



Distributed By:
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Foam Pig Selection Guide





Light Density Foam Pigs

Light density foam pigs are constructed of a 1-2 lbs/cubic foot density foam. The coating used on our pigs is a 90 Shore A durometer urethane coating.

LB - Light Density Bare Foam Swab



Features: Light density Foam cylinder with urethane coating on rear only.

Applications: Daily pigging where pressures are low, but cleaning is needed to reduce rapidity of buildups. Used as a gauging pig when progressive pigging is performed in order to ascertain reduced line diameter. Used as a sealer pig when progressive cleaning and smaller-than-line-size pigs are being run, by preventing too much bypass of the cleaning pig.

LC - Light Density Criss-Cross Swab



Features: Bullet shaped light density foam pig with urethane coating in double-spiral configuration.

Applications: Light wiping and light scraping used when line conditions do not allow for heavier density foam pigs due to low pressures. Good for multi-dimensional pipelines. The light density foam allows for hand launching with pig over-sizing.

LS - Light Density Criss-Cross Silicon Carbide



Features: Bullet shaped light density foam pig with urethane coating in double-spiral configuration and silicon carbide sprinkled into coating.

Applications: Light scraping in short distances of 2,000 ft. or less.

LW - Light Density Criss-Cross Wirebrush



Features: Bullet shaped light density foam pig with urethane coating in double-spiral configuration and wirebrush straps. (Also available with plastic brush straps)

Applications: Light scraping. Used for scraping, plowing, and medium hard scale removal (up to 5 1/2 on Moh's scale of hardness) for most tuberculated scales.



Medium Density Foam Pigs

Medium density foam pigs are constructed of a 5-7 lbs/cubic foot density foam. The coating used on our pigs is a 90 Shore A durometer urethane coating.

MB - Medium Density Bare Foam



Features: Bullet shaped medium density foam cylinder with coating on rear only.

Applications: Regular drying. For drying pipelines of up to 10 miles with smooth interiors or for the removal of soft buildups in all pipes. Can also be used for mild cleaning of lines with low pressures, or for gauging inside diameter of scaled line.

MC - Medium Density Criss-Cross



Features: Bullet shaped medium density foam pig with urethane coating in double-spiral configuration.

Applications: Regular wiping. Good in oilfield flow-lines for paraffin removal or for wiping most pipelines with soft buildup. Best in minimum pressure lines or lines with large quantity of short radius bends, tees, valves, etc.

MS - Medium Density Criss-Cross Silicon Carbide



Features: Bullet shaped medium density foam pig with urethane coating in double-spiral configuration and silicon carbide sprinkled into coating.

Applications: Regular scraping where mild abrasion is needed in short distances of 2,000 ft. or less. Not recommended where normal or tough abrasion is needed.

MW - Medium Density Criss-Cross Wirebrush



Features: Bullet shaped medium density foam pig with urethane coating in double-spiral configuration and wirebrush straps. (Also available with plastic brush straps)

Applications: Medium scraping. Used for scraping, plowing, and medium hard scale removal (up to 5 1/2 on Moh's scale of hardness) for most tuberculated scales.



Heavy Density Foam Pigs

Heavy density foam pigs are constructed of a 8-10 lbs/cubic foot density foam. The coating used on our pigs is a 90 Shore A durometer urethane coating.

HB - Heavy Density Bare Foam



Features: Bullet shaped heavy density foam cylinder with coating on rear only.

Applications: Heavy drying. Best for use in long lines where heavy drying or wiping is needed. Good for any drying needs or product removal such as light oils, hydrocarbon liquid, etc.

HC - Heavy Density Criss-Cross



Features: Bullet shaped heavy density foam pig with urethane coating in double-spiral configuration.

Applications: Regular wiping. Good in oilfield flow-lines for paraffin removal or for wiping most pipelines with soft buildup. Best in minimum pressure lines or lines with large quantity of short radius bends, tees, valves, etc.

HS - Heavy Density Criss-Cross Silicon Carbide



Features: Bullet shaped heavy density foam pig with urethane coating in double-spiral configuration and silicon carbide straps.

Applications: Heavy scraping. For hard scraping scales (harder than 6 on Moh's scales of hardness). Good when used in line conditions that would shorten the life of the criss-cross, or when scraping is needed, but wirebrush is too much.

HW - Heavy Density Criss-Cross Wirebrush



Features: Bullet shaped foam pig with urethane coating in double-spiral configuration and wirebrush straps. (Also available with plastic brush straps)

Applications: Heavy scraping. For heaviest scraping, plowing, and medium hard scale removal (up to 5 1/2 on Moh's scale of hardness).



Foam Disc Pigs



FDP5
(Medium Density)

FDP8
(Heavy Density)

Features: The foam disc pig is constructed from a polyurethane foam with a high grade abrasion and chemical resistant polyurethane elastomer coating. The pig is available in both a medium density and heavy density foam option.

Applications: The multiple sealing discs make it an excellent pig for regular wiping, batching, dewatering, and product removal.

Options: The various options available include bare (no coating), pulling rope or cable, transmitter cavity, magnets, and customized lengths.



Brush Foam Pigs

TWP - Total Plastic Bristle Pig



Features: Bullet shaped medium density foam with urethane coating and plastic bristle straps covering entire pig. (75% more straps than standard plastic bristle pig)

Applications: Maximum scraping. Used when very abrasive cleaning is needed, but wirebrush may damage pipe (PVC, fiberglass, internally coated) or not allow pig passage.

TW - Total Wirebrush Pig



Features: Bullet shaped heavy density foam with urethane coating and wirebrush straps covering entire pig. (75% more straps than standard wirebrush pig)

Applications: Maximum scraping. For scraping to an absolute bare surface in steel or cast iron pipe prior to either drying to a negative dew point or the application of internal coatings. Should be used only in single-dimensional lines.

GHS - Hard Scale Pig



Features: Bullet shaped heavy density foam with urethane coating and heavy gauge wirebrush straps.

Applications: This pig is used for the heaviest types of cleaning applications, such as fly ash, encrusted salt crystals, and solidified sulfur.

Double Dish (Bi-Directional)



Same body construction and coating configuration as bullet-shaped pigs, but with both ends being dished. Used when two directions are to be traversed by the pig without leaving the pipe.

Double Nose

Same body construction and coating configuration as bullet-shaped pigs, but with both ends being bullet-shaped. Will move through line at approximately half the speed of a standard or double dish pig due to no flat surface for pressure to push.



Transmitter Cavity



The transmitter cavity is prepared in the body of the pig to house a tracking transmitter for the purpose of tracking or locating a pig. Caution should be used on sizes 8" and smaller.



Design Variations

Turning Pattern

The turning pattern of coating applied to the pig in a different fashion than the standard criss-cross helps the pig to rotate as it is traversing the line, thereby allowing for a more even wear and longer distances.



Ropes and Cables



Pigs can be supplied with handling ropes or cables in nose, rear, or both. Cables for pulling purposes can also be requested.

Lengths and Diameters

The standard length of a foam pig is approximately one-and-a-half times the nominal pipe diameter for the length from base to shoulder of the pig, plus one-half the diameter for the nose. The total length of a double-dish pig is one-and-a-half times the nominal pipe diameter, and a double-nose pig has a total length of two-and-a-half times the diameter. Custom lengths are available.

To properly seal and perform their functions, the pig's diameter is larger than the internal diameter of the pipe (anywhere from 1-5% over sizing is standard). Custom diameters are available.





Foam Spheres



Foam spheres are available in various styles as with foam pigs, including bare, criss-cross, silicon-carbide, wirebrush, and plastic bristle. They are used for the same applications as standard foam pigs, however, they are able to negotiate some piping configurations that standard foam pigs cannot. Spheres can also be magazine loaded in specially designed sphere launchers for automated mechanical launching.

Note: *If you are familiar with using a particular style of foam sphere or you have used a foam sphere before, please feel free to place an order. If you have never used a foam sphere or are unsure if a foam sphere is the best pig for your application, please contact us to discuss in more detail. Due to their spherical design, spheres only contact the pipe with a minimal amount of their sealing surface (approximately 15% of their diameter). This is compared to standard cylindrical pigs which are in contact with the pipe for their entire sealing length (approximately 1-1/2 times the diameter). Because of this design characteristic, spheres are more prone to losing seal while negotiating various piping configurations (i.e. elbows, tees, wyes, etc.), than standard cylindrical pigs.*



SPH-5B Bare Foam Sphere



SPH-5C Coated Foam Sphere



SPH-5P Plastic-Bristle Foam Sphere



SPH-5S Silicon-Carbide Foam Sphere



SPH-5W Wirebrush Foam Sphere



SPH-8B Bare Foam Sphere



SPH-8C Coated Foam Sphere



SPH-8P Plastic-Bristle Foam Sphere



SPH-8S Silicon-Carbide Foam Sphere



SPH-8W Wirebrush Foam Sphere



Pig Life Considerations

Operators will often ask the distance that they might expect to get from their pigging products in terms of miles or kilometers. This question is impossible to answer as it depends on too many variables from line to line, and from one pig manufacturer to the other. Conditions such as the number and degree of bends, the dryness or viscosity of the fluid medium used as a propellant, the density of the pig, the speed at which the pig travels (a pig that moves too slow, below 2fps, may experience stops and starts and “speed excursions”, and will wear down faster than a steady moving pig), the kinds of debris it contacts and the percentage of oversize of the pig OD in relation to the pipeline ID.

General Guidelines & Considerations

- On **foam pigs**, is the urethane skin still adhered to the foam body of the pig? Is there significant cuts or tears that have penetrated through? If the skin appears to be in good shape, it will probably run again. If it begins to separate from the pig, there is a risk that this segment may pull back further, in the worst cases resulting in the foam arriving separate in the receiver from the skin. If using urethane pigs and/or cups and discs, check for gouges in the sealing surfaces (the part that contacts the pipe wall during operation) to ensure a proper seal is maintained.
- On **brush pigs**, inspect the bristles. Is the wear to the bristle significant enough after previous runs to indicate that they may become completely worn before completing another run? If so, another pig should be used, however, if a pig is run 20 miles and it only experiences a 10 percent loss in bristles length, it is reasonable to assume that it will lose approximately the same amount on subsequent runs, and should therefore be acceptable to run several times, provided other **factors such as the skin bonding are considered**.
- **PIG OD** – On foam as well as urethane pigs, cups and discs, a special measuring tape known as a diameter tape can be used to wrap around the body of the pig. This will measure the remaining OD of the object. All pigs, cups and discs are larger than the pipeline that they are intended to clean. Foam pigs will elongate, and eventually lose some OD to wear, and urethane cups and discs will wear down from friction, reducing their OD. As long as the OD remains larger than the pipeline it is intended to clean, creating a 360 degree seal around the pipe, the pig will travel and clean, and can therefore be reused. If the amount of oversize is less than 1 percent, special consideration should be given to long runs (in excess of 40-50 miles) so that the seal is not lost, especially on urethane pigs.
- **Chemical Exposure**, UV Light and ageing can damage pigs. A pig run through a chemical line and then sat on a shelf may appear to be sound, but the cell structure can be damaged and brittle, and the pig may fall apart under pressure in the line. If the operator can with his fingernail pry loose pieces of foam, pig skin, or urethane from cups and discs, the pig should be disposed of. Pigs stored properly and unused may sit in some cases for up to 5 years and still be acceptable for use. Most pigs are stored in moderate conditions, and a good rule of thumb for warehoused pigs that are wrapped and protected from the sun and weather is 2 years.