

FOAM



ProVex FD™
2 - 42"
Pg. 6-2



Foam Light Density
Pg. 6-7

Heavy Density			Medium Density		
Model	Type	Function	Model	Type	Function
HDH (Heavy Density Blue Sponges)	Heavy Density	Heavy Drilling	MDB (Medium Density Blue Sponges)	Medium Density	Regular Drilling
HDW (Heavy Density White Sponges)	Heavy Density	Heavy Scraping	MDB (Medium Density White Sponges)	Medium Density	Regular Scraping
HDH (Heavy Density Yellow Sponges)	Heavy Density	Heavy Drilling	MDB (Medium Density Yellow Sponges)	Medium Density	Regular Drilling
HDW (Heavy Density Yellow Sponges)	Heavy Density	Heavy Scraping	MDB (Medium Density Yellow Sponges)	Medium Density	Regular Scraping
HDH (Heavy Density Green Sponges)	Heavy Density	Heavy Drilling	MDB (Medium Density Green Sponges)	Medium Density	Regular Drilling
HDW (Heavy Density Green Sponges)	Heavy Density	Heavy Scraping	MDB (Medium Density Green Sponges)	Medium Density	Regular Scraping
HDH (Heavy Density Purple Sponges)	Heavy Density	Heavy Drilling	MDB (Medium Density Purple Sponges)	Medium Density	Regular Drilling
HDW (Heavy Density Purple Sponges)	Heavy Density	Heavy Scraping	MDB (Medium Density Purple Sponges)	Medium Density	Regular Scraping

Light Density			Options		
Model	Type	Function	Model	Type	Function
LDH (Light Density Blue Sponges)	Light Density	Light Drilling	Harding Edge	Harding Edge	Polystyrene type for use in well hole of conventional wells for ensuring connection to the well hole.
LDW (Light Density White Sponges)	Light Density	Light Drilling	Double Dish	Double Dish	Used for bi-directional operations and operations of liquids.
LDH (Light Density Yellow Sponges)	Light Density	Light Drilling	ProVex 3D™ Pig	ProVex 3D™ Pig	For directional, clean, radius, hole for drilling, wiping and scraping.
LDW (Light Density Yellow Sponges)	Light Density	Light Drilling	Full Cone	Full Cone	Regular Scraping

ProVex 3D™ Pig	
Material	Material of liquid in gas line, was removed in case of pipeline, the remaining after to discharge drilling, nitrogen purge, backside valve, venting, repair, down-hole carter.

Foam Chart
Pg. 6-3



Foam Medium Density
Pg. 6-8



Foam Pigs
2 - 60"
Pg. 6-4



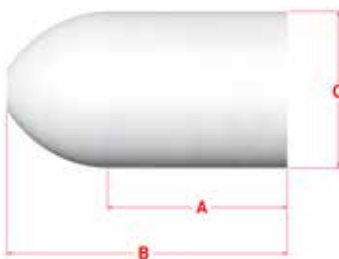
Foam Plastic Bristle
Pg. 6-9



Outside Diameter
Pg. 6-5



Foam Heavy Density
Pg. 6-10



Foam Sizes
Pg. 6-6



Foam Custom
Pg. 6-11

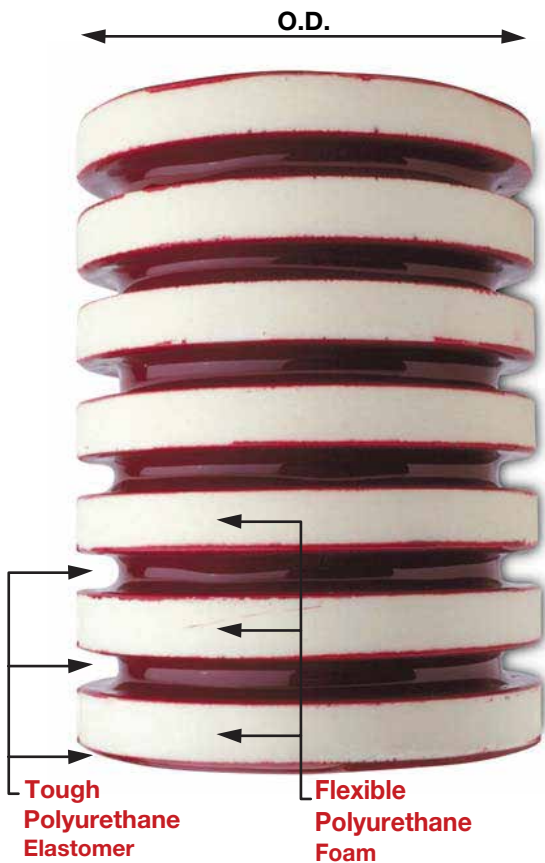
F O A M

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 are 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.

ALL THESE FEATURES MAKE OUR ProVex FD™ THE MOST VERSATILE PIG IN THE MARKET TODAY.



Applications:

- Removal of liquids in gas lines
- Wax removal in crude oil pipelines
- De-watering after hydrostatic testing
- Nitrogen purge

Features:

- Available in medium and high density foam
- Bi-directional
- Single piece construction

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

Size	O.D.	Part #	Size	O.D.	Part #
2"	2.30"	85800200	14"	14.00"	85801400
3"	3.00"	85810300	16"	16.00"	85801600
	3.40"	85800300	18"	18.00"	85801800
4"	4.00"	85810400	20"	20.00"	85802000
	4.50"	85800400	24"	24.00"	85802400
6"	6.50"	85800600	30"	30.00"	85803000
8"	8.50"	85800800	34"	34.00"	85803400
10"	10.50"	85801000	36"	36.00"	85803600
12"	12.50"	85801200	42"	42.00"	85804200






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/ft³ or 128-160 kg/m³)

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

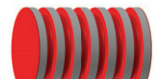
Medium Density (5-7 lb/ft³ or 80-112 kg/m³)

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






Light Density

Style	Type	Function
	MLS (Medium Light Swab)	Light Drying 2 lb/ft ³
	LDBS (Light Density Bare Squeegee)	Light Drying 2 lb/ft ³
	SLS (Super Light Swab)	Light Drying 1 lb/ft ³

ProVex FD™ Pig

	Removal of liquids in gas lines, wax removal in crude oil pipelines, de-watering after hydrostatic testing, nitrogen purge. Available With: handling ropes, transmitter cavities
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Options

Style	Type	Function
	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.
	Full Coat	Regular Scraping

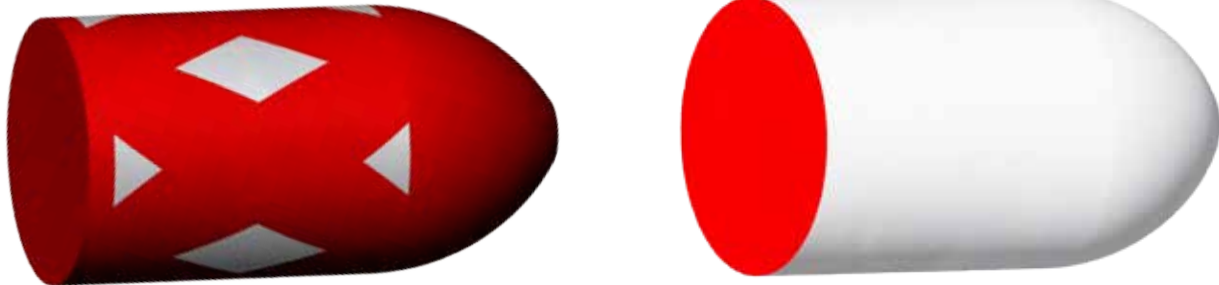
Foam Densities are approximations and can change depending on several different factors. Figures above are industry standards.

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.

FOAM DIAMETERS

OUTSIDE DIAMETER OF BARE, UNCOATED FOAM PIGS

Apache Pipeline Products recommends the diameter of foam pigs be a minimum 5% larger than the inside diameter of the pipe. Foam pigs are designed to navigate short radius bends and traverse up to 35% anomaly in pipe bore.

Apache Pipeline Products manufactures foam pigs from 2" to 48". Our diameter range coincides with all standard pipe sizes and has a finished diameter tolerance of +/- 2%. Further application of a polyurethane coating to the outside surface of the foam pig will increase the diameter by 0.125" to 0.250".

Available Diameters:

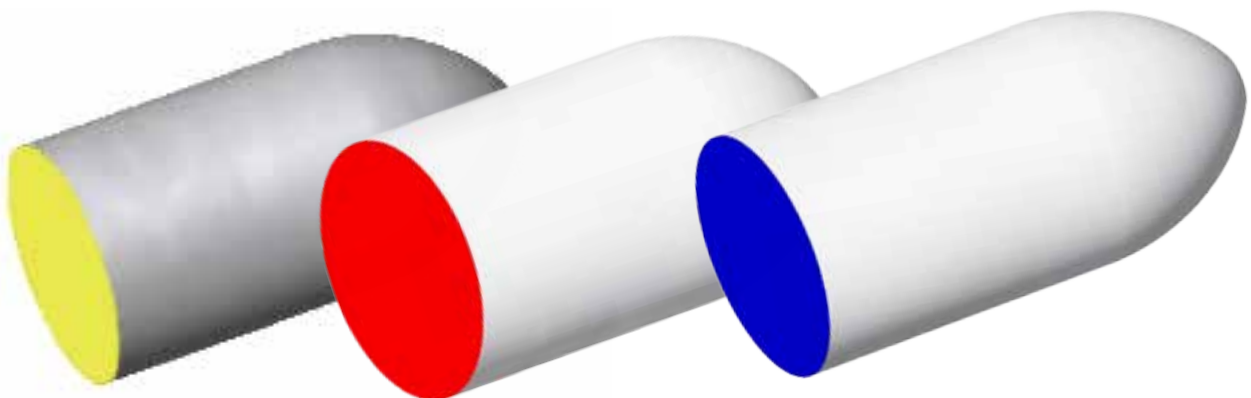
2", 3", 4", 6", 8", 10" & 12"

available in +1/4" or +1/2" as well

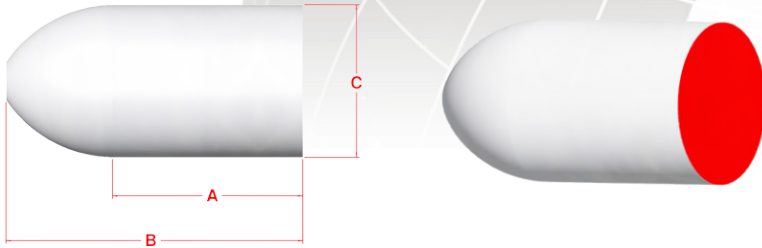
14" to 48"

even sizes only

Other diameters are available on a custom order bases.

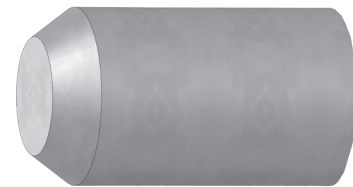


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Size	A	B	C
2"	2.50	4.00	2.00
2-1/4"	2.88	4.50	2.25
2-1/2"	3.25	4.88	2.50
2-3/4"	3.50	5.38	2.75
3"	3.75	5.75	3.00
3-1/4"	4.17	6.25	3.25
3-1/2"	4.50	6.75	3.50
3-3/4"	4.75	7.25	3.75
4"	5.00	7.75	4.00
4-1/4"	5.31	8.31	4.25
4-1/2"	5.63	8.94	4.50
4-3/4"	6.00	9.25	4.75
5"	6.38	9.75	5.00
5-1/4"	6.63	10.25	5.25
5-1/2"	7.00	10.75	5.50
5-3/4"	7.38	11.25	5.75
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
6-3/4"	8.63	13.25	6.75
7"	8.88	13.75	7.00
7-1/4"	9.25	14.25	7.25
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

Size	A	B	C
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
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



Sizes 26" to 60" use our Tapered Pig design.

Size	A	B	C
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
52"	74.00	86.00	52.00
56"	76.50	88.50	56.00
60"	90.00	104.50	60.00

*Custom Sizes Available Upon Request

F O A M

LIGHT DENSITY

1-2 lb/ft³ (16-32 kg/m³)



SLS
Super Light Swab
Light Drying



MLS
Medium Light Swab
Meduim Drying



LDBS
Light Density
Bare Squeegee
Light Drying

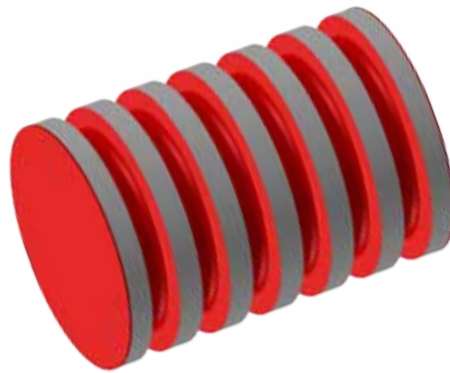
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MEDIUM DENSITY

5-7 lb/ft³ (80-112 kg/m³)



MDBS
Medium Density
Bare Squeegee
Regular Drying



ProVex FD™
Medium Density



MDCC
Medium Density
Criss Cross
Regular Wiping



MDSC
Medium Density
Silicone Carbide
Regular Scraping



MDPB
Medium Density
Plastic Brush
Lined Plastic Pipe
Regular Scraping



MDWB
Medium Density
Wire Brush
Regular Scraping

F O A M

MEDIUM DENSITY PLASTIC BRUSH

Apache Pipeline Products proudly announces a new addition to our world-class line of pipeline cleaners. We have finished all of our testing with this new Exclusive Plastic Brush material and our customers have given us great reviews.

These Medium Density Plastic Brush pigs have a number of advantages:

- No metal parts
- Does no damage to lined pipe
- Comparable to steel brush
- Able to traverse short radius bends
- Acceptable for fiberglass and plastic pipelines
- Brush bristles are farther apart than steel which eliminates “clogging”
- Available in all common sizes and configurations



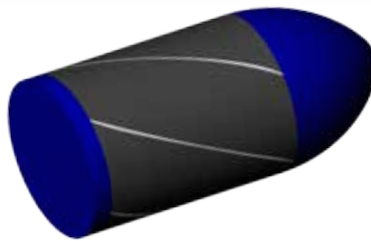
F O A M

HEAVY DENSITY

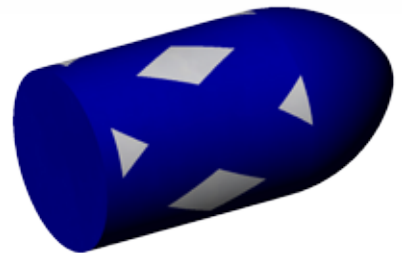
8-10 lb/ft³ (128-160 kg/m³)



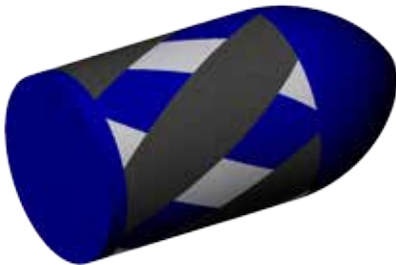
HDBS
Heavy Density
Bare Squeegee
Heavy Drying



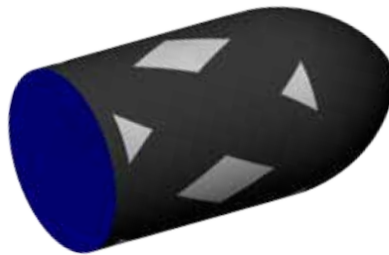
Porcupine
Heavy Density
Total Wire Brush
Maximum Scraping



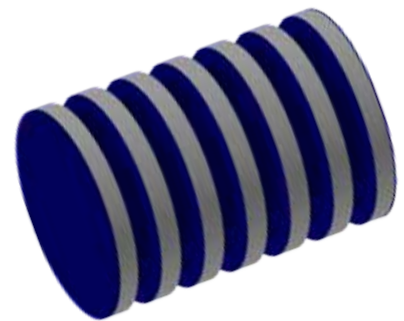
HDCC
Heavy Density
Criss Cross
Heavy Wiping



HDWB
Heavy Density
Wire Brush
Heavy Scraping



HDSC
Heavy Density
Silicone Carbide
Heavy Scraping



ProVex FD™
Heavy Density

F O A M

CUSTOM

2-10 lb/ft³ (16-160 kg/m³)



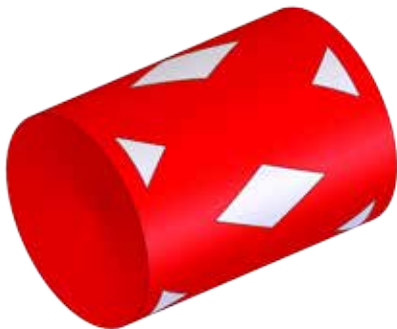
Handling Rope
Polypropylene rope for one or both ends of the pig for ease of handling.



Transmitter Cavity
Standard and customized cavity for encasing transmitters for pig tracking.



Full Coat
Regular Scraping



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



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