



OIL PRODUCTS
WELL COMPLETIONS



Oilfield

Bridge Plugs and Cement Retainers

ARGENTINA

+54 9 2994 729242

Ruta 151 - Km 31
Barda del Medio
Río Negro, Argentina

gerenciacomercial@qroilproducts.com

Hydra Bridge Plugs

SAZ Oilfield offers a wide range of Bridge Plugs for permanent or temporary well bore isolation. Our **Hydra** line of Bridge Plugs are based on field proven design and have an extensive track record globally over a wide range of downhole conditions.

Hydra MS Mechanical Set Bridge Plugs are deployed on Tubing or Drill Pipe and set by mechanical setting tool in either tension or compression. It's locked construction design and large clearance enables faster and safer run-in speed. Provides optimum strength, easy drillability, and high pressure ratings. Easily converts from Mechanical Set to Wireline set by changing the upper slips. Conversion kit also available to convert from Bridge Plug to Cement Retainer.

Hydra WS Wireline Set Bridge Plugs are deployed on Wireline and set via appropriate Wireline Pressure Setting Assembly and Wireline Adapter Kit. This deployment offers customer a safe and efficient method of placing a drillable Bridge Plug at any pre-determined point in the casing without having to dump cement on top to prevent leakage.



**Mechanical Set
Convertible
Bridge Plug**



**Wireline Set
Convertible
Bridge Plug**

Application

- Multi-Zone isolation
- Multi-Zone stimulation
- Plug and Abandonment

Features

- Available from 4-1/2" to 13-3/8" Casing Sizes
- Up to 10,000 psi & 400°F Rating
- Anti-preset mechanism

Types

- Hydra MS** Mechanical Set
- Hydra WS** Wireline Set

- Easy conversion to Cement Retainers
- Cast Iron construction, easily drillable

- Convertible from Mechanical to Wireline Set and vice versa

Hydra Bridge Plugs

Hydra Convertible Bridge Plug					
Casing		Plug	Setting Range (in)	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)	OD (in)			
4 1/2	9.5-16.6	3.593	3.826-4.090	10,000	Nitrile / HNBR / Aflas / Viton
5	11.5-18	3.937	4.154-4.560		
5 1/2	13-23	4.312	4.580-5.044		
6	10.5-12	5.375	5.595-6.135		
6-5/8	17-34				
7	32-38				
7	17-35	5.687	6.004-6.538		
7-5/8	20-39	6.312	6.625-7.263		
8-5/8	24-49	7.125	7.511-8.248	8,000	
9-5/8	29.3-53.5	8.125	8.435-9.063	8,000	
10-3/4	54-81	9.000	9.250-9.660	5,000	
10-3/4	32.7-51	9.437	9.660-10.192	5,000	
13-3/8	77-102	11.562	11.633-12.464	3,000	
13-3/8	48-72	12.000	12.175-12.715	3,000	

Hydra Bridge Plugs

Our **Hydra WSB/ Hydra WSM** Bridge Plugs are compact and economical unit engineered for fast running downhole on electric

Hydra WSM Wireline Set Bridge Plugs are available from 4-1/2" to 7" casing sizes. These Bridge Plugs are constructed with single piece elastomeric packing elements thereby providing an economical means for zone isolation, fracturing and other wellbore treatments. This plug sustains moderate pressures and temperatures.

Hydra WSB Wireline Set Bridge Plugs are available from 2-3/8" to 20" sizes. These high performance Bridge Plugs contains three piece Elastomeric Elements with metallic back-up rings on either side of the Elements to avoid rubber extrusion in high pressure and high temperature environment. For larger plugs deployed in 9-5/8", 10-3/4" and 13-3/8" casing sizes, the three piece packing elements are replaced with a single piece element, with option to retain the three piece element design.



**Wireline Set
Bridge Plug
WSB**



**Wireline Set
Bridge Plug
WSM**

Application

- Multi-Zone isolation
- Multi-Zone stimulation
- Plug and Abandonment

Features

- Available from 2-3/8" to 20" Casing Sizes
- Up to 10,000 psi & 400°F Rating
- Anti-preset mechanism

Hydra WSM Bridge Plug					
Casing		Plug	Setting Range (in)	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)	OD (in)			
4 1/2	9.5 - 16.6	3.5	3.826-4.09	8,000	Nitrile / HNBR / Aflas / Viton
4 1/2	9.5 - 13.5	3.71	3.92-4.56		
5	11.5 - 21	3.71	3.92-4.56		
5 1/2	13 - 25	4.24	4.58-5.047		
5 3/4	22.5 - 25.2	4.24	4.58-5.047		
6 5/8	17 - 22	5.61	5.989-6.655		
7	17 - 35	5.61	5.989-6.655		

Hydra Bridge Plugs

Hydra WSB Bridge Plug					
Casing		Plug	Setting Range (in)	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)	OD (in)			
2 3/8	3.3 - 5.9	1.71	1.867-2.107	10,000	Nitrile / HNBR / Aflas / Viton
2 7/8	6.4 - 6.5	2.1	2.28-2.563		
3 1/2	5.7 - 10.2	2.75	2.867-3.258		
3 1/2	12.7	2.5	2.625-2.75		
4	5.6 - 14	3.12	3.34-3.732		
4 1/2	9.5 - 16.6	3.5	3.826-4.09		
4 1/2	9.5 - 13.5	3.71	3.92-4.56		
5	11.5 - 21	3.71	3.92-4.56		
5 1/2	13 - 25	4.24	4.58-5.047		
5 3/4	22.5 - 25.2	4.24	4.58-5.047		
6	14 - 26	4.75	5.14-5.595		
6 5/8	34	4.75	5.14-5.595		
6	10.5 - 12	5.34	5.595-6.366		
6 5/8	17 - 34	5.34	5.595-6.366		
7	23 - 40	5.34	5.595-6.366		
6 5/8	17 - 22	5.61	5.989-6.655		
7	17 - 35	5.61	5.989-6.655		
7 5/8	20 - 39	6.09	6.625-7.263	8,000	
8 5/8	24 - 49	6.96	7.511-8.248		
9 5/8	29.3 - 53.5	7.71	8.435-9.063	5,000	
10 3/4	54 - 81	8.71	9.25-9.784		
10 3/4	32.7 - 51	9.5	9.85-11.15	3,000	
11 3/4	38 - 60	9.5	9.85-11.15		
13 3/8	77 - 102	11.56	11.633-12.464	2,000	
13 3/8	48 - 72	12	12.347-12.715		
16	65 - 109	14.25	14.688-15.25		
18 5/8	76 - 96.5	17.25	17.655-18.73		
20	133 - 169	17.25	17.655-18.73		

Hydra Bridge Plugs

Hydra HM Bridge Plug is Hydraulically actuated and Mechanically set, thereby eliminating the need for an external mechanical or wireline setting tool. These Bridge Plugs can be run and set in tandem with retrievable production packers or squeeze packers. The plugs offer customer flexibility on deployment for zonal isolation, squeeze cementing, fracturing, and Plug & Abandonment. **Hydra HM** internal setting mechanism consists of Ball Seat, Setting Sleeve and Shear Stud. To set the Bridge Plug, a setting ball is dropped from surface and pressure is applied which sets the upper slips. Then the work string is picked up in tension which sets the packing element. The work string is then released by either shearing the shear stud or rotating 10 turns to the right.



Hydra HM Hydro-Mechanical Bridge Plug							
Casing		Setting Range (in)	Plug OD max. (in)	Shear Force (lbs)	Thread Box Up	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)						
3 1/2	5.7-10.2	2.867-3.258	2.75	9,000-12,000	2-3/8" EUE	10,000	Nitrile / HNBR / Aflas / Viton
4	5.6-14	3.34-3.732	3.12	20,000-25,000			
4 1/2	9.5 - 16.6	3.826-4.09	3.5	22,000-30,000			
5	11.5 - 18	3.92-4.56	3.71	22,000-30,000			
5 1/2	13 - 25	4.58-5.047	4.24	22,000-30,000			
5 3/4	22.5 - 25.2	4.58-5.047	4.24	22,000-30,000			
6	14 - 26	5.14-5.595	4.75	22,000-30,000	2-7/8" EUE	8,000	
6 5/8	34	5.14-5.595	4.75	22,000-30,000			
6	10.5 - 12	5.595-6.366	5.34	30,000-45,000			
6 5/8	17 - 34	5.595-6.366	5.34	30,000-45,000			
7	23 - 40	5.595-6.366	5.34	30,000-45,000			
6 5/8	17 - 22	5.989-6.655	5.61	30,000-45,000			
7	17 - 35	5.989-6.655	5.61	30,000-45,000	2-7/8" EUE	3,000	
7 5/8	20 - 39	6.625-7.263	6.09	30,000-45,000			
8 5/8	24 - 49	7.511-8.248	6.96	35,000-48,000			
9 5/8	29.3 - 53.5	8.435-9.063	7.71	35,000-48,000			
10 3/4	54 - 81	9.25-9.784	8.71	35,000-48,000			
10 3/4	32.7 - 51	9.85-11.15	9.5	35,000-48,000			
11 3/4	38 - 60	9.85-11.15	9.5	35,000-48,000	2-7/8" EUE	3,000	
13 3/8	77 - 102	11.633-12.464	11.56	35,000-48,000			
13 3/8	48 - 72	12.347-12.715	12	35,000-48,000			
16	65-109	14.688-15.250	14.25	40,000-48,000			
18 5/8	76-96.5	17.25-17.655	17.25	40,000-48,000			
20	133-169	17.25-17.655	17.25	40,000-48,000			

Hydra Bridge Plugs

The **Hydra ER Extended Range Bridge Plugs** are specially designed to run through restrictions and then set securely in larger diameters below. These restrictions such as seating nipples often force tubing to be pulled before well service can take place. The Extended Range Bridge Plug eliminates this in many cases. These Bridge Plugs will set securely in any hardness casing.

Milling is preferable should the plug needs to be removed as it is made up of mild steels to cover the broad setting range.

These are available for 1.610" through 3.920" setting range.

Features

Millable

Electric wireline set

Compact, easy running

Three-piece packing element and rocker action metal back up rings combine for a superior seal

Sets in any grade casing including Q-125

Runs through restrictions to set in larger diameters



Hydra ER Extended Range Bridge Plug				
Plug	Setting Range (in)	Setting Tool	Differential Pressure (psi)	Elastomer
OD (in)		GO		
1.406	1.610-1.995	1 ½ Shorty	10,000	Nitrile / HNBR / Aflas / Viton
1.750	1.905-2.441	1 11/16 Multi-stage		
1.906	2.156-2.765	1 11/16 Multi-stage		
2.187	2.375-3.000	1 11/16 or 2 1/8 Multi-stage		
2.281	2.441-3.343	1 11/16 or 2 1/8 Multi-stage		
2.500	2.875-3.500	2 1/8 Multi-stage		
2.750	3.187-3.920	2 1/8 Multi-stage		

Hydra Bridge Plugs

Hydra WR Wireline or Hydraulic Set Retrievable Bridge Plug is a high-performance Retrievable Bridge Plug that can be deployed on wireline or jointed pipe and retrieved via jointed pipe. It is ideally suited for temporary wellbore isolation without killing the well as the plug can be deployed and retrieved under pressure.

The high pressure from above and below thereby offering customer flexibility for temporary zonal isolation, acidizing and surface equipment repairs like well head replacements by safely keeping the wellbore fluids under control.

Hydra WR Bridge Plug is deployed on wireline and set via the Wireline Adapter Kit attached to the Pressure Setting Assembly. It can alternately be lowered on Tubing and set via the Hydraulic Setting Tool connected to the Wireline Adapter Kit.

SWR Retrieving Tool is run in hole and latched on the **Hydra WR** plug with 5 to 10k lbs set down weight. This enables the differential pressures across plug to equalize and a 10 to 15k lbs overall releases the Hydra WR Bridge Plug from the casing wall for safe retrieval.

Application

- Wellhead testing
- Treating and testing multiple, selected zones
- Deep, high-pressure testing
- Squeeze cementing
- Fracturing
- Temporary zonal isolation

Features

- Field proven and reliable design
- Straight-on set and straight-pull to release



Hydra WR Retrievable Bridge Plug					
Casing		Setting Range (in)	Plug OD (in)	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)				
3 1/2	7.7 - 10.2	2.992-3.068	2.700	8,000	NITRILE/ HNBR/ VITON/AFLAS
4	9.5 - 11.0	3.476-3.548			
	10.46 - 12.95	3.340-3.476	3.187		
4 1/2	9.5 - 13.5	3.920-4.090	3.750		
	13.5 - 15.1	3.826-3.920	3.650		
	15.1 - 16.6	3.754-3.826	3.625		
5	11.5 - 15.0	4.408-4.560	4.125		
	18.0 - 21.0	4.154-4.276	3.969		
5 1/2	13.0 - 20.0	4.778-5.156	4.625		
	20.0 - 23.0	4.670-4.778	4.500		
	23.0 - 26.0	4.548-4.670	4.406		
7	17.0 - 26.0	6.276-6.538	5.969		
	26.0 - 32.0	6.094-6.276	5.875		

Hydra Bridge Plugs

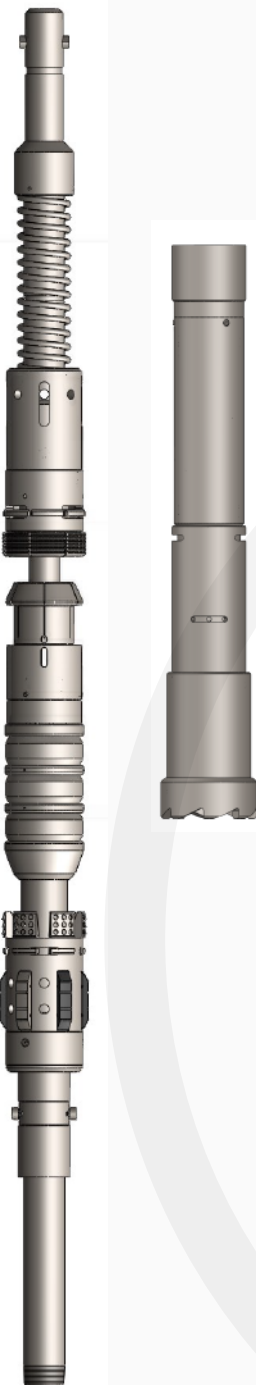
Hydra MR Mechanical Bridge Plug is a field proven high pressure packer type plug, used for treating and testing multiple, selected zones. This tool has a large internal by-pass to prevent swabbing when running and retrieving. The by-pass closes during the setting of the plug and opens prior to releasing the upper slips to equalize pressure when unsetting. This tool also features an upper-slip releasing system that reduces the force required to release the packer. A non-directional slip is released first, making it easier to release the other slips.

Application

- Wellhead testing
- Treating and testing multiple, selected zones
- Deep, high-pressure testing
- Squeeze cementing
- Fracturing
- Temporary zonal isolation

Features

- 1/4 turn set & release - Only one-quarter right rotation is required to set and release
- Pressure equalizing before setting - The by-pass closes during the setting of the plug and opens prior to releasing the upper slips to equalize pressure when unsetting.
- Tubing string can be held in tension, compression, or neutral set while the packer remains engaged.



Hydra MR Mechanical Bridge Plug					
Casing		Setting Range (in)	Plug OD (in)	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)				
4 1/2	13.5 - 15.1	3.826-3.920	3.625	10,000	NITRILE/ HNBR/ VITON/AFLAS
	9.5 - 13.5	3.920-4.090	3.750		
5	18.0 - 20.8	4.156-4.276	4.000		
	11.5 - 15.0	4.408-4.560	4.125		
5 1/2	20.0 - 26.0	4.548-4.778	4.406		
	14.0 - 23.0	4.670-5.012	4.625		
7	26.0 - 32.0	6.094-6.276	5.875		
	23.0 - 29.0	6.184-6.366	5.969		
	17.0 - 26.0	6.276-6.538	6.000		
9 5/8	40.0-53.5	8.535-8.835	8.218		

Hydrus Cement Retainers

SAZ Oilfield offers a wide range of drillable Cement Retainers for single-interval squeeze, batch, or block squeeze cementing. Our **Hydrus** Cement Retainers provide optimal strength and drillability for temporary or permanent wellbore isolation over a wide range of downhole conditions.

Hydrus MS Mechanical Set Cement Retainers are deployed on Tubing or Drill Pipe and set by Snap Latch Setting Tool in compression. The large internal bypass prevents swabbing during running and retrieval. The bypass closes during Cement Retainer setting and opens during retrieval to enable pressure equalization before releasing the upper slips. The setting tool is released from the Cement Retainer by applying tension and back-up rotational release. The running string can be internally pressure tested before release.

Hydrus WS Wireline Set Cement Retainers are deployed on Wireline and set via appropriate Wireline Pressure Setting Assembly (WPSA), Wireline Adapter Kit (WLAK) and Snap Latch Stinger Sub. When reaching the pre-determined depth, WPSA is actuated, the Tension Mandrel moves upward, pulling the body of the Cement Retainer up with respect to the setting sleeve of the WLAK, thereby setting and packing-off the Cement Retainer. Continued upward movement closes Control Latch inside the Retainer and the setting assembly with WLAK is retrieved once the Release Stud is sheared.



Application

- Multi-Zone isolation
- Multi-Zone stimulation
- Plug and Abandonment

Features

- Available from 4-1/2" to 13-3/8" Casing Sizes
- Up to 10,000 psi & 400°F Rating
- Tubing can be tested before squeezing
- Convertible from Mechanical to Wireline Set and vice versa

Types

- Mechanical Set
- Wireline Set

- Holds final squeeze pressure and isolates squeeze from hydrostatic pressure
- Anti-preset mechanism
- Cast Iron construction, easily drillable

Hydrus Cement Retainers

Hydrus Cement Retainer					
Casing		Plug	Setting Range (in)	Differential Pressure (psi)	Elastomer
OD (in)	Weight (ppf)	OD (in)			
4 1/2	9.5-16.6	3.593	3.826-4.090	10,000	Nitrile / HNBR / Aflas / Viton
5	11.5-18	3.937	4.154-4.560		
5 1/2	13-23	4.312	4.580-5.044		
6	10.5-12	5.375	5.595-6.135		
6-5/8	17-34				
7	32-38				
7	17-35	5.687	6.004-6.538		
7-5/8	20-39	6.312	6.625-7.263		
8-5/8	24-49	7.125	7.511-8.248	8,000	
9-5/8	29.3-53.5	8.125	8.435-9.063	8,000	
10-3/4	54-81	9.000	9.250-9.660	5,000	
10-3/4	32.7-51	9.437	9.660-10.192	5,000	
13-3/8	77-102	11.562	11.633-12.464	3,000	
13-3/8	48-72	12.000	12.175-12.715	3,000	

Accessories

The **Mechanical Setting Tool – Drag Spring** is designed to run and mechanically set the Hydrus Cement Retainer (Hydrus MS) or the Hydra Cast Iron Bridge Plug (Hydra MS) at any depth on tubing or drill pipe.

This tool has built-in snap latch feature allowing the tool to be latched into the retainer with set down weight and released with up-strain or right hand rotation.

Features

- Allows users to set, pressure test tubing, and squeeze in a single trip
- Can quickly be configured to set Hydrus MS Cement Retainers or Hydra MS Bridge Plugs
- Special designed Bow Spring provides positive control and allows one size Mechanical Setting Tools to cover a large range of casing weight.

Application

- Setting cement retainers or bridge plugs on tubing or drill pipe.
- Squeeze cementing



Mechanical Setting Tool– Drag Spring			
Casing		Setting Tool	Setting Range (in)
Size (in)	Weight (ppf)	OD (in)	
4 1/2	9.5-16.6	3.593	3.826-4.090
5	11.5-18	3.937	4.154-4.560
5 1/2	13-23	4.312	4.580-5.044
6	10.5-12	5.375	5.595-6.135
6-5/8	17-34	5.375	5.595-6.135
7	32-38	5.375	5.595-6.135
7	17-35	5.375	6.004-6.538
7-5/8	20-39	6.312	6.625-7.263
8-5/8	24-49	7.125	7.511-8.248
9-5/8	29.3-53.5	8.125	8.435-9.063
10-3/4	54-81	9.000	9.250-9.660
10-3/4	32.7-51	9.437	9.660-10.192
13-3/8	77-102	11.562	11.633-12.464
13-3/8	48-72	12.000	12.175-12.715

Accessories

The **Mechanical Setting Tool – Drag Block** is designed to run and mechanically set the Hydrus Cement Retainer (Hydrus MS) or the Hydra Cast Iron Bridge Plug (Hydra MS) at any depth on tubing or drill pipe.

This tool has built-in snap latch feature allowing the tool to be latched into the retainer with set down weight and released with up-strain or right had rotation.

Features

- Allows users to set, pressure test tubing, and squeeze in a single trip
- Can quickly be configured to set Hydrus MS Cement Retainers or Hydra MS Bridge Plugs
- Top slips partially covered to protect from accidental damage and pre-set

Application

- Setting cement retainers or bridge plugs on tubing or drill pipe.
- Squeeze cementing



Mechanical Setting Tool– Drag Block			
Casing		Setting Tool	Setting Range (in)
OD (in)	Weight (ppf)	OD (in)	
4 1/2	9.5-16.6	3.593	3.826-4.090
5	11.5-18	3.937	4.154-4.560
5 1/2	13-23	4.312	4.580-5.044
6	10.5-12	5.375	5.595-6.135
6-5/8	17-34	5.375	5.595-6.135
7	32-38	5.375	5.595-6.135
7	17-35	5.375	6.004-6.538
7-5/8	20-39	6.312	6.625-7.263
8-5/8	24-49	7.125	7.511-8.248
9-5/8	29.3-53.5	8.125	8.435-9.063
10-3/4	54-81	9.000	9.250-9.660
10-3/4	32.7-51	9.437	9.660-10.192
13-3/8	77-102	11.562	11.633-12.464
13-3/8	48-72	12.000	12.175-12.715

Stinger Seal Assembly is a tubing conveyed latching seal assembly that is use Cement Retainer previously set on wireline line.

The Snap Latch Stinger Sub Assembly should always be run with a Tubing Centralizer to provide for easier entry into the Cement Retainer.



Stinger Seal Assembly	
Casing Size (in)	Thread Connection
4 1/2~5-1/2	2-3/8" EU 8RD
7~13-3/8	2-7/8" EU 8RD

Control Unit is used to center the tubing and provide for easier entry into an Hydrus WR Cement Retainer previously set by wireline.



Control Unit		
Casing		Thread Connection
Size (in)	Weight (ppf)	
4 1/2	9.5-16.6	2-3/8" EU 8RD
5	11.5-18	2-3/8" EU 8RD
5 1/2	13-23	2-3/8" EU 8RD
6	10.5-12	2-7/8" EU 8RD
6-5/8	17-34	2-7/8" EU 8RD
7	32-38	2-7/8" EU 8RD
7	17-35	2-7/8" EU 8RD
7-5/8	20-39	2-7/8" EU 8RD
8-5/8	24-49	2-7/8" EU 8RD
9-5/8	29.3-53.5	2-7/8" EU 8RD
10-3/4	54-81	2-7/8" EU 8RD
10-3/4	32.7-51	2-7/8" EU 8RD
13-3/8	77-102	2-7/8" EU 8RD
13-3/8	48-72	2-7/8" EU 8RD



QROIL PRODUCTS
WELL COMPLETIONS



ARGENTINA



+54 9 2994 729242



Ruta 151 - Km 31
Barda del Medio
Río Negro, Argentina



gerenciacomercial@qroilproducts.com