

## OIL and GAS

**Apollo Screens;** a company established in 2013 by the APOLLO GROUP, a renowned engineering house combining its engineering expertise with long term vision, ethical business approach and a global team of experts in design and manufacture of wedge wire screens for a wide range of applications.

**Apollo Screen manufacturing facility:** The plant & critical equipment for Apollo screens has been designed and built by the Apollo group's designers and engineers. The plant is equipped with state of the art screen fabrication technology to produce finest quality wedge wire screens with accuracy of wire drawing facility to achieve the highest product quality.

Having specialised in the design of water well screens Apollo technology has been extended to include oil and gas well screens.

The Apollo all welded screen is manufactured entirely from a single material. The unique welding process produces welds at every contact point between the wire and support rods of the highest integrity.

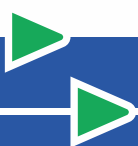
This method produces an extremely rapid fusion weld with a heat treating action which retains the quality of the metal and does not reduce its resistance to corrosion. The versatility of this manufacturing technique ensures welding process allows for changes of slot opening and profiles of wire used.

The continuous slot screen has much large open area compared to other types of screens. The obvious advantages are that restrictions to flow into the well are reduced, well losses are minimised thus resulting in considerable savings in pumping costs. The screen also allows maximum development efficiency.

Throughout the manufacturing process screen slot size is closely monitored to ensure that tolerances are maintained. This, and other rigorous dimensional and quality control checks assure uniformity of all components. This permits strength and flow calculations to be made within narrow limits.

The basic design consists of welded screen jacket telescoped over a perforated pipe base or over another welded screen base.

Apollo objective in manufacturing oil and gas well screens is to provide better down-hole sand control and more flow than other type of screens.



## How To Select A Gravel Pack Screen

Several important criteria need to be considered selecting proper gravel pack screen for an oil or gas well.

- **Length :** The screen should be long enough to lap over the perforated interval. A good rule of thumb is to allow five feet top and bottom.
- **Size (Circumference) :** Apollo screens recommends that the annular area between the O.D. of the screen and the I.D. of the casing be at least one inch. This prevents the gravel from bridging before it reaches bottom and facilitates wash over procedures.
- **Slot Size :** The Slot size is determined by the formation grain size. Current Practice is to size the gravel five to six times larger than the formation grain size and then pick a screen slot that will retain 70-80% of the gravel.
- **Length of Blank Pipe :** Blank Pipe allows for a reserve of gravel so that when the gel breaks the gravel will be able to cover the screen. A general rule is that using 15lbs. of gravel to one gallon of gel results in a 40% loss of gravel volume. If the space is available uphole, factor of three is applied. For example, 30 feet of screen requires 90 feet of blank pipe.
- **Centralizers :** All gravel pack screen and blank pipe should be centralized so that the gravel falls evenly around all sides. Placing steel centralizers every 15 feet is normal and adequate in most cases. Steel is normally used in shallow holes without a serious deviation and also where no sump packer is involved (a broken centralizer could cause serious damage to the sump packer) Steel should not be used if acid will be used prior to gravel packing.
- **Material Selection :** The screen material is 304 stainless steel which is adequate in 95% of the cases. 316L stainless is normally carried in stock and is used in some more corrosive environments. The pipe base is normally J-55, but L-80 and N-80 are carried in stock with other grades available through special order. If necessary, the pipe base can be coated. Whenever material selection is in question, simply consult a Apollo representative for assistance.

The gravel pack screen provides down-hole sand control in oil and gas wells when the situation demands maximum screen strength.



### Registered office & works :

Plot No: B-8 & 9, Dharti Apollo Industrial Park,  
Kadi Road Post & Village - Chatral, Taluka - Kalol,  
Dist.- Gandhinagar (382729) Ahmedabad, Gujarat, India.  
Phone : +91 79 26444597, 26564705  
Email : info@apolloscreens.com

### Mumbai Office :

212, New India Estate, 33, Mahal Industrial Area,  
Off Mahakali Caves Road, Andheri (East),  
Mumbai - 400093. INDIA.  
Phone : +91 22 26879301 Fax : +91 22 26879305  
Email : mumbaioffice@apolloscreens.com

website: [www.apolloscreens.com](http://www.apolloscreens.com)

