

WE ARE **DPC-OFS**

PROUD OF OUR PRODUCT'S QUALITY



DPC-OFS, designs, manufactures, and assembles downhole equipment's for customers in both domestic and international markets. Headquartered in Buenos Aires, our tradition is one of quality, affordability, customer service, and community investment.

We have been proud of the quality of our products. For more than 40 years our technicians had developed specific engineering on metal casting and forging products to oil & gas industry.

DPC OIL TOOLS® is a trademark of DPC-OFS.

DPC Oil Tools®

Quality Statement

DPC-OFS's Quality Policy is to - "Establish a relentless focus on satisfying Customer needs and expectations". Our quality objectives are to:

- Provide customers with quality products.
- Make these products available when and where customers want them.
- Develop a cost structure that enables competitive pricing.
- Build and maintain a reputation for absolute trustworthiness.



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COMPLETION EQUIPMENTS

- HYDRAULIC SET PACKERS
- MECHANICAL SET PACKERS
- ON-OFF CONNECTORS
- TUBING ANCHORS
- SERVICE TOOLS & ACCESORIES
- UN-CONVENTIONAL OIL TOOLS

DPC-OFS designs, manufactures, and assembles downhole equipment for customers in both domestic and international markets, under trademark **DPC Oil Tools**. Headquartered in Buenos Aires, Argentina, our focus is quality non-stop development.

We devote ourselves to solving customers' problems and enriching the lives of our employees. Our success is driven by our ability to provide custom designed equipment and to remain flexible in an ever-changing industry. As our operation expands in size and grows in number, **DPC-OFS** remains committed to providing the highest-quality equipment and customer service.

DPC-OFS provides a wide variety of Hydraulic set Packers, Mechanical set Packers, Retainers Packers, Seal Bore Packers, Tubing Anchors, Bridge Plugs, Unconventional Plugs (Dissolvable full metal and Composite) and Gaslift products as Side Pocket Mandrels; forged or round body.



2.1 PACKER HP11 SERIES

Hydraulic Set Packer - Turn to Release

OVERVIEW

HP11 Series is a retrievable packer (hydraulic set model) which has been designed for waterflooding and production wells. For selective injection, it can be combined with Tandems (Packers w/out slips) and On-Off connectors. The most striking feature of this packer is the release with minimal turnaround maneuvers due "Hexa-System", ideal to selective string in which the number of tools is high, but also for those wells with certain degree of deviation.

HP11 Series packer is an easy operation tool both in the setting and the recovery, due the Hexa-System allow the run and setting and prevents premature release. Pressure or temperature changes do not affect its position and packing.

SETTING PROCESS

Deepen the tool up to the indicated zone and apply the necessary pressure for the shear of the safety pins for then packing the tool.

In order to obtain a perfect packing of the HP11 packer, it is required a pressure that varies from 2600psi to 3000psi, depending on the number of pins selected for the setting operation. It is essential to consider the hydrostatic differential that possibly exists at the moment of applying the before mentioned pressure; this latter will be diminished by the difference of fluid levels between the internal and external part of the tubing. This tool can be left with weight, tension or in neutral position as preferred.

RELEASE PROCESS

The tubing weight should be above the tool at a neutral point at packer depth for the tool release. It is also necessary to apply pressure between 1000 and 1500 lbs, rotate a right minimal turn to the elements level, wait for pressure equalization and then it can be lifted it up softly.

FEATURES

- Setting and Packing pressure, adjustable by shear pins
- Turn to release, by minimal torque.
- Extremaly compact.
- Dress by Viton, HNBR, EPDM, under request.
- Other sizes and threaded connections available upon request.
- Manufacturer in compliance with API 11D1. Designation grade: V3. Quality grade: Q3.



2.1 PACKER HP11 SERIES

Hydraulic Set Packer - Turn to Release

CASING		PRODUCT NUMBER	PACKER						LOADS				SIZE
Size	Weight		Dimensions			Maximum Work Pressure			Maximum strength on the mandrel		B-P		
			in	lbs/ft	OD	ID	Length	Above	Below	Work		Yield	
			in	(mm)	in	(mm)	pie	(m)	psi (Kg/cm ²)	psi (Kg/cm ²)	lbs (Kg)	lbs (Kg)	
5"	11.5-13	HP11-5123	4.248	(107.9)	2.01	(51,1)	4,45	(1,356)	10000	8000	67000	135000	2 3/8"
	15-18	HP11-5023	4.126	(104,8)									
	18-20,8	HP11-5323	4.007	(101,8)									
5 1/2"	13-14	HP11-5523	4.780	(121,4)	2.37	(60,2)	5,02	(1,530)	8000	6000	185000	255000	2 7/8"
	14-17	HP11-5623	4.685	(119,0)									
	20-23	HP11-5723	4.500	(114,3)									
6-5/8"	13-14	HP11-5527	4.780	(121,4)	2.44	(62,0)	4,76	(1,451)	8500	6500	207000	276000	3 1/2"
	14-17	HP11-5627	4.685	(119,0)									
	20-23	HP11-5727	4.500	(114,3)									
7"	20-24	HP11-6527	5.657	(143,7)	3	(76,2)	4,64	(1,414)	8500	6500	207000	276000	3 1/2"
	24-32	HP11-6627	5.551	(141,0)									
	17-20	HP11-7027	6.264	(159,1)									
9-5/8"	20-23	HP11-7127	6.075	(154,3)	3	(76,2)	5,37	(1,636)	8500	6500	207000	276000	3 1/2"
	23-29	HP11-7227	5.969	(151,6)									
	32-35	HP11-7327	5.811	(147,6)									
9-5/8"	17-20	HP11-7035	6.264	(159,1)	3	(76,2)	4,64	(1,414)	8500	6500	207000	276000	3 1/2"
	20-23	HP11-7135	6.075	(154,3)									
	23-29	HP11-7235	5.969	(151,6)									
9-5/8"	32-35	HP11-7335	5.811	(147,6)	3	(76,2)	5,37	(1,636)	8500	6500	207000	276000	3 1/2"
	29,3-36	HP11-9535	8.594	(218,3)									
	40-47	HP11-9635	8.437	(214,3)									
9-5/8"	47-53,5	HP11-9735	8.217	(208,7)	3	(76,2)	5,37	(1,636)	8500	6500	207000	276000	3 1/2"

2.2 PACKER HYDRA HP20 SERIES

Hydraulic Set Packer - Pull to Release

OVERVIEW

HYDRA HP20 Series is a hydraulic set packer, which be used in virtually any production application. It combines the performance of a permanent packer with the conveniences of a retrievable packer.

Tubing pump pressure is used to set the packer and the setting force is locked into the packer by a body lock ring. A large internal by-pass reduces swabbing when running and retrieving. The by-pass closes when the packer is set and opens during the releasing process to allow pressure equalization. Shear screws are used to control the packer release.

FEATURES

- Adjustable setting initiation pressure.
- Adjustable shear release.
- Straight pull release.
- High-performance, three-piece element system.
- Release safety system.
- Manufacturer in compliance with API 11D1. Designation grade: V6. Quality grade: Q3.

SETTING OPERATION

Firstly, determine the number of setting pins, and then it is necessary to deepen the tool up to the indicated zone and apply the necessary pressure for the shear of the safety pins for then packing the tool. In order to obtain a perfect packing of the **HYDRA HP20** retrievable packer, it is required a pressure that varies from 2200psi to 3000psi. It is essential to consider the hydrostatic differential that possibly exists at the moment of applying the before mentioned pressure; this latter will be diminished by the difference of fluid levels between the internal and external part of the tubing. This tool can be left with weight, tension or in neutral position as preferred.

RELEASING OPERATION

For release process of **HP20 Series**, it is necessary to tighten the tubing string with a surface value higher than the string weight together with the release system shear value, wait for pressure equalization and then it can be lifted it up softly.



2.2 PACKER HYDRA HP20 SERIES

Hydraulic Set Packer - Pull to Release

CASING		WEIGHT lbs/ft	PRODUCT NUMBER	TOOL DIMENSIONS				LOADS			Thread Connection (Box- Pin)
OD in	OD (mm)			ID in	ID (mm)	Length ft	Length (m)	Maximum Work Pressure psi (Kg/cm ²)		Maximum strength on the mandrel	
						Above psi (Kg/cm ²)	Below psi (Kg/cm ²)	Work lbs (Kgf)	Yield lbs (Kgf)		
4 1/2		9,5-13,5	HP20 4523	3,772 (95,8)	4,95 (1,508)	2	10000	10000	105500	135000	2 3/8"
		11,5-13	HP20 5023	4,248 (107,9)	5,50 (1,676)						
5		15-18	HP20 5123	4,126 (104,8)	5,77 (1,760)	2	(703)	(703)	(47855)	(91236)	2 3/8"
		13-14	HP20 5523	4,780 (121,4)	5,77 (1,760)						
5 1/2		15,5-17	HP20 5623	4,638 (117,8)	5,77 (1,760)	2,44	10000	8000	185000	255000	2 7/8"
		20-23	HP20 5723	4,500 (114,3)	5,77 (1,760)						
6 5/8		13-14	HP20 5527	4,780 (121,4)	7,69 (2,346)	3	(703)	(562)	195000	267000	3 1/2"
		15,5-17	HP20 5627	4,638 (117,8)	7,69 (2,346)						
7		20-23	HP20 5727	4,500 (114,3)	7,69 (2,346)	2,44	10000	8000	185000	255000	2 7/8"
		20-24	HP20 6527	5,657 (143,7)	7,69 (2,346)						
8 5/8		20-24	HP20 6627	5,551 (141,0)	7,69 (2,346)	3	(703)	(562)	195000	267000	3 1/2"
		20-24	HP20 6535	5,657 (143,7)	7,69 (2,346)						
9 5/8		20-23	HP20 7135	5,969 (151,6)	8,3804 (2,555)	2,44	9000	7500	185000	255000	2 7/8"
		20-23	HP20 7235	5,969 (151,6)	8,3804 (2,555)						
7 5/8		20-24	HP20 7035	6,811 (173,0)	8,856 (2,700)	3	5000	(302)	195000	267000	3 1/2"
		20-24	HP20 7527	6,811 (173,0)	8,856 (2,700)						
8 5/8		26,4-29,7	HP20 7627	6,669 (169,4)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		33,7-39	HP20 7727	6,457 (164,0)	9,6104 (2,930)						
9 5/8		20-24	HP20 7035	6,811 (173,0)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		26,4-29,7	HP20 7135	6,669 (169,4)	9,6104 (2,930)						
8 5/8		33,7-39	HP20 7235	6,457 (164,0)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		24-28	HP20 8535	7,780 (197,6)	9,6104 (2,930)						
9 5/8		32-40	HP20 8635	6,350 (161,3)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		44-49	HP20 8735	7,311 (185,7)	9,6104 (2,930)						
8 5/8		29,3-36	HP20 8535	8,594 (218,3)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		40-47	HP20 8635	8,437 (214,3)	9,6104 (2,930)						
9 5/8		47-53,5	HP20 9735	8,217 (208,7)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		24-28	HP20 8545	7,780 (197,6)	9,6104 (2,930)						
8 5/8		32-40	HP20 8645	6,350 (161,3)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		44-49	HP20 8745	7,311 (185,7)	9,6104 (2,930)						
9 5/8		29,3-36	HP20 9545	8,594 (218,3)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		40-47	HP20 9645	8,437 (214,3)	9,6104 (2,930)						
9 5/8		47-53,5	HP20 9745	8,217 (208,7)	9,6104 (2,930)	3,96	5000	4300	208000	288000	4 1/2"
		24-28	HP20 8545	7,780 (197,6)	9,6104 (2,930)						

Rubber Trim Upgrade Options (additional cost, inquire with a DPC OILFIELD SUPPLY S.A. sales associate).
Other sizes, connections, and rubber options available upon request.
DPC-OFS supplies the Feedthrough series of this model: **HYDRA HP21**. Feedthrough in size 3/8" NPT; Innox316 or Incoloy
Manufactured in compliance with API 11D1. Designation grade: V6 - Quality grade: Q3

2.3 PACKER HP30 SERIES

Seal Bore Packer

OVERVIEW

HP30 Series is a Retrievable Seal Bore Production Packer with honed ID. This reliable packer is suited for most production, testing or stimulation applications. The **HP30 Series** is available in a variety of metallurgical and elastomeric versions to suit even the most hard well conditions, including high H2S and CO2 content, as well as high chloride concentration and extreme temperatures.

This model could be setting by Wireline or Hydraulic Setting Tool and it have the advantages of a Retrievable Packer.

FEATURES

- Honed ID.
- Packer is not affected by tubing expansion or contraction forces and cannot be accidentally unset.
- One piece, double acting slips securely hold the packer against pressure differentials.
- The setting force is applied directly to the element, ensuring a full and hard pack-off even with high multi-durometer element.
- The setting mechanism is actuated hydraulically with pump pressure at any depth allowing the tubing to be displaced and the packer to be set after the well is flanged up.
- The packer is fully compatible with **DPC-OFS** sealing accessories.
- Simple and reliable releasing systems straight pull on retrieving tool.
- The packer locking mechanism is reliably protected from the washing action of the flow and from collisions with any tools that can be run through the packer.
- Packer design enables the use of tubing applied pressure for releasing utilizing the **DPC 30-RETRIEVING TOOL**.
- Manufacturer in compliance with API 11D1. Designation grade: V3. Quality grade: Q3.



2.3 PACKER HP30 SERIES

Seal Bore Packer

CASING O.D. (in)	WEIGHT lbs/ft	PRODUCT NUMBER	SEAL BORE (mm)	MAXIMUM WORK PRESSURE		MAXIMUM STRENGTH ON THE MANDREL	
				ABOVE psi (Kg/cm ²)	BELOW psi (Kg/cm ²)	WORK lbs (Kgf)	YIELD lbs (Kgf)
5-1/2"	13-15,5	HP30 5535	3 (76,2)	10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
	17-20	HP30 5135					
	20-23	HP30 5235					
	26	HP30 5335					
7"	17-20	HP30 7040	4 (101,6)	9.000 (633)	9.000 (633)	185.000 (84.090)	255.000 (115.900)
	23-29	HP30 7140					
	29-32	HP30 7240					
	35-38	HP30 7340					
7-5/8"	20-24	HP30 7540	6 (152,4)	9.000 (633)	8.000 (563)	195.000 (88.636)	267.000 (121.363)
	24-29,7	HP30 7640					
	29,7-33,7	HP30 7740					
	33,7-39	HP30 7840					
9-5/8"	36-40	HP30 9560		5.000 (352)	5.000 (352)		
	40-47	HP30 9660					
	47-53,5	HP30 9760					
	53,5-58,4	HP30 9860					

Rubber Trim Upgrade Options (additional cost, inquire with a DPC OILFIELD SUPPLY S.A. sales associate).
Other sizes, connections, and rubber options available upon request.
Manufactured in compliance with API 11D1. Designation grade: V6 - Quality grade: Q3

2.4 PACKER PE10 SERIES

Retainer Production Permanent Packer

OVERVIEW

PE10 Series is a Seal Bore Retainer Production Packer are the "big bore" versions of the Retainer Production Packer. The main applications are: Production, injection and zonal isolation, sump packer, Squeeze or test packer,.

FEATURES

- Solid, slim-line construction and a packing element system that resists swab-off.
- Two opposed sets of full circle, full strength slips assure that the packer will stay where it is set.
- Expandable metal back-up rings contact the casing and create a positive barrier to packing element extension.
- The largest possible opening through a drillable packer.
- Aflas packing element is available in select casing weight ranges

PE Series Seal Bore Retainer Production Packers could be dressed with different kind of compound seals.

* CR=Neoprene TFE/P=Aflas

* These tables are attended as a guide to seal suitable for specific applications.

Statements and recommendations in this chart are based on experience and knowledge of typical applications for this product.



PE10 SERIES

With guide for Mill Out Extension /
Seal Bore Extension

2.4 PACKER PE10 SERIES

Retainer Production Permanent Packer

CASING O.D. (in)	WEIGHT lbs/ft	PRODUCT NUMBER	OD TOOL in (mm)	SEAL BORE ID in (mm)	Min Bore Thru Seals Nipple in (mm)	LENGTH in (mm)	Maximum Work Pressure		Maximum strength on the mandrel	
							Above psi (Kg/cm ²)	Below psi (Kg/cm ²)	Work lbs (Kgf)	Yield lbs (Kgf)
4½	9,5-11,6	PE10 4523	3,6 (91,5)	2,39 (60,706)	1,807 (45,9)	27,2 (690,1)	10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
	11,6-15,1	PE10 4623					10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
5	21,4-24,1	PE10 5023	3,968 (100,8)	3 (76,2)	2,35 (59,7)	29,5 (749,3)	10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
	24,1	PE10 5123					10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
5½	14-17	PE10 5535	4,6 (117)	3 (76,2)	2,35 (59,7)	29,5 (749,3)	10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
	20-23	PE10 5635	4,5 (114,3)				10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
6 5/8	17-32	PE10 6540	5,5 (139,7)	4 (101,6)	2,35 (59,7)	33,5 (850,9)	10.000 (703)	10.000 (703)	105.500 (47.800)	135000 (61.200)
	17-32	PE10 7040	5,875 (149,225)				10.000 (703)	9.000 (633)	185.000 (84.090)	255.000 (115.900)
7	32-38	PE10 7140	5,65 (143,5)	4 (101,6)	2,35 (59,7)	33,5 (850,9)	10.000 (703)	9.000 (633)	185.000 (84.090)	255.000 (115.900)
	24-29,7	PE10 7540	6,5 (165,1)				9.000 (633)	8.000 (563)	185.000 (84.090)	255.000 (115.900)
7 5/8	33,7-39	PE10 7640	6,375 (161,9)	6 (152,4)	2,35 (59,7)	36,5 (927,1)	10.000 (703)	5.000 (352)	195.000 (88.636)	267.000 (121.363)
	36-47	PE10 9560	8,125 (206,4)				5.000 (352)	5.000 (352)	195.000 (88.636)	267.000 (121.363)
9 5/8	40-58,4	PE10 9660		6 (152,4)	4,875 (123,8)	36,5 (927,1)	5.000 (352)	5.000 (352)	195.000 (88.636)	267.000 (121.363)

Rubber Trim Upgrade Options (additional cost, inquire with a DPC OILFIELD SUPPLY S.A. sales associate).
Other sizes, connections, and rubber options available upon request.
Manufactured in compliance with API 11D1. Designation grade: V6 - Quality grade: Q3

2.5 PACKER MP11 SERIES

Mechanical Set Packer

OVERVIEW

MP11 Series is a retrievable mechanical-set packer which has been designed for production operations in installations of mechanical pumping, gas lift and injector wells. This packer also is typically used in high-pressure, high-temperature or geothermal applications. The double grip packer requires only a one-quarter turn to set and release it. For geothermal applications, the rotational safety release disengages the expansion joint from the packer.

FEATURES

- High-temperature steam injection (geothermal applications)
- Flexible design enables the packer to be used in various completion requirements.
- Element seals in different combinations; NBR, HNBR, Viton, PTFE. Optional element and seal configuration up to 650°F (geothermal application).
- For completion applications; bonded seals can hold 10.000 psi.
- Manufacturer in compliance with API 11D1. Designation grade: V6. Quality grade: Q3.

SETTING OPERATION

The packer should be run up to the established depth, lifting the tubing about 1 or 2 feet. Then weight should be applied keeping torque to the packer depth, this movement should be done together with a slight drop. Once weight increase is shown, it is necessary to go on increasing it up to (1000 lbs). This operation should be repeated a few times.

CAUTION; Care must be taken so that the packer is properly spaced out before setting since it is straight shear released and cannot be reset without redressing (see **THERMAL EXPANSION CHART**).

RELEASING OPERATION

It is necessary to find the tubing neutral point at the packer depth, then apply enough weight and tighten, keeping the right torque, releasing the upper slips, packing it off. At this point, the packer is producing pressure equalizations. Once this operation is finished, the packer is ready to be removed. If excessive drag is experienced, work packer up and down a few times to help relax external seal element.



2.5 PACKER MP11 SERIES

Mechanical Set Packer

CASING		PRODUCT NUMBER	TOOL										LOADS				Thread Connection (Box - Pin)
OD in	WEIGHT lbs/ft		DIMENSIONS					Maximum Work Pressure					Maximum strength on the mandrel				
			GAGES OD (mm)		DRAG BLOCK OD (mm)		ID (mm)	Length pie (m)	Above psi (Kg/cm ²)	Below psi (Kg/cm ²)	Work lbs (Kgf)	Yield lbs (Kgf)					
4 1/2	9.5-13.5	MP11 4523	3.772 (95.8)	4.51 (114.6)	4.51 (114.6)	6.93 (2.112)	10000 (703)	10000 (703)	75182 (103000)	2 3/8"	103000	135000	198000	2 3/8"			
	11.5-13	MP11 5023	4.248 (107.9)	4.95 (125.7)	4.95 (125.7)	6.93 (2.112)	10000 (703)	10000 (703)	105500 (47855)						105500 (47855)	135000 (61236)	135000 (61236)
5	15-18	MP11 5123	4.126 (104.8)	4.8 (121.9)	4.8 (121.9)	6.29 (1.919)	10000 (703)	8000	144525 (65557)	2 7/8"	198000	198000	198000	2 7/8"			
	13-14	MP11 5523	4.780 (121.4)	5.51 (141.0)	5.51 (141.0)	6.29 (1.919)	10000 (703)	8000	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
5 1/2	15.5-17	MP11 5623	4.985 (119.0)	5.40 (137.2)	5.40 (137.2)	6.50 (1.981)	8500 (598)	6500 (457)	160583 (72840)	3	220000	69792	198000	3 1/2"			
	20-23	MP11 5723	4.500 (114.3)	5.24 (133.1)	5.24 (133.1)	6.50 (1.981)	8500 (598)	6500 (457)	160583 (72840)						160583 (72840)	220000 (99792)	220000 (99792)
6 5/8	13-14	MP11 5527	4.780 (121.4)	5.51 (141.0)	5.51 (141.0)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	15.5-17	MP11 5627	4.985 (119.0)	5.40 (137.2)	5.40 (137.2)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
7	20-24	MP11 6527	5.657 (143.7)	6.59 (167.4)	6.59 (167.4)	6.50 (1.981)	8500 (598)	6500 (457)	160583 (72840)	3	220000	69792	198000	3 1/2"			
	24-32	MP11 6627	5.551 (141.0)	6.4 (162.6)	6.4 (162.6)	6.50 (1.981)	8500 (598)	6500 (457)	160583 (72840)						160583 (72840)	220000 (99792)	220000 (99792)
7 5/8	17-20	MP11 7027	6.264 (159.1)	7.16 (181.9)	7.16 (181.9)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	20-23	MP11 7127	6.075 (154.3)	7 (177.8)	7 (177.8)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
8 5/8	32-35	MP11 7327	5.811 (147.6)	6.63 (168.4)	6.63 (168.4)	6.50 (1.981)	8500 (598)	6500 (457)	160583 (72840)	3	220000	69792	198000	3 1/2"			
	17-20	MP11 7035	6.264 (159.1)	7.16 (181.9)	7.16 (181.9)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
9 5/8	20-24	MP11 7540	6.811 (173.0)	7.7 (195.6)	7.7 (195.6)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	26.4-29.7	MP11 7640	6.669 (169.4)	7.52 (191.0)	7.52 (191.0)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
9 5/8	33.7-39	MP11 7740	6.457 (164.0)	7.31 (185.7)	7.31 (185.7)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	20-24	MP11 7840	6.811 (173.0)	7.7 (195.6)	7.7 (195.6)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
9 5/8	26.4-29.7	MP11 7940	6.669 (169.4)	7.52 (191.0)	7.52 (191.0)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	33.7-39	MP11 7941	6.457 (164.0)	7.31 (185.7)	7.31 (185.7)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
9 5/8	24-28	MP11 8540	7.780 (197.6)	8.72 (221.5)	8.72 (221.5)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	32-40	MP11 8640	6.350 (161.3)	8.55 (217.2)	8.55 (217.2)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
9 5/8	44-49	MP11 8740	7.311 (185.7)	8.25 (209.6)	8.25 (209.6)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	29.3-36	MP11 9540	6.594 (167.4)	8.85 (224.3)	8.85 (224.3)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)
9 5/8	40-47	MP11 9640	8.437 (214.3)	9.62 (244.3)	9.62 (244.3)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)	4	198000	198000	198000	4"			
	47-53.5	MP11 9740	8.217 (208.7)	9.46 (240.3)	9.46 (240.3)	6.50 (1.981)	9000 (633)	7500 (527)	144525 (65557)						144525 (65557)	198000 (89813)	198000 (89813)

Dobleces Tím Libranda. Cautione (Additional heat insulate with a DPC Oilfield Supply S.A. color annotation)

2.6 AC11 ANCHOR CATCHER

Tubing Anchor - Mechanical Set

OVERVIEW

AC11 Series is reliable and sound tool designed for heavy duty service. Catcher Model is ideal of the down hole assembly where the extraction system as the mechanical pumping, produce an unwilling tubing movement that is necessary to avoid as a "Breathing Effect" or "Buckling Effect".

FEATURES

- This tool increases efficiency in pumping.
- Double mechanical grip allowing to be left in position with weight, tension or neutral.
- Low maintenance cost.
- It can be set manually with a left rotation.
- It has interchangeable parts.
- Double releasing system, normal by rotation and emergency by tension and calibrated shear pins
- It is basically made from SAE 4140 material. It has special alloys.

SETTING OPERATION

Lower de AC11 Tubing Anchor to the desired depth and rotate the tubing manually to the left hand, 6-8 turns until torque is felt. While maintaining torque, apply weight and tension with the tubing up to the precalculated elongation valve.

UNSETTING OPERATION

Lower the tubing up to the neutral point at the anchor depth. Then rotate 6-8 turns to the right hand, verify that anchor is free.

Note: It is good practice to make turns when removed it to avoid grip of slips.

EMERGENCY RELEASE: Release system is assembled with calibrated pins to obtain the value calculated over calculated tubing tension. To release the AC11 Tubing Anchor apply tension at anchor's depth up to cut-off value.



2.6 AC11 ANCHOR CATCHER

Tubing Anchor - Mechanical Set

CASING				OD (mm)	PRODUCT NUMBER	Thread Conection Box-Pin
OD	Weight (lbs/ft)	Min. (mm)	Máx. (mm)			
5"	11.5 - 18	104,8	115,8	101,6	AC11 5023	2 3/8"
5 1/2"	13 - 23	118,6	128,1	114,3	AC11 5527	2 7/8"
6 5/8"	17 - 32	144,1	155,8	139,7	AC11 6527	
7"	23 - 38	150,4	161,7		AC11 7027	
		17 - 20	164	166,1	AC11 7127	
6 5/8"	17 - 32	144,4	155,8		AC11 6535	3 1/2"
7"	17 - 38	150,8	166,1		AC11 7035	

2.7 A-HYD ANCHOR

Tubing Anchor - Hydraulic Set

OVERVIEW

A-HYD Series of Tubing Anchor Hydraulic-Set, is reliable and hardy tool designed for heavy duty service. It's an ideal part of downhole assembly where the extraction system as the mechanical pumping produces an unwilling tubing movement that is necessary to avoid as a "Breathing Effect" or "Buckling Effect".

FEATURES

- Hydraulic set.
- The handling tubing is not required.
- Double mechanical grip that anchor to stay in position under weight, tension or neutral.
- Double releasing system. Normal by rotation (1/4 turn over) and emergency release by calibrated pre-set shear pins (Pull-to Release).
- Easy redress.

SETTING OPERATION

Install the A-HYD Series so close to the pump as you want, below or above; this model could be installing in any position of the string. Lower the anchor tubing the desired depth; apply pressure by direct until to the prefix value shear pins.

RELEASE OPERATION

The release process just need apply a minimum torque and rotate ¼ turn to the right hand. The emergency release shear value, must be dressed with at least 10.000 pds. higher than working tension calculated to be left in the well; when the emergency release system is used, tension is applied only depth to the prefix shear value (Pull-to-Release).



2.7 A-HYD ANCHOR

Tubing Anchor - Hydraulic Set

CASING		PRODUCT NUMBER	TOOL DIMENSIONS						THREAD CONNECTION					
SIZE in	WEIGHT lbs/ft		OD		ID		Length		Work lbs (Kgf)	Yield lbs (Kgf)	Torque		Size B-P	
			in	(mm)	in	(mm)	pie	(m)			ft-lb (Kgm)	min		ft-lb (Kgm)
4 1/2"	9.5 - 13.5	AHYD 4523	3,740	(95,0)	2	(50,8)	3,22	(,98)	80230 (36468)	104300 (47409)	1350 (187)	1800 (249)	2250 (311)	2 3/8"
	20,8	AHYD 5123	3,976	(101,0)										
5"	11,5-18	AHYD 5023	4,094	(104,0)	2,37	(60,2)	3,78	(1,15)	165000 (83916)	255000 (115668)	1725 (238)	2300 (318)	2875 (397)	2 7/8"
	13-14	AHYD 5523	4,780	(121,4)										
5 1/2"	14-17	AHYD 5623	4,680	(119,0)	3	(76,2)	4,15	(1,26)	207000 (93895)	276000 (195194)	2400 (332)	3200 (442)	4000 (553)	3 1/2"
	20-23	AHYD 5723	4,500	(114,3)										
7"	13-14	AHYD 5527	4,780	(121,4)	3	(76,2)	4,15	(1,26)	185000 (83916)	255000 (115668)	1725 (238)	2300 (318)	2875 (397)	2 7/8"
	14-17	AHYD 5627	4,680	(119,0)										
	20-23	AHYD 5727	4,500	(114,3)										
	17-20	AHYD 7027	6,264	(159,1)										
	20-23	AHYD 7127	6,075	(154,3)										
	23-29	AHYD 7227	5,969	(151,6)										
	32-35	AHYD 7327	5,811	(147,6)										
	17-20	AHYD 7035	6,264	(159,1)										
	20-23	AHYD 7135	6,075	(154,3)										
	23-29	AHYD 7235	5,969	(151,6)										
32-35	AHYD 7335	5,811	(147,6)											

3.1 OVERCOUPLING PROTECTOR (CLAMPS)

Service Tools

ESP CABLE AND CONTROL LINE PROTECTOR

ESP cable and control line protectors (stamping) are used to protect any configuration of ESP cables, control lines or encapsulated lines in the wellbore. Channels are designed to shield cables or lines as they transit across the tubing coupling to prevent from damage during installation or retrieval of completions. Field installation is quick and simple using hydraulic driven installation tools.

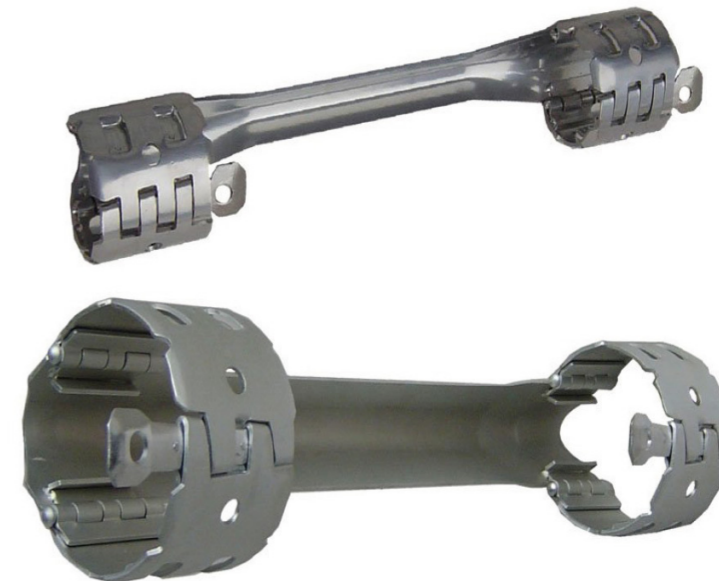
FEATURES

- ESP Cable.
- Surface safety valves control line.
- Chemical injection line.
- Coiled Tubing application.
- Permanent gauges.
- Intelligent wells.
- Fiber Optics.

PIPE SIZE	COUPLING TYPE	CABLE SIZE	CONTROL LINE
2-3/8"	EUE	#1 FLAT	1/8"
2-7/8"	NUE	#2 FLAT	1/4"
3-1/2"	FOX	#3 FLAT	3/8"
4"	VAM TOP	#4 FLAT	11X11mm
4-1/2"	BGT1	#1 ROUND	-
-	-	#2 ROUND	-

AVAILABLE

- Cross coupling protectors. Mid joint protectors.
- Materials; carbon steel or stainless steel.
- Tubing sizes from 2-7/8" OD to 7" OD.
- Configurations for flat, round, or square cables, lines.
- Custom-made upon request



GASLIFT EQUIPMENTS

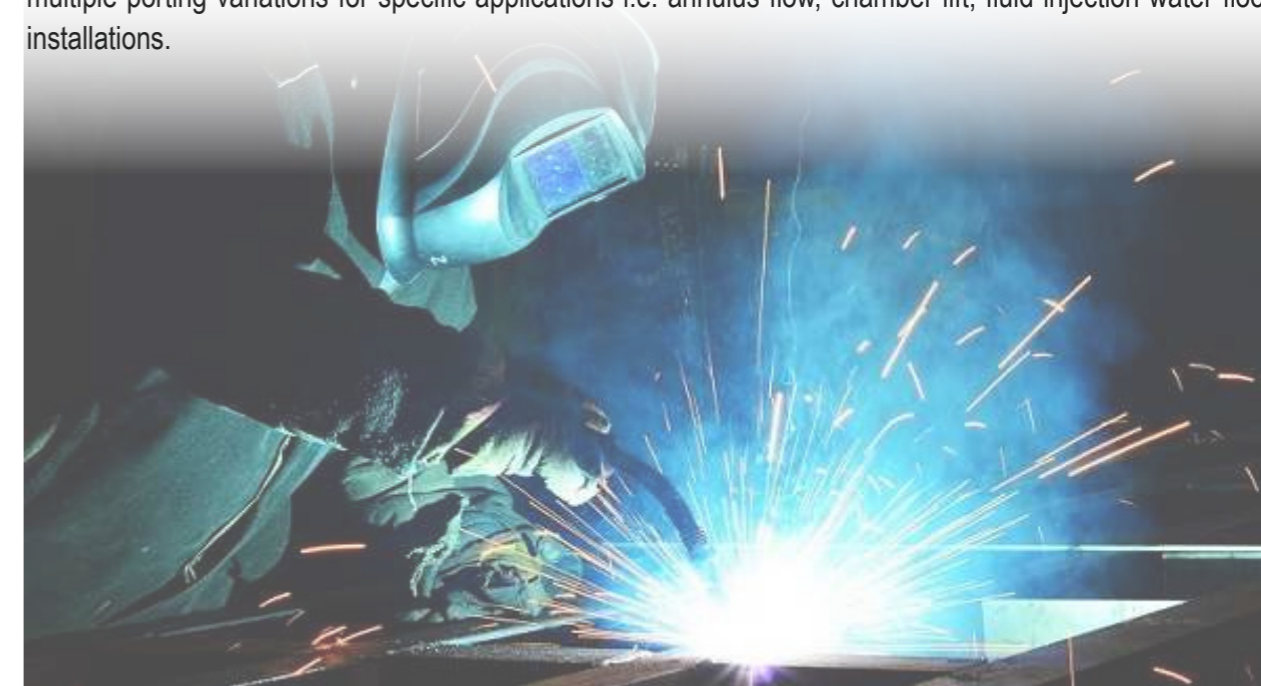
- **SIDE POCKET MANDRELS FORGED**
- **SIDE POCKET MANDRELS ROUND BODY - HIGH PRESSURE**
- **DUMMY VALVES**
- **RWF-1R VALVES & LATCHES**
- **WATERFLOODING TOOLS**

Side pocket mandrels are completion components that house gaslift valves and other devices that communicate with the annulus. These mandrels enable rapid retrieval and replacement of the gaslift valves without having to pull the tubing, making them essential in wells with highly variable production or where tubing retrieval would compromise well economics. For a single well or an entire field, **DPC-OFS** side pocket mandrels provide a cost-effective edge to help operators maximize production and revenue in a competitive and demanding market.

DPC-OFS has continuously improved both engineering design and equipment manufacturing processes to produce the most advanced premium side pocket mandrel range on the market.

Operators can install with confidence because each side pocket mandrel will deliver maximum added value to an oil or gas well.

KGD & MGD Series are SPM forged with integral tool discriminator, oval pipe, swages and orienting sleeves. Its orienting sleeve allows precise and proper alignment during the insertion of positioning devices/tools into the side pocket. Tool discriminator guides the proper diameter side pocket devices/tools into the mandrel pocket and deflects larger tools into the tubing bore to prevent damage to the positioning devices/tools. In Gas Lift applications, high pressure gas injected into the casing annulus flows through the ports of the pocket in the gas lift valve and into the tubing. The standard pocket in the ported between the seal bores to communicate with the casing annulus and the gas is circulated down the annulus through the gas lift valve into the tubing. These mandrels are used for tubing flow applications. Both **KGD** and **MGD** series feature multiple porting variations for specific applications i.e. annulus flow, chamber lift, fluid injection water flood installations.



1.1 SIDE POCKET MANDREL KD238

SPM FORGED

OVERVIEW

KD238 Series are **SPM** designed with a SAE 4130 low alloy steel oval section tube and are available in API-EUE 8RD Box-Box thread configuration.

The ends of the mandrel are forged integrally ending in an eccentric round cross section. This eccentric end allows to make the threaded connection and achieve the continuity of passage with an internal drift control.

This lateral outlet mandrel model, developed by **DPC-OFS**, can accommodate all water/gas regulating valves or blind valves with a nominal diameter of 1". This is achieved by the incorporation of a tubular pocket made of an integral piece, welded by welding procedures and qualified welders. The diameter for seal of the packings, meets the requirements of dimensions and surface finish required by API Std. 11D1.

The pocket has a shoulder at the entrance that allows the use of valves with type R, RA locks.

The mandrel **KGD238** Series incorporates a guiding sleeve (G), to help the positive alignment of the kickover tool.

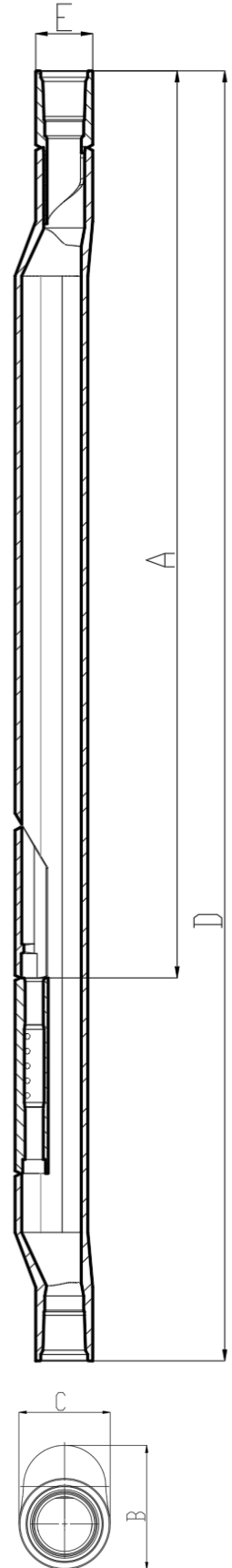


1.1 SIDE POCKET MANDREL KD238

SPM FORGED

CASING 5-1/2" (14 - 20#)											
CODE	KD 238 3030	KGD 238 3030	KD 238 3030	KGD 238 3030N	KD 238 3016	KGD 238 3016	KD 238 1616	KGD 238 1616	KD 238 1616	KGD 238 1616	
TEST PRESSURE				5000			4500			4500	
IN											
OUT											
Material del cuerpo				SAE 4130							AISI 316L
Material del bolsillo				SAE 4130							AISI 316L
Recubrimiento				NIQUELADO 45µ							
Servicio	Normal	Normal	Corrosivo (**)	Corrosivo (**)	Corrosivo	Corrosivo	Corrosivo	Corrosivo	Corrosivo	Corrosivo	Corrosivo
UNIDADES S.I. (Unidades std de campo)											
Nro de Parte	50002380020	50002380016	50002380019	50002380021	50002380017	50002380018	50002380022	50002380023			
Camisa Orientadora	NO	SI	NO	SI	NO	SI	NO	SI	NO	SI	
Drift Interno Tbg				49,2 (1,93 in)							
Distancia Referencia		1240 (48,8)		1240 (48,8)		1240 (48,8)		1240 (48,8)		1240 (48,8)	
Drift Externo Csg				118 (4,64 in)							
Oval Min				101,6 (4 in)							
Largo Total	1812 (71,3 in)	2028 (79,8 in)	1812 (71,3 in)	2028 (79,8 in)	1812 (71,3 in)	2028 (79,8 in)	1812 (71,3 in)	2028 (79,8 in)	1812 (71,3 in)	2028 (79,8 in)	
OD cabezal				82 (3,2 in)							
Diametro de Valvula				25,4 (1 in)							
Traba de Valvula				R, RA, BK-2, BEK-2, M, Integral							
Kickover tool				L, L-2D							
Conexión			91.100 kgs (198400 lbs)							61.000 kgs (132850 lbs)	
											API EUE 8RD 2-3/8" Box-Box (*)

* Otras conexiones y opcion Box-Pin disponible bajo pedido.
** Para medios agresivos que no justifiquen el uso de piezas en AISI316L



1.1 SIDE POCKET MANDREL KD238

SPM FORGED

Handling and Storage Procedures

KGD & MGD mandrels leave the manufacturing building complying with quality procedures for storage and dispatch. It is recommended to follow the proper practices during their transit, storage and handling prior to their use.

- All **DPC** side pocket mandrels must be handled with their thread protectors in place. If stowed temporarily, do it on racks or metal or wood surfaces free of stones, sand or dirt..
- Must be inspect during receipt. Avoid shocks during loading and unloading operations. If a mandrel falls to the ground, the thread may be damaged or the body may be struck. Damaged threads can suffer fluid loss or fracture during service. Shocks on the body reduce resistance to internal and/or external pressure.
- Place bars of wood between successive layers of mandrels if you stack more than one. This prevents the mandrels from leaning directly on their threaded ends and deforming.
- All end threads and pocket seal areas must be protected with corrosion inhibitor.

Installation and repair procedure

Prior to installation, remove the thread protectors and clean the threads of the storage grease with a solvent (do not use diesel oil) or pressurized water, then remove all traces of moisture.

If for any reason the threads present dirt, apply the following procedure:

Inspect the all threads; looking for excessive wear, ovalization, dents, oxidation. Those that present damages, should be left aside until their final disposal.

Before installation, verify the internal drift by a **5CT API** gauge of the pass-not-pass type. Those mandrills that could not pass the drift control should be left aside until their final disposal.

Check the direction of the mandrel. For this, all the mandrels have an arrow indicating the upper end, next to the word "**UP**".

For connection and installation, use API greases (API Bull 5A2).

Make sure the threads are aligned vertically before torque. Once aligned, start tapping to the manual adjustment position. Avoid that the threads rotate freely on if without achieving screw on.

During torque operations, avoid any surface damage, either with the torque tool and/or the clamping tool. Any surface damage must be repaired manually.

Do not apply excess tension to the joint since the yield point of the material can be exceeded, favoring the engagement of the joint.

When removing the side pocket mandrel, do not hit the unions to facilitate unscrewing. Avoid oscillating the mandrel when Tubing is still connected. Lift the mandrel slowly when unscrewing the last thread.

Once separated from the tubing, place the protectors at both ends.