17.09	434	218.26	63
22	01-0677-0022-00	30.67	779	19.65	499	218.26	99
24	01-0677-0024-00	30.67	779	19.65	499	229.28	104
26	01-0677-0026-00	36.57	929	25.55	649	291.01	132
28	01-0677-0028-00	36.57	929	25.55	649	308.65	140
30	01-0677-0030-00	41.34	1050	27.76	705	548.95	249
32	01-0677-0032-00	41.34	1050	27.76	705	577.61	262
34	01-0677-0034-00	46.26	1175	32.28	820	637.14	289
36	01-0677-0036-00	46.26	1175	32.28	820	668.00	303
42	01-0677-0042-00	51.02	1296	34.49	876	793.66	360
48	01-0677-0048-00	Available as special order					

Note: These sealing lengths are based on the above configuration. Up to full bore openings can be traversed by rearranging the disc packages. These pigs can all traverse 1.5D bends.



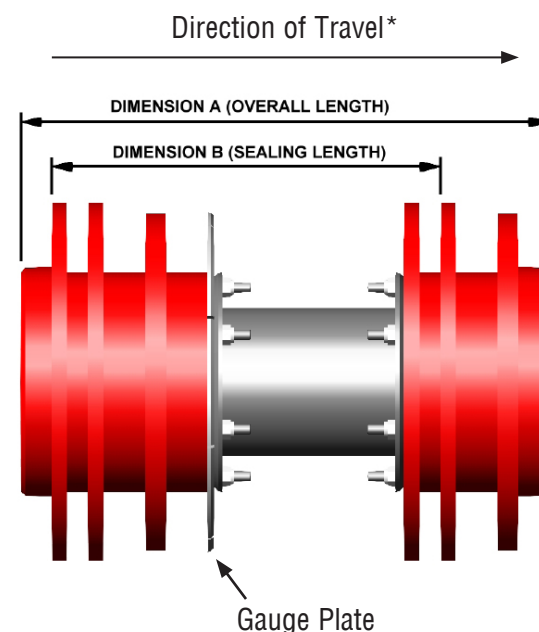
## Series IV BiDirectionAll Gauging Pig

These pigs feature four seals, two guide discs and an aluminum slotted gauge plate. Each gauge plate is precision machined to a precise diameter, typically 95 percent to 97 percent of the pipe's inside diameter. All sizes 12-inch and larger have a mounting flange suitable for a TDW transmitter. Each disc package can be rearranged to suit your requirements. The bodies are supplied with pluggable bypass holes.

\*For best results, run in direction noted, though direction can be reversed if needed.



■ Series IV BiDirectionAll Gauging Pig

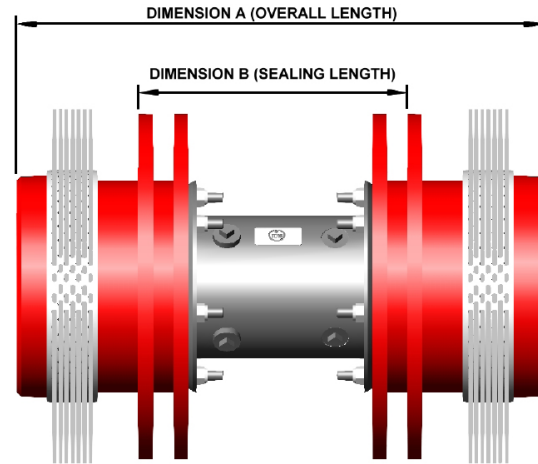
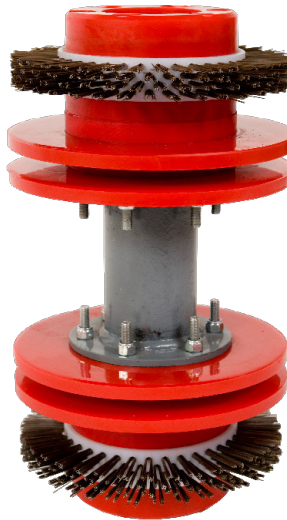


Size (Inches)	Part Number	Dimension A		Dimension B		Approximate Weight	
		Inches	mm	Inches	mm	Lbs	Kg
4	03-1521-0004-00	8.58	218	5.71	145	3.31	1.5
6	03-1521-0006-00	12.32	313	8.78	223	11.02	5
8	03-1521-0008-00	14.88	378	10.16	258	19.84	9
10	03-1521-0010-00	18.03	458	12.64	321	35.27	16
12	03-1521-0012-00	20.63	524	15.24	387	61.73	28
14	03-1521-0014-00	20.63	524	15.12	384	68.34	31
16	03-1521-0016-00	24.25	616	17.56	446	105.82	48
18	03-1521-0018-00	26.73	679	20.04	509	134.48	61
20	03-1521-0020-00	26.73	679	20.04	509	147.71	67
22	03-1521-0022-00	30.67	779	23.19	589	227.08	103
24	03-1521-0024-00	30.67	779	23.19	589	238.10	108
26	03-1521-0026-00	36.57	929	29.09	739	302.03	137
28	03-1521-0028-00	36.57	929	26.73	679	416.67	189
30	03-1521-0030-00	41.34	1050	32.48	825	571.00	259
32	03-1521-0032-00	41.34	1050	32.48	825	604.07	274
34	03-1521-0034-00	46.26	1175	37.40	950	670.21	304
36	03-1521-0036-00	46.26	1175	37.40	950	701.07	318
42	03-1521-0042-00	51.02	1296	41.54	776	837.76	380
48	03-1521-0048-00	Available as special order					

Note: These sealing lengths are based on the above configuration. Up to full bore openings can be traversed by rearranging the disc packages. These pigs can all traverse 1.5D bends.

# Series IV BiDirectionAll Circular Brush Cleaning Pig

These pigs feature four seals and two 360-degree circular brushes (on sizes up to 20-inch), providing full coverage of the pipeline wall. The modular brushes are easily replaced. All sizes 12-inch and larger have a mounting flange suitable for a TDW transmitter. Each disc package can be rearranged to suit your requirements. The bodies are supplied with pluggable bypass holes.



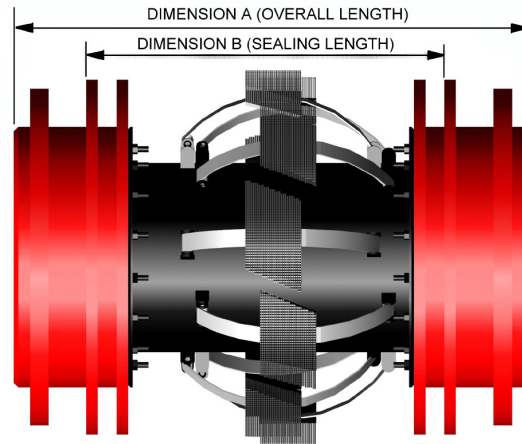
■ Series IV BiDirectionAll Circular Brush Cleaning Pig

Size (Inches)	Part Number	Dimension A		Dimension B		Approximate Weight	
		Inches	mm	Inches	mm	Lbs	Kg
4	02-2681-0004-00	Available as special order					
6	02-2681-0006-00	12.32	313	5.83	148	5.00	5
8	02-2681-0008-00	14.88	378	7.20	183	9.00	9
10	02-2681-0010-00	18.03	458	7.83	199	16.00	16
12	02-2681-0012-00	20.63	524	10.43	265	27.00	27
14	02-2681-0014-00	20.63	524	10.43	265	30.00	30
16	02-2681-0016-00	24.17	614	12.48	317	40.00	40
18	02-2681-0018-00	26.73	679	15.04	382	58.00	58
20	02-2681-0020-00	26.73	679	15.04	382	64.00	64
22	02-2681-0022-00	Available as special order					
24	02-2681-0024-00	Available as special order					
26	02-2681-0026-00	Available as special order					
28	02-2681-0028-00	Available as special order					
30	02-2681-0030-00	Available as special order					
32	02-2681-0032-00	Available as special order					
34	02-2681-0034-00	Available as special order					
36	02-2681-0036-00	Available as special order					
42	02-2681-0042-00	Available as special order					
48	02-2681-0048-00	Available as special order					

Note: These sealing lengths are based on the above configuration. Up to full bore openings can be traversed by rearranging the disc packages. These pigs can all traverse 1.5D bends.

## Series IV BiDirectionAll Sprung Brush Cleaning Pig

These pigs, in sizes of 16-inch and larger, feature four seals, two guide discs and a spring-mounted brush assembly. With each brush individually supported on its own spring, these pigs offer 360-degree brush coverage. The brushes are pinned and clamped onto brush holders. All sizes 16-inch and larger have a mounting flange suitable for a TDW transmitter. Each disc package can be rearranged to suit your requirements. The bodies are supplied with pluggable bypass holes.



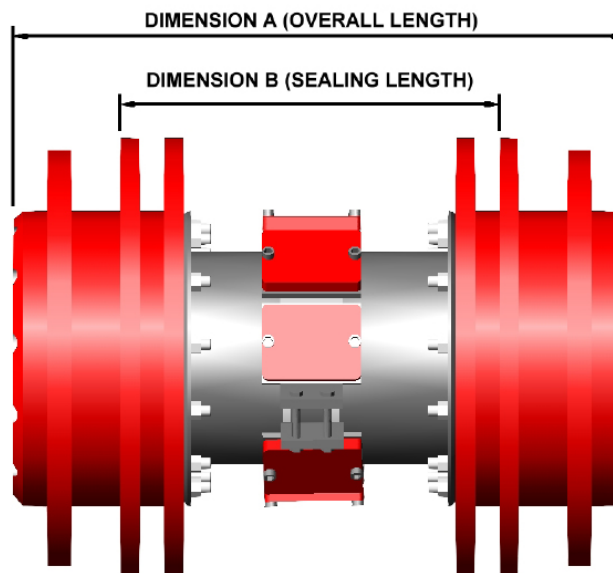
■ Series IV BiDirectionAll Sprung Brush Cleaning Pig

Size (Inches)	Part Number	Dimension A		Dimension B		Approximate Weight	
		Inches	mm	Inches	mm	Lbs	Kg
16	02-2682-0016-00	31.65	804	22.01	559	158.73	72
18	02-2682-0018-00	31.65	804	22.01	559	182.98	83
20	02-2682-0020-00	31.65	804	22.01	559	196.21	89
22	02-2682-0022-00	35.59	904	24.57	624	293.21	133
24	02-2682-0024-00	35.59	904	24.57	624	304.24	138
26	02-2682-0026-00	38.54	979	27.52	699	359.35	163
28	02-2682-0028-00	38.54	979	27.52	699	379.20	172
30	02-2682-0030-00	43.31	1100	29.72	755	641.55	291
32	02-2682-0032-00	43.31	1100	29.72	755	670.21	304
34	02-2682-0034-00	46.26	1175	32.68	830	740.75	336
36	02-2682-0036-00	46.26	1175	32.68	830	771.62	350
42	02-2682-0042-00	58.11	1476	32.68	830	1719.61	780
48	02-2682-0048-00	Available as special order					

Note: These sealing lengths are based on the above configuration. Up to full bore openings can be traversed by rearranging the disc packages. These pigs can all traverse 3D bends.

# Series IV BiDirectionAll Magnetic Pig

These pigs feature four seals, two guide discs and a magnetic bracelet of very high strength neodymium magnets protected by polyurethane covers. All sizes 12-inch and larger have a mounting flange suitable for a TDW transmitter. Each disc package can be rearranged to suit your requirements. The bodies are supplied with pluggable bypass holes.



Size (Inches)	Part Number	Dimension A		Dimension B		Approximate Weight	
		Inches	mm	Inches	mm	Lbs	Kg
4	02-2680-0004-00	Available as special order					
6	02-2680-0006-00	Available as special order					
8	02-2680-0008-00	14.88	378	8.39	213	24.25	11
10	02-2680-0010-00	18.03	458	10.28	261	37.48	17
12	02-2680-0012-00	20.63	524	12.87	327	66.14	30
14	02-2680-0014-00	19.25	489	12.87	327	72.75	33
16	02-2680-0016-00	24.17	614	14.57	370	112.44	51
18	02-2680-0018-00	26.73	679	17.09	434	145.51	66
20	02-2680-0020-00	26.73	679	17.09	434	158.73	72
22	02-2680-0022-00	30.67	779	19.65	499	242.51	110
24	02-2680-0024-00	30.67	779	19.65	499	297.62	135
26	02-2680-0026-00	36.57	929	25.55	649	317.47	144
28	02-2680-0028-00	36.57	929	25.55	649	399.04	181
30	02-2680-0030-00	41.34	1050	27.76	705	590.84	268
32	02-2680-0032-00	41.34	1050	27.76	705	619.50	281
34	02-2680-0034-00	46.26	1175	32.28	820	692.25	314
36	02-2680-0036-00	46.26	1175	32.28	820	855.39	388
42	02-2680-0042-00	51.02	1296	34.49	876	1510.17	685
48	02-2680-0048-00	Available as special order					

Note: These sealing lengths are based on the above configuration. Up to full bore openings can be traversed by rearranging the disc packages. These pigs can all traverse 1.5D bends.