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Apache Pig Chart

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# BI-DIRECTIONAL



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1-1

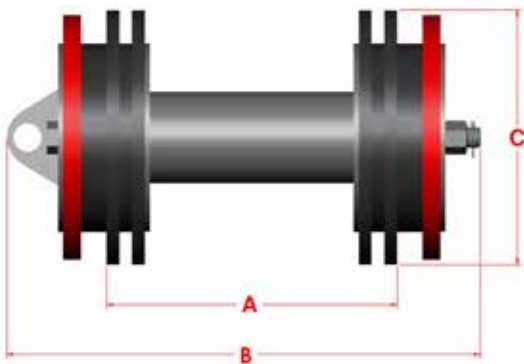
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# BI-DIRECTIONAL

## ED

4-14" (102-356mm)

The series ED pigs are bi-directional and used primarily for air and water displacement applications during the pressure test stage of construction. Designed to travel in either direction, the operator can fill the line with water and displace the water without removing the pig.



Size	A	B	C	Weight	Part #
4"	4.375	9.100	4.375	4	70705604
6"	6.000	13.000	6.375	14	70705606
8"	7.5000	15.200	8.375	26	70705608
10"	10.500	18.700	10.500	44	70705610
12"	12.250	23.200	12.500	72	70705612
14"	14.500	23.500	13.875	77	70705614

### Features:

The ED version, with a combination of 4 sealing discs and 2 guide discs, offers a sealing arrangement suitable for separation of dissimilar fluids or for dewatering during hydrostatic testing. Sealing discs experiencing wear can reverse direction without compromising sealing characteristics.

### Options:

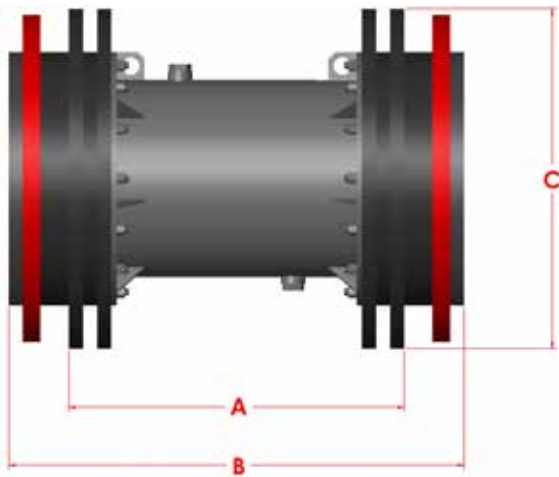
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# BI-DIRECTIONAL

## ED

16-48" (406-1219mm)

The series ED pigs are bi-directional and used primarily for air and water displacement applications during the pressure test stage of construction. Designed to travel in either direction, the operator can fill the line with water and displace the water without removing the pig.



Size	A	B	C	Weight	Part #
16"	15.000	22.250	15.875	118	70705616
18"	17.000	24.250	17.900	142	70705618
20"	19.250	27.250	20.000	191	70705620
22"	21.500	30.250	22.000	215	70705622
24"	23.750	32.250	24.125	277	70705624
30"	29.750	38.500	30.125	442	70705630
36"	35.250	47.000	36.500	704	70705636
42"	41.250	55.250	42.625	1075	70705642
48"	46.500	60.000	48.875	1360	70705648

### Features:

The ED version, with a combination of four sealing and two guide discs, offers a sealing arrangement suitable for separation of dissimilar fluids or for dewatering during hydrostatic testing. Sealing discs experiencing wear can reverse direction without compromising sealing characteristics. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

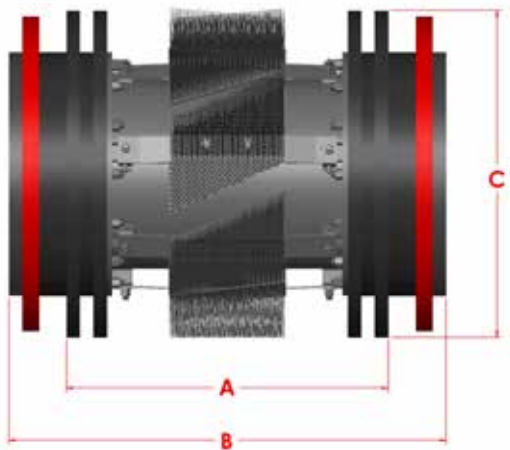
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# BI-DIRECTIONAL

## EDX

16-48" (406-1219mm)

The series EDX cleaning pigs are designed for bi-directional cleaning of newly constructed lines or for existing lines where scale and debris are present. It is also an excellent choice for air and water displacement applications during the pressure test stage of construction.



Size	A	B	C	Weight	Part #
16"	18.000	25.250	15.875	157	60722816
18"	20.500	27.750	17.875	194	60722818
20"	23.000	31.000	20.000	252	60722820
22"	26.250	34.250	22.000	283	60722822
24"	26.750	35.250	24.125	355	60722824
30"	29.750	39.500	30.250	530	60722830
36"	35.250	47.000	36.500	812	60722836
42"	42.250	55.250	42.625	1209	60722842
48"	46.500	61.750	48.875	1511	60722848

### Features:

EDX is an economical four sealing and two guide disc bi-directional pig which offers an optimum seal and also allows for aggressive cleaning with wear compensating, spring loaded brushes. The pig is equipped with durable guide discs designed to center the sealer discs in the line, forming a quadruple seal that virtually eliminates product by-pass. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

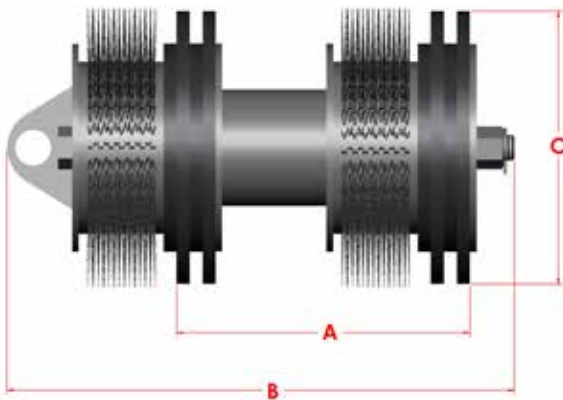
- Bi-directional carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Plow blades.

# BI-DIRECTIONAL

## EDR

6-14" (152-356mm)

The series EDR pigs are bi-directional and used primarily for air and water displacement applications during the pressure test stage of construction. Designed to travel in either direction, the operator can fill the line with water and displace the water without removing the pig.



Size	A	B	C	Weight	Part #
6"	7.875	15.700	6.375	18	60715006
8"	10.250	18.200	8.375	31	60715008
10"	11.250	19.700	10.500	51	60715010
12"	14.125	22.700	12.500	71	60715012
14"	16.625	25.200	13.875	80	60715014

### Features:

Simple replacement of a disc with a circular wire brush enhances the versatility of the ED series. This EDR version offers a sealing arrangement suitable for separation of dissimilar fluids or for dewatering during hydrostatic testing. Sealing discs experiencing wear can reverse direction without compromising sealing characteristics.

### Options:

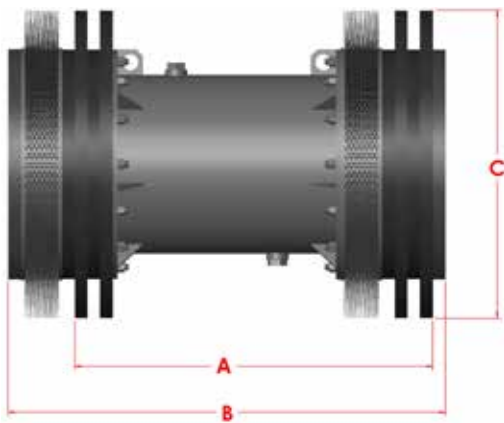
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# BI-DIRECTIONAL

## EDR

16-48" (406-1219mm)

The series EDR pigs are bi-directional and used primarily for air and water displacement applications during the pressure test stage of construction. Designed to travel in either direction, the operator can fill the line with water and displace the water without removing the pig.



Size	A	B	C	Weight	Part #
16"	19.000	25.000	15.875	132	60715016
18"	21.500	27.500	17.875	165	60715018
20"	24.370	30.500	20.000	217	60715020
22"	26.370	32.250	22.000	248	60715022
24"	28.250	34.500	24.125	303	60715024
30"	33.375	40.200	30.125	468	60715030
36"	40.125	47.000	36.500	776	60715036
42"	47.250	55.250	42.625	1093	60715042
48"	53.250	62.000	48.875	1381	60715048

### Features:

This EDR version offers a sealing arrangement suitable for separation of dissimilar fluids or for dewatering during hydrostatic testing. Sealing discs experiencing wear can reverse direction without compromising sealing characteristics. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

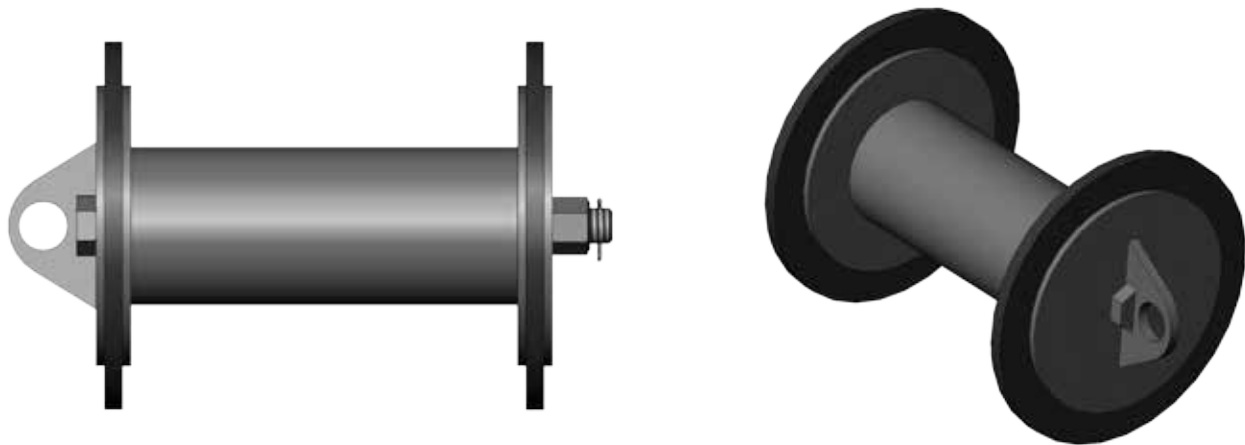


# BI-DIRECTIONAL

## MD2

3-14" (76-356mm)

The MD2 bi-directional pigs are designed to be both economical and efficient. They have multiple uses including separation of dissimilar fluids, batching and light cleaning, however, the primary use for the MD2 is water displacement during the hydrostatic testing stage of construction. The steel bodied pig is designed to travel in either direction in the pipeline.



MD series, in sizes 14" and smaller, have a through bolt mandrel design, complete with a pull hook. Sealing discs experiencing wear after traveling one direction, can reverse direction without compromising their sealing characteristics. All discs are produced from Apache's special blend of wear resistant Reliathane.

The discs are manufactured from a special blend of wear resistant polyurethane but inevitably wear will occur. The advantage of a bi-directional pig is that after traveling in one direction, the pig can be run in the other direction and still maintain a positive seal.

### Options:

- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

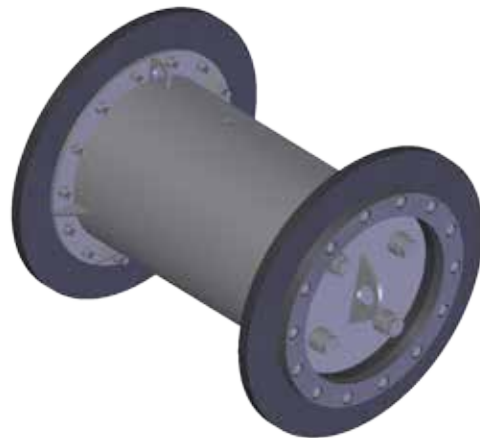
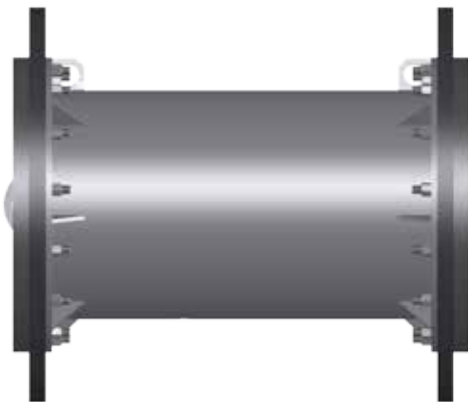
# BI-DIRECTIONAL

## MD2

16-48" (406-1219mm)

The MD2 bi-directional pigs are designed to be both economical and efficient. They have multiple uses including separation of dissimilar fluids, batching and light cleaning however the primary use for the MD2 is water displacement during the hydrostatic testing stage of construction. The steel bodied pig is designed to travel in either direction in the pipeline.

MD series, in sizes 16" and larger, are equipped with either two or four disc combinations, bolted to a rugged steel mandrel. Typically, the longer the pig run the more discs you would install. Sealing discs experiencing wear after traveling one direction, can reverse direction without compromising their sealing characteristics. The discs are made from a special blend of wear resistant polyurethane. The advantage of a bi-directional pig is that after traveling in one direction, the pig can be run in the other direction and still maintain a positive seal. Bumper noses prevent damage to both the pig and in-line auxiliary equipment. The MD series are available in either the standard MD2 or the heavy duty MD4 design.



### Options:

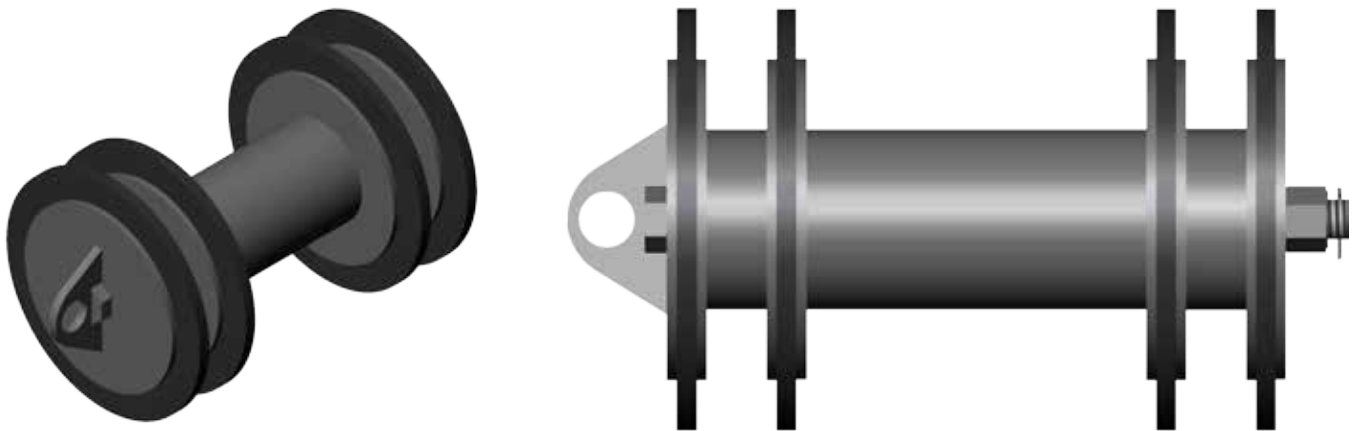
- Transmitter cavities for electronic tracking equipment.
- Gauging plates can be custom made to suit your application and are available in aluminum or steel, slotted or standard.
- Magnets available.

# BI-DIRECTIONAL

## MD4

3-14" (76-356mm)

The primary use for the MD4 is liquid displacement during the hydrostatic testing stage of construction; however the 4 disc design allows the pig to be used for light cleaning, separation and batching. Designed to be run in either direction in the pipeline the operator can fill the line with liquid and displace the liquid with out removing the pig from the line. The sealing discs experiencing wear after traveling in one direction can reverse the direction without compromising their sealing characteristics.



### Features:

MD series, in sizes 14" and smaller, have a through bolt mandrel design, complete with a pull hook. The pigs can be equipped with two or four discs to suit the application. Typically the longer the pig run the more discs you would install. The MD4 is available in sizes 3" – 14" in diameter and comes with a single through bolt mandrel design, complete with a pull hook. The discs are manufactured from a special blend of wear resistant polyurethane.

### Options:

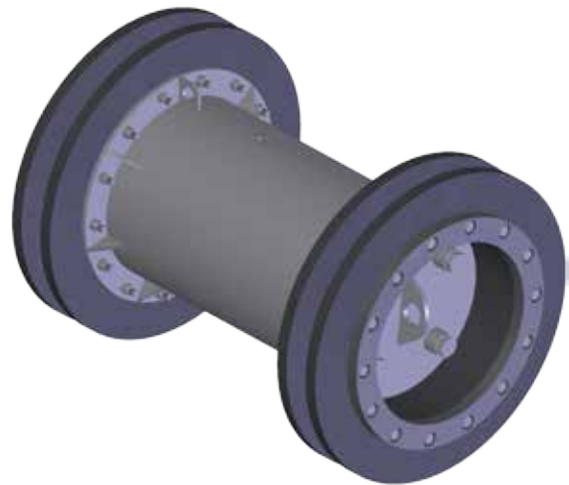
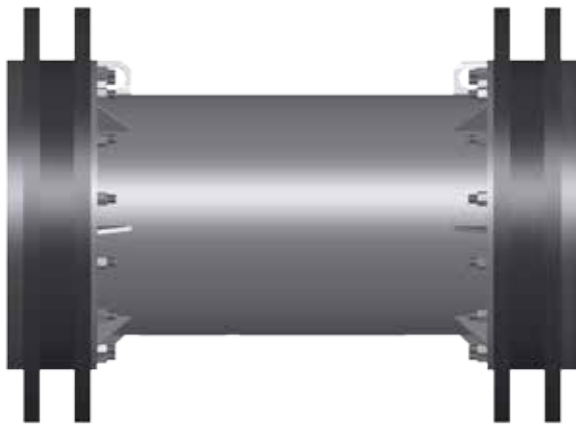
- Gauging plates can be custom made to suit your application and are available in aluminum or steel, slotted or standard.
- Magnets available.

# BI-DIRECTIONAL

## MD4

16-48" (406-1219mm)

This pig is very economical and efficient and is manufactured for medium to long pigging runs and varies in size from 16" to 48" in diameter. Although the primary use for the MD4 is liquid displacement during the hydrostatic testing stage of construction they can be used for cleaning, separation and batching as well. All Apache discs are manufactured from a special bend of wear resistant polyurethane and the MD pigs are designed to traverse in either direction in the pipeline.



### Features:

These pigs can be equipped with two or four discs to suit the application. Typically the longer the pig run the more discs you would install. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

- Transmitter cavities for electronic tracking equipment.
- Gauging plates can be custom made to suit your application and are available in aluminum or steel, slotted or standard.
- Magnets are available.

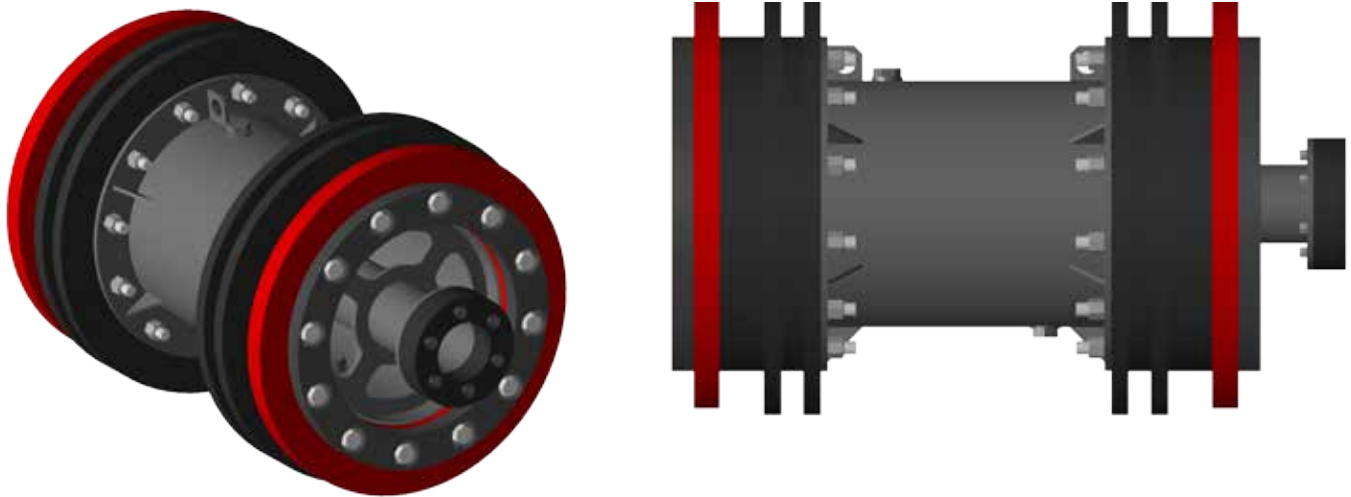
# BI-DIRECTIONAL

## MDK ED

16-48" (406-1219mm)

MDK-ED bi-directional pigs are designed for use in long-run pipeline construction applications during the hydrostatic test stage. Designed to travel in either direction, the operator can fill the line with water and displace the water without removing the pig. The MDK-ED mandrels are engineered to easily be adapted to a cleaning pig by the addition of flat steel wire brushes.

MDK-ED pigs have both an inner mandrel and outer mandrel. The MDK-ED dual mandrel is favoured by contractors, as the inner mandrel withstands the battering inherent during construction phases, while the outer disc carrying mandrel remains untouched.



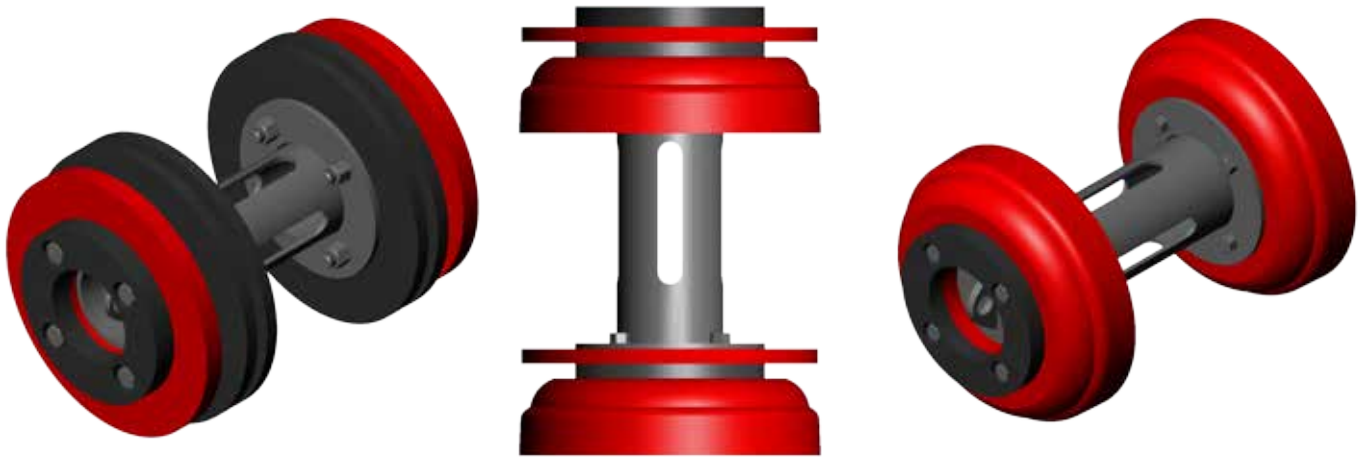
The pigs are equipped with durable guide discs, one at each end. They provide a positive centering affect which allow the four sealing discs in the center to effectively seal during the displacement period. Bumper noses are also included with MDK-ED pigs. They prevent damage of expensive in-line auxiliary equipment. Handling hooks are standard features on the MDK-ED.

# BI-DIRECTIONAL

## UT MANDREL

6-14" (52-356mm)

The primary use for the UT pig is to house a transmitter located within the center of the mandrel. They can also be used for cleaning and batching of dissimilar fluids. The mandrel can accommodate any configuration of cups, disks and brushes.



### Features:

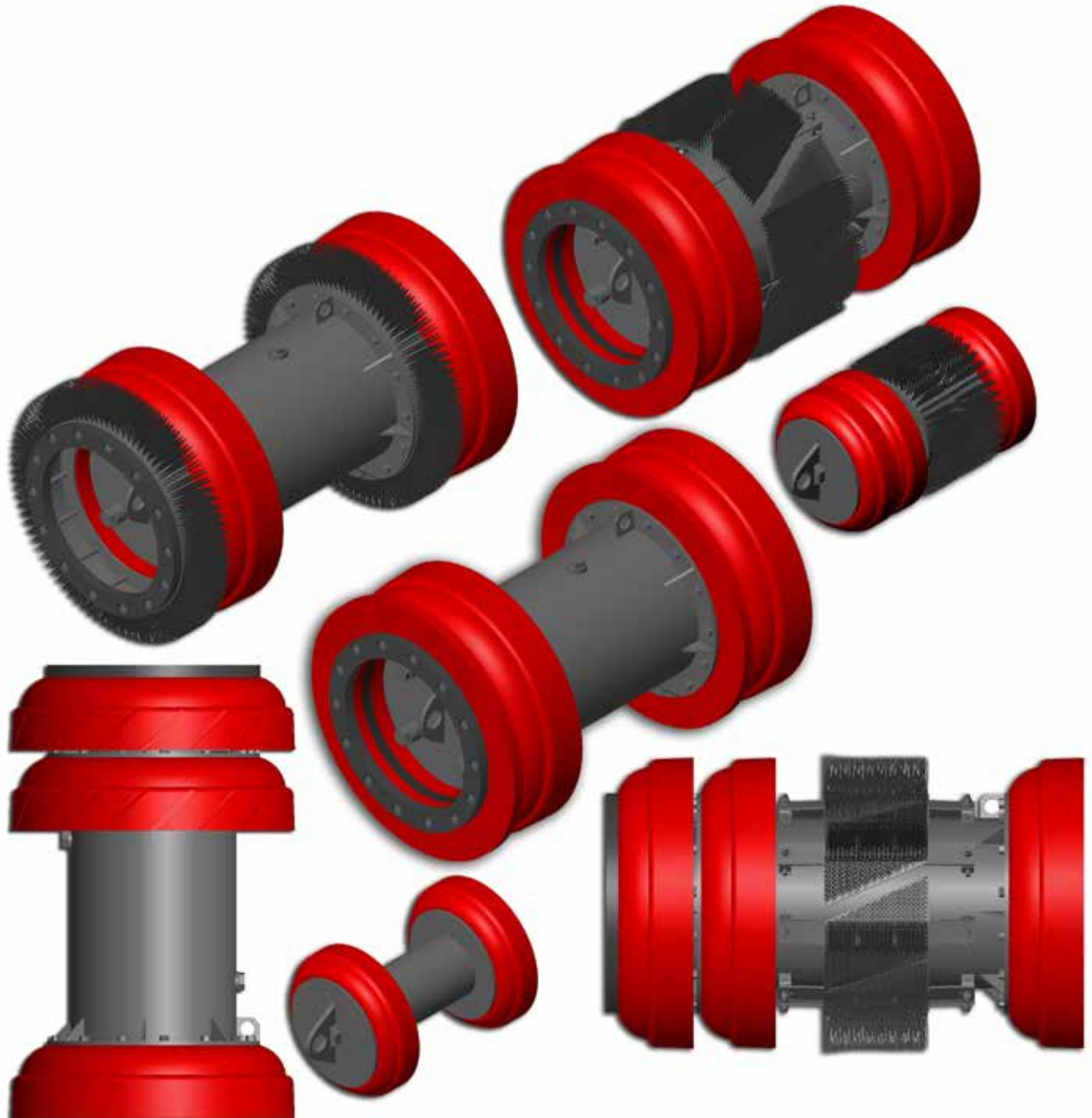
The UT is the only small diameter steel mandrel pig that Apache manufactures with a transmitter cavity in the middle of the mandrel to accommodate electronic pig tracking equipment. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment.

### Options:

- Circular flat carbon steel, stainless steel or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.



# SCRAPER CUP



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2-1

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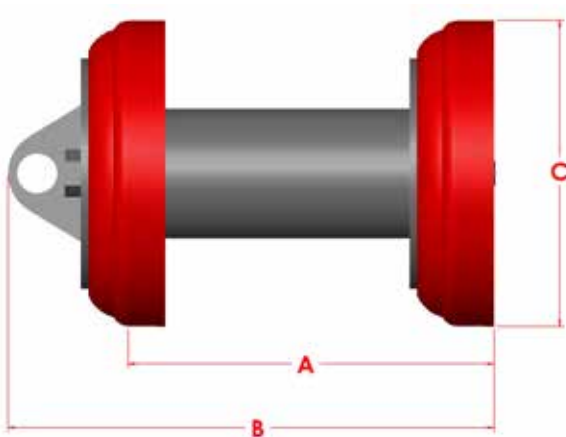


# SCRAPER CUP

## UC2

2-14" (51-356mm)

The basic two cup series UC pigs are generally used for batching of dissimilar fluids. The UC series is available in three versions. The two cup design of this pig provides a positive seal between fluid interfaces while the three and four cup design is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
3"	4.375	6.875	3.375	2	70380203
4"	5.500	8.125	4.375	3	70380204
6"	7.750	11.750	6.375	11	70380206
8"	10.125	14.000	8.500	20	70380208
10"	12.500	16.750	10.625	35	70380210
12"	15.000	19.000	12.500	46	70380212
14"	17.375	21.000	13.875	54	70380214

### Features:

The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Cups can be changed or adapted to different configurations as the application dictates.

### Options:

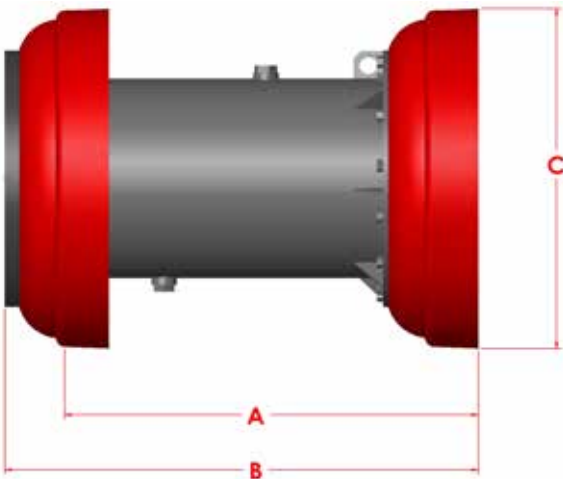
- Gauging plates of aluminum or steel, and either in slotted or standard styles are available.
- Magnets are available.

# SCRAPER CUP

## UC2

16-48" (406-1219mm)

The UC pig available in three versions. The basic two cup and three cup UC pigs are generally used for batching of dissimilar fluids. Cups can be changed or adapted to different configurations as the application dictates. The configuration of the four cup UC provides positive seal between dissimilar fluids and typically used for longer distance operations and for light cleaning of pipelines.



Size	A	B	C	Weight	Part #
16"	17.875	21.125	16.000	83	70380216
20"	22.625	26.375	19.875	134	70380220
22"	24.750	28.875	21.875	153	70380222
24"	27.375	31.500	23.875	197	70380224
30"	33.750	38.875	29.875	307	70380230
36"	40.125	45.750	36.000	472	70380236
42"	46.750	52.750	42.125	685	70380242
48"	51.000	57.500	47.625	849	70380248

### Features:

UC pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

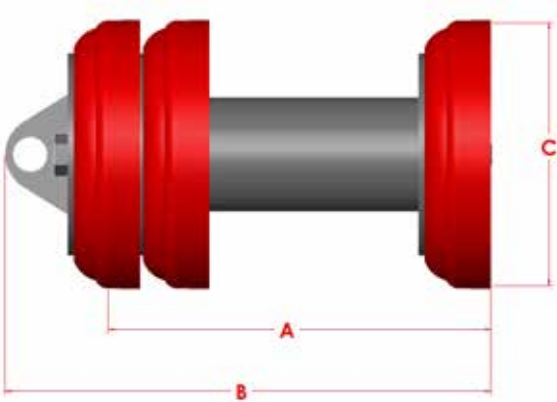
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## UC3

2-14" (51-356mm)

The basic three cup series UC pigs are designed for batching of dissimilar fluids and are typically used for longer distance applications. The UC series is available in three versions. The three cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
3"	5.500	7.000	3.375	2	70380303
4"	6.625	8.375	4.375	4	70380304
6"	9.875	13.750	6.375	15	70380306
8"	11.375	15.250	8.500	26	70380308
10"	15.250	19.500	10.625	47	70380310
12"	18.250	22.750	12.500	64	70380312
14"	21.250	25.875	13.875	75	70380314

### Features:

The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Cups can be changed or adapted to different configurations as the application dictates.

### Options:

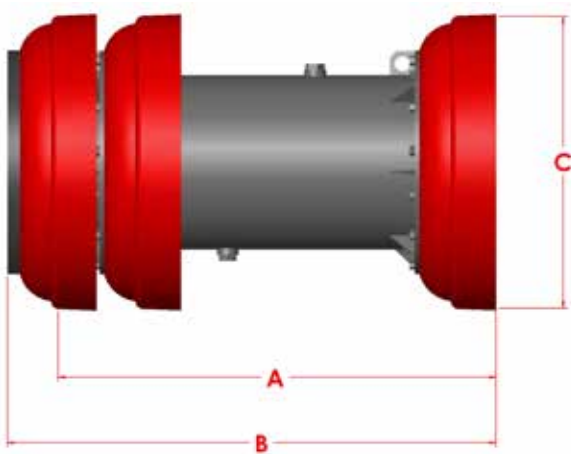
- Gauging plates of aluminum or steel, and either in slotted or standard styles are available.
- Magnets are available.

# SCRAPER CUP

## UC3

16-48" (406-1219mm)

The basic three cup UC pigs are designed for batching of dissimilar fluids and are typically used for longer distance applications. The UC series is available in three versions. The three cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
16"	22.500	25.875	16.000	115	70380316
20"	28.500	32.375	19.875	187	70380320
22"	31.375	35.500	21.875	215	70380322
24"	34.375	38.250	23.875	269	70380324
30"	42.125	47.125	29.875	426	70380330
36"	49.250	54.750	36.000	644	70380336
42"	56.500	62.500	42.125	942	70380342
48"	61.625	68.125	47.625	1141	70380348

### Features:

UC pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

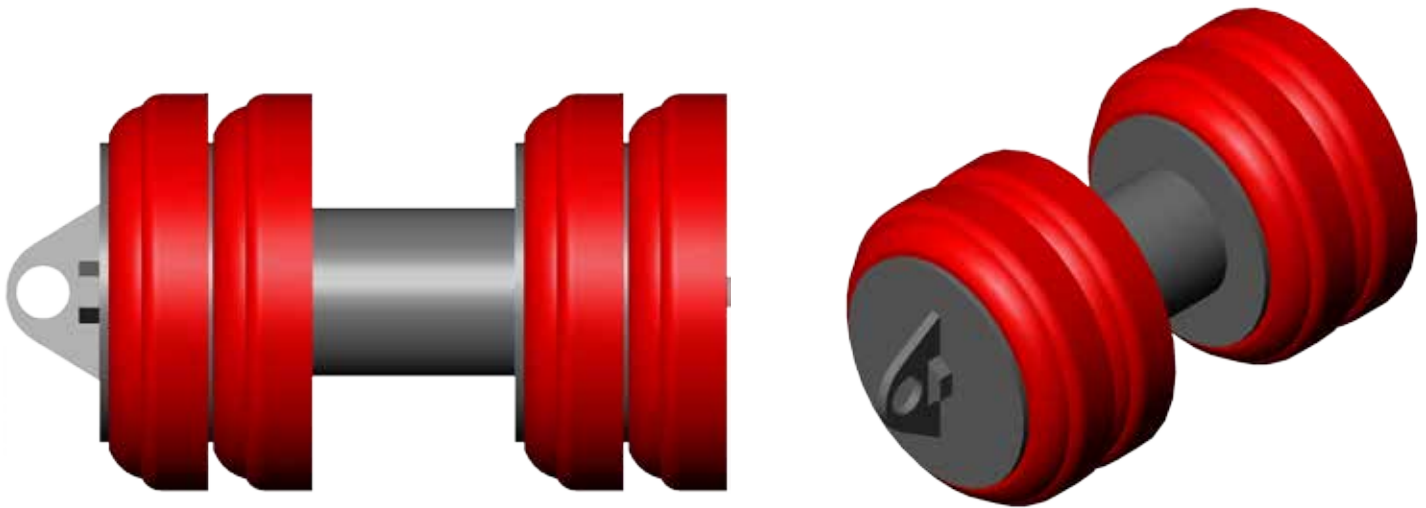
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## UC4

2-14" (51-356mm)

The basic four cup series UC pigs are generally used for batching of dissimilar fluids and are typically used for longer distance applications. The UC series is available in three versions. The four cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



### Features:

The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Cups can be changed or adapted to different configurations as the application dictates.

### Options:

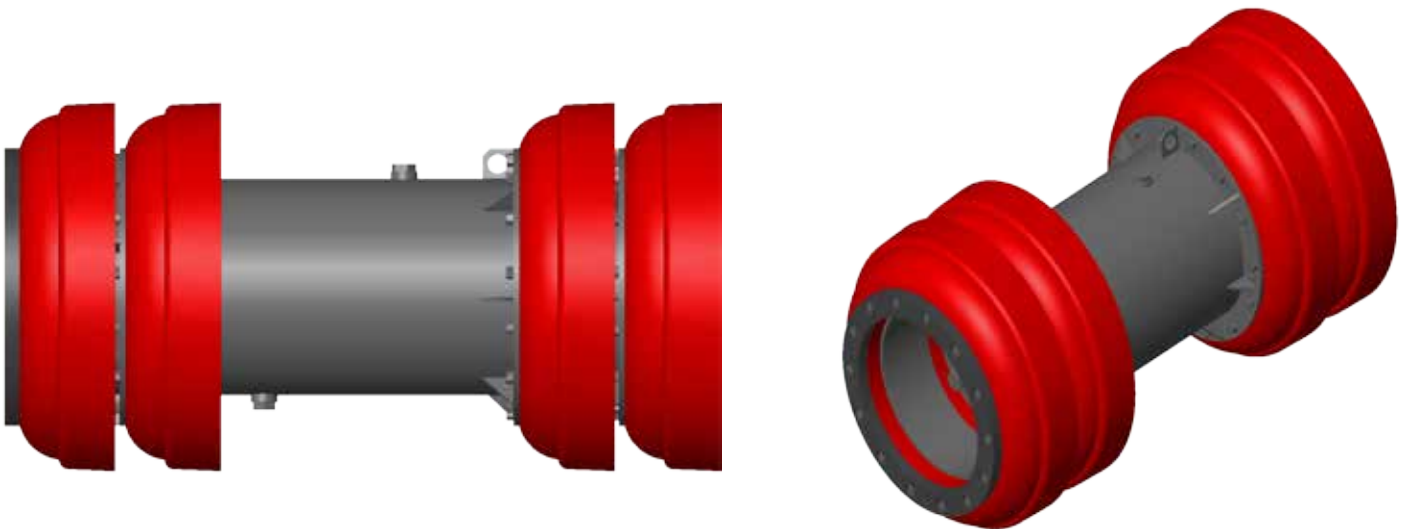
- Gauging plates of aluminum or steel, and either in slotted or standard styles are available.
- Magnets are available.

# SCRAPER CUP

## UC4

16-48" (406-1219mm)

The basic four cup series UC pigs are generally used for batching of dissimilar fluids and are typically used for longer distance applications. The UC series is available in three versions. The four cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



### Features:

UC pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

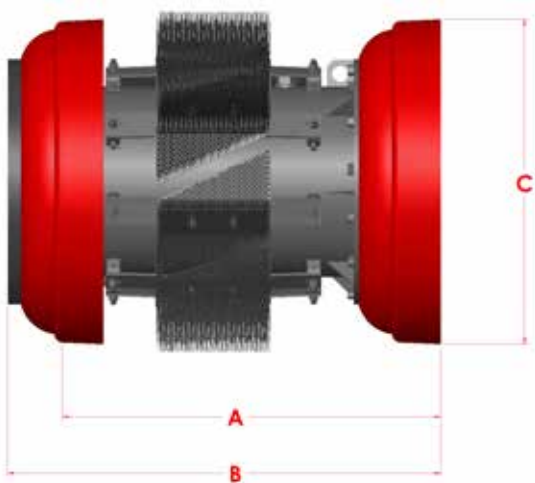
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## UC2X

16-48" (406-1219mm)

The basic two cup UCX pigs are generally used for cleaning and scraping of pipelines. This pig is also available in three and four cup configurations. By adding cups to the configuration the UC pig provides a positive seal between dissimilar fluids and is typically used for longer distance operations and for light cleaning of pipelines. Cups can be changed or adapted to different configurations as the application dictates.



Size	A	B	C	Weight	Part #
16"	18.875	22.000	16.000	118	60352216
20"	24.500	28.375	19.875	187	60352220
22"	26.750	30.875	21.875	210	60352222
24"	28.375	32.500	23.875	269	60352224
30"	33.750	38.875	29.875	391	60352230
36"	40.125	45.750	36.000	572	60352236
42"	46.750	52.750	42.125	819	60352242
48"	51.000	57.500	47.625	987	60352248

### Features:

UCX pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. A standard bumper nose prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

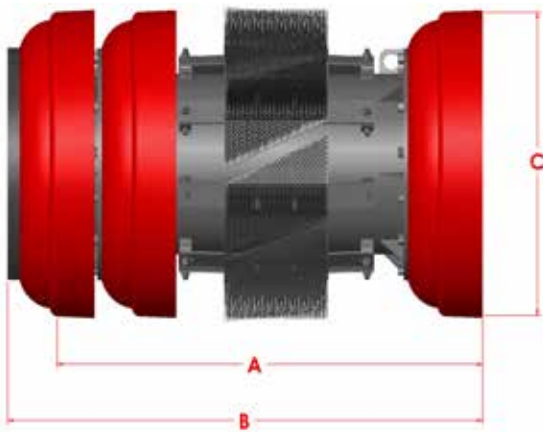
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Plow blades.

# SCRAPER CUP

## UC3X

16-48" (406-1219mm)

The three cup UCX pigs are generally used for cleaning and scraping of pipelines. By adding cups to the configuration the UC pig provides a positive seal between dissimilar fluids and is typically used for longer distance operations and for light cleaning of pipelines. Cups can be changed or adapted to different configurations as the application dictates.



Size	A	B	C	Weight	Part #
16"	23.500	26.875	16.000	150	60352316
20"	30.500	34.500	19.875	240	60352320
22"	33.375	37.500	21.875	276	60352322
24"	35.125	39.250	23.875	341	60352324
30"	42.125	47.125	29.875	509	60352330
36"	49.250	54.750	36.000	743	60352336
42"	56.500	62.500	42.125	1058	60352342
48"	61.750	68.125	47.625	1292	60352348

### Features:

UCX pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. A standard bumper nose prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

- Carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Plow blades.

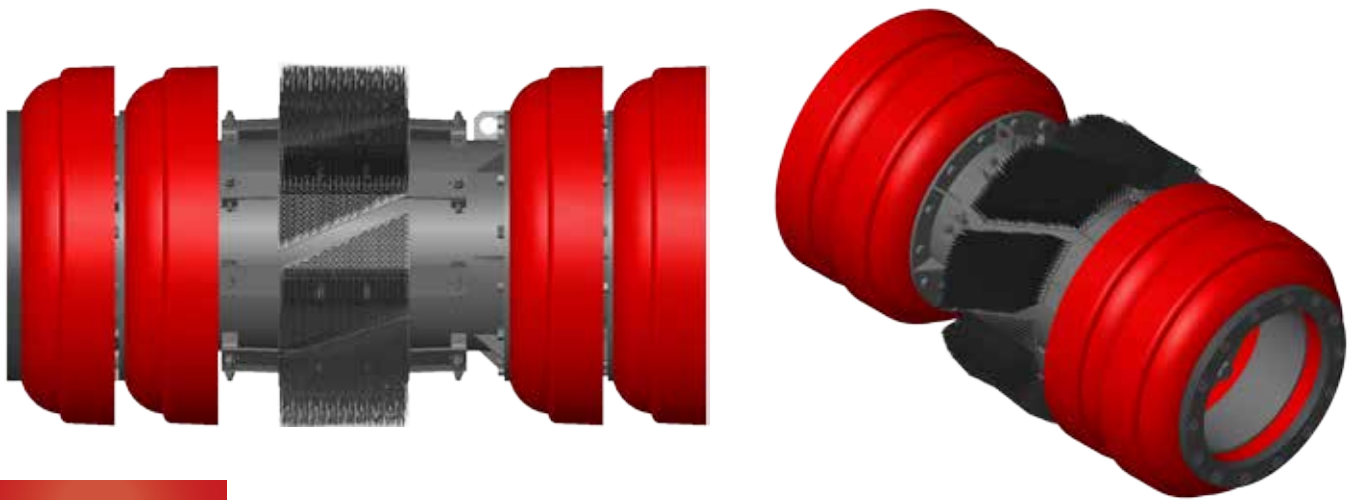


# SCRAPER CUP

## UC4X

16-48" (406-1219mm)

The four cup UCX pigs are generally used for cleaning and scraping of pipelines. By adding cups to the configuration the UC pig provides a positive seal between dissimilar fluids and is typically used for longer distance operations and for light cleaning of pipelines. Cups can be changed or adapted to different configurations as the application dictates.



### Features:

UCX pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. A standard bumper nose prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

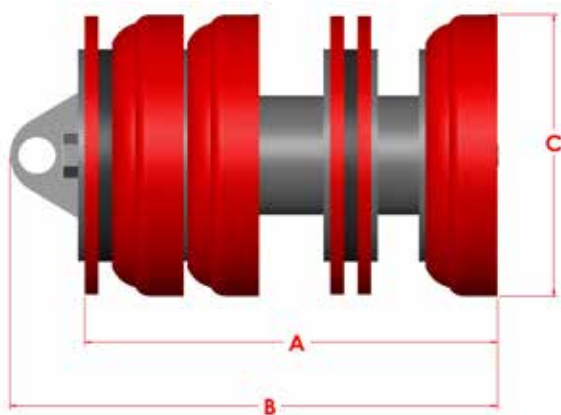
- Carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Plow blades.

# SCRAPER CUP

## XF

6-14" (152-356mm)

The Apache XF pig comes standard with a combination of three sealing discs and three series C cups, providing a positive seal between dissimilar fluids and scraping compatibility. XF are typically used for longer distance batching operations and for light cleaning of pipelines. Cups and discs can be easily changed or adapted to different configurations as the application dictates.



Size	A	B	C	Weight	Part #
6"	10.250	12.500	6.375	18	70678606
8"	12.000	14.375	8.500	33	70678608
10"	15.125	18.000	10.625	58	70678610
12"	18.125	20.875	12.750	82	70678612
14"	20.750	23.500	13.875	92	70678614

### Options:

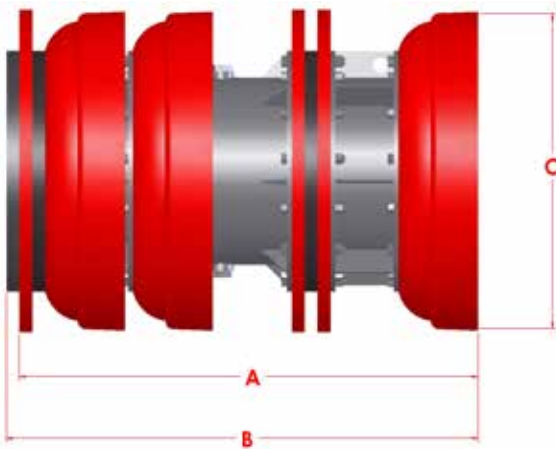
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Magnets are available.

# SCRAPER CUP

## XF

16-48" (406-1219mm)

The Apache XF pig comes standard with a combination of three sealing discs and three series C cups, providing a positive seal between dissimilar fluids and scraping compability. XF are typically used for longer distance batching operations and for light cleaning of pipelines. Cups and discs can be easily changed or adapted to different configurations as the application dictates.



Size	A	B	C	Weight	Part #
16"	23.375	24.375	16.000	140	70678616
18"	27.625	28.625	17.875	174	70678618
20"	30.000	31.000	19.875	231	70678620
22"	32.500	33.500	21.875	267	70678622
24"	35.500	36.500	23.875	328	70678624
30"	45.500	46.500	29.875	541	70678630
36"	53.500	54.875	36.000	823	70678636
42"	62.125	63.625	42.125	1252	70678642
48"	72.000	73.625	47.625	1519	70678648

### Features:

Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

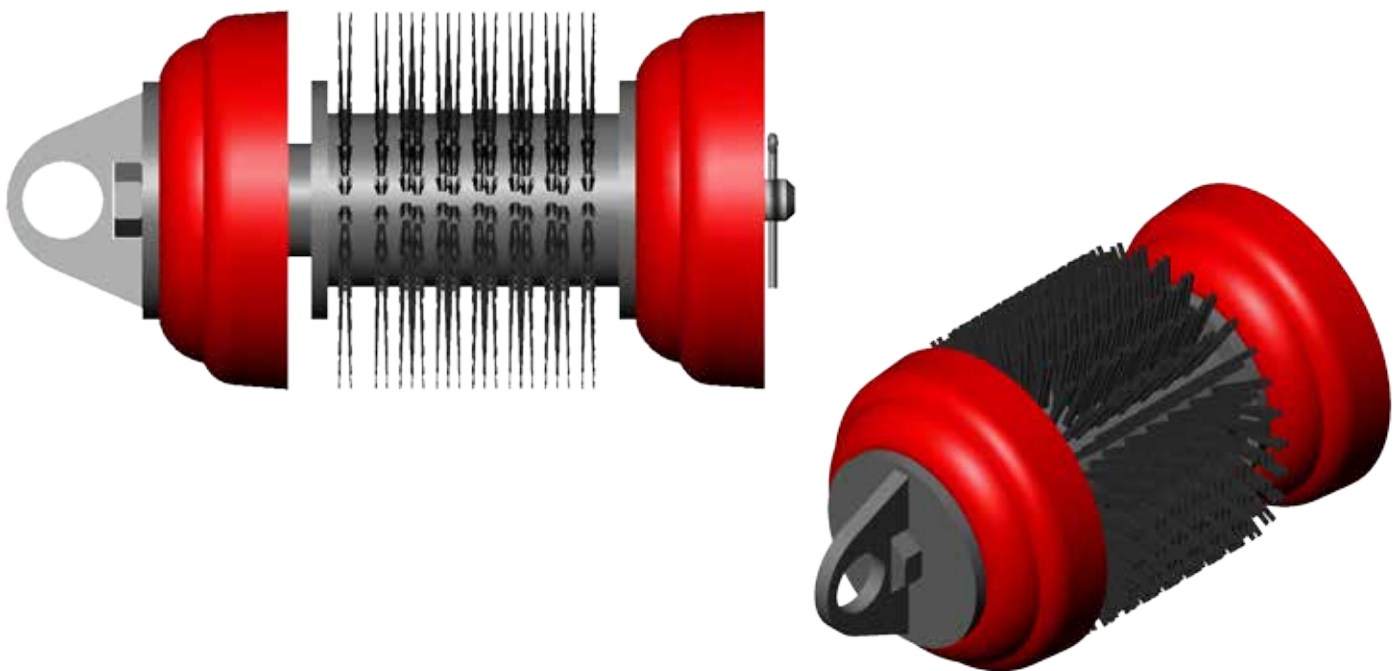
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Transmitter cavity for electronic tracking equipment.
- Magnets are available.

# SCRAPER CUP

## SC2A

3-4" (76-102mm)

The series SCA cleaning pigs improve flow rate deficiencies in small gathering lines. The ability to negotiate sharp bends and the cleaning capability of the Series HDPE-PB brush make the SCA an efficient cleaning tool.



### Features:

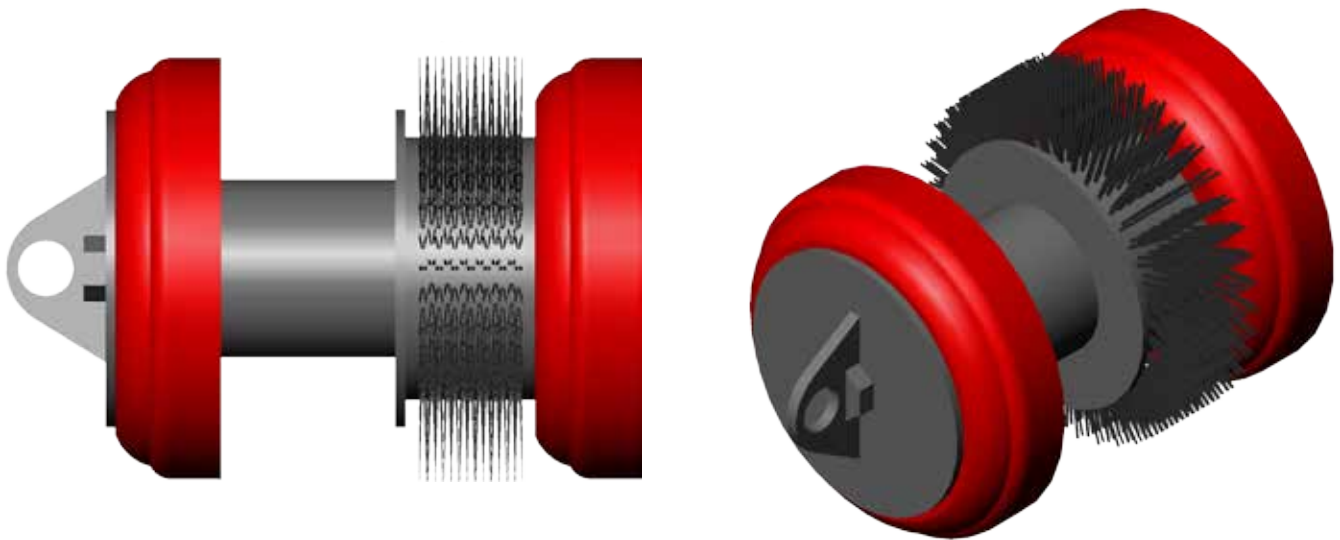
The SC2A pigs come standard with two Apache Series C cups manufactured from high quality Reliathane. Elements and brushes can be easily replaced to provide additional service.

# SCRAPER CUP

## SC2R

6-14" (152-356mm)

The series SCR cleaning pigs are designed to aggressively remove debris from pipelines. Effective in all types of pipelines, the aggressive fixed steel brush provides optimal cleaning ability.



### Features:

The SC2R pigs come standard with two Apache Series C cups manufactured from high quality Reliathane. Elements and brushes can easily be replaced to provide additional service.

### Options:

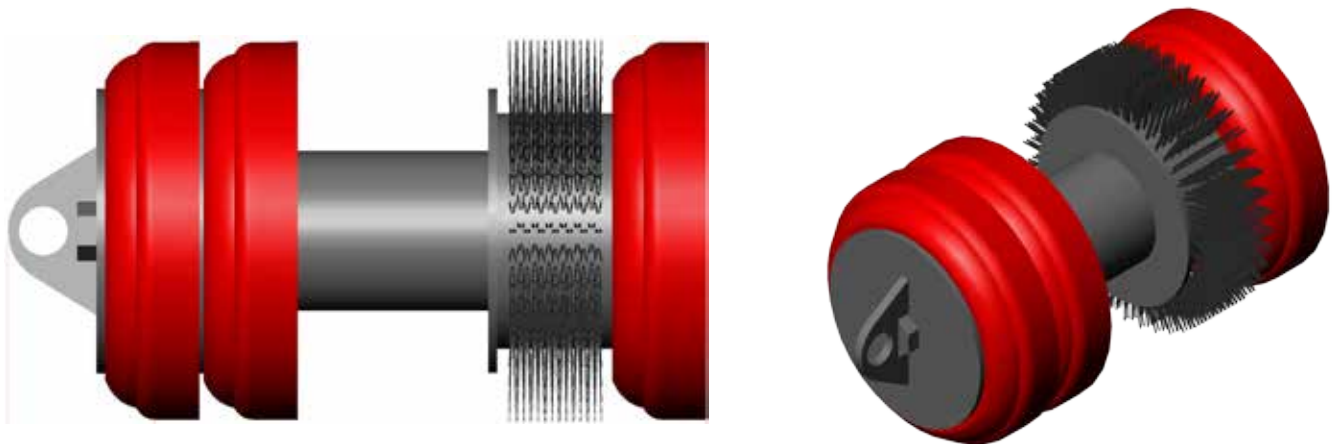
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## SC3R

6-14" (152-356mm)

The series SCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flowrates. Effective in all types of pipelines, the aggressive fixed steel brush provides optimal cleaning ability.



### Features:

The SC3R model comes standard with three Apache Series C cups to further increase the versatility of these pigs.

### Options:

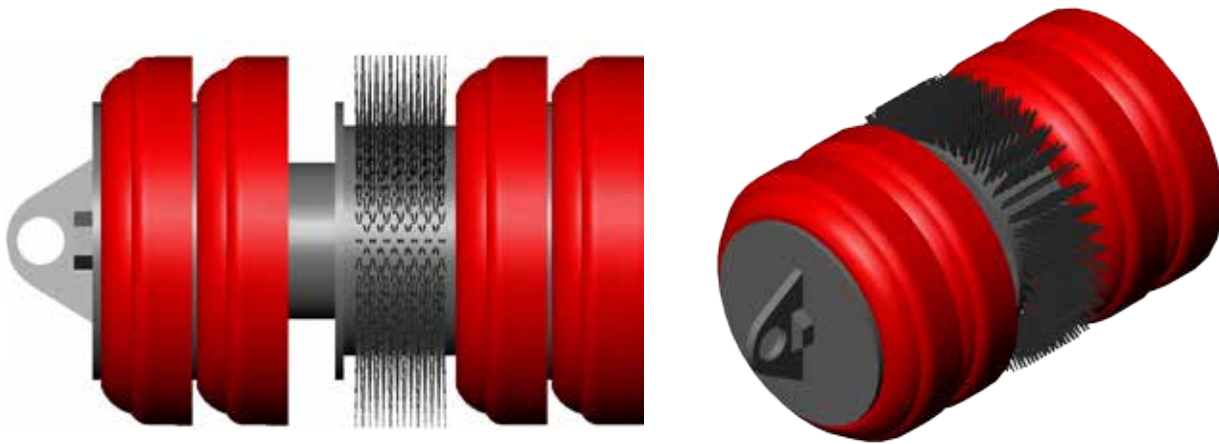
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## SC4R

6-14" (152-356mm)

The series SCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flowrates. Effective in all types of pipelines, the aggressive fixed steel brush provides optimal cleaning ability.



### Features:

The SC4R model comes standard with four Apache Series C cups to further increase the versatility of these pigs.

### Options:

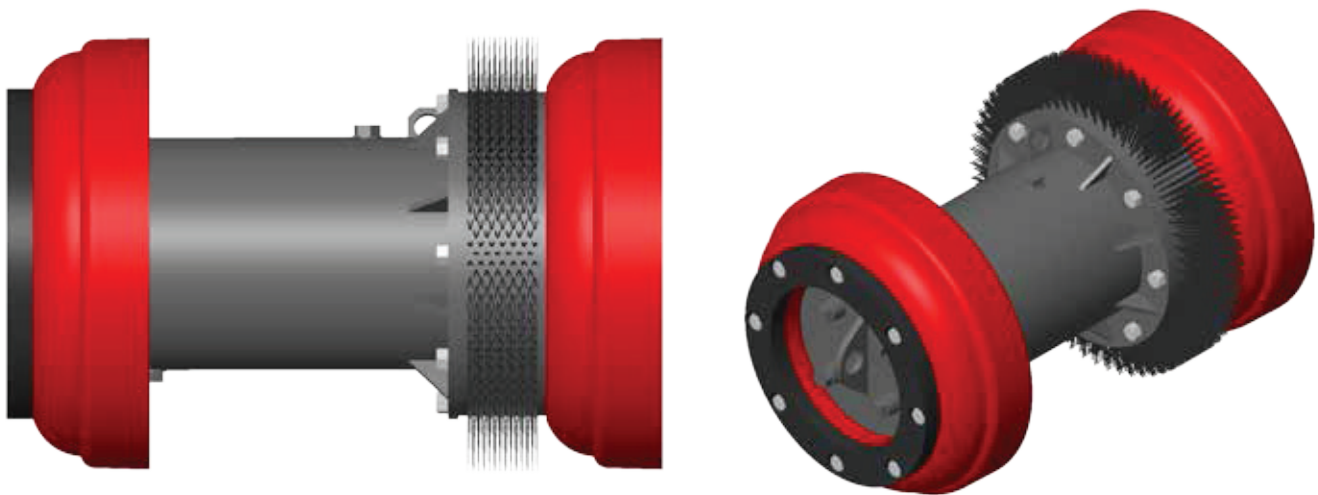
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## SCR

16-48" (406-1219mm)

The series SCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flow rates. Effective in all types of pipelines, the aggressive fixed steel brush provides optimal cleaning ability.



### Features:

The SCR model comes standard with two Apache Series C cups manufactured from high quality Reliathane. Elements and brushes can easily be replaced to provide additional service.

### Options:

- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Transmitter cavities.
- Rattler assemblies.

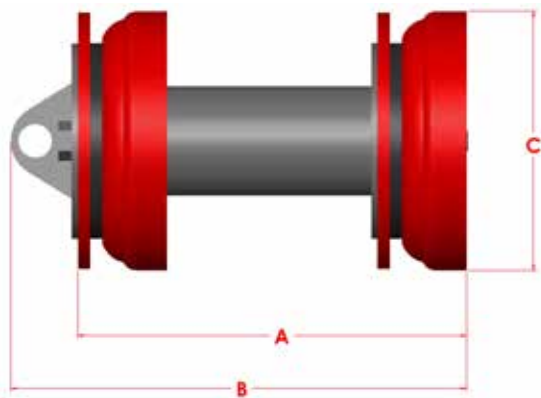


# SCRAPER CUP

## DCD

3-14" (76-356mm)

The series DCD pig comes standard with a combination of two sealing discs and two series C Cups, providing a positive seal between dissimilar fluids and scraping capability. The increased surface area provided by multiple sealing components significantly improves overall cleaning and sealing capacity of the pig.



Size	A	B	C	Weight	Part #
3"	4.875	6.500	3.375	2	70683003
4"	6.250	8.250	4.375	4	70683004
6"	9.375	12.250	6.375	12	70683006
8"	11.875	14.500	8.500	23	70683008
10"	14.875	17.750	10.625	39	70683010
12"	18.125	20.875	12.750	56	70683012
14"	20.750	23.500	13.875	65	70683014

### Features:

Configuration of the DCD pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations.

### Options:

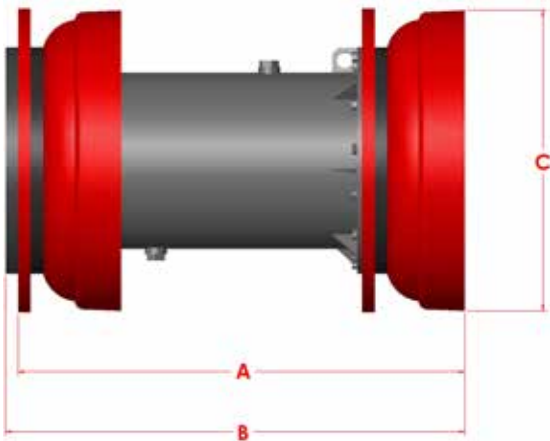
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## DCD

16-48" (406-1219mm)

The series DCD pig comes standard with a combination of two sealing discs and two series C Cups, providing a positive seal between dissimilar fluids and scraping capability. The increased surface area provided by multiple sealing components significantly improves overall cleaning and sealing capacity of the pig.



Size	A	B	C	Weight	Part #
16"	23.125	24.125	16.000	97	70683016
20"	28.875	29.875	19.875	159	70683020
22"	31.375	32.375	21.875	183	70683022
24"	34.500	35.500	23.875	234	70683024
30"	42.250	43.375	29.875	376	70683030
36"	49.875	51.250	36.000	583	70683036
42"	57.250	58.750	42.188	865	70683042
48"	62.750	64.500	47.688	1077	70683048

### Features:

Configuration of the DCD pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

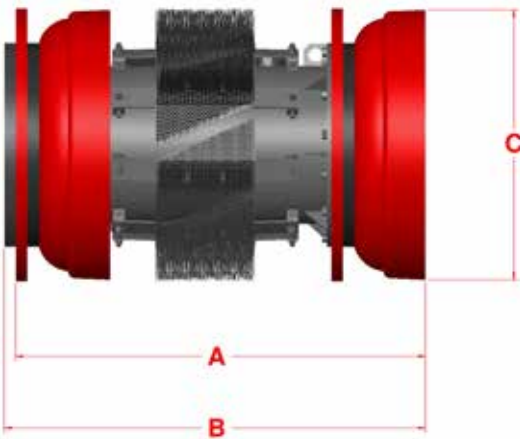
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## DCDX

16-48" (406-1219mm)

The series DCDX pig come standard with the combination of two cups, two discs and brushes which provides a positive seal between dissimilar fluids and is typically used for long distance operations and light cleaning of pipelines. The increased surface area provided by multiple sealing components significantly improves overall cleaning and sealing capacity of the pig.



Size	A	B	C	Weight	Part #
16"	24.000	25.000	16.000	132	60370016
20"	30.875	31.875	19.875	212	60370020
22"	33.375	34.375	21.875	246	60370022
24"	35.500	36.500	23.875	307	60370024
30"	42.250	43.375	29.875	459	60370030
36"	49.875	51.250	36.000	682	60370036
42"	57.875	58.750	42.250	999	60370042
48"	62.750	64.500	47.625	1207	60370048

### Features:

DCDX pigs are equipped with Apache Series C cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. A standard bumper nose prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

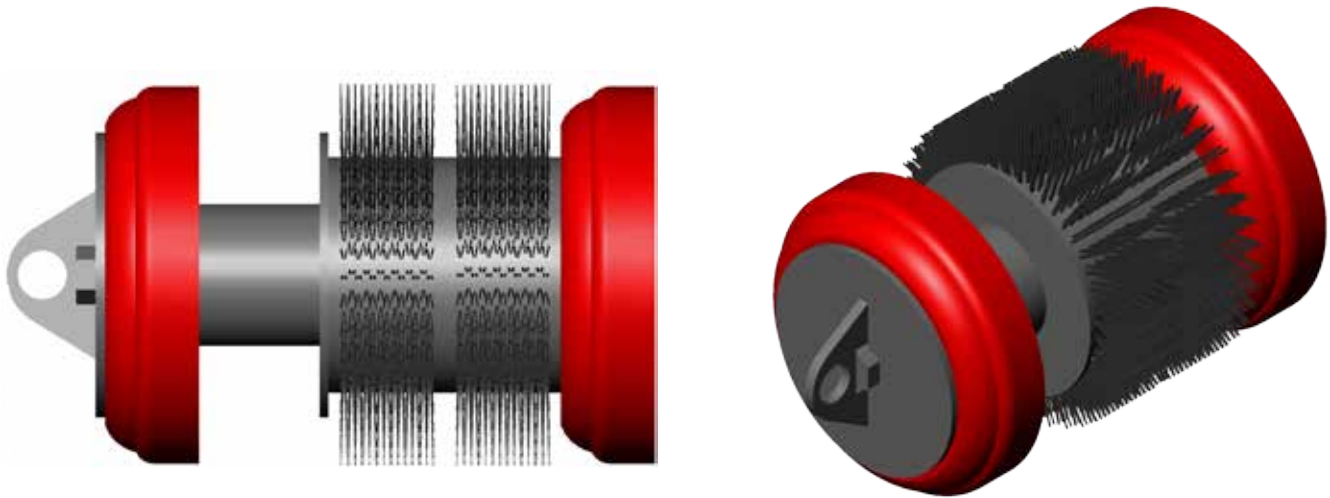
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Plow blades.

# SCRAPER CUP

## DC2R

6-14" (152-356mm)

Apache series DCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flowrates. DC2R pigs come standard with two Apache Series C cups manufactured from high quality Reliathane.



### Features:

Elements and brushes can be easily replaced to provide additional service. Similar in design to the SCR pigs, the DCRs are equipped with two fixed steel brushes to further enhance cleaning performance.

### Options:

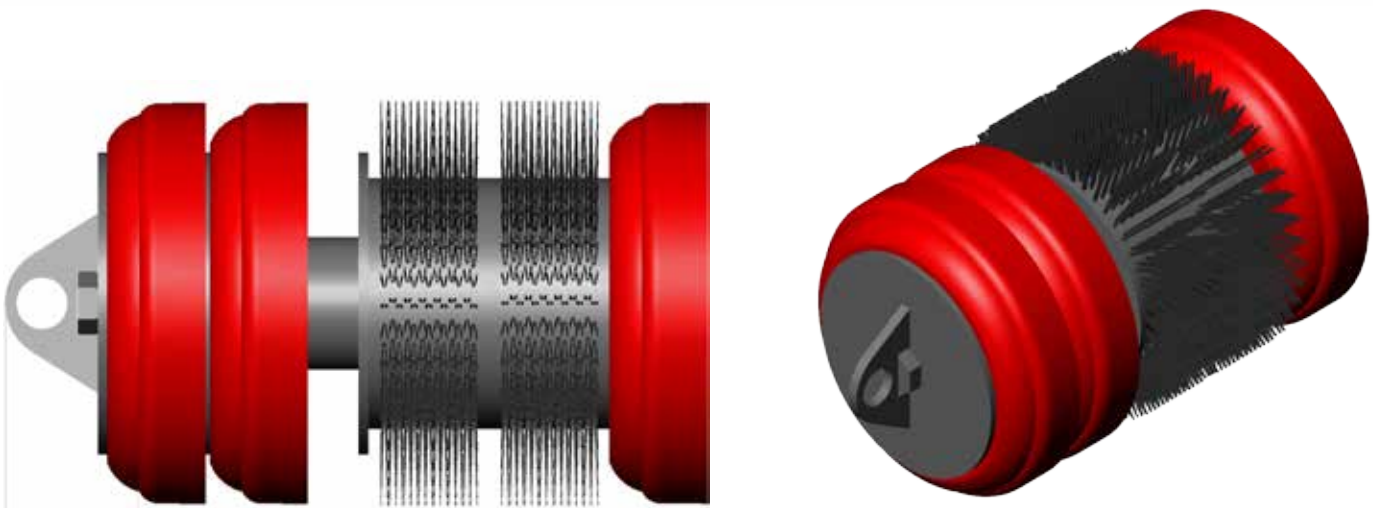
- Carbon steel, stainless steel, pencil or plastic brushes.
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Magnets available.

# SCRAPER CUP

## DC3R

6-14" (152-356mm)

Apache series DCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flowrates. DC3R pigs come standard with three Apache Series C cups manufactured from high quality Reliathane.



### Features:

Elements and brushes can be easily replaced to provide additional service. Similar in design to the SCR pigs, the DCRs are equipped with two fixed steel brushes to further enhance cleaning performance.

### Options:

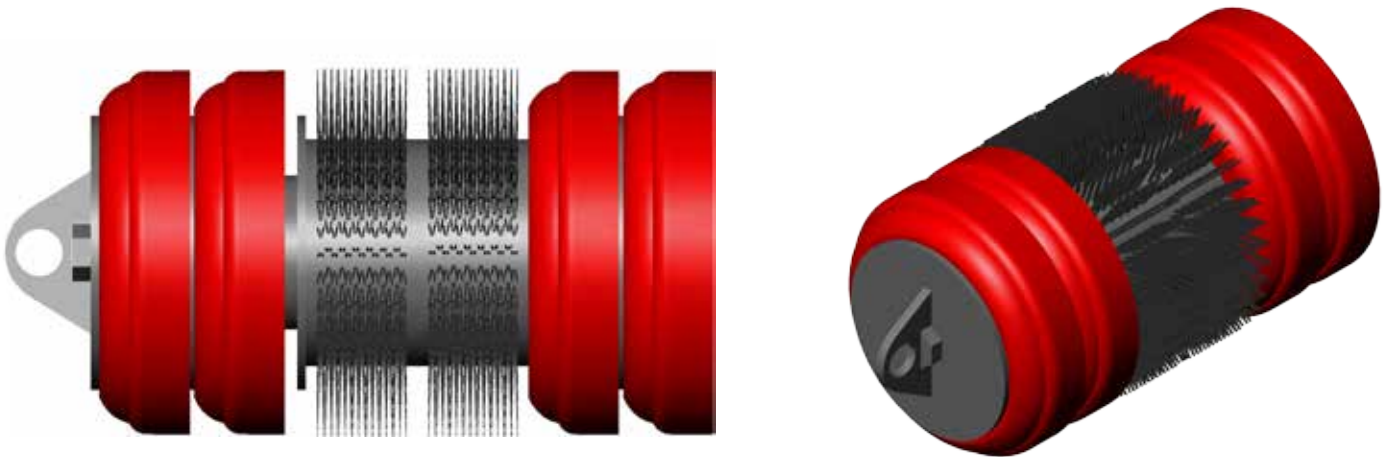
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Carbon steel, stainless steel, pencil or plastic brushes.
- Magnets are available.

# SCRAPER CUP

## DC4R

6-14" (152-356mm)

Apache series DCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flowrates. DC4R pigs come standard with four Apache Series C cups manufactured from high quality Reliathane.



### Features:

Elements and brushes can be easily replaced to provide additional service. Similar in design to the SCR pigs, the DCRs are equipped with two fixed steel brushes to further enhance cleaning performance.

### Options:

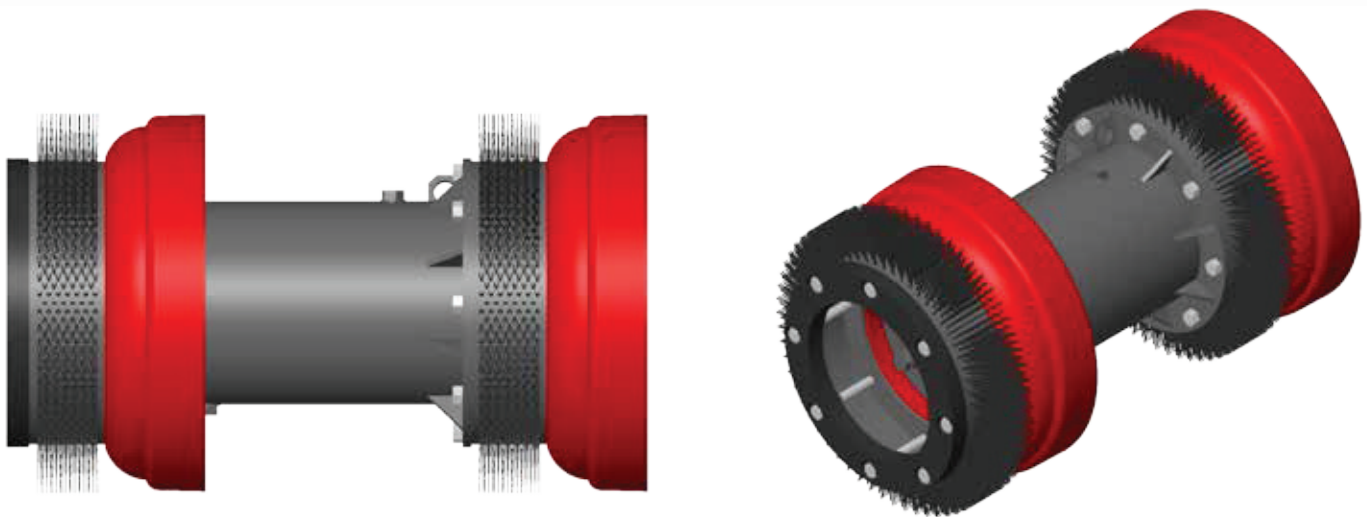
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Carbon steel, stainless steel, pencil or plastic brushes.
- Magnets are available.

# SCRAPER CUP

## DCR

16-48" (406-1219mm)

Apache series DCR cleaning pigs are used to remove debris from pipelines thereby improving valuable flow rates. DCR pigs come standard with two Apache Series C cups manufactured from high quality Reliathane.



### Features:

Elements and brushes can be easily replaced to provide additional service. Similar in design to the SCR pigs, the DCRs are equipped with two fixed steel brushes to further enhance cleaning performance.

### Options:

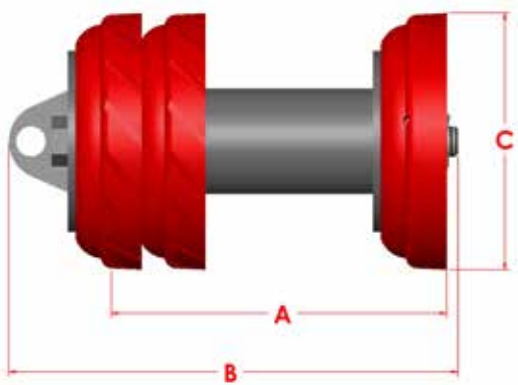
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Carbon steel, stainless steel, pencil or plastic brushes.
- Magnets are available.
- Transmitter cavities.
- Rattler assemblies.

# SCRAPER CUP

## JC

3-14" (76-356mm)

The unique design of the JC Cup provides the user all the advantages of the Apache Series C Cup with the added benefit of the jetting action. The grooves in the surface of the cup create five times the cleaning surface enabling a calibrated amount of fluid to pass along the pipe wall to jet away and suspend any wax, sand or other debris.



Size	A	B	C	Weight	Part #
3"	5.500	7.000	3.375	2	70380303
4"	6.625	8.375	4.375	4	70380304
6"	9.875	13.750	6.375	15	70380306
8"	11.375	15.250	8.500	26	70380308
10"	15.250	19.500	10.625	47	70380310
12"	18.250	22.750	12.500	64	70380312
14"	21.250	25.875	13.875	75	70380314

### Features:

Comes equipped with 2 standard JC series Cups and one rear ported Series C Cup.

### Options:

- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Magnets available.

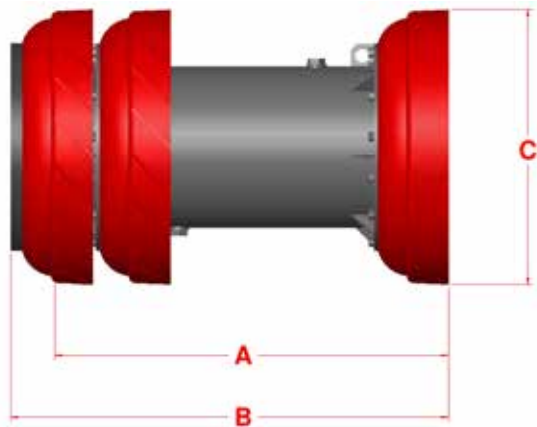


# SCRAPER CUP

## JC

16-48" (406-1219mm)

The unique design of the JC Cup provides the user all the advantages of the Apache Series C Cup with the added benefit of the jetting action. The grooves in the surface of the cup create five times the cleaning surface enabling a calibrated amount of fluid to pass along the pipe wall to jet away and suspend any wax, sand or other debris.



Size	A	B	C	Weight	Part #
16"	22.500	25.875	16.000	115	70380316
20"	28.500	32.375	19.875	187	70380320
22"	31.375	35.500	21.875	215	70380322
24"	34.375	38.250	23.875	269	70380324
30"	42.125	47.125	29.875	426	70380330
36"	49.250	54.750	36.000	644	70380336
42"	56.500	62.500	42.125	942	70380342
48"	61.625	68.125	47.625	1141	70380348

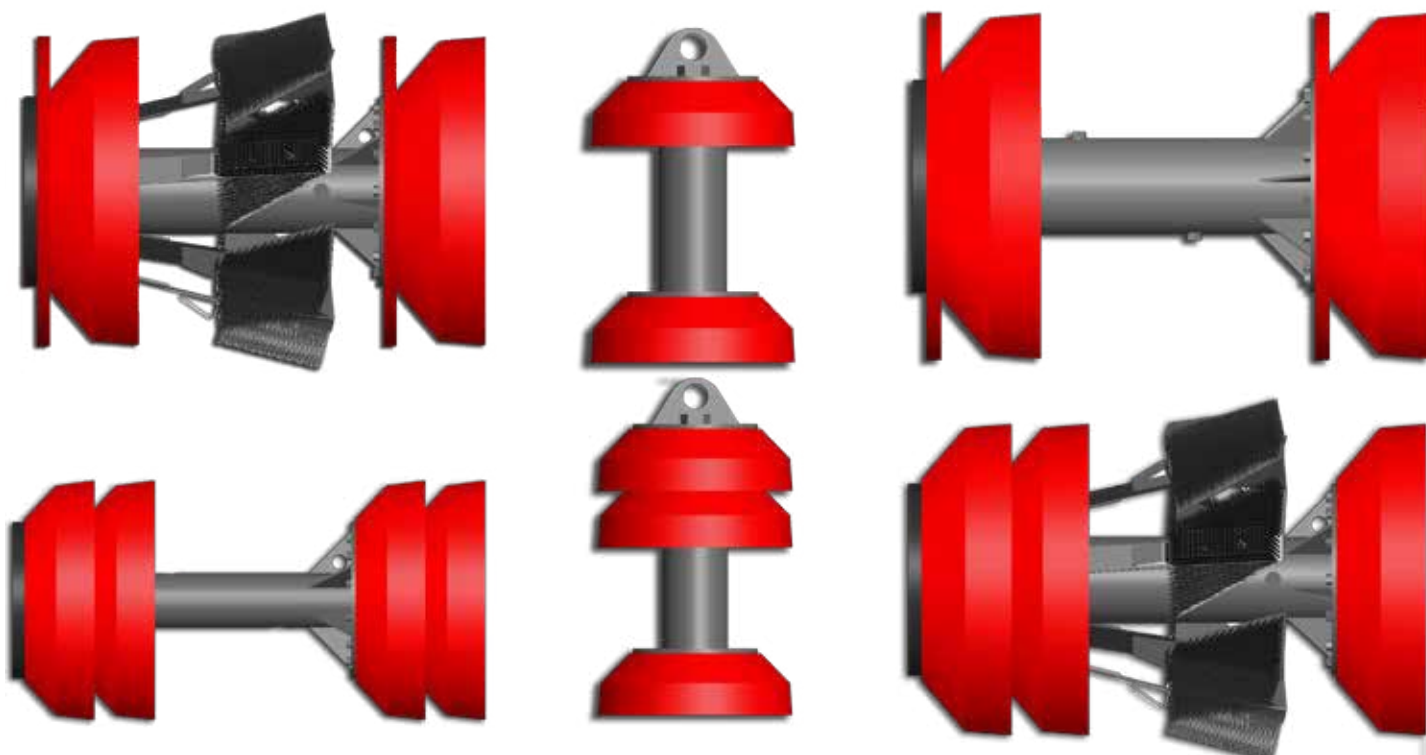
### Features:

Comes equipped with 2 standard JC series Cups and one rear ported Series C Cup. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Magnets available.

# CONICAL CUP

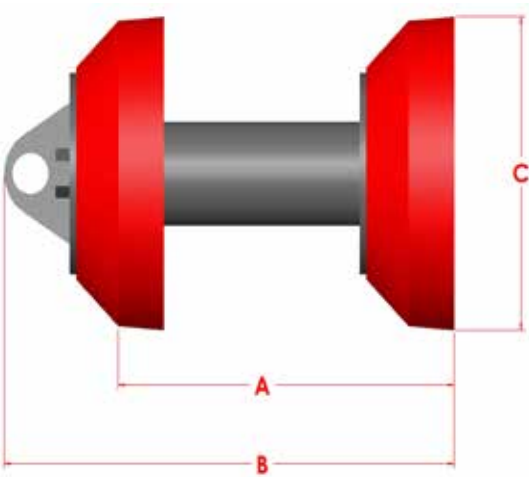


# CONICAL CUP

## UM2

3-14" (76-356mm)

The basic two cup series UM pigs are generally used for batching of dissimilar fluids. The UM series is available in three versions. The two cup design of this pig provides a positive seal between fluid interfaces while the three and four cup design is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
3"	4.625	6.625	3.375	2	70580203
4"	5.875	8.000	4.375	3	70580204
6"	8.250	11.625	6.500	10	70580206
8"	10.500	14.125	8.375	15	70580208
10"	12.750	17.125	10.500	27	70580210
12"	15.125	19.625	12.500	39	70580212
14"	17.500	22.125	14.000	48	70580214

### Features:

Configuration of the UM2 pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment.

### Options:

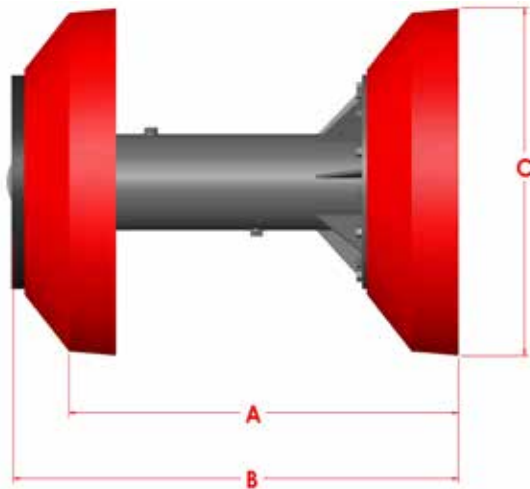
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## UM2

16-48" (406-1219mm)

The UM pig available in three versions. The basic two cup and three cup UM pigs are generally used for batching of dissimilar fluids. Cups can be changed or adapted to different configurations as the application dictates. The configuration of the four cup UM provides positive seal between dissimilar fluids and typically used for longer distance operations and for light cleaning of pipelines.



Size	A	B	C	Weight	Part #
16"	21.000	24.000	15.875	63	70580216
20"	23.750	27.375	20.000	98	70580220
22"	27.625	31.625	22.000	137	70580222
24"	29.500	33.875	24.000	161	70580224
30"	36.750	41.875	29.875	273	70580230
36"	45.750	52.250	36.000	421	70580236
42"	54.125	61.375	42.000	614	70580242
48"	60.375	68.625	48.000	754	70580248

### Features:

UM pigs are equipped with Apache Series M cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

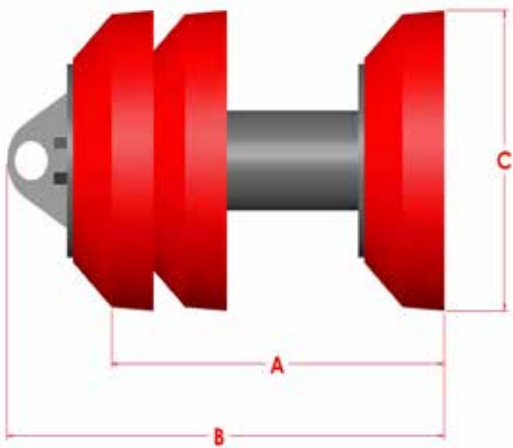
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## UM3

3-14" (76-356mm)

The basic three cup series UM pigs are designed for batching of dissimilar fluids and are typically used for longer distance applications. The UM series is available in three versions. The three cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
3"	4.875	6.750	3.375	3	70580303
4"	6.125	8.625	4.375	4	70580304
6"	9.250	12.625	6.500	13	70580306
8"	12.000	15.625	8.375	20	70580308
10"	14.875	19.250	10.500	36	70580310
12"	16.625	21.250	12.500	52	70580312
14"	19.500	24.250	14.000	64	70580314

### Features:

Configuration of the UM3 pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment.

### Options:

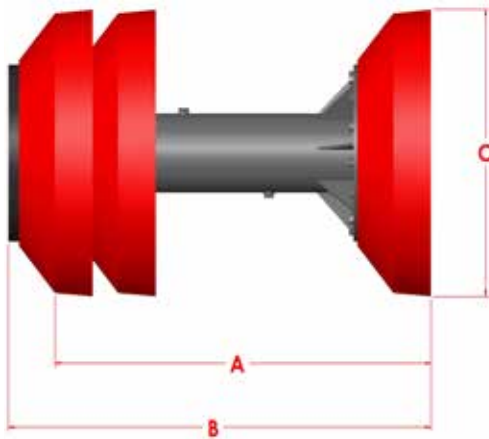
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## UM3

16-48" (406-1219mm)

The basic three cup UM pigs are designed for batching of dissimilar fluids and are typically used for longer distance applications. The UM series is available in three versions. The three cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
16"	25.000	28.000	15.875	89	70580316
20"	29.750	33.375	20.000	145	70580320
22"	34.375	38.250	22.000	197	70580322
24"	36.500	40.875	24.000	231	70580324
30"	45.500	50.625	29.875	385	70580330
36"	55.125	61.750	36.000	586	70580336
42"	66.250	73.500	42.000	860	70580342
48"	74.625	83.000	48.000	1061	70580348

### Features:

UM pigs are equipped with Apache Series M cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

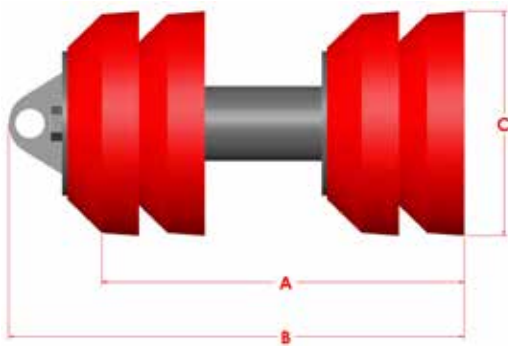
- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## UM4

3-14" (76-356mm)

The basic four cup series UM pigs are generally used for batching of dissimilar fluids and are typically used for longer distance applications. The UM series is available in three versions. The four cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
3"	6.000	8.000	3.375	3	70580403
4"	7.000	9.500	4.375	5	70580404
6"	10.250	13.625	6.500	15	70580406
8"	13.500	17.125	8.375	25	70580408
10"	17.000	21.250	10.500	45	70580410
12"	18.750	23.750	12.500	65	70580412
14"	21.625	26.375	14.000	81	70580414

### Features:

Configuration of the UM4 pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment.

### Options:

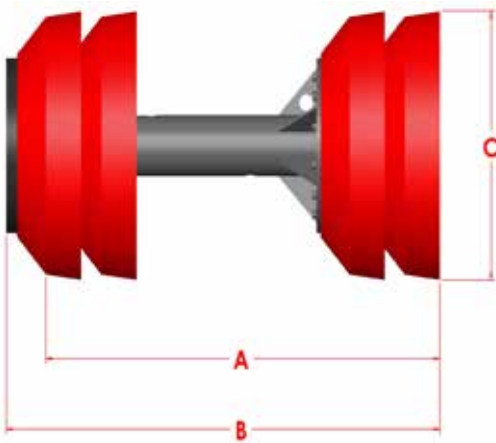
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## UM4

16-48" (406-1219mm)

The basic four cup series UM pigs are generally used for batching of dissimilar fluids and are typically used for longer distance applications. The UM series is available in three versions. The four cup design of this pig provides a positive seal between fluid interfaces and is widely used for light cleaning of pipelines or batching/separation operations.



Size	A	B	C	Weight	Part #
16"	29.000	32.125	15.875	115	70580416
20"	35.750	39.375	20.000	191	70580420
22"	41.000	44.875	22.000	257	70580422
24"	43.500	47.875	24.000	301	70580424
30"	54.250	59.375	29.875	498	70580430
36"	64.625	71.125	36.000	751	70580436
42"	78.500	85.750	42.000	1118	70580442
48"	84.875	93.250	48.000	1338	70580448

### Features:

UM pigs are equipped with Apache Series M cups manufactured from high quality Reliathane. The large wear surface of the cup promotes longer life while the product pressure keeps the cutting edge firm against the pipe wall. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

- Transmitter cavity for electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

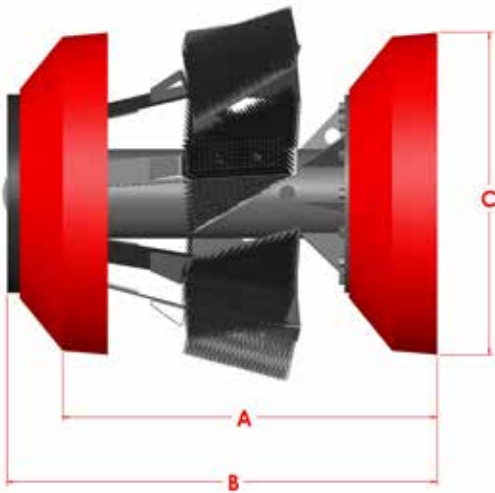


# CONICAL CUP

## UM2X

16-48" (406-1219mm)

The basic two cup UMX pigs are generally used for cleaning and scraping of pipelines. This pig is also available in three and four cup configurations. By adding cups to the configuration the UM pig provides a positive seal between dissimilar fluids and is typically used for longer distance operations and for light cleaning of pipelines.



Size	A	B	C	Weight	Part #
16"	22.000	25.000	15.875	104	60514216
20"	27.250	30.875	20.000	165	60514220
22"	29.125	31.500	22.000	212	60514222
24"	29.500	33.875	24.000	230	60514224
30"	39.750	44.875	29.875	388	60514230
36"	45.750	52.250	36.000	551	60514236
42"	54.125	61.375	42.000	763	60514242
48"	60.375	68.625	48.000	937	60514248

### Features:

UMX pigs are equipped with Apache Series M cups manufactured from high quality Reliathane. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

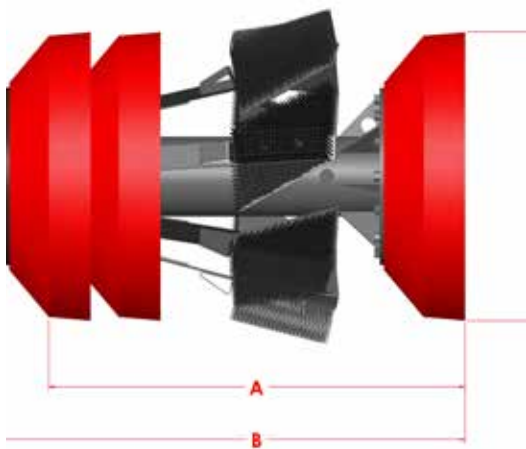
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Transmitter cavity for electronic tracking equipment.
- Magnets are available.
- Plow blades.

# CONICAL CUP

## UM3X

16-48" (406-1219mm)

The three cup UM3X pigs are generally used for cleaning and scraping of pipelines. By adding cups to the configuration the UM pig provides a positive seal between dissimilar fluids and is typically used for longer distance operations and for light cleaning of pipelines.



Size	A	B	C	Weight	Part #
16"	26.000	29.000	15.875	129	60514316
20"	33.250	36.875	20.000	212	60514320
22"	35.875	39.750	22.000	268	60514322
24"	36.500	40.875	24.000	301	60514324
30"	48.500	53.625	29.875	502	60514330
36"	55.125	61.750	36.000	716	60514336
42"	66.250	73.500	42.000	1015	60514342
48"	74.625	83.000	48.000	1244	60514348

### Features:

UMX pigs are equipped with Apache Series M cups manufactured from high quality Reliathane. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

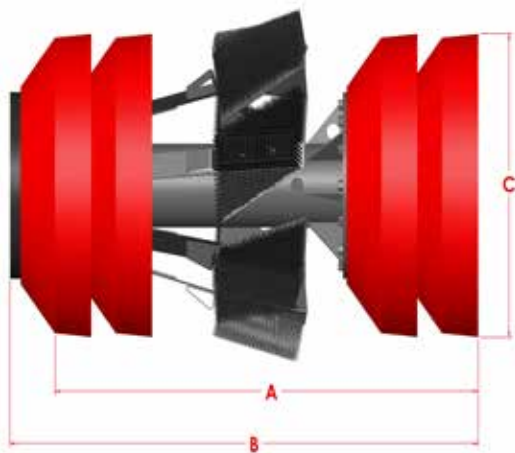
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Transmitter cavity for electronic tracking equipment.
- Magnets are available.
- Plow blades.

# CONICAL CUP

## UM4X

16-48" (406-1219mm)

The four cup UMX pigs are generally used for cleaning and scraping of pipelines. By adding cups to the configuration the UM pig provides a positive seal between dissimilar fluids and is typically used for longer distance operations and for light cleaning of pipelines.



Size	A	B	C	Weight	Part #
16"	30.000	33.125	15.875	154	60514416
20"	39.250	42.875	20.000	257	60514420
22"	42.500	46.375	22.000	324	60514422
24"	43.500	47.875	24.000	372	60514424
30"	57.250	62.375	29.875	613	60514430
36"	64.625	71.125	36.000	879	60514436
42"	78.500	85.750	42.000	1264	60514442
48"	88.875	97.250	48.000	1550	60514448

### Features:

UMX pigs are equipped with Apache Series M cups manufactured from high quality Reliathane. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

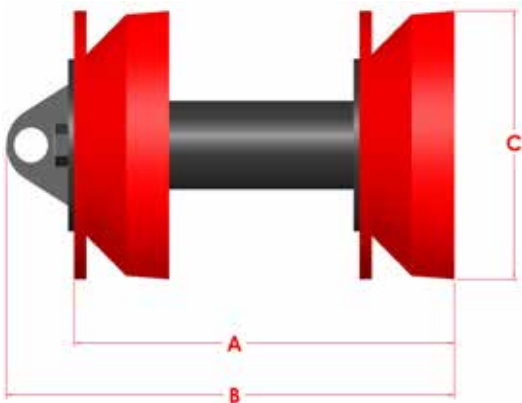
- Gauging plates of aluminum or steel, and either in slotted or standard styles.
- Transmitter cavity for electronic tracking equipment.
- Magnets are available.
- Plow blades.

# CONICAL CUP

## DMD

3-14" (76-356mm)

The series DMD pig comes standard with a combination of two sealing discs and two series M Cups, providing a positive seal between dissimilar fluids and scraping capability. The increased surface area provided by multiple sealing components significantly improves overall cleaning and sealing capacity of the pig.



Size	A	B	C	Weight	Part #
3"	5.625	7.000	6.500	2	70685003
4"	7.250	8.875	8.375	3	70685004
6"	10.125	12.375	6.500	11	70685006
8"	11.875	14.125	8.375	20	70685008
10"	15.500	18.125	10.500	31	70685010
12"	20.875	18.125	12.500	46	70685012
14"	20.500	23.250	14.000	52	70685014

### Features:

Configuration of the DMD pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations. Pipeline pigs mounted with conical cups can traverse pipeline anomalies of up to 20% without damage to inline auxiliary equipment.

### Options:

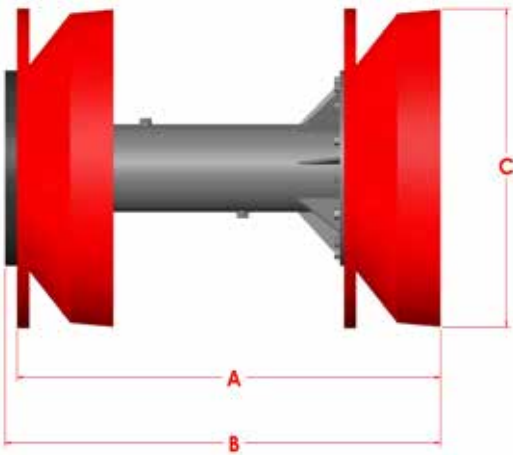
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## DMD

16-48" (406-1219mm)

The series DMD pig comes standard with a combination of two sealing discs and two series M Cups, providing a positive seal between dissimilar fluids and scraping capability. The increased surface area provided by multiple sealing components significantly improves overall cleaning and sealing capacity of the pig.



Size	A	B	C	Weight	Part #
16"	24.500	25.500	15.875	75	70685016
20"	28.000	29.000	20.000	122	70685020
22"	32.375	33.375	22.000	163	70685022
24"	34.875	35.875	24.000	196	70685024
30"	43.000	44.125	29.875	328	70685030
36"	53.625	55.000	36.000	520	70685036
42"	62.875	64.375	42.000	755	70685042
48"	70.500	72.125	48.000	962	70685048

### Features:

Configuration of the DMD pig offers a sealing arrangement suitable for separation of dissimilar fluids together with light scraping of pipeline during longer distance operations. Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

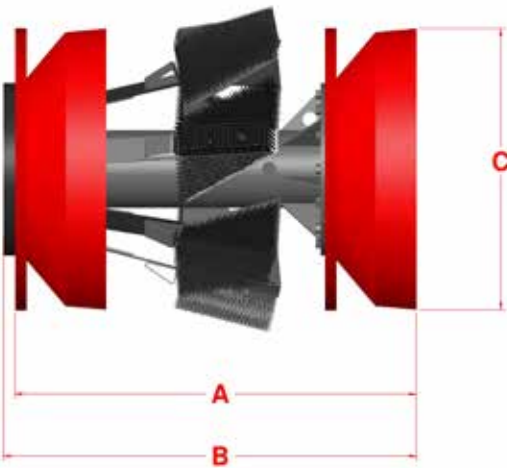
- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.

# CONICAL CUP

## DMDX

16-48" (406-1219mm)

The series DMDX pig come standard with the combination of two cups, two discs and brushes which provides a positive seal between dissimilar fluids and is typically used for long distance operations and light cleaning of pipelines. The increased surface area provided by multiple sealing components significantly improves overall cleaning and sealing capacity of the pig.



Size	A	B	C	Weight	Part #
16"	25.500	26.500	15.875	115	60690016
20"	31.500	32.500	20.000	187	60690020
22"	33.875	34.875	22.000	236	60690022
24"	34.875	35.875	24.000	264	60690024
30"	46.000	47.125	29.875	444	60690030
36"	53.625	55.000	36.000	653	60690036
42"	62.875	64.375	42.000	912	60690042
48"	70.500	72.125	48.000	1106	60690048

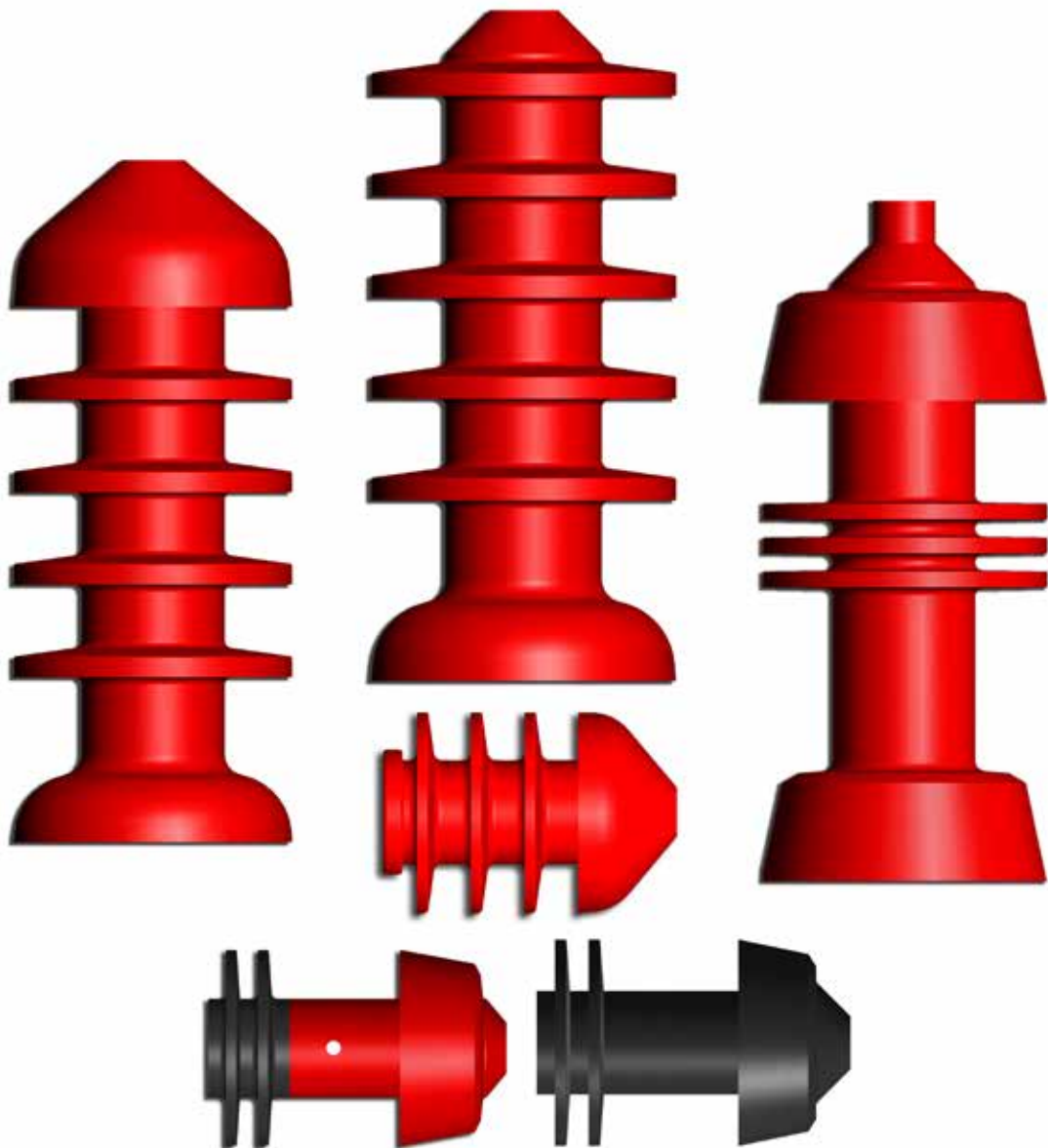
### Features:

Standard bumper noses prevent damage to both the pig and in-line auxiliary equipment. All Apache 16"-48" pigs are manufactured with by-pass ports. The ports have threaded plugs that can be removed if by-pass is required.

### Options:

- Circular flat carbon steel, stainless steel, pencil or plastic brushes.
- Transmitter housing to accommodate electronic tracking equipment.
- Aluminum or steel gauging plates are available in either slotted or standard styles.
- Magnets available.
- Plow blades.

# ALL URETHANE



1575 - 90 Ave Edmonton, AB Canada T6P 0E2

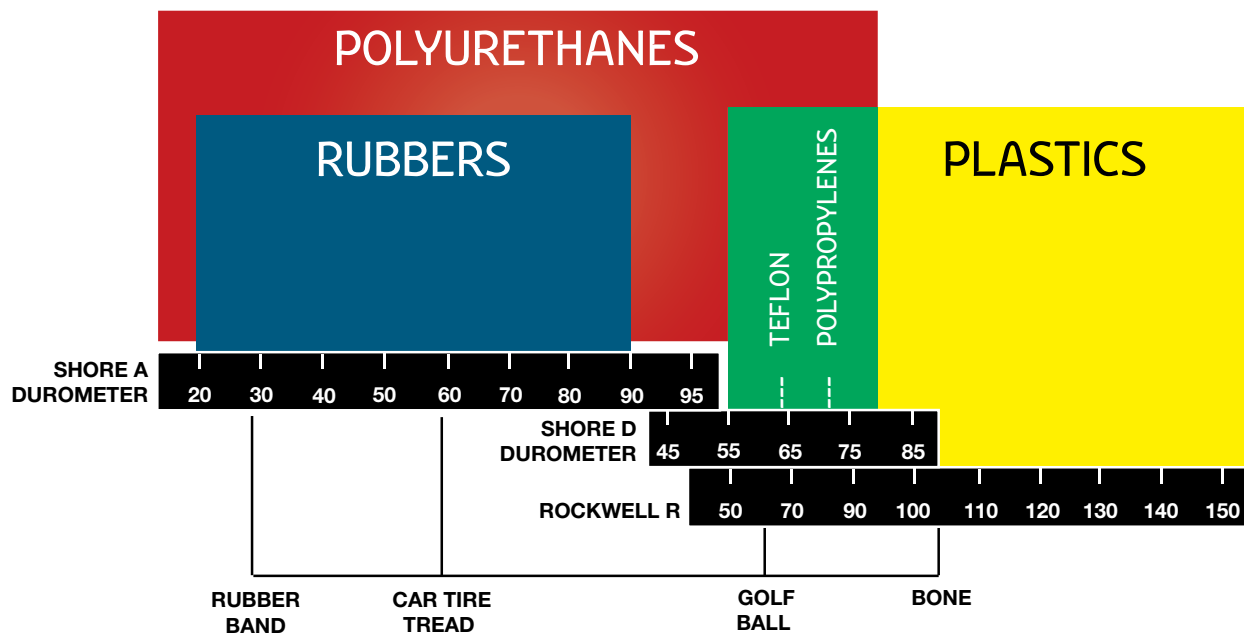
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# ALL URETHANE DUROMETER

Durometer is one of several measures of the hardness of a material. Hardness may be defined as a material's resistance to permanent indentation. In the world of polyurethane pipeline pigs, the hardness scale used is "Shore A". Our polyurethanes typically range from 60 to 90 on the Shore A scale, but we can expand that range for special applications if required. Compared to Rubber, Polyurethane is a harder and stronger product, giving it the ability to handle harsher conditions, higher load and greater impact. The below chart illustrates the unique properties of Polyurethanes:



In regards to pipeline pigs, each Durometer has its advantages and disadvantages: the description headings below also indicates our standard color for each Durometer:

- **60-63 Durometer:** Very soft and pliable; good for passing through restrictions or turning tight radius bends; can be used in non-steel pipelines (Fibreglass, HDPE or lined pipe); less effective at cleaning and scraping due to softness; shortened pig life span due to increased wear; lower resistance to extreme conditions such as high hydrogen sulfide gas or chemicals.
- **70-75 Durometer:** Somewhat firm but quite flexible; moderate cleaning and scraping effectiveness; medium wear resistance
- **80-85 Durometer:** Most common Durometer used for solid cast pigs; firm with fair flexibility; very effective at cleaning and scraping; high level of wear resistance; also moderate resistance to hydrogen sulfide gas or chemicals.
- **90-95 Durometer:** Very hard with little to no flexibility; uncommonly used in solid-cast pigs; used mostly for custom urethane applications (i.e. rollers, bumpers & spacers)

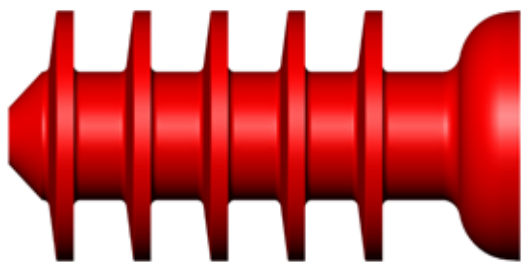
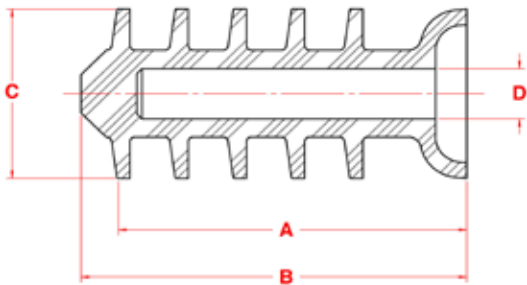


# ALL URETHANE

## PURGER I - solid cast

2-36" (51-914mm)

The Apache Purger I is a tough, all-urethane, maintenance free pipeline pig. An efficient batching, cleaning or displacement pig, the Purger I's flexible design ensures the sealing elements are centered in the pipeline thus resulting in consistent wear.



Size	A	B	C	D	Weight
2"	4.500	5.000	2.250	0.500	0.5
3"	6.750	7.500	3.375	1.000	1
4"	7.500	8.500	4.375	1.250	2
6"	11.500	13.250	6.375	1.500	7
8"	15.250	17.000	8.625	3.000	15
10"	17.500	19.750	10.625	3.875	26
12"	20.500	23.000	12.625	4.750	44
14"	23.500	26.000	14.250	5.750	56
16"	25.750	28.500	16.125	6.750	84
18"	29.000	35.000	18.250	7.750	92
20"	30.000	37.000	20.375	9.750	118
24"	35.75	39.750	24.000	12.500	208
30"	44.000	52.000	30.000	12.875	337
36"	48.500	61.000	36.000	18.625	505

### Features:

- Lightweight - no metal components.
- Flexible design allows easy navigation of bends.
- Improved sealing as hollow core allows pressure to expand the pig body.
- Multiple seals offer excellent product interface.

### Options:

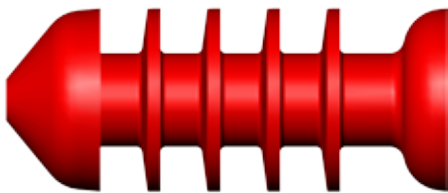
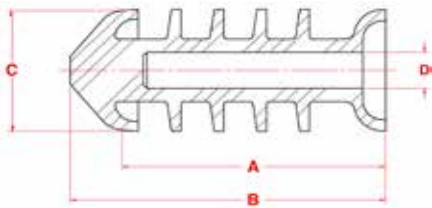
- Solid core.
- Variety of sizes and durometers.
- Flat steel wire, stainless or plastic brushes.

# ALL URETHANE

## PURGER II - solid cast

2-24" (51-610mm)

The Apache Purger II is lightweight and easy to handle. The one-piece molded design has multiple seals for use in batching, cleaning or displacement applications. The solid all-urethane construction eliminates the anxiety of possible loss of parts commonly experienced with metal pigs. Both the leading and trailing flexible cups can pass up to 20% reductions in pipe.



Size	A	B	C	D	Weight	Part #
2"	4.25	5.38	2.25	0.50	0.5	71-0285-02
3"	6.75	8.38	3.41	1.00	1.3	71-0285-03
4"	7.50	9.50	4.35	1.25	3	71-0285-04
6"	11.50	15.00	6.37	1.50	7.8	71-0285-06
8"	15.50	19.25	8.63	3.00	17.5	71-0285-08
10"	18.25	22.00	10.63	3.88	28	71-0285-10
12"	22.00	26.50	12.50	4.75	50	71-0285-12
14"	24.00	31.00	14.25	5.75	58	71-0285-14
16"	24.50	33.00	16.37	6.75	75	71-0285-16
18"	27.00	36.00	18.00	8.75	109	71-0285-18
20"	32.00	37.00	20.38	9.75	126	71-0285-20
24"	36.75	46.00	24.00	12.50	247	71-0285-24

### Features:

- Light weight – no metal components.
- Flexible design allows easy navigation of bends.
- Improved sealing as hollow core allows pressure to expand pig body.
- Excellent for nitrogen purge applications

### Options:

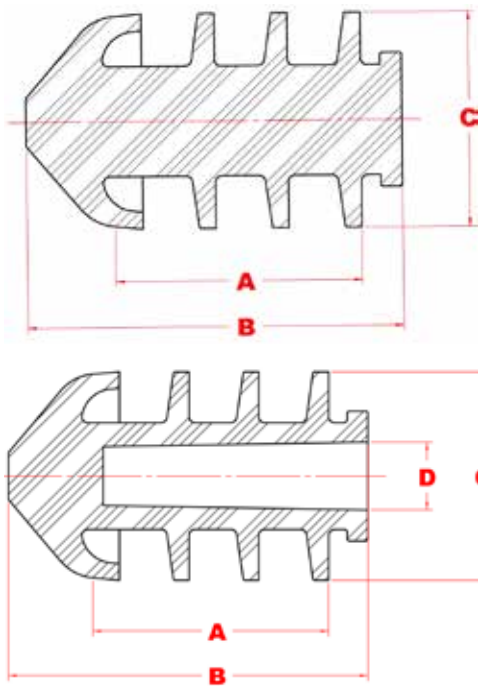
- Solid core.
- Variety of sizes and durometers.
- Flat steel wire, stainless or plastic brushes.

# ALL URETHANE

## PURGER VP - solid cast

2-12" (51-305mm)

The Purger VP is a new product in our Purger line of solid cast urethane pigs. The VP stands for Valve Pig which can be can be launched and received using most of the pigging valves on the market today. Our new design can be counted on to perform up to Apache Pipeline Products high standards to optimize the maintenance of your pipeline. The Purger VP is designed to achieve all of your cleaning and maintenance tasks. Apache Pipeline Products believes that the way to keep your asset in excellent condition and to have less integrity problems is to clean your line with Purger VP pigs. They are easy to launch and receive and once they are traversing down your pipeline you can expect our new design to do a first rate job of cleaning your pipeline.



Size	A	B	C	D	Weight	Part #
2"	2.37	4.00	2.25	-	0.5	71096202S
3"	3.78	5.77	3.38	-	1.1	71096203S
4"	3.91	7.42	4.38	-	2.4	71096204S
6"	5.77	10.25	6.38	-	6.0	71096206S
8"	8.42	14.75	8.50	2.85	12.0	71096208
10"	9.29	15.29	10.50	3.90	18.8	71096210
12"	11.21	18.47	12.50	4.52	33.0	71096212

Please note sizes 8-12" come standard as hollow core but are available in solid core.

### Features:

- Light weight, no metal components.
- Flexible design allows easy navigation of bends.
- Multiple seals offer excellent product interfcce.
- Can be utilized in Argus\*, Masterflo\* and Meridian\* Valves.
- Variety of sizes and durometers.
- Flat steel wire brushes.

\* Trademark names

# ALL URETHANE

## FP & LP - solid cast

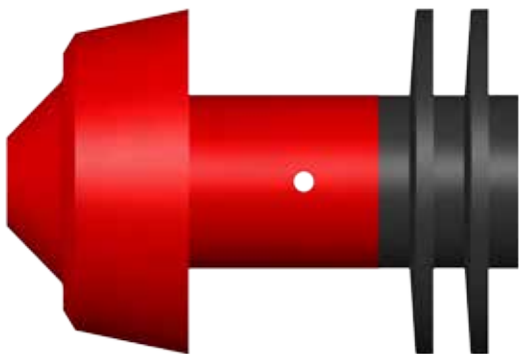
3-12" (76-305mm)

The Apache Pipeline Hurricane LP is designed to be the lead pig in a two pig train while containing the inhibitor or biocide treatment and allowing minimum by-pass. The inhibitor is contained between the lead pig and our Hurricane FP pig which allows our FP design to leave a film of inhibitor on the pipe wall. The Hurricane LP has a similar look to the filming pig but is manufactured with 72 Durometer Urethane and has a hollow center core.



### Features:

- Light weight, no metal components
- Flexible design allows easy navigation of ends
- Available in sizes from 3"-12"
- Can be launched in most common pigging valves



The unique design of our new dual durometer Hurricane FP pig has a front hollow mandrel with two port holes in the middle of the mandrel. This allows the inhibitor to travel to the front of the pig and then through the port holes. The inhibitor is then contained between the 86 durometer leading cup and two 62 durometer rear sealing discs allowing the pig to leave a film of inhibitor on the pipe wall.

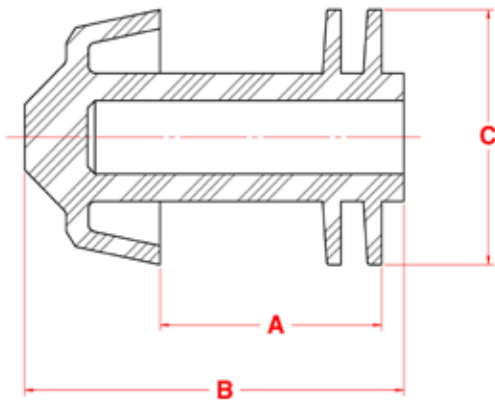
Apache Pipeline Products introduces a new addition to our world class line of pipeline products. Our new design can be counted on to perform up to Apache Pipeline Products high standards to optimize the maintenance of your pipeline.

# ALL URETHANE

## LEAD PIGS - solid cast

3-12" (76-305mm)

The Apache Pipeline Hurricane LP is designed to be the lead pig in a two pig train while containing the inhibitor or biocide treatment and allowing minimum by-pass. The inhibitor is contained between the lead pig and our Hurricane FP pig which allows our FP design to leave a film of inhibitor on the pipe wall. The Hurricane LP has a similar look to the filming pig but is manufactured with 72 Durometer Urethane and has a rear hollow cavity.



Size	A	B	C	Weight	Part #
3"	2.56	4.86	3.41	0.70	74-0572-03S
4"	3.63	6.22	4.40	1.20	74-0572-04S
6"	5.41	8.74	6.51	3.40	74-0572-06S
8"	7.59	11.77	8.54	9.30	74-0572-08S
10"	9.60	14.16	10.60	15.00	74-0572-10S
12"	10.10	15.40	12.56	25.00	74-0572-12S



### Features:

- Light weight, no metal components
- Flexible design allows easy navigation of bends
- Available in sizes from 3"-12"
- Can be launched in most common pigging valves

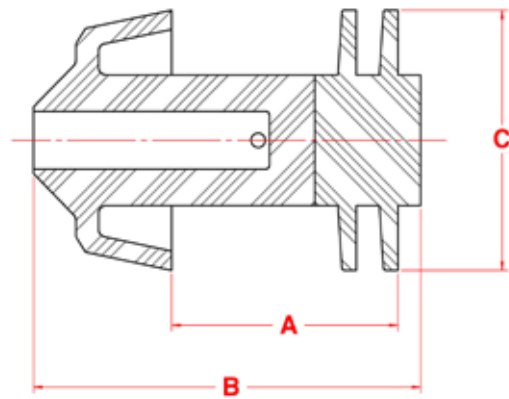
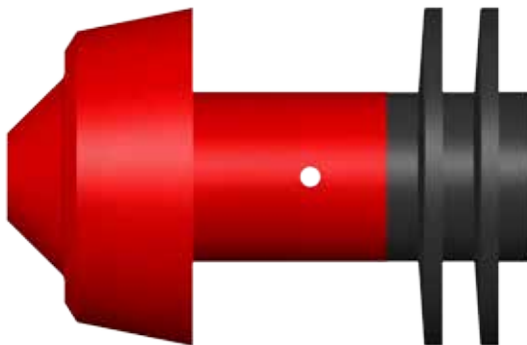
# ALL URETHANE

## FILMING PIGS - solid cast

3-12" (76-305mm)

Apache Pipeline Products introduces a new addition to our world class line of pipeline products. Our new design can be counted on to perform up to Apache Pipeline Products high standards to optimize the maintenance of your pipeline.

The unique design of our new dual durometer Hurricane FP pig has a front hollow mandrel with two port holes in the middle of the mandrel. This allows the inhibitor to travel to the front of the pig and then through the port holes. The inhibitor is then contained between the 86 durometer leading cup and two 62 durometer rear sealing discs allowing the pig to leave a film of inhibitor on the pipe wall.



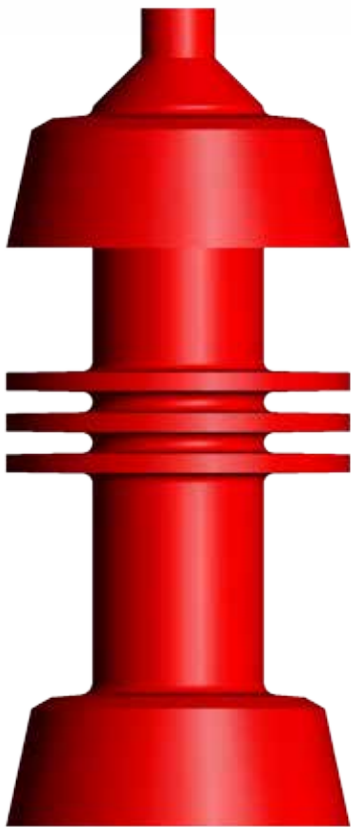
Size	A	B	C	Weight	Part #
3"	2.56	4.86	3.41	1	74-0462-03
4"	3.63	6.22	4.40	2	74-0462-04
6"	5.41	8.74	6.51	4	74-0462-06
8"	7.59	11.77	8.54	10	74-0462-08
10"	9.60	14.16	10.60	20	74-0462-10
12"	10.10	15.40	12.56	32	74-0462-12

# ALL URETHANE

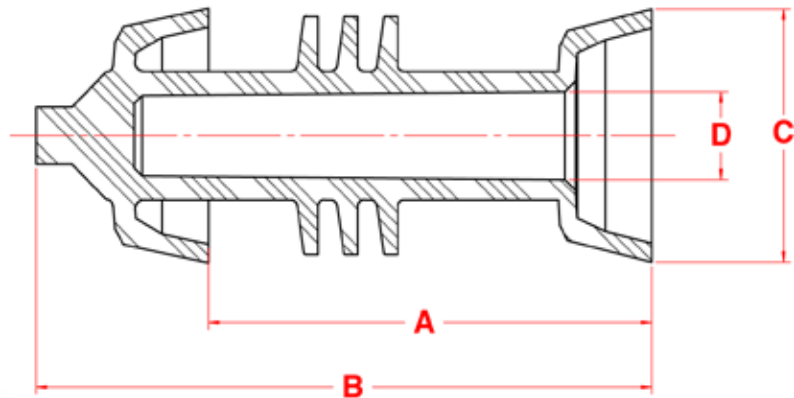
## HURRICANE I - solid cast

3-12" (76-305mm)

This one piece urethane cup/disc pig is light weight for maximum cleaning. The strategic placement of the cups and discs allows the pig to traverse tees and full opening valves.



Size	A	B	C	D	Weight	Part #
3"	5.750	7.750	3.375	1.000	1.00	74-0185-03
4"	7.375	9.625	4.500	1.500	1.70	74-0185-04
6"	10.125	13.125	6.500	2.000	5.20	74-0185-06
8"	13.125	17.500	8.625	2.875	13.10	74-0185-08
10"	16.000	20.500	10.750	3.750	21.20	74-0185-10
12"	20.500	23.000	12.625	4.625	48.10	74-0185-12



### Features:

- Solid cast urethane.
- Light weight.
- Available in different durometers.

### Options:

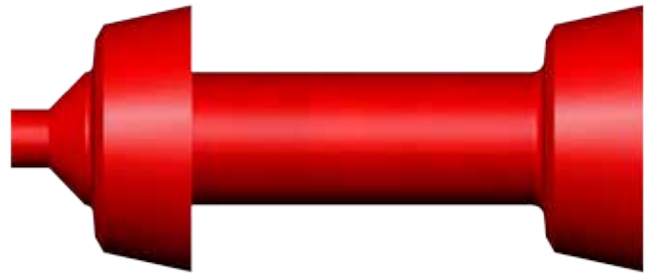
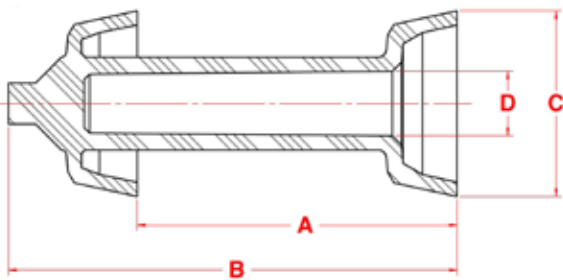
- Solid core.
- Variety of sizes.

# ALL URETHANE

## HURRICANE II - solid cast

3-12" (76-305mm)

This one piece urethane cup pig is light weight for maximum cleaning. The strategic placement of the cup allows the pig to traverse tees and full opening valves.



Size	A	B	C	D	Weight	Part #
3"	6.250	7.875	3.375	1.000	0.80	74-0285-03
4"	8.000	9.750	4.500	1.500	1.40	74-0285-04
6"	10.750	13.000	6.500	2.000	3.70	74-0285-06
8"	14.000	16.750	8.625	2.875	9.70	74-0285-08
10"	16.000	20.500	10.750	3.750	21.20	74-0285-10
12"	20.500	23.000	12.625	4.625	48.10	74-0285-12

### Features:

- Solid cast urethane.
- Light weight.
- Available in different durometers.

### Options:

- Hollow or solid core.
- Variety of sizes.

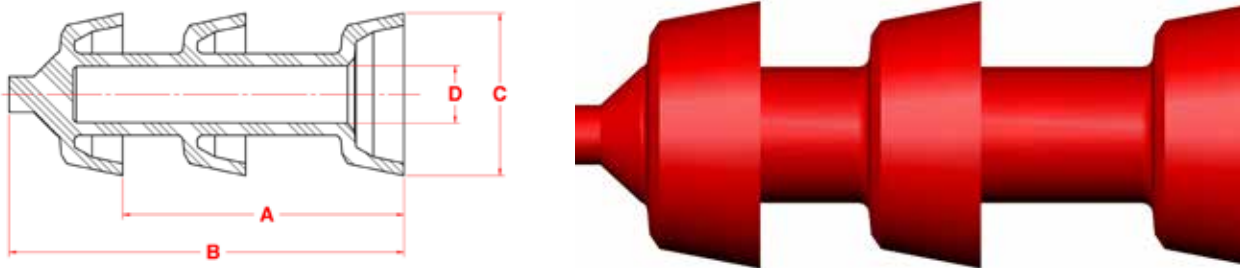


# ALL URETHANE

## HURRICANE III - solid cast

3-12" (76-305mm)

This one piece urethane cup pig is light weight for maximum cleaning. The strategic placement of the cups allows the pig to traverse tees and full opening valves.



Size	A	B	C	D	Weight	Part #
3"	5.750	7.750	3.440	1.000	1.00	74-0385-03
4"	7.125	9.625	4.500	1.500	1.80	74-0385-04
6"	9.875	12.500	6.500	2.000	4.60	74-0385-06
8"	12.375	16.250	8.630	2.875	11.50	74-0385-08
10"	15.750	20.750	10.750	3.750	19.30	74-0385-10
12"	20.500	23.000	12.625	4.625	48.10	74-0385-12

### Features:

- Solid cast urethane.
- Light weight.
- Available in different durometers.

### Options:

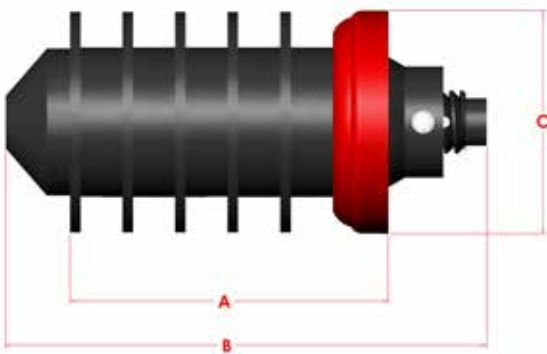
- Solid core.
- Variety of sizes.

# ALL URETHANE

## VERSI I - solid cast

6-20" (152-508mm)

The Apache Versi I is an all-urethane, durable and economical pipeline pig. Designed for versatility, it can easily be adapted for cleaning, batching, or displacement operations. The flexibility of the solid urethane shaft means even wear of the sealing elements, an inherent problem with heavy steel mandrel shafts.



Size	A	B	C	Part #
6"	9.156	14.055	6.375	73055106
8"	12.240	18.647	8.500	73055108
10"	15.146	22.879	10.625	73055110
12"	18.881	26.432	12.500	73055112
14"	20.675	27.669	13.875	73055114
16"	24.571	33.915	16.000	73055116
20"	28.969	38.313	19.875	73055120

### Features:

- No metal parts to bend, corrode or damage pipe lining.
- Remove and replace only worn parts instead of entire assembly.
- Customize configurations to suit application.
- All cups and discs are manufactured from proprietary Reliathane.
- Light-weight.

### Options:

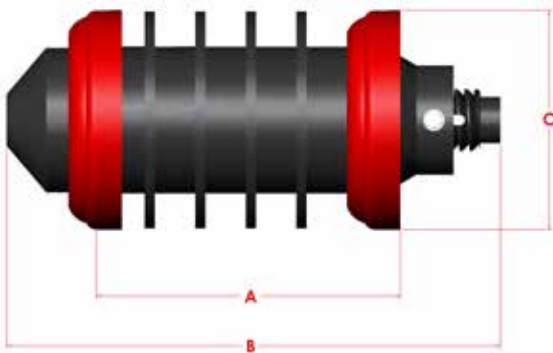
- Configure with any combination of cups and discs.
- Circular flat carbon steel, stainless, or plastic brushes.
- Available in different durometers and materials.

# ALL URETHANE

## VERSI II - solid cast

6-20" (152-508mm)

The Apache Versi II is an all-urethane, durable and economical pipeline pig. Designed for versatility, it can easily be adapted for cleaning, batching, or displacement operations. The flexibility of the solid urethane shaft means even wear of the sealing elements, an inherent problem with heavy steel mandrel shafts.



Size	A	B	C	Part #
6"	9.272	15.393	6.375	73055206
8"	12.680	19.885	8.500	73055208
10"	15.035	24.364	10.625	73055210
12"	18.641	27.669	12.500	73055212
14"	21.482	30.763	13.875	73055214
16"	24.000	33.915	16.000	73055216
20"	30.068	43.065	19.875	73055220

### Features:

- No metal parts to bend, corrode or damage pipe lining.
- Remove and replace only worn parts instead of entire assembly.
- Customize configurations to suit application.
- All cups and discs are manufactured from proprietary Reliathane.
- Light-weight.

### Options:

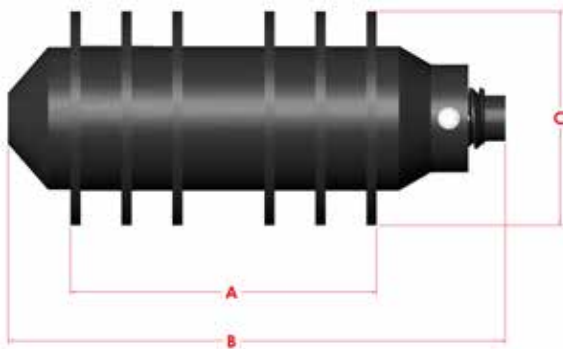
- Configure with any combination of cups and discs.
- Circular flat carbon steel, stainless, or plastic brushes.
- Available in different durometers and materials.

# ALL URETHANE

## VERSI III - solid cast

6-20" (152-508mm)

The Apache Versi III is a bi-directional, all-urethane, durable and economical pipeline pig. Designed for versatility, it can easily be adapted for cleaning, batching, or displacement operations. The flexibility of the solid urethane shaft means even wear of the sealing elements, an inherent problem with heavy steel mandrel shafts.



Size	A	B	C	Part #
6"	9.250	15.393	6.375	73055306
8"	12.000	19.885	8.375	73055308
10"	15.000	24.364	10.500	73055310
12"	17.500	27.669	12.500	73055312
14"	21.250	30.763	13.875	73055314
16"	24.000	36.111	15.875	73055316
20"	29.750	43.065	20.000	73055320

### Features:

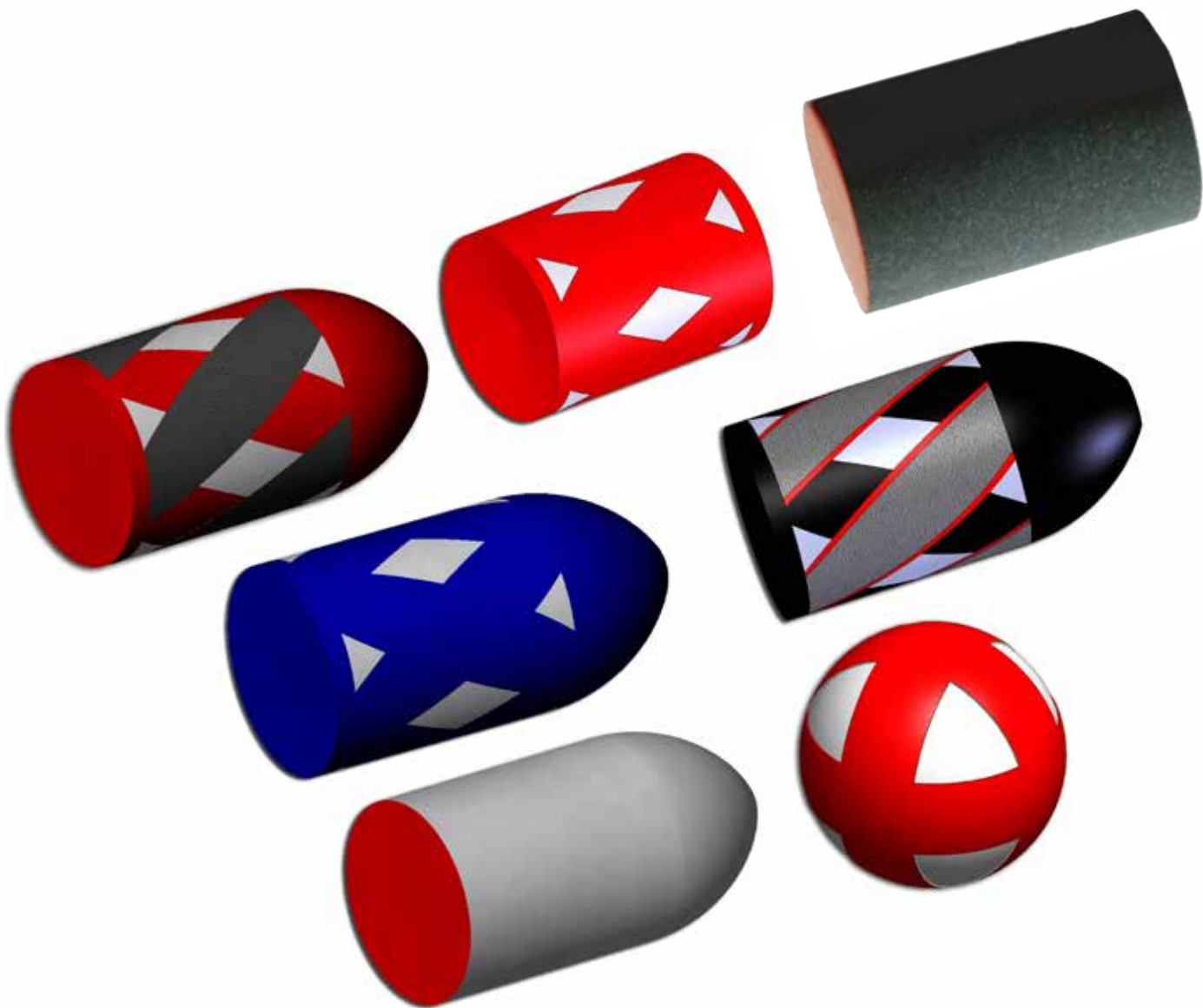
- No metal parts to bend, corrode or damage pipe lining.
- Remove and replace only worn parts instead of entire assembly.
- Customize configurations to suit application.
- All cups and discs are manufactured from proprietary Reliathane.
- Light-weight.

### Options:

- Configure with any combination of cups and discs.
- Circular flat carbon steel, stainless, or plastic brushes.
- Available in different durometers and materials.



# F O A M

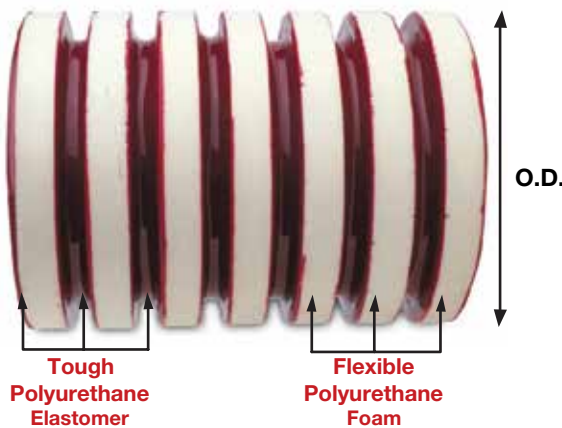


# F O A M

## ProVex FD™ Pig

2-42" (51-1067mm)

Designed & field proven as the ultimate pig for the removal of liquids in pipeline. The ProVex FD™ backbone is made of tough, flexible foam. An engineered series of molded channels provide multiple wiping discs. Coating each channel with our durable polyurethane elastomer forms a cutting edge to each disc which facilitates longer runs.



Size	O.D.
2"	2.30"
3"	3.40"
4"	4.50"
6"	6.50"
8"	8.50"
10"	10.50"
12"	12.50"
14"	14.00"
16"	16.00"
18"	18.00"
20"	20.00"
24"	24.00"
30"	30.00"
34"	34.00"
36"	36.00"
42"	42.00"

### Features:

Available in medium and high density foam, single piece construction, and bi-directional.

### Applications:

Removal of liquids in gas lines, wax removal in crude oil pipelines, de-watering after hydrostatic testing, and nitrogen purge.

### Options:

Handling Rope - Polypropylene rope for one or both ends of the pig for ease of handling.  
Transmitter Cavity - Standard and customized cavity for encasing transmitters for pig tracking.






# F O A M

Apache foam pigs and spheres are fabricated from the highest quality open cell polyurethane foam. The flexible nature of these pigs allows for the negotiation of both short radius bends and unexpected reductions in pipe bore.






The basic foam pig design can be adapted to include a variety of tough urethane coatings. The addition of aggressive wire brushes into the urethane coating provide a durable and efficient cleaner for hard pipe scale applications. Foam pigs and spheres are the most cost effective, versatile design of pipeline cleaner in the market today.

Custom designs and sizes are available. Please contact Apache for more detailed information. Standard sizes are available in whole, quarter and half inch sizing.

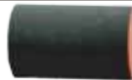

## Heavy Density (8-10 lb/ft<sup>3</sup> or 128-160kg/m<sup>3</sup>)

Style	Type	Function
	<b>HDBS</b> (Heavy Density Bare Squeegee)	Heavy Drying
	<b>HDCC</b> (Heavy Density Criss Cross)	Heavy Wiping
	<b>HDWB</b> (Heavy Density Wire Brush)	Heavy Scraping
	<b>HDSC</b> (Heavy Density Silicone Carbide)	Heavy Scraping
	<b>Porcupine</b> (Total Wire Brush)	Max Scraping





## Medium Density (5-7 lb/ft<sup>3</sup> or 80-112kg/m<sup>3</sup>)

Style	Type	Function
	<b>MDBS</b> (Medium Density Bare Squeegee)	Regular Drying
	<b>MDCC</b> (Medium Density Criss Cross)	Regular Wiping
	<b>MDWB</b> (Medium Density Wire Brush)	Regular Scraping
	<b>MDSC</b> (Medium Density Silicon Carbide)	Regular Scraping
	<b>MDPB</b> (Medium Density Plastic Brush)	Regular Scraping in Lined or Plastic Pipe

## Light Density (1-2 lb/ft<sup>3</sup> or 32kg/m<sup>3</sup>)

Style	Type	Function
	<b>MLS</b> (Medium Light Swab)	Light Drying
	<b>LDBS</b> (Light Density Bare Squeegee)	Light Drying
	<b>SLS</b> (Super Light Swab)	Light Drying

## Options

Style	Type	Function
	<b>Handling Rope</b>	Polypropylene rope for one or both ends of the pig for ease of handling.
	<b>Transmitter Cavity</b>	Standard and customized cavity for encasing transmitters for pig tracking.
	<b>Double Dish</b>	Ideal for bi-directional operations and evacuation of liquids.
	<b>Foam Balls</b>	Bi-directional, short radius bends for drying, wiping and scraping.

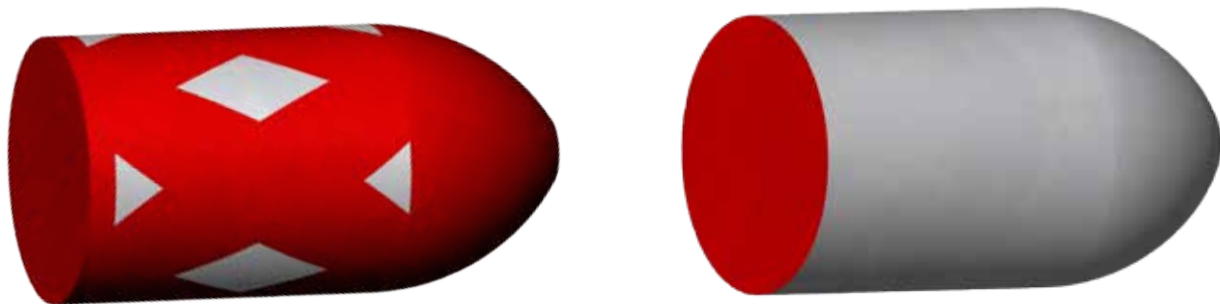


# F O A M

## FOAM PIGS

2-60" (51-1524mm)

Apache foam pigs and spheres are fabricated from the highest quality open cell polyurethane foam. The flexible nature of these pigs allows for the negotiation of both short radius bends and unexpected reductions in pipe bore.



### Features:

The basic foam pig design can be adapted to include a variety of tough urethane coatings. The addition of aggressive wire brushes into the urethane coating provide a durable and efficient cleaner for hard pipe scale applications. Foam pigs and spheres are the most cost effective, versatile design of pipeline cleaner in the market today.

### Options:

Handling Rope - Polypropylene rope for one or both ends of the pig for ease of handling.  
Transmitter Cavity - Standard and customized cavity for encasing transmitters for pig tracking.

Double Dish - Ideal for bi-directional operations and evacuation of liquids.

Double Nose - Bi-directional operations, multi-diameter pipeline.

Foam Balls - Bi-directional, short radius bends for drying, wiping and scraping.

Custom designs and sizes are available. Please contact Apache for more detailed information.

# F O A M



Size	A	B	C
2"	2.50	4.00	2.00
2-1/4"	2.88	4.50	2.25
2-1/2"	3.25	4.88	2.50
3"	3.75	5.75	3.00
3-1/4"	4.17	6.25	3.25
3-1/2"	4.50	6.75	3.50
4"	5.00	7.75	4.00
4-1/4"	5.31	8.31	4.25
4-1/2"	5.63	8.94	4.50
6"	7.63	11.75	6.00
6-1/4"	7.81	12.19	6.25
6-1/2"	8.56	12.88	6.50
8"	10.17	15.44	8.00
8-1/4"	10.31	16.13	8.25
8-1/2"	8.94	16.38	8.50
10"	12.50	19.50	10.00
10-1/4"	12.81	20.00	10.25
10-1/2"	13.19	20.50	10.50
12"	15.00	23.38	12.00

Size	A	B	C
12-1/4"	15.31	23.88	12.25
12-1/2"	15.75	24.38	12.50
14"	17.50	24.50	14.00
16"	20.00	28.00	16.00
18"	22.50	31.50	18.00
20"	25.00	35.00	20.00
22"	27.50	38.50	22.00
24"	30.00	42.00	24.00
26"	39.00	45.00	26.00
28"	42.00	48.50	28.00
30"	45.00	52.00	30.00
32"	48.00	55.50	32.00
34"	51.00	59.00	34.00
36"	54.00	62.50	36.00
38"	57.00	66.00	38.00
40"	60.00	69.50	40.00
42"	63.00	73.00	42.00
48"	72.00	83.50	48.00
60"	90.00	104.50	60.00

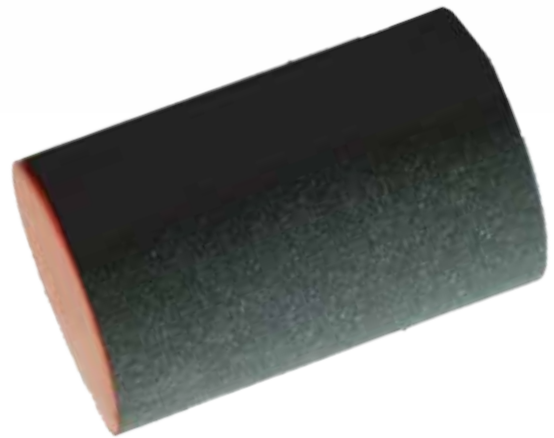
# F O A M

## LIGHT DENSITY

1-2 lb/ft<sup>3</sup> (16-32 kg/m<sup>3</sup>)



**SLS**  
Super Light Swab  
Light Drying



**MLS**  
Medium Light Swab  
Meduim Drying



**LDBS**  
Light Density  
Bare Squeegee  
Light Drying

# F O A M

## MEDIUM DENSITY

5-7 lb/ft<sup>3</sup> (80-112 kg/m<sup>3</sup>)



**MDBS**  
Medium Density  
Bare Squeegee  
Regular Drying



**MDCC**  
Medium Density  
Criss Cross  
Regular Wiping



**MDPB**  
Medium Density  
Plastic Brush  
Lined or Plastic Pipe  
Regular Scraping



**MDSC**  
Medium Density  
Silicone Carbide  
Regular Scraping



**MDWB**  
Medium Density  
Wire Brush  
Regular Scraping

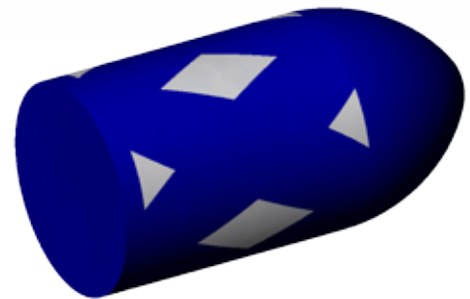
# F O A M

## HEAVY DENSITY

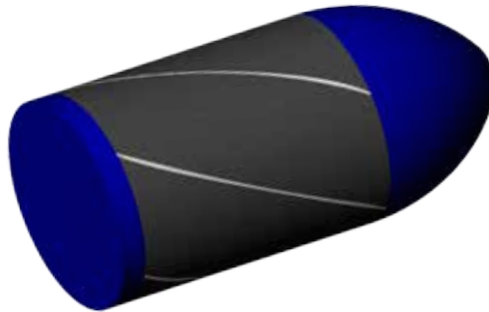
8-10 lb/ft<sup>3</sup> (128-160 kg/m<sup>3</sup>)



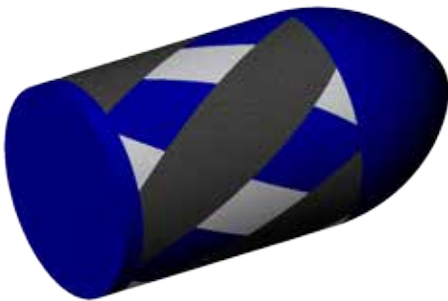
**HDBS**  
Heavy Density  
Bare Squeegee  
Heavy Drying



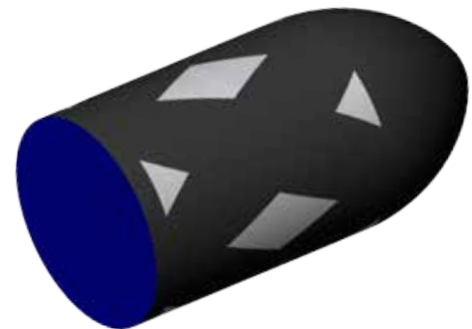
**HDCC**  
Heavy Density  
Criss Cross  
Heavy Wiping



**Porcupine**  
Heavy Density  
Total Wire Brush  
Maximum Scraping



**HDWB**  
Heavy Density  
Wire Brush  
Heavy Scraping

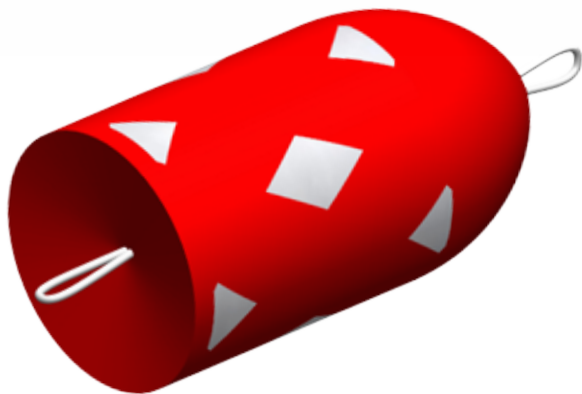


**HDSC**  
Heavy Density  
Silicone Carbide  
Heavy Scraping

# F O A M

## CUSTOM

2-10 lb/ft<sup>3</sup> (16-160 kg/m<sup>3</sup>)



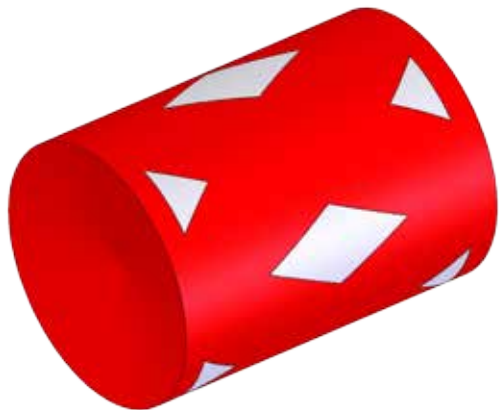
### Handling Rope

Polypropylene rope for one or both ends of the pig for ease of handling.



### Transmitter Cavity

Standard and customized cavity for encasing transmitters for pig tracking.



### Double Dish

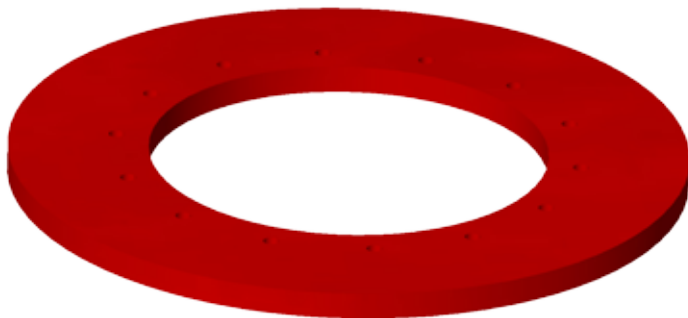
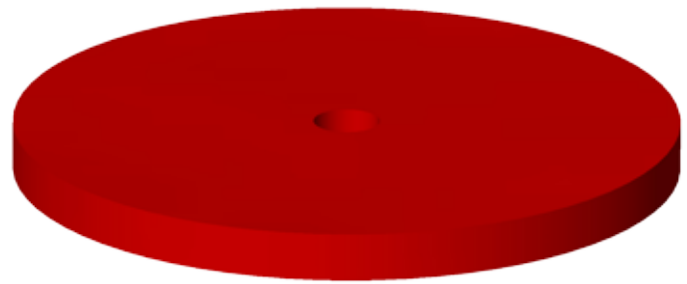
Ideal for bi-directional operations and evacuation of liquids.



### Foam Balls

Bi-directional, short radius bends for drying, wiping and scraping.

# PIG PARTS



# S E R I E S C

## SCRAPER CUP

3-14" (51-356mm)



Size	O.D	I.D	Weight	Part # 86A
2"	2.125	0.50	0.10	91-3015-02
3"	3.375	0.50	0.20	91-3015-03
4"	4.375	0.50	0.40	91-3015-04
6"	6.375	1.00	1.10	91-3015-06
8"	8.500	1.00	1.90	91-3015-08
10"	10.625	1.00	3.70	91-3015-10
12"	12.750	1.00	6.10	91-3015-12
14"	13.875	1.00	8.00	91-3015-14

The unique design of the Series C Cup provides both the cleaning advantages of a scraper cup and the flexibility of a conical cup. The wear surface is three times larger than any other scraper, which promotes longer cup life, while the pressure of the product keeps the cutting edge firmly against the pipe wall to provide an optimum seal. The flex area between the shank and the cleaning surface allows the Apache cup to traverse 15% reductions in pipe bore caused by buckling or flattening of the pipeline.



# S E R I E S C

## SCRAPER CUP

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Weight	Part # 86A
16"	16.000	8.750	11.000	8	0.50	8.90	91-3015-16
18"	17.875	10.875	12.750	8	0.50	11.40	91-3015-18
20"	19.875	10.875	13.500	12	0.50	17.60	91-3015-20
22"	21.875	10.875	13.500	12	0.50	25.10	91-3015-22
24"	23.875	14.125	16.500	14	0.50	29.90	91-3015-24
26"	25.875	14.125	16.500	14	0.50	37.00	91-3015-26
28"	27.875	16.125	19.500	16	0.50	42.70	91-3015-28
30"	29.875	16.125	19.500	16	0.50	50.20	91-3015-30
32"	32.000	20.125	24.000	24	0.50	52.30	91-3015-32
34"	34.000	20.125	23.000	18	0.50	68.50	91-3015-34
36"	36.000	22.125	25.000	22	0.50	74.00	91-3015-36
42"	42.125	24.125	30.000	24	0.50	117.00	91-3015-42
48"	47.750	32.125	36.000	24	0.50	156.00	91-3015-48

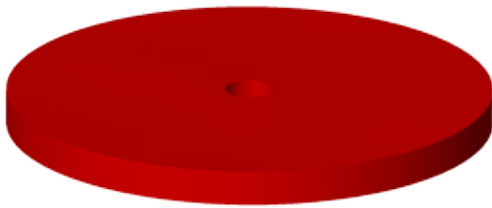
The unique design of the Series C Cup provides both the cleaning advantages of a scraper cup and the flexibility of a conical cup. The wear surface is three times larger than any other scraper, which promotes longer cup life, while the pressure of the product keeps the cutting edge firmly against the pipe wall to provide an optimum seal. The flex area between the shank and the cleaning surface allows the Apache cup to traverse 15% reductions in pipe bore caused by buckling or flattening of the pipeline.



# S E R I E S C

## SEALER DISCS

3-14" (76-356mm)



Size	O.D	I.D	Thick	Weight	Part #
3"	3.375	0.500	0.125	0.10	91-3210-03
4"	4.375	0.500	0.250	0.20	91-3210-04
6"	6.375	1.000	0.375	0.50	91-3210-06
8"	8.375	1.000	0.500	1.20	91-3210-08
10"	10.500	1.000	0.500	1.90	91-3210-10
12"	12.500	1.000	0.625	3.30	91-3210-12
14"	13.875	1.000	0.625	4.10	91-3210-14

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series C cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.

All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S C

## SEALER DISCS

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Thick	Weight	Part #
16"	15.875	8.750	11.000	8	0.50	0.750	4.50	91-3210-16
18"	17.875	10.875	12.750	8	0.50	0.750	5.20	91-3210-18
20"	20.000	10.875	13.500	12	0.50	0.875	8.40	91-3210-20
22"	22.000	10.875	13.500	12	0.50	0.875	10.90	91-3210-22
24"	24.125	14.125	16.500	14	0.50	1.000	13.00	91-3210-24
26"	26.125	14.125	16.500	14	0.50	1.000	16.50	91-3210-26
28"	28.250	16.125	19.500	16	0.50	1.125	20.60	91-3210-28
30"	30.250	16.125	19.500	16	0.50	1.125	25.10	91-3210-30
32"	32.375	20.125	24.000	24	0.50	1.250	27.40	91-3210-32
34"	34.375	20.125	23.000	18	0.50	1.250	33.10	91-3210-34
36"	36.500	22.125	25.000	22	0.50	1.375	39.50	91-3210-36
38"	38.500	22.125	27.000	24	0.50	1.375	46.50	91-3210-38
40"	40.625	22.125	26.000	24	0.50	1.375	54.40	91-3210-40
42"	42.625	24.125	30.000	24	0.50	1.500	63.10	91-3210-42
48"	48.875	32.125	36.000	24	0.50	1.750	80.90	91-3210-48

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series C cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.

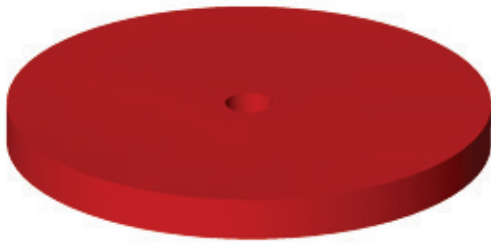


All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S C

## GUIDE DISCS

4-14" (102-356mm)



Size	O.D	I.D	Thick	Weight	Part #
4"	4.000	0.500	0.375	0.20	91-3220-04
6"	6.000	1.000	0.625	0.70	91-3220-06
8"	8.000	1.000	0.750	1.60	91-3220-08
10"	10.000	1.000	0.750	2.50	91-3220-10
12"	12.000	1.000	0.875	4.20	91-3220-12
14"	13.250	1.000	0.875	5.20	91-3220-14

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series C cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.

All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S C

## GUIDE DISCS

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Thick	Weight	Part #
16"	15.250	8.750	11.000	8	0.50	1.125	6.00	91-3220-16
18"	17.250	10.875	12.750	8	0.50	1.125	6.90	91-3220-18
20"	19.250	10.875	13.500	12	0.50	1.250	10.80	91-3220-20
22"	21.250	10.875	13.500	12	0.50	1.250	14.20	91-3220-22
24"	23.250	14.125	16.500	14	0.50	1.250	14.50	91-3220-24
26"	25.500	14.125	16.500	14	0.50	1.250	18.70	91-3220-26
28"	27.250	16.125	19.500	16	0.50	1.500	24.70	91-3220-28
30"	29.250	16.125	19.500	16	0.50	1.500	30.50	91-3220-30
32"	31.250	20.125	24.000	24	0.50	1.625	31.70	91-3220-32
34"	33.250	20.125	23.000	18	0.50	1.625	38.80	91-3220-34
36"	35.250	22.125	25.000	22	0.50	1.750	44.90	91-3220-36
38"	37.250	22.125	27.000	24	0.50	1.750	53.60	91-3220-38
40"	39.250	22.125	26.000	24	0.50	1.750	62.70	91-3220-40
42"	41.250	24.250	30.000	24	0.50	2.000	76.30	91-3220-42
48"	47.250	32.125	36.000	24	0.50	2.375	97.20	91-3220-48

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series C cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.



All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S J C

## JETTED CUP

2-14" (51-356mm)



Size	O.D	I.D	Weight	Part #
2"	2.125	0.50	0.10	91-3998-02
3"	3.375	0.50	0.20	91-3998-03
4"	4.375	0.50	0.40	91-3998-04
6"	6.375	1.00	1.10	91-3998-06
8"	8.500	1.00	1.90	91-3998-08
10"	10.625	1.00	3.70	91-3998-10
12"	12.750	1.00	6.10	91-3998-12
14"	13.875	1.00	8.00	91-3998-14

The turbulence created, jets away debris from in front of the cleaning pig. The grooves in the surface of the cup allow a calibrated amount of fluid to pass along the wall of the pipe to jet away wax, sand and other debris.

The Jetted Cup works well in oil, gas and products pipelines. It eliminates the large accumulations of wax left in scraper traps after the arrival of cleaning pigs. The grooves on the lip of the cup provide increased scraping and cutting action of standard cups. The design of the jetting grooves causes the pig to rotate as it travels ensuring even wear of the cup, increasing cup life and reducing operating costs.

# S E R I E S J C

## JETTED CUP

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Weight	Part #
16"	16.000	8.750	11.000	8	0.50	8.90	91-3998-16
18"	17.875	10.875	12.750	8	0.50	11.40	91-3998-18
20"	19.875	10.875	13.500	12	0.50	17.60	91-3998-20
24"	23.875	14.125	16.500	14	0.50	29.90	91-3998-24
26"	25.875	14.125	16.500	14	0.50	37.00	91-3998-26
30"	29.875	16.125	19.500	16	0.50	50.20	91-3998-30
34"	34.000	20.125	23.000	18	0.50	68.50	91-3998-34
36"	36.000	22.125	25.000	22	0.50	74.00	91-3998-36
42"	42.125	24.125	30.000	24	0.50	117.00	91-3998-42
48"	47.750	32.125	36.000	24	0.50	156.00	91-3998-48

The turbulence created, jets away debris from in front of the cleaning pig. The grooves in the surface of the cup allow a calibrated amount of fluid to pass along the wall of the pipe to jet away wax, sand and other debris.



# S E R I E S M

## CONICAL CUP

3-14" (76-356mm)



Size	O.D	I.D	Weight	Part #
3"	3.375	0.500	0.500	91-5010-03
4"	4.375	0.500	0.500	91-5010-04
6"	6.500	1.000	1.000	91-5010-06
8"	8.375	1.000	1.700	91-5010-08
10"	10.500	1.000	3.000	91-5010-10
12"	12.500	1.000	4.100	91-5010-12
14"	14.000	1.000	6.300	91-5010-14

The wide sealing surface provides long cup life, while the flexible design gives a continuous seal in the pipeline. Pipeline cleaners mounted with this cup can negotiate pipe bore reductions of up to 20%. All Series M Cups are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.



# S E R I E S M

## CONICAL CUP

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Weight	Part #
16"	15.875	6.750	8.500	8	0.44	8.20	91-5010-16
18"	18.000	8.375	10.500	12	0.44	12.00	91-5010-18
20"	20.000	8.375	10.500	12	0.44	13.50	91-5010-20
22"	22.000	10.375	13.000	14	0.50	21.00	91-5010-22
24"	24.000	10.375	13.000	14	0.50	27.00	91-5010-24
26"	26.000	12.375	15.000	16	0.50	32.20	91-5010-26
28"	28.000	12.375	15.000	16	0.50	42.00	91-5010-28
30"	29.875	15.375	18.000	18	0.50	50.00	91-5010-30
32"	32.000	15.375	18.000	18	0.50	59.00	91-5010-32
34"	34.000	17.375	20.000	22	0.50	79.00	91-5010-34
36"	36.000	17.375	20.000	22	0.50	90.00	91-5010-36
38"	38.000	20.375	24.000	24	0.50	105.00	91-5010-38
40"	40.000	20.375	24.000	24	0.50	148.00	91-5010-40
42"	42.000	20.375	24.000	24	0.50	213.00	91-5010-42
48"	48.000	24.375	28.000	28	0.50	246.00	91-5010-48

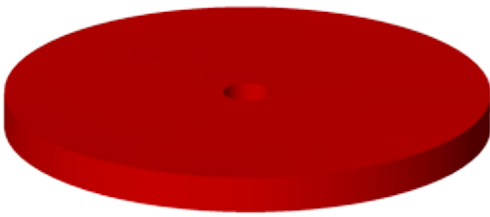
The wide sealing surface provides long cup life, while the flexible design gives a continuous seal in the pipeline. Pipeline cleaners mounted with this cup can negotiate pipe bore reductions of up to 20%. All Series M Cups are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.



# S E R I E S M

## SEALER DISCS

3-14" (76-356mm)



Size	O.D	I.D	Thick	Weight	Part #
3"	3.375	0.500	0.125	0.10	91-5210-03
4"	4.375	0.500	0.250	0.20	91-5210-04
6"	6.375	1.000	0.375	0.50	91-5210-06
8"	8.375	1.000	0.500	1.20	91-5210-08
10"	10.500	1.000	0.500	1.90	91-5210-10
12"	12.500	1.000	0.625	3.30	91-5210-12
14"	13.875	1.000	0.625	4.10	91-5210-14

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series M cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.

All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

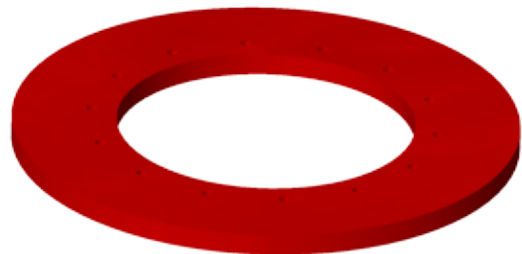
# S E R I E S M

## SEALER DISCS

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Thick	Weight	Part #
16"	15.875	6.750	8.500	8	0.44	0.750	5.10	91-5210-16
18"	17.875	8.375	10.500	12	0.44	0.750	6.40	91-5210-18
20"	20.000	8.375	10.500	12	0.44	0.875	9.70	91-5210-20
22"	22.000	10.375	13.000	14	0.50	0.875	11.10	91-5210-22
24"	24.125	10.375	13.000	14	0.50	1.000	16.10	91-5210-24
26"	26.125	12.375	15.000	16	0.50	1.000	17.90	91-5210-26
28"	28.250	12.375	15.000	16	0.50	1.125	24.50	91-5210-28
30"	30.250	15.375	18.000	18	0.50	1.125	25.80	91-5210-30
32"	32.375	15.375	18.000	18	0.50	1.250	34.40	91-5210-32
34"	34.375	17.375	20.000	22	0.50	1.250	37.20	91-5210-34
36"	36.500	17.375	20.000	22	0.50	1.375	43.60	91-5210-36
38"	38.500	20.875	24.000	24	0.50	1.375	44.30	91-5210-38
40"	40.625	20.875	24.000	24	0.50	1.375	51.00	91-5210-40
42"	42.625	20.875	24.000	24	0.50	1.500	64.30	91-5210-42
48"	48.875	24.875	28.000	28	0.50	1.750	90.10	91-5210-48

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series M cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.

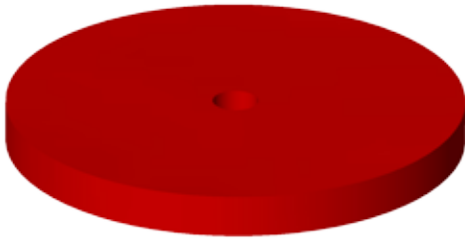


All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S M

## GUIDE DISCS

3-14" (76-356mm)



Size	O.D	I.D	Thick	Weight	Part #
3"	3.000	0.50	0.375	0.12	91-5220-03
4"	4.000	0.500	0.375	0.20	91-5220-04
6"	6.000	1.000	0.625	0.70	91-5220-06
8"	8.000	1.000	0.750	1.60	91-5220-08
10"	10.000	1.000	0.750	2.50	91-5220-10
12"	12.000	1.000	0.875	4.20	91-5220-12
14"	13.250	1.000	0.875	5.20	91-5220-14

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series M cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.

All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S M

## GUIDE DISCS

16-48" (406-1219mm)

Size	O.D	I.D	Bolt Circle	# Holes	Hole Dia	Thick	Weight	Part #
16"	15.250	6.750	8.500	8	0.44	1.125	7.20	91-5220-16
18"	17.250	8.375	10.500	12	0.44	1.125	8.70	91-5220-18
20"	19.250	8.375	10.500	12	0.44	1.250	12.80	91-5220-20
22"	21.250	10.375	13.000	14	0.50	1.250	14.70	91-5220-22
24"	23.250	10.375	13.000	14	0.50	1.250	18.50	91-5220-24
26"	25.250	12.375	15.000	16	0.50	1.250	20.60	91-5220-26
28"	27.250	12.375	15.000	16	0.50	1.500	30.10	91-5220-28
30"	29.250	15.375	18.000	18	0.50	1.500	31.70	91-5220-30
32"	31.250	15.375	18.000	18	0.50	1.625	41.00	91-5220-32
34"	33.250	17.375	20.000	22	0.50	1.625	44.50	91-5220-34
36"	35.250	17.375	20.000	22	0.50	1.750	56.10	91-5220-36
38"	37.250	20.875	24.000	24	0.50	1.750	56.70	91-5220-38
40"	39.250	20.875	24.000	24	0.50	1.750	65.90	91-5220-40
42"	41.250	20.875	24.000	24	0.50	2.000	86.30	91-5220-42
48"	47.250	24.875	28.000	28	0.50	2.375	130.70	91-5220-48

Apache discs can be used in both bi-directional and uni-directional applications, or in conjunction with Series M cups as sealing or guide discs. The dimensions, durometer or composition of the discs can be varied to meet any special requirements.



All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# S E R I E S M D K

## SEALER DISC

20-48" (508-1219mm)

Size	O.D	I.D	Thick	# Holes	Hole Dia	Bolt Circle	Weight	Part #
20"	20.00	10.87	0.75	12	0.812	13.50	7.9	91-7200-20
24"	24.00	14.18	1.00	12	0.812	16.93	14.2	91-7200-24
30"	30.00	18.15	1.00	12	0.875	22.00	21.6	91-7200-30
36"	36.00	22.25	1.25	12	0.875	25.27	37.9	91-7200-36
42"	43.12	26.25	1.25	12	0.937	29.05	55.3	91-7200-42
48"	49.00	28.25	1.25	12	0.937	31.89	71.2	91-7200-48

## GUIDE DISC

20-48" (508-1219mm)

Size	O.D	I.D	Thick	# Holes	Hole Dia	Bolt Circle	Weight	Part #
20"	19.25	10.87	1.25	12	0.812	13.50	8.8	91-7205-20
24"	23.25	14.18	1.50	12	0.812	16.93	19.3	91-7205-24
30"	29.30	18.15	1.50	12	0.875	22.00	30.0	91-7205-30
36"	35.00	22.25	1.75	12	0.875	25.27	48.3	91-7205-36
42"	40.75	26.25	2.25	12	0.937	29.05	82.7	91-7205-42
48"	46.63	28.25	2.37	12	0.937	31.89	123.4	91-7205-48

MDK-ED pigs are equipped with durable guide discs, one at each end. The guide discs provide a positive centering affect which allow the four sealing discs in the center to effectively seal during the displacement period.

All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# SERIES UT

## SEALER DISC

6-14" (152-356mm)

Size	O.D	I.D	Thick	# Holes	Hole Dia	Bolt Circle	Weight	Part #
6"	6.375	2.50	0.375	4	0.438	3.25	0.5	91-4210-06
8"	8.375	3.00	0.500	4	0.500	4.00	1.1	91-4210-08
10"	10.500	3.625	0.500	4	0.563	5.00	1.7	91-4210-10
12"	12.500	4.625	0.625	4	0.563	6.00	3.1	91-4210-12
14"	13.875	4.625	0.625	4	0.563	6.00	3.6	91-4210-14

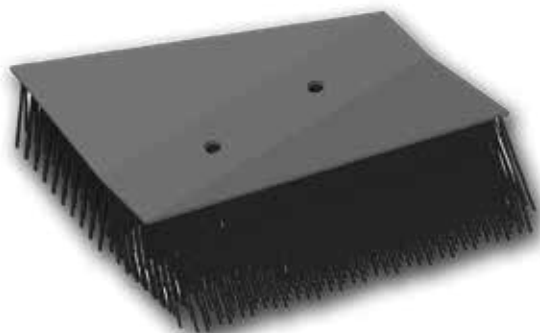
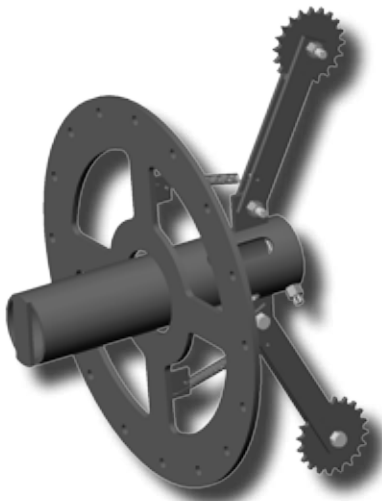
## GUIDE DISC

6-14" (152-356mm)

Size	O.D	I.D	Thick	# Holes	Hole Dia	Bolt Circle	Weight	Part #
6"	6.000	2.50	0.625	4	0.438	3.25	0.6	91-4220-06
8"	8.000	3.00	0.750	4	0.500	4.00	1.3	91-4220-08
10"	10.000	3.625	0.750	4	0.563	5.00	2.4	91-4220-10
12"	12.000	4.625	0.875	4	0.563	6.00	4.0	91-4220-12
14"	13.750	4.625	0.875	4	0.563	6.00	5.0	91-4220-14

Apache discs can be used in both bi-directional and uni-directional applications. The dimensions, durometer or composition of the discs can be varied to meet any special requirements. All Apache discs are manufactured from high quality polyurethane and are available with a variety of wear resistant additives. Apache has also developed a proprietary chemically-resistant urethane suited specifically for severe environments such as hydrogen sulphide gas.

# PIG OPTIONS





# BRUSHES

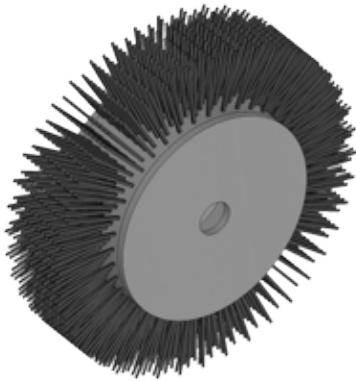
**Model BB Flat**



**Model BB Pencil**



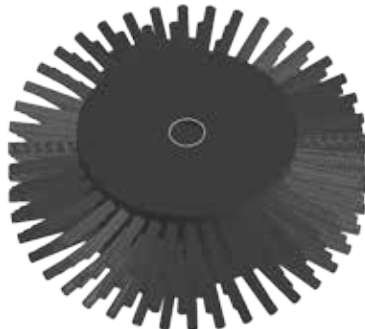
**Model RB 6-14" Flat**



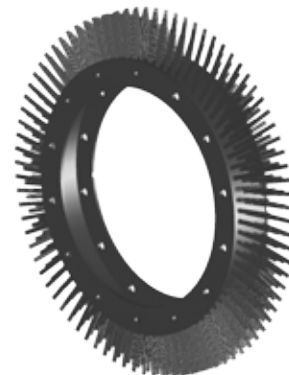
**Model RB 16-48" Flat**



**Model HDPE 3-16" Pencil**

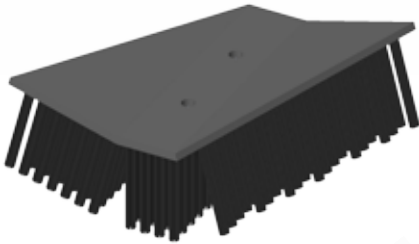


**Model RB 16-48" Pencil**

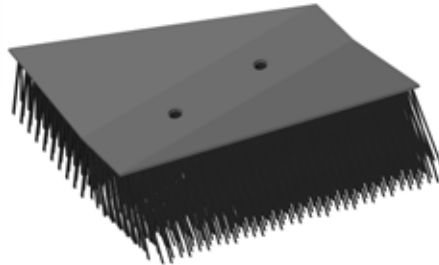


# BRUSHES

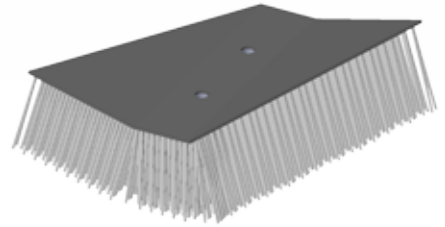
**Model XB Pencil**



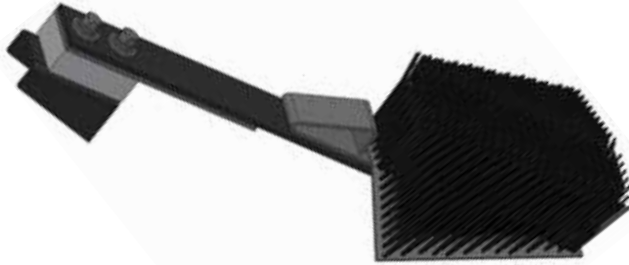
**Model XB Flat**



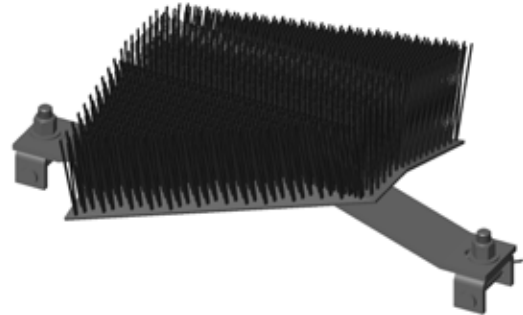
**Model XB Nylon**



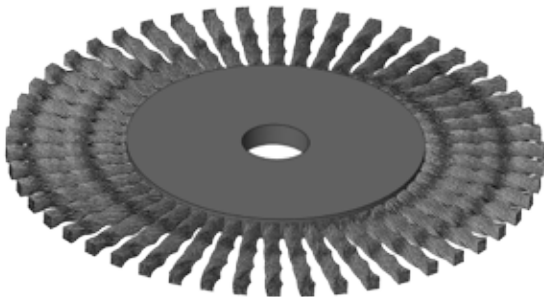
**Model XB  
Cantilever Assembly**



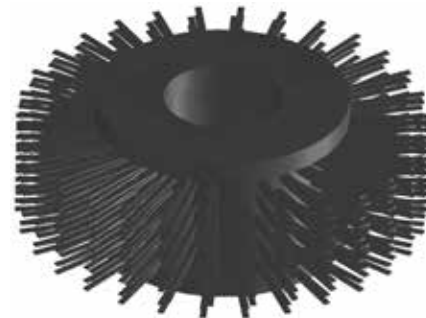
**Model XB  
Fixed Assembly**



**Model TB Twisted Brush**



**Model VB Flat**



# BRUSHES

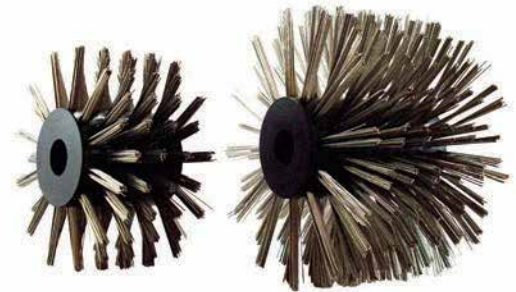
## HDPE-PB

3-16" (76-406mm)

The HDPE-PB features a high density polyethylene core with 304 stainless steel pencil brushes.

Stock Sizing Available in 3" to 16"

Size	I.D. (in)	I.D. (mm)	Weight (lbs)	Brush O.D.
3"	0.56	14.29	0.30	3.75
4"	0.56	14.29	0.70	4.50
6"	1.06	26.99	1.00	6.50
8"	1.06	26.99	2.50	8.50
10"	1.06	26.99	5.10	10.62
12"	1.06	26.99	9.40	12.62
14"	1.06	26.99	10.80	14.00
16"	8.75	222.25	15.40	16.00



18" - 48" Sizes Available on Request

Custom I.D. and Bolt Patterns Available on Request

# BRUSHES

## INTEGRITY XB

20-48" (508-1219mm)

The Integrity XB has been developed specifically for the North American market and is made to fit existing brush cleaning pigs. The brush has been designed to clean better and last longer than existing products and features a new unique construction method with Pencil Brush Technology. Each brush features stiff 22 gauge memory wire bristles at the front for heavy scraping and longer, flexible 25 gauge bristles at the rear for deep cleaning. High grade tinned hardened & tempered steel memory wire provide excellent cleaning performance & corrosion resistance.

### Amazing Cleaning Performance

- New Pencil Brush Technology
- 360 degree Rebound Memory Wire
- Increased Wire Bristle Density
- Over 7,000 Hardened and Tempered Steel Wires Per Brush



### Corrosion Resistance

- All Parts have Corrosive Resistance
- Powder Coated Back Plate
- Tin Coated Individual Steel Wires
- Non Corrosive High Grade Urethane Base

### New & Unique Product

- Different to Anything Else in the Market
- Options to Customize
- Fully Developed and Tested
- Looks Fantastic



# BRUSHES

## INTEGRITY XB

20-48" (508-1219mm)

### Compression Testing

This was done using the JJ Lloyd LRX102175 Universal Testing Machine, Calibration Certificate No. 20090472 under the control of "Nexygen" software.

The specimens were compressed to a limit of 20mm deflection on a single bristle and the full brush face. This was done due to initial tests showing the specimen bristles passing 45° at this deflection. All bristles were loaded at approximately 25% of the bristle.

The chart below displays an attempt to cause failure in the brush using 70% of the bristle to load and deflecting to a maximum 30mm.

#### Compress to Limit, Brief Report

Date	Time	User	Sample	Sample Information	Batch Reference	Sample Reference
20/07/2011	10:40:55	u00238	TRUE	Sample Information	Small Tri	Thin whole destruct
20/07/2011	10:46:26	u00238	TRUE	Sample Information	Small Tri	Thin whole destruct

Speed	Datum Speed	Load at Limit	Deflection on Limit	Work to Limit	Maximum Load
50.000	1.0000 mm/...	516.83 N	20.000 mm	5.2160 J	517.45 N
50.000	1.0000 mm/...	4798.9 N	30.000 mm	20.494 J	4825.7 N

Deflection at Maximum Load	Work to Maximum Load	Stiffness
20.014 mm	5.2234 J	43124.0
30.016 mm	20.570 J	182470

#### Urethane Block to Hold Bristles

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ASTM Data</b>			
Density (73°F)	1180	kg/m <sup>3</sup>	ASTM D 792
<b>Mechanical Properties</b>			
<b>ISO Data</b>			
Abrasion resistance	40	mm <sup>3</sup>	ISO 4649
<b>ASTM Data</b>			
Tensile Strength	35	MPa	ASTM D 638
Elongation at Break	420	%	ASTM D 638
Flexural Modulus	230	MPa	ASTM D 790
Modulus at 100% Elongation	20	MPa	ASTM D 412
Modulus at 300% Elongation	28	MPa	ASTM D 412
Shore D hardness	62	-	ASTM D 2240
Tear Strength	155	kN/m	ASTM D 624
Izod Impact notched (Low Temperature)	0.125	kJ/m	ASTM D 256
Temperature	-20	°C	ASTM D 256

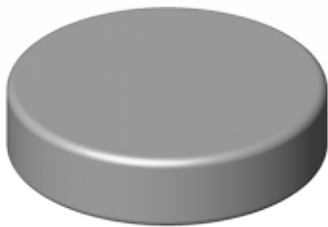
#### EPOXY Resin Adhesive

##### Typical Performance Characteristics

Color Mixed:	Purple
Cured density (SG):	1.16
Temperature:	-50°C to +65°C depending on conditions of use
Water:	Not intended for constant immersion
Oil & Petrol:	Good Resistance
Chemicals:	Good Resistance
Sandability:	Sandable when set. Please wear dust mask.
Paintability:	Good, but confirm by test. Fine sanding helps.

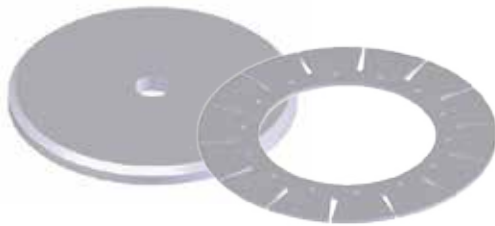
# PIG OPTIONS

## Magnets



## Gauging Plates

*Aluminum or Steel,  
slotted or standard*



## Bumper Noses



## Rattler



## Transmitter Housing

*Custom design for any  
transmitter*



## Polyurethane Blade

*Available for most  
Apache cleaning pigs*



# PIG OPTIONS

## GAUGE PLATES/SIZING RINGS

2-48" (51-1219mm)

All Gauge Plates are cut out of 6061 T6 Aluminum and come standard with the below dimensions.

Gauge Plates are manufactured to Customer Supplied O.D +/- 2mm Tolerance

Size	I.D. (in)	Weight (lbs)
2"	9/16	0.10
3"	9/16	0.20
4"	9/16	0.40
6"	1 1/16	0.80
8"	1 1/16	1.30
10"	1 1/16	2.00
12"	1 1/16	2.80
14"	1 1/16	4.00



2" - 14" Standard Plates

- 1/4" Thick
- Bevelled Edge
- Non-Slotted

Size	I.D. (in)	Bolt Circle Diameter (in)	# Holes
16"	8 3/4	11.00	8
18"	10 7/8	12.75	8
20"	10 7/8	13.50	12
22"	10 7/8	13.50	12
24"	14 1/8	16.50	14
26"	14 1/8	16.50	14
28"	16 1/8	19.50	16
30"	16 1/8	19.50	16
32"	20 1/8	24.00	24
34"	20 1/8	23.00	18
36"	20 1/8	25.00	22
38"	22 1/8	27.00	24
40"	22 1/8	26.00	24
42"	24 1/8	30.00	24
48"	32 1/8	36.00	24



16" - 48" Standard Plates

- 3/8" Thick
- Non-Bevelled
- Slotted

Utilizing our new CNC Water Jet Cutting System, Apache can manufacture Pig Sizing Rings to any customer supplied dimensions, quickly and cost effectively.



2" - 14" Sizing Rings

- to be cut with no handles



16" - 48" Sizing Rings

- to be cut with four (4) handles





# pigPRO™



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# p i g P R O™

## SERIES 53

Visual/Electrical Indication

Manual/Auto Reset



### Features:

Base Model 53-0000 is a combined visual/electrical indicator with manual/automatic reset. It includes a thread mounting nipple, standard lower housing with fluorocarbon ORings, hemispherical plunger with a flag assembly and weather sealed & explosion proof limit switch. The switch employed on this model is NEMA rated, UL listed and CSA certified to suit most applications.

### Options:

Flange Mount - Flange base models are manufactured to mount to existing flanged connections and are available in class 150, 300, 600 or 900 ANSI flanges. Conversions kits are also available which enable installation onto the mountings of other manufacturers.

### Extension Pole:

Aluminum extensions can be attached to enable detection of the pigs passage on buried pipelines. All pressure sealing components remain below the extension module. Available in lengths 2' to 8'.

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8-2

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# pigPRO™

## SERIES 55

Electrical Indication

Auto Reset



### Features:

Base Model 55-0000 is an electrical indicator with automatic reset. It includes a thread mounting nipple, standard lower housing with fluorocarbon O-Rings, hemispherical plunger and weather sealed & explosion proof limit switch. The switch employed on this model is NEMA rated, UL listed and CSA certified to suit most applications.

### Options:

Flange Mount -Flange base models are manufactured to mount to existing flanged connections and are available in class 150, 300, 600 or 900 ANSI flanges. Conversions kits are also available which enable installation onto the mountings of other manufacturers.

### Extension Pole:

Aluminum extensions can be attached to enable detection of the pigs passage on buried pipelines. All pressure sealing components remain below the extension module. Available in lengths 2' to 8'.

# p i g P R O™

## SERIES 57

Visual Indication  
Manual Reset



### Features:

Our most popular pigPRO™ the base Model 57-0000 is a visual flag indicator with manual reset. It includes a thread mounting nipple, standard lower housing with fluorocarbon O-Rings, hemispherical plunger with a flag assembly.

### Options:

Flange Mount -Flange base models are manufactured to mount to existing flanged connections and are available in class 150, 300, 600 or 900 ANSI flanges. Conversions kits are also available which enable installation onto the mountings of other manufacturers.

### Extension Pole:

Aluminum extensions can be attached to enable detection of the pigs passage on buried pipelines. All pressure sealing components remain below the extension module. Available in lengths 2' to 8'.

