

PRODUCTION PACKERS

WELL COMPLETION SYSTEMS



Gas Lift Solutions
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ABOUT US

Penguin Petroleum Services (P) Limited (PPSL) delivers end-to-end E&P solutions, from engineering through product realisation, with reliable delivery and real value for customers.

Its 90,000 sqft facility, off the Mumbai–Pune Expressway, India, houses design & development, manufacturing, and validation/functional testing under one roof.

YEARS OF EXPERIENCE

15+

COUNTRIES SERVED

35+

Equipment includes:

- Mechanical and metrology labs
- NDE equipment
- Sucker Rod Pump tooling
- CNC turning centres, VMCs, Turn-Mills
- Make-up/break-out machine (100,000 ft/lbs torque)
- Honing and deep-hole drilling machines

Testing capability:

- Downhole tools up to 1,200,000 lbf bi-directional load
- Liquid (ISO V3) and nitrogen gas (ISO V0) pressure testing, up to 20,000 psi
- Four separate/simultaneous test channels
- Ambient temperature range up to 500°F

Backed by this equipment and a skilled workforce, PPSL's India-based delivery centre offers bespoke engineering, precision machining, manufacturing, testing and assembly at a world-class standard.

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HYDRAULIC PACKERS

STRAIGHT-PULL TO RELEASE

HYDRAULIC-SET RETRIEVABLE PACKER - CAP-3

The PPSL Hydraulic-Set Retrievable Packer, CAP-3 is a highly compact and cost-effective solution specifically engineered for low to medium pressure applications. Its short body design is particularly advantageous in tight radius deviations and horizontal well configurations, where space is limited. The packer is designed to set without requiring downward mandrel movement, which not only simplifies installation but also allows for stacked applications, making it versatile in various well conditions.

For retrieval, the packer features a straight-pull release mechanism, which provides a straightforward and reliable method to release the tool. The packer also incorporates built-in bypass ports that equalize pressure across the tool, promoting ease during retrieval by reducing differential pressure forces.



Additionally, the shear-release mechanism is carefully isolated from the hydraulic system of the packer, ensuring that even under full pressure differentials, only low release forces are needed to disengage the packer. This thoughtful design improves operational efficiency and minimizes the risk of equipment damage, contributing to the overall reliability and performance of the packer in challenging well conditions.

Key Features

- ◆ No downward mandrel movement for setting
- ◆ Low setting pressure: 2,000 psi minimum.
- ◆ Straight-pull release, adjustable up to 50,000 lb
- ◆ Shear screws isolated from hydraulic pressure
- ◆ Short overall length.
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F (standard trim)
- ◆ Material: L-80 or equivalent for H2S service

Benefits

- ◆ Minimal shear-out force required, even at full pressure differential
- ◆ Cost-effective design allows easy redress of the packer
- ◆ Can be positioned using rig pumps
- ◆ Stacked-packer installations with sequential setting

Applications

- ◆ Offshore oil and gas applications with low to medium pressure requirements
- ◆ Highly deviated wells and severe doglegs
- ◆ Stacked-packer completions
- ◆ Coiled-tubing completions
- ◆ Injection wells
- ◆ Hydrogen sulfide (H2S) environments



CAP-3 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER		
Size (in)	Weight (lb/ft)	Weight (lb/ft)	Weight (lb/ft)	Gage Ring OD (in)	ID (in)	Connection
5 1/2	14 - 17	4.892	5.012	4.625	2.000	2 - 3/8" EUE
	17 - 23	4.670	4.892	4.500	2.000	2 - 3/8" EUE
6 5/8	24 - 28	5.791	5.921	5.540	2.373	2 - 7/8" EUE
7	17 - 29	6.088	6.629	6.000	2.441	2 - 7/8" EUE
	29 - 32	6.293	5.990	5.875	2.441	2 - 7/8" EUE
	20 - 26	6.276	6.456	6.000	2.361	2 - 7/8" EUE
	26 - 32	6.094	6.276	5.891	2.361	2 - 7/8" EUE
	23 - 29	6.184	6.366	6.005	2.900	3 - 1/2" EUE
	32 - 35	6.004	6.904	5.754	2.938	3 - 1/2" 9.2 lb/ft
9 - 5/8	43.5 - 53.5	8.535	8.755	8.250	2.919	3 - 1/2" EUE





HYDRAULIC SET RETRIEVABLE PRODUCTION PACKER, PHS-I

The PPSL PHS-1 is a high-pressure, double-grip, retrievable hydraulic-set production packer, designed to provide superior sealing and reliability in demanding well environments. It operates with a straightforward straight-pull release mechanism on the tubing string, ensuring ease of retrieval. One of its key features is an upper-slip releasing system, which minimizes the strain required to release the slips, enhancing operational efficiency. When a key non-directional slip is dislocated, it triggers the automatic release of the remaining slips, ensuring smooth and reliable operation during retrieval.

The PHS-1 production packer is specifically recommended for use in well completions where the packer needs to be set after the well has been flanged up, offering versatility in post-installation applications. It is also highly effective in deviated holes and gas-lift installations, as well as other scenarios where a mechanical-set packer would not be suitable. Additionally, the PHS-1 is ideal for stacked installations. Its built-in zone-activated pressure-balance system helps to offset pressure differentials across the packer, ensuring consistent and reliable sealing, even in environments with fluctuating pressure conditions. This feature enhances the packer’s versatility, making it suitable for a wide range of well types and applications

Key Features

- ◆ Upper-slip releasing mechanism
- ◆ All components are securely locked to prevent pre-setting
- ◆ Tension force to release packer can be easily adjusted before running
- ◆ Release shear pins are unaffected by differential pressures variations
- ◆ Tension force required to release the packer can be easily adjusted in the field
- ◆ Pressure differential rating: 7,500 psi
- ◆ Temperature rating: 300°F

Benefits

- ◆ Straight pull release
- ◆ Balance system offsets pressure reversals
- ◆ Mechanical upper slips
- ◆ Can be converted to selective set

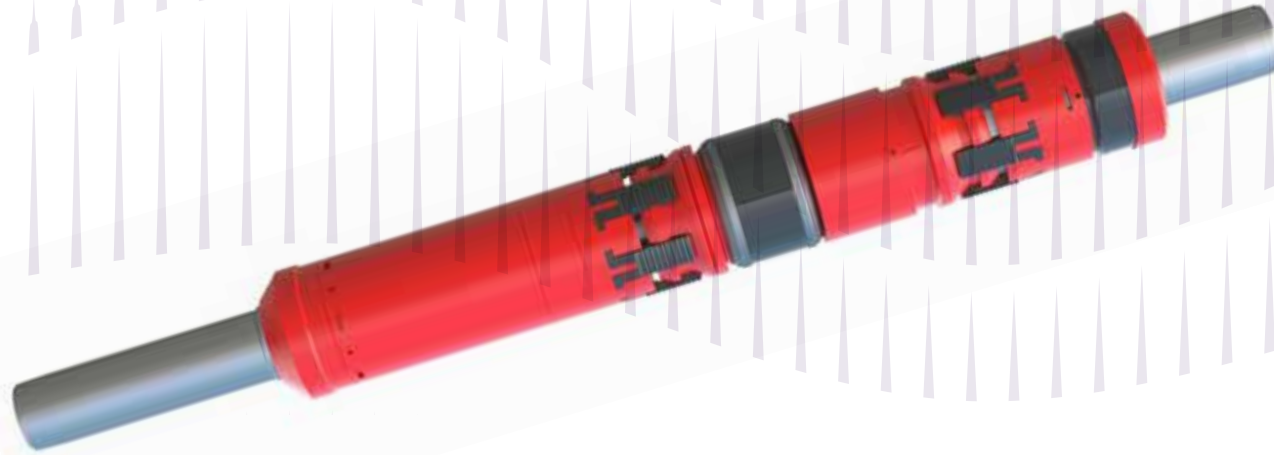
Applications

- ◆ Offshore oil and gas applications
- ◆ Highly deviated wells and severe doglegs
- ◆ Stacked-packer completions
- ◆ Coiled-tubing completions

PHS-1 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER		
O.D. (in)	Weight (lb/ft)	Min. ID (in)	Max. ID (in)	Gage Ring OD (in)	ID (in)	Connection
4 1/2	9.5 - 13.5	3.920	4.090	3.766	1.938	2 - 3/8" EU 8 RD
5	15 - 18	4.276	4.408	4.125	1.938	2 - 3/8" EU 8 RD
	11.5 - 15	4.408	4.560	4.141	1.938	2 - 3/8" EU 8 RD
5 1/2	20 - 23	4.670	4.778	4.516	1.984	2 - 3/8" EU 8 RD
	13 - 20	4.778	5.044	4.641	1.984	2 - 3/8" EU 8 RD
	9 - 13	5.044	5.240	4.875	1.984	2 - 3/8" EU 8 RD
	20 - 23	4.670	4.778	4.500	2.375	2 - 7/8" EU 8 RD
	15.5 - 20	4.778	4.950	4.641	2.375	2 - 7/8" EU 8 RD
	13 - 15.5	4.892	5.044	4.781	2.375	2 - 7/8" EU 8 RD
5 - 3/4	18.6 - 25	4.882	5.118	4.641	1.984	2 - 3/8" EU 8 RD
6	23 - 26	5.132	5.240	4.875	1.984	2 - 3/8" EU 8 RD
6 - 5/8	24 - 32	5.675	5.921	5.500	2.500	2 - 7/8" EU 8 RD
	17 - 24	5.921	6.135	5.781	2.908	3 - 1/2" EU 8 RD
	20 - 24	5.921	6.049	5.750	2.500	2 - 7/8" EU 8 RD
7	26 - 35	6.004	6.276	5.875	2.500	2 - 7/8" EU 8 RD
	17 - 29	6.184	6.538	6.000	2.500	2 - 7/8" EU 8 RD
	26 - 35	6.004	6.276	5.875	3.000	3 - 1/2" EU 8 RD
	17 - 29	6.184	6.538	6.000	3.000	3 - 1/2" EU 8 RD
7 - 5/8	29.7 - 39	6.625	6.875	6.458	2.908	3 - 1/2" EU 8 RD
				6.485	2.485	2 - 7/8" EU 8 RD
	11.5 - 15	4.408	4.560	6.625	2.908	3 - 1/2" EU 8 RD
				6.630	2.485	2 - 7/8" EU 8 RD
8 - 5/8	28 - 40	7.725	8.017	7.536	2.984	3 - 1/2" EU 8 RD
9 - 5/8	40 - 53.5	8.535	8.835	8.250	2.984	3 - 1/2" EU 8 RD
	29.3 - 43.5	8.755	9.063	8.500	2.984	3 - 1/2" EU 8 RD
	40 - 53.5	8.535	8.835	8.250	3.937	4 - 1/2" EU 8 RD
10 - 3/4	60.7 - 71.1	9.450	9.660	9.200	2.910	3 - 1/2" EU 8 RD
					4.875	5 - 1/2" BUTTRESS
13 - 3/8	68 - 72	12.347	14.415	12.000	3.000	3 - 1/2" EU 8 RD



HIGH-PRESSURE HYDRAULIC-SET RETRIEVABLE PRODUCTION PACKER – PB1

The PPSL high-pressure retrievable hydraulic-set production packer PB1 is specifically designed to provide exceptional strength, reliability, and a long service life, particularly in high-rate production or water injection wells. It is engineered to handle differential pressures of up to 10,000 psi (69 MPa), making it suitable for some of the most demanding well environments. The packer's construction features a durable, single-mandrel design combined with a slip-element-slip configuration, which significantly enhances its operating envelope and ensures robust performance even under extreme conditions.

Setting the PB1 packer is straightforward: it is activated by pressuring up the tubing with any plugging device located below the packer. For applications where no plugs are needed, the PB1 offers an optional hydrostatic setting trigger that can be added beneath the packer. This hydrostatic trigger requires no hydraulic lines, simplifying installation and operation, and is equipped with anti-preset features to prevent unintentional setting, providing additional reliability in the field.

Another key feature of the PB1 packer is its versatile architectural design, which allows for easy modification between different release mechanisms. With a simple conversion kit, the packer can be transformed from a standard cut-to-release (CTR) packer to a straight-pull-to-release (SPR) packer, offering flexibility depending on the specific needs of the well completion. This adaptability makes the PB1 highly versatile and suited for a wide range of well types and completion requirements.

Key Features

- ◆ Debris barrier protected slips
- ◆ One-piece mandrel
- ◆ Big-bore versions
- ◆ Optional configurable hydrostatic setting trigger
- ◆ Pressure differential rating: 10,000 psi
- ◆ Temperature rating: 300°F

Benefits

- ◆ Eliminates tubing movement during installation
- ◆ A programmable release mechanism makes inventory management easier
- ◆ Increases application flexibility via broad operating envelope

Applications

- ◆ High-significance applications such as offshore and high-pressure wells
- ◆ Vertical, deviated, and horizontal wellbores
- ◆ Non-intervention single-trip completions
- ◆ High-rate production and injection wells

PB1 PACKER

(SPECIFICATION GUIDE)

Casing (in)	Casing Weight Range (lb/ft)	Tubing (in)	Max Working Temperature (°F)	Pressure Rating (psi)	Release
7	23 - 38	4 ½	300	10000	CTR / SPR
		6.293			
7 - 5/8	29.7	3 ½	300	10000	CTR
9 - 5/8	40 - 53.5	7	300	10000	CTR / SPR
9 - 7/8	62.8	5 ½	300	10000	CTR / SPR
10 - 1/8	75.9 - 79.29	4 ½	300	10000	CTR / SPR
10 - 3/4	60.7 - 65.7	7	300	10000	CTR
13 - 3/8	68 - 72	9 5/8	300	10000	CTR
13 - 5/8	88.2	7	300	10000	CTR



HYDRAULIC SET, RETRIEVABLE PRODUCTION PACKER – PPFH

The PPSL Hydraulic set Retrievable Production Packer PPFH, is a highly regarded, industry-standard single-string retrievable packer, combining fully hydrostatic, hydraulic-set, and shear-release features to provide dependable performance in demanding well environments. This packer operates by applying tubing pressure against a plugging device beneath it, triggering the hydraulic setting mechanism to secure the packer in place, ensuring a tight seal even in fluctuating conditions.

The shear-release mechanism allows the packer to be easily released with a simple straight-pull action, which minimizes operational complexity and enhances the speed of retrieval. This makes the PPFH an ideal choice for applications where efficiency and ease of maintenance are crucial. Its design allows for smooth operations in wells with varying pressure and temperature conditions, and its simplicity reduces the risk of equipment malfunction, providing peace of mind for operators. The PPFH packer is particularly suited for single-string applications that require reliable sealing and straightforward retrieval under challenging down-hole conditions.

Key Features

- ◆ Operationally simple
- ◆ Hydraulically activated, hydrostatic set-low pressure, rig pump capable activation.
- ◆ Field adjustable shear release
- ◆ Built-in un-loader and bypass to aid in releasing and retrieving
- ◆ Pack-off is mechanically locked constantly reinforced by hydrostatic pressure.
- ◆ Triple seal multiple durometer elements ensure pressure integrity over a wide range of temperatures and conform easily to casing irregularities.
- ◆ No mandrel movement during setting allows stacked packer application.
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Applications

- ◆ Production, injection and zonal isolation.
- ◆ Single string selective completions or dual string completions with multiple packers.
- ◆ Deviated wells or other application where no rotation for installation or removal is desired.
- ◆ Application where displacing and setting after the well is flanged up is desirable.
- ◆ Test the tubing string before packer setting or to independently set and test individual packer in multiple packer completion.

PPFH PACKER

(SPECIFICATION GUIDE)

CASING			PACKER			
O.D.		Weight	Nom ID		Max Gage Ring OD	
(in)	(mm)	(lb/ft)	(in)	(mm)	(in)	(mm)
4 - 1/2	114.3	9.5 - 13.5	1.978	50.2	3.786	95.2
5	127.0	15 - 18	1.978	50.2	4.140	105.2
		11.5 - 15			4.255	108.3
5 - 1/2	139.7	26	1.978	50.2	4.255	108.3
		20 - 23			4.515	114.7
		15.5 - 20			4.656	118.3
		13 - 15.5			4.796	121.8
6	152.4	26	1.978	50.2	4.796	121.8
		20 - 23			5.078	129.0
		15 - 18			5.171	131.3
6 - 5/8	168.3	34	1.978	50.2	5.421	137.7
		28 - 32			5.499	139.7
		24 - 28			5.603	142.3
7	177.8	38	2.416	61.4	5.603	142.3
6 - 5/8	168.3	24	2.416 or 2.000	61.4 or 50.8	5.671	144.0
		17 - 20			5.827	148.0
7	177.8	38	2.416 or 2.000	61.4 or 50.8	5.671	144.0
		32 - 35			5.827	148.0
		26 - 29			5.983	152.0
		20 - 26			6.093	154.8
		17 - 20			6.281	159.5
7 - 5/8	193.7	33.7 - 39	2.416 or 2.000	61.4 or 50.8	6.468	164.3
		24 - 29.7			6.687	169.9
		20 - 24			6.827	173.4
8 - 5/8	219.1	44 - 49	3.000 or 2.416 or 2.000	46.2 or 61.4 or 50.8	7.327	186.1
		32 - 40			7.546	191.7
		20 - 28			7.796	198.0
9 - 5/8	244.5	47 - 53.5	3.000 or 2.416 or 2.000	46.2 or 61.4 or 50.8	8.233	209.1
		40 - 47			8.452	214.7
		29.3 - 36			8.608	218.6



HYDRAULIC SET, RETRIEVABLE PRODUCTION PACKER (LARGE BORE) – PPFHL

The PPSL Hydraulic set Retrievable Production Packer PPFHL is a highly regarded, industry-standard single-string retrievable packer, combining fully hydrostatic, hydraulic-set, and shear-release features to provide dependable performance in demanding well environments. This packer operates by applying tubing pressure against a plugging device beneath it, triggering the hydraulic setting mechanism to secure the packer in place, ensuring a tight seal even in fluctuating conditions.

The shear-release mechanism allows the packer to be easily released with a simple straight-pull action, which minimizes operational complexity and enhances the speed of retrieval. This makes the PPFHL an ideal choice for applications where efficiency and ease of maintenance are crucial. Its design allows for smooth operations in wells with varying pressure and temperature conditions, and its simplicity reduces the risk of equipment malfunction, providing peace of mind for operators. The PPFHL packer is particularly suited for single-string applications that require reliable sealing and straightforward retrieval under challenging down-hole conditions.

**PPFHL is the large
bore version of the
PPFH packer.**

Features, advantages and operational procedures are the same as those for PPFH packers.

Key Features

- ◆ Operationally simple
- ◆ Hydraulically activated, hydrostatic set-low pressure, rig pump capable activation.
- ◆ Field adjustable shear release
- ◆ Built-in un-loader and bypass to aid in releasing and retrieving
- ◆ Pack-off is mechanically locked constantly reinforced by hydrostatic pressure.
- ◆ Triple seal multiple durometer elements ensure pressure integrity over a wide range of temperatures and conform easily to casing irregularities.
- ◆ No mandrel movement during setting allows stacked packer application.
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Applications

- ◆ Production, injection and zonal isolation.
- ◆ Single string selective completions or dual string completions with multiple packers.
- ◆ Deviated wells or other application where no rotation for installation or removal is desired.
- ◆ Application where displacing and setting after the well is flanged up is desirable.
- ◆ Test the tubing string before packer setting or to independently set and test individual packer in multiple packer completion.

PPFHL PACKER

(SPECIFICATION GUIDE)

CASING			PACKER			
O.D.		Weight	Nom ID		Max Gage Ring OD	
(in)	(mm)	(lb/ft)	(in)	(mm)	(in)	(mm)
6 - 5/8	168.3	24	3.000	76.2	5.671	144.0
		20			5.827	148.0
		17			5.983	152.0
7	177.8	38	3.000	76.2	5.671	144.0
		32 - 35			5.827	148.0
		26 - 29			5.983	152.0
		20 - 26			6.093	154.8
		17 - 20			6.281	159.5
7 - 5/8	193.7	33.7 - 39	3.000	76.2	6.468	164.3
		24 - 29.7			6.687	169.9
		20 - 24			6.827	173.4
9 - 5/8	244.5	47 - 53.5	4.750	120.7	8.233	209.1
		40 - 47	4.000	101.6	8.452	214.7
		29.3 - 36			8.608	218.6



HYDRAULIC PACKERS

ROTATIONAL RELEASE

HYDRAULIC SET, RETRIEVABLE, ROTATIONAL RELEASE PRODUCTION PACKER (WITH SLIP) - TS1

The PPSL Hydraulic Set Retrievable Rotational Release Production Packer, TS1 is a highly compact and cost-efficient solution, specifically designed for use in medium-pressure environments. This packer is hydraulically set, offering an efficient and reliable method of installation, and it is equipped with a rotational release system that simplifies retrieval. Due to its compact design, the packer requires minimal turning maneuver during both setting and retrieval, optimizing operational efficiency.



The packer is ideally suited for wells with selective installations, particularly those with a high number of packers, and wells that feature a certain degree of deviation. Its design ensures straightforward and simple operation, enhancing ease of use in the field. Additionally, the TS1 Packer offers exceptional stability; its position and sealing performance remain unaffected by variations in pressure or temperature, ensuring consistent and reliable sealing throughout the well’s lifecycle. This robust functionality makes it an ideal solution for wells requiring dependable, long-term performance under dynamic conditions.

Key Features

- ◆ Short and compact length.
- ◆ Three packaging elements.
- ◆ It is set with production tubing hydraulic pressure.
- ◆ Locking system prevents accidental release during the run in the well.
- ◆ Easy rotation release system with minimal twist.
- ◆ Low cost of maintenance and repair.
- ◆ Pressure differential rating: 7,500 psi
- ◆ Temperature rating: 250°F

Applications

- ◆ Stacked-packer completions.
- ◆ Highly deviated wells and severe doglegs
- ◆ Suitable for water injection
- ◆ Suitable for high tensile and compressive application

TS1 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER		
Size (in)	Weight (lb/ft)	Min. ID (in)	Max. ID (in)	OD (in)	ID (in)	Connection
4 1/2	9.5 - 13.5	3.920	4.090	3.772	2.00	2 - 3/8" EUE Box X Pin
5	11.5 - 13.0	4.494	4.560	4.248	2.00	2 - 3/8" EUE Box X Pin
	15.0 - 18.0	4.408	4.276	4.126	1.99	2 - 3/8" EUE Box X Pin
5 1/2	14 - 17	4.892	5.012	4.685	2.00	2 - 3/8" EUE Box X Pin
	20 - 23	4.670	4.778	4.500	2.00	2 - 3/8" EUE Box X Pin
	14 - 17	4.670	5.012	4.685	2.37	2 - 7/8" EUE Box X Pin
	20 - 23	4.670	4.778	4.500	2.37	2 - 7/8" EUE Box X Pin
6 - 5/8	20 - 24	5.921	6.049	5.657	2.37	2 - 7/8" EUE Box X Pin
	24 - 32	5.676	5.921	5.551	2.37	2 - 7/8" EUE Box X Pin
7	17 - 20	6.456	6.538	6.264	2.991	3 - 1/2" EUE Box X Pin
	20 - 23	6.366	6.456	6.075	2.991	3 - 1/2" EUE Box X Pin
	23.0 - 29.0	6.184	6.366	6.043	2.991	3 - 1/2" EUE Box X Pin
	32 - 35	6.004	6.094	5.811	2.991	3 - 1/2" EUE Box X Pin
	17 - 20	6.456	6.538	6.264	2.441	2 - 7/8" EUE Box X Pin
	20 - 23	6.366	6.456	6.075	2.441	2 - 7/8" EUE Box X Pin
	26.0 - 32.0	6.097	6.276	5.96	2.441	2 - 7/8" EUE Box X Pin
	23.0 - 29.0	6.184	6.366	6.053	2.441	2 - 7/8" EUE Box X Pin
	32 - 35	6.004	6.094	5.811	2.441	2 - 7/8" EUE Box X Pin
9 - 5/8	29.3 - 36	8.921	9.063	8.594	2.991	3 - 1/2" EUE Box X Pin
	40 - 47	8.681	8.835	8.437	2.991	3 - 1/2" EUE Box X Pin
	47 - 53.5	8.535	9.681	8.217	2.991	3 - 1/2" EUE Box X Pin



HYDRAULIC SET, RETRIEVABLE, ROTATIONAL RELEASE PRODUCTION (WITHOUT SLIP) – TWS1

The PPSL Hydraulic Set Retrievable Rotational Release Production Packer (without slip) TWS1, is a highly compact and cost-efficient solution, specifically designed for use in medium-pressure environments. This packer is hydraulically set, offering an efficient and reliable method of installation, and it is equipped with a rotational release system that simplifies retrieval. Due to its compact design, the packer requires minimal turning maneuver during both setting and retrieval, optimizing operational efficiency.

The packer is ideally suited for wells with selective installations, particularly those with a high number of packers, and wells that feature a certain degree of deviation. Its design ensures straightforward and simple operation, enhancing ease of use in the field. Additionally, the TWS1 Packer offers exceptional stability; its position and sealing performance remain unaffected by variations in pressure or temperature, ensuring consistent and reliable sealing throughout the well's lifecycle. This robust functionality makes it an ideal solution for wells requiring dependable, long-term performance under dynamic conditions. The TWS1 can be used as a top packer in simple installations combined with the model TS1.

Key Features

- ◆ Short and compact length.
- ◆ Three packaging elements.
- ◆ It is set with production tubing hydraulic pressure.
- ◆ Locking system prevents accidental release during the run in the well.
- ◆ Easy rotation release system with minimal twist.
- ◆ Low cost of maintenance and repair.
- ◆ Pressure differential rating: 7,500 psi
- ◆ Temperature rating: 250°F

Applications

- ◆ Stacked-packer completions
- ◆ Highly deviated wells and severe doglegs
- ◆ Suitable for water injection
- ◆ Suitable for high tensile and compressive application

TWS1 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER		
Size (in)	Weight (lb/ft)	Min. ID (in)	Max. ID (in)	OD (in)	ID (in)	Connection
5	11.5 - 13.0	4.4494	4.560	4.248	2.00	2 - 3/8" EUE Box X Pin
	15.0 - 18.0	4.408	4.276	4.126	2.00	2 - 3/8" EUE Box X Pin
5 - 1/2	14 - 17	4.892	5.012	4.685	2.00	2 - 3/8" EUE Box X Pin
	20 - 23	4.670	4.778	4.500	2.00	2 - 3/8" EUE Box X Pin
	14 - 17	4.892	5.012	4.685	2.37	2 - 7/8" EUE Box X Pin
	20 - 23	4.670	4.778	4.500	2.37	2 - 7/8" EUE Box X Pin
6 - 5/8	20 - 24	5.921	6.049	5.657	2.37	2 - 7/8" EUE Box X Pin
	24 - 32	5.676	5.921	5.551	2.37	2 - 7/8" EUE Box X Pin
7	17 - 20	6.456	6.538	6.264	2.991	2 - 7/8" EUE Box X Pin
	20 - 23	6.366	6.456	6.075	2.991	3 - 1/2" EUE Box X Pin
	23.0 - 29.0	6.184	6.366	6.053	2.991	3 - 1/2" EUE Box X Pin
	32 - 35	6.004	6.094	5.811	2.991	3 - 1/2" EUE Box X Pin
	17 - 20	6.456	6.538	6.264	2.441	2 - 7/8" EUE Box X Pin
	20 - 23	6.366	6.456	6.075	2.441	2 - 7/8" EUE Box X Pin
	26.0 - 32.0	6.097	6.276	5.96	2.441	2 - 7/8" EUE Box X Pin
	23.0 - 29.0	6.184	6.366	6.053	2.441	2 - 7/8" EUE Box X Pin
	32 - 35	6.004	6.094	5.811	2.441	2 - 7/8" EUE Box X Pin
9 - 5/8	29.3 -36	8.921	9.063	8.594	2.991	3 - 1/2" EUE Box X Pin
	40 - 47	8.681	8.835	8.437	2.991	3 - 1/2" EUE Box X Pin
	47 - 53.5	8.535	8.681	8.217	2.991	3 - 1/2" EUE Box X Pin



ESP PACKERS

HYDRAULIC SET RETRIEVABLE SPLIT BODY PACKER - PH2

The PPSL Hydraulic Set Retrievable Split Body ESP Packer is a compact and cost-effective solution, specifically designed for use in low to medium-pressure environments. Its hydraulic setting mechanism ensures reliable placement, while the straight-pull release system allows for efficient and straightforward retrieval, minimizing operational complexity.

Due to its compact design, the packer excels in applications with horizontal wells, tight doglegs, and low-angle deflections. It is particularly advantageous in wells where space is limited or where precise positioning is critical. The packer does not require downward mandrel movement during the setting process, which allows for stacked applications and enables concurrent



In addition to its primary sealing function, the packer is available with additional bores, offering flexibility for the installation of ESP cables, chemical-injection lines, control lines, and well monitoring devices, which can all be integrated within the same completion system.

The packer is designed for quick and easy retrieval, thanks to its combination of straight-pull release, pressure equalization, and shear-out features. These mechanisms work together to ensure that the packer can be removed swiftly and with minimal effort. Moreover, the packer is equipped with a sequential upper-slip releasing system, which releases each slip individually. This feature is engineered to reduce the pull force required for release, optimizing the efficiency of retrieval operations and minimizing the risk of excessive strain on the wellbore equipment.

Key Features

- ◆ Tension force to release packer is easily adjusted before running.
- ◆ All components locked to prevent pre-set.
- ◆ Release Shear pins not affected by differential pressures.
- ◆ Short and compact, ideal for doglegs and deviated wells.
- ◆ Setting Cylinder below elements eliminates all of the critical O-rings after setting.
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Benefits

- ◆ Straight pull release
- ◆ Can be pressure-tested on location
- ◆ Mechanical upper slips
- ◆ Multiple bores available
- ◆ No Hydraulic hold-downs buttons
- ◆ Cost effective

Applications

- ◆ Multiple-zone isolation
- ◆ High-volume instrumented applications
- ◆ Monitoring, gas venting, chemical injection, and hydraulic-line access.
- ◆ Deviated and horizontal wells
- ◆ Submersible pump installations



PH2 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER						
O.D. (in)	Weight (lb/ft)	Min. ID (in)	Max. ID (in)	Gage Ring OD (in)	Long String ID (in)	Long String Connection Box x Pin	Short String ID (in)	Short String Connection Box x Pin	3rd String & Vent String Connections	Long String/Short String Set
5 - 1/2	14.0 - 20.0	4.778	5.012	4.625	1.531	1.900" NU 10RD	1.313	1.660" NU 10RD	N/A	LS Set
	14.0 - 20.0	4.778	5.012	4.625	1.531	1.900" NU 10RD	1.313	1.660" NU 10RD	N/A	SS Set
7	23.0 - 32.0	6.094	6.366	5.938	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" NU 10RD	N/A	LS Set
	23.0 - 32.0	6.094	6.366	5.938	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" NU 10RD	N/A	SS Set
	23.0 - 32.0	6.094	6.366	5.938	1.938	2 - 3/8" NU 10RD	1.938	2 - 3/8" NU 10RD	N/A	SS Set
	23.0 - 32.0	6.094	6.366	5.938	1.938	2 - 3/8" NU 10RD	1.938	2 - 3/8" NU 10RD	N/A	LS Set
	23.0 - 32.0	6.094	6.366	5.938	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" NU 10RD	N/A	SS Set
	17.0 - 29.0	6.184	6.538	6.000	1.938	2 - 3/8" EU 8rd	1.938	2 - 3/8" NU 10RD	N/A	LS Set
	17.0 - 29.0	6.184	6.538	6.000	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" NU 10RD	N/A	LS Set
	17.0 - 29.0	6.184	6.538	6.000	1.938	2 - 3/8" (4.6) NEW VAM	1.938	2 - 3/8" NU 10RD	1/2" NPT Box x Box	LS Set

CASING				PACKER						
O.D. (in)	Weight (lb/ft)	Min. ID (in)	Max. ID (in)	Gage Ring OD (in)	Long String ID (in)	Long String Connection Box x Pin	Short String ID (in)	Short String Connection Box x Pin	3rd String & Vent String Connections	Long String/Short String Set
7 - 5/8	33.7 - 39.0	6.625	6.785	6.469	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" EU 8RD	N/A	SSvv Set
	33.7 - 39.0	6.625	6.785	6.469	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" EU 8RD	N/A	SS Set
	24.0 - 29.7	6.875	7.025	6.672	2.406	2 - 7/8" EU 8RD	1.938	2 - 3/8" EU 8RD	N/A	SS Set
	24.0 - 29.7	6.875	7.025	6.672	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" EU 8RD	N/A	LS Set
	24.0 - 29.7	6.875	7.025	6.672	1.938	2 - 3/8" EU 8RD	1.938	2 - 3/8" EU 8RD	N/A	LS Set
8 - 5/8	28.0 - 40.0	7.725	8.017	7.125	2.406	2 - 7/8" EU 8RD	1.938	2 - 7/8" EU 8RD	N/A	LS Set
9 - 5/8	47.0 - 53.0	8.535	8.681	8.312	2.972	2 - 7/8" (9.2) NEW VAM	2.972	2 - 7/8" (9.2) NEW VAM	N/A	LS Set
	47.0 - 53.0	8.535	8.681	8.312	2.972	3 - 1/2" (9.2) NEW VAM	2.972	3 - 1/2" (9.2) NEW VAM	N/A	LS Set
	36.0 - 47.0	8.681	8.921	8.500	3.000	3 - 1/2 NU 10RD	3.000	3 - 1/2 NU 10RD	N/A	SS Set
	36.0 - 47.0	8.681	8.921	8.500	2.972	3 - 1/2" (9.2) NEW VAM	3.000	3 - 1/2 NU 10RD	N/A	SS Set
	36.0 - 47.0	8.681	8.921	8.500	2.375	2 - 7/8" (6.4) NEW VAM	2.375	2 - 7/8" (6.4) NEW VAM	N/A	SS Set
10 - 3/4	51.0 - 60.7	9.660	9.850	9.500	3.000	3 - 1/2 EU 8RD	3.000	3 - 1/2 EU 8RD	N/A	SS Set
	51.0 - 60.7	9.660	9.850	9.500	2.687	3 - 1/2" (12.95) PH6CB Hydrill	2.687	3 - 1/2" (12.95) PH6CB Hydrill	N/A	SS Set



DOUBLE SLIP HYDRAULIC SET RETRIEVABLE ESP, SINGLE MANDREL – PB2

The PPSL retrievable hydraulic-set ESP Single Mandrel production packers PB2, are designed for use in vertical and deviated wellbores with ESP completions. There are several feed-through ports that can be set up for gas venting, chemical injection, and other ESP devices. Additionally, this packer is made to enable electric cable connection and feed through on-site. This compact packer is a cost-effective option for production applications with ESPs because of its single-piece mandrel body, straight-pull, adjustable shear release value, and 5,000-psi [34.5-MPa] pressure differential design.

This packer can be fully configured for a variety of penetrator bore and production combinations. H2S and CO2 conditions are among the many service applications for which these packers are suitable.

The packer is installed with the completion tubing and set by applying pressure to the tubing. A straight upward pull on the tubing completes the retrieval process. The packer shear-release mechanism, which is factory-set to a standard setting, can be modified in the field before being installed. When the tension on the tubing string exceeds the predetermined value of the shear screws, the slips disengage the casing and the element relaxes.

Key Features

- ◆ No tubing movement while setting
- ◆ One-piece mandrel
- ◆ Adjustable, straight-pull release
- ◆ High-compressive strength
- ◆ Dual bore with multiple ports
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Benefits

- ◆ Simplifies rig setup and retrieval, saving time and money
- ◆ Enables system pressure test at surface

Applications

- ◆ ESP completions
- ◆ Zonal isolations
- ◆ Vertical, Deviated and Horizontal wells

PB2 PACKER

(SPECIFICATION GUIDE)

Casing Size (in)	Weight (lb/ft)	Tubing Size (in)	Penetrator Types	Feed Through Dia Options (in)	Max Working Temp (°F)	Differential Pressure Rating (psi)
5	15 - 18	2 - 3/8	3-legged	1/4	350	5,000
	18 - 20.3					
5 - 1/2	15.5 - 20	2 - 3/8	3-legged	1/4	325	5,000
				3/8		
7	23 - 32	2 - 7/8	Single, 3-legged	1/4	350	5,000
		3 - 1/2		3/8		
7 - 5/8	26.4 - 33.7	2 - 7/8	Single, Dual, 3-legged	1/4	325	5,000
		3 - 1/2		3/8		
9 - 5/8	36 - 53.5	3 - 1/2	Single, Dual, 3-legged	1/4	350	5,000
				3/8		
10 - 3/4	55.5 - 65.7	4 - 1/2	Single, Dual, 3-legged	1/4	325	5,000
		5 - 1/2		3/8		



HIGH PRESSURE HYDRAULIC SET RETRIEVABLE ESP, SINGLE MANDREL – PB4

The PPSL High pressure hydraulically set, retrievable, single mandrel production packer PB4, is designed for ESP wells. The packer is made up to the tubing string at a point above the ESP or Artificial Lift system. There is an anti-preset function, which prevents the packer from accidentally setting while running in hole. The packer is set by applying hydraulic pressure against a plugging device in the tubing string below the packer.

During setting, the slips and seal elements are forced against the casing wall, anchoring the packer in place and creating a pressure tight seal. The single piece mandrel ensures that there is no movement of the packer relative to the control lines or power cable during setting or retrieving. To release the packer, a direct pull on the tubing string shears the release shear pins, allowing the seal elements to decompress and the slips to retract.

The anti-preset mechanism has an additional function where it locks the packer in the release position, thus preventing it from resetting while pulling out of the hole. This allows the packer to be pushed/pulled without the danger of slips resetting.

Key Features

- ◆ Hydraulic set, pull to release
- ◆ Retrievable production annulus barrier
- ◆ Sealing bypass for the ESP power cable
- ◆ Mandrel can accommodate single or multiple ports to meet penetrator requirements.
- ◆ Optional ports for monitoring or gas venting.
- ◆ Adjustable start to set pressureTemperature rating: 250°F
- ◆ Adjustable release force up to 90,000 lbs
- ◆ Working pressure of up to 7,500 psi
- ◆ Temperature rating: 300°F

Benefits

- ◆ Compact Design
- ◆ Single piece mandrel with no leakpaths
- ◆ No movement between tubing/casing/ capable during setting
- ◆ Accepts all types of penetrator systems.
- ◆ Available with multiple size combinations for primary & secondary strings
- ◆ Multiple bypass lines in all sizes
- ◆ All shear pin stubs are retained after shearing

Applications

- ◆ ESP completions
- ◆ Connects the production tubing to the casing
- ◆ Creates an annular pressure barrier preventing hydrocarbon ingress.

PB4 PACKER

(SPECIFICATION GUIDE)

Casing size (in)	Casing Weight (lb/ft)	Max OD (in)	Production String		Cable Bypass (in)	Additional Bypass
			Min ID (in)	Connection		
5 ½	14.0 - 15.5	4.770	1.969		3 x 0.433	As Required
	17.0 - 23.0	4.490				
7	17.0 - 23.0	6.180	2.402	Box x Pin	1.57	
	23.0 - 26.0	6.100				
	26.0 - 29.0	6.000				
	29.0 - 32.0	5.910				
	17.0 - 23.0	6.180	2.913	Box x Pin	3 x 0.551	
	23.0 - 26.0	6.100				
	26.0 - 29.0	6.000				
	29.0 - 32.0	5.940				
	23.0 - 26.0	6.120	3.898			
	7 ⅝	24.0 - 29.7	6.690	2.402	Box x Pin	
33.7 - 39.0		6.440				
9 ⅝	36.0 - 40.0	8.620	2.953	Box x Box	2.01	
	43.5 - 47.0	8.470				
	47.0 - 53.5	8.320				
	36.0 - 40.0	8.620	3.898		1.65	
	43.5 - 47.0	8.470				
	47.0 - 53.5	8.320				

Multiple configurations available
Available in multiple connections upon request
Minimum ID's of production string may vary dependent on tubing thread connection



MECHANICAL PACKERS

MECHANICAL SET RETRIEVABLE PRODUCTION PACKER (DOUBLE GRIP) -PDR3

The PPSL mechanical set retrievable production packer (double grip) PDR3 packer is a highly versatile and reliable production packer, engineered for a wide variety of production applications. Designed with a compression- set mechanism, it is ideal for use in stimulation and treatment operations, offering a robust double-grip configuration that ensures secure sealing and optimal performance under dynamic well conditions.



The packer incorporates a hydraulic hold-down system that effectively manages differential pressure from below, providing stability and reliability during well operations. This feature is particularly beneficial in maintaining a secure seal under fluctuating pressure conditions, which is critical in maintaining the integrity of the well during production activities.

For applications where bottom-hole pressures have been depleted or are lower than expected, the PPSL DR3 packer is available in a single-grip version, offering a more economical option without sacrificing performance. This configuration is suitable for less demanding production environments where cost-effective solutions are needed, while still maintaining the packer’s versatility and reliability.



Key Features

- ◆ Hydraulic button-type hold down located below the by-pass valve
- ◆ The built-in, “differential lock” ensures the by-pass valve remains closed.
- ◆ Effective by-pass designs speeds equalization and resists swab-off.
- ◆ Three- element packing system and rocker-type slip
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Benefits

- ◆ Automatically returns to run-in position when moved up the hole
- ◆ Large bypass allows fluids toequalize quickly

Applications

- ◆ Injection
- ◆ Pumping
- ◆ Testing and production
- ◆ Zonal isolation

PDR3 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER	
O.D. (in)	Weight (Lb/ft.)	Min. I.D. (in)	Max. I.D. (in)	Gage Ring O.D (in)	Thread Connection (in)
4 - 1/2	9.5 - 13.5	3.920	4.090	3.771	2 - 3/8" EU 8 RD
5	15.0 - 18.0	4.250	4.408	4.125	2-3/8" EU 8 RD
	11.5 - 15.0	4.408	4.560	4.250	
5 - 1/2	20 - 23	4.670	4.778	4.500	2 - 3/8" EU 8 RD
	15.5 - 20.0	4.778	4.950	4.641	
	13 - 15.5	4.950	5.044	4.781	
	20 - 23	4.670	4.778	4.500	2 - 7/8" EU 8 RD
	15.0 - 20.0	4.778	4.974	4.641	
	13 - 15.5	4.950	5.044	4.781	
5 - 3/4	22.5	4.950	5.190	4.781	2 - 3/8" EU 8 RD
6	26.0	4.893	5.044	4.781	2 - 7/8" EU 8 RD
		4.950	5.190		2 - 3/8" EU 8 RD
	20.0 - 23.0	5.240	5.352	5.062	
	15.0 - 18.0	5.424	5.524	5.156	
6 - 5/8	28.0 - 32.0	5.675	5.791	5.490	2 - 3/8" EU 8 RD
	24.0-28.0	5.791	5.921		2 - 7/8" EU 8 RD
	24	5.830	5.937	5.656	
	17.0 - 20.0	6.456	6.538	5.812	
7	38.0	5.830	5.937	5.656	2 - 7/8" EU 8 RD
	32.0 - 35.0	6.004	6.094	5.812	
	26.0 - 29.0	6.184	6.276	5.968	
	20.0 - 26.0	6.276	6.456	6.078	2 - 7/8" EU 8 RD
	17.0 - 20.0	6.456	6.538	6.266	
7 - 5/8	33.7 - 39.0	6.625	6.765	6.453	2 - 7/8" EU 8 RD
	24.0 - 29.7	6.875	7.025	6.672	
	20.0 - 24.0	7.025	7.125	6.812	
9 - 5/8	47.0 - 53.5	8.535	8.681	8.218	3 - 1/2" EU 8 RD
	40.0 - 47.0	8.681	8.835	8.437	
	29.3 - 36.0	8.921	9.063	8.593	



MECHANICAL SET RETRIEVABLE PRODUCTION PACKER (SINGLE GRIP) – PSR3

The PPSL mechanical set retrievable production packer (single grip) PSR3 packer is a highly versatile and reliable production packer, engineered for a wide variety of production applications. Designed with a compression-set mechanism, it is ideal for use in stimulation and treatment operations, offering a robust double-grip configuration that ensures secure sealing and optimal performance under dynamic well conditions.

The packer incorporates a hydraulic hold-down system that effectively manages differential pressure from below, providing stability and reliability during well operations. This feature is particularly beneficial in maintaining a secure seal under fluctuating pressure conditions, which is critical in maintaining the integrity of the well during production activities.

For applications where bottom-hole pressures have been depleted or are lower than expected, the PPSL DR3 packer is available in a single-grip version, offering a more economical option without sacrificing performance. This configuration is suitable for less demanding production environments where cost-effective solutions are needed, while still maintaining the packer’s versatility and reliability.

Key Features

- ◆ Hydraulic button-type hold down located below the by-pass valve
- ◆ The built-in, “differential lock” ensures the by-pass valve remains closed.
- ◆ Effective by-pass design speeds equalization and resists swab-off.
- ◆ Three- element packing system and rocker-type slip
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Benefits

- ◆ Automatically returns to run-in position when moved up the hole
- ◆ Large bypass allows fluids to equalize quickly

Applications

- ◆ Cementing
- ◆ Fracture stimulation
- ◆ Testing and production
- ◆ Zonal isolation

PSR3 PACKER

(SPECIFICATION GUIDE)

CASING					PACKER	
O.D. (in)	Weight (Lb/ft.)	Min. I.D. (in)	Max. I.D. (in)	Min. I.D. (in)	Max Gage Ring O.D (in)	Box-Up, Pin-Down Thread Connection (in)
4-1/2	9.5-13.5	3.920	4.090	1.92	3.771	2-3/8" EU 8 RD
5	11.5-15.0	4.408	4.560	1.92	4.250	2-3/8" EU 8 RD
	15.0-18.0	4.276	4.408		4.125	
5-1/2	13.0-15.5	4.950	5.044	1.93	4.781	2-3/8" EU 8 RD
				2.37		2-7/8" EU 8 RD
	17.0-20.0	4.778	4.892	1.93	4.641	2-3/8" EU 8 RD
				2.37		2-7/8" EU 8 RD
	20.0-23.0	4.670	4.778	1.93	4.500	2-3/8" EU 8 RD
5-3/4	22.5	4.990		1.93	4.781	2-3/8" EU 8 RD
				2.37		2-7/8" EU 8 RD
6	26.0	5.132		1.93	4.781	2-3/8" EU 8 RD
				2.37		2-7/8" EU 8 RD
6-5/8	17.0-20.0	6.049	6.135	2.37	5.812	2-7/8" EU 8 RD
	24.0	5.921			5.656	
7	17.0-20.0	6.456	6.538	2.37	6.281	2-7/8" EU 8 RD
	20.0-26.0	6.276	6.456		6.078	
	26.0-29.0	6.184	6.276		5.968	
	32.0-35.0	6.004	6.094		5.812	
	38.0	5.920			5.656	
7-5/8	20.0-24.0	7.025	7.125	2.37	6.812	2-7/8" EU 8 RD
	24.0-29.7	6.875	7.025		6.672	
	33.7-39.0	6.625	6.765		6.453	
9-5/8	29.3-36.0	8.921	9.063	3.94	8.593	3-1/2" EU 8 RD
	40.0-47.0	8.681	8.835		8.437	
	47.0-53.5	8.535	8.681		8.218	



MECHANICAL SET PRODUCTION PACKER – PA1

The PPSL Mechanical set Production Packer PA1, is a highly versatile, retrievable double-grip compression- or tension-set packer, designed to provide reliable performance in a variety of well conditions. This packer can be left in tension, compression, or a neutral position, making it adaptable to different well requirements. It is capable of holding pressure from both above and below, offering exceptional sealing capability in various production scenarios.

A key feature of the PA1 packer is its large internal bypass, which helps reduce the swabbing effect during run-in and retrieval. The bypass remains open during these operations, preventing the negative impacts of pressure fluctuations on the wellbore. Once the packer is set, the bypass automatically closes to maintain pressure integrity.

This combination of features – including the internal bypass, pressure equalization, and efficient slip release system – ensures that the PPSL PA1 Mechanical Production Packer is highly effective in minimizing operational complexities while maintaining reliable sealing and pressure control throughout the life of the well.

This combination of features – including the internal bypass, pressure equalization, and efficient slip release system – ensures that the PPSL PA1 Mechanical Production Packer is highly effective in minimizing operational complexities while maintaining reliable sealing and pressure control throughout the life of the well.

Key Features

- ◆ Holds pressure differentials from above or below
- ◆ Can be set using tension or compression
- ◆ Requires only one-quarter right hand rotation to set and release
- ◆ Optional safety-release features available upon request
- ◆ Bypass valve located below upper slips washes debris from slips when the valve is opened.
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

Benefits

- ◆ Versatile design, meets most production, stimulation, and injection needs.
- ◆ Can be run with an On-off tool and utilized as a bridge plug.
- ◆ Can be left in tension, compression, or neutral position.
- ◆ Ideal for use with fiberglass tubing.

Applications

- ◆ Effectively meets several requirements for zonal isolation, injection, pumping, and production.
- ◆ Full opening allows wireline tools and other accessories to pass through without restriction

PA1 PACKER

(SPECIFICATION GUIDE)

CASING				PACKER		
Size (in)	Weight (lb/ft)	Min ID (in)	Max ID (in)	Gage Ring OD (in)	ID (in)	Connection
2-7/8	6.4-6.5	2.376	2.441	2.250	0.625	1.05 EU 10 RD
3-1/2	7.7-10.2	2.922	3.068	2.781	1.250	1.900 NU 10 RD
4	9.5-11	3.476	3.548	3.250	1.500	1.900 NU 10 RD
4-1/2	9.5-13.5	3.920	4.090	3.750	1.938	2-3/8 EU 8 RD
	13.5-15.1	3.826	3.920	3.680		
5	18-20.8	4.156	4.276	4.000	1.938	2-3/8 EU 8 RD
	11.5-15	4.408	4.560	4.125		
5-1/2	20-23	4.670	4.778	4.500	1.938	2-3/8 EU 8 RD
	13-17	4.892	5.044	4.625		
	14-20	4.882	5.991	4.625	2.000	
	9-13	5.044	5.192	4.875	2.375	2-7/8 EU 8 RD
	13-14	5.012	5.044	4.813		
	20-23	4.670	4.778	4.500		
	15.5-17	4.778	4.950	4.750		
6-5/8	20-24	5.921	6.094	5.750	2.500	3-1/2 EU 8 RD

CASING				PACKER		
Size (in)	Weight (lb/ft)	Min ID (in)	Max ID (in)	Gage Ring OD (in)	ID (in)	Connection
7	29-35	5.875	6.184	5.813	2.500	2-7/8 EU 8 RD
	17-26	6.276	6.538	6.000		
	26-32	6.094	6.004	6.276	2.485	
	26-35			5.875	2.411	
	26-35	6.004	6.276	5.875	3.000	3-1/2 EU 8 RD
	17-26	6.276	6.538	6.000		
7-5/8	33.7-39	6.625	6.766	6.453	2.500	2-7/8 EU 8 RD
	33.7-39				3.000	3-1/2 EU 8 RD
	24-29.7	6.875	7.025	6.672	2.500	2-7/8 EU 8 RD
	24-29.7				3.000	3-1/2 EU 8 RD
8-5/8	24-28	8.017	8.097	7.750	2.938	3-1/2 EU 8 RD
	28-40	7.725	8.017	7.531		
	32-40	7.725	7.921	7.500	4.000	4-1/2 EU 8 RD
	24-28	8.017	8.097	7.750		
9.5/8	43.5-53.5	8.535	8.755	8.265	3.894	3-1/2 EU 8 RD
	43.5-53.5	8.535	8.755	8.250		4-1/2 EU 8 RD
	32.6-43.5	8.755	9.001	8.500		
10-3/4	32.75-45.5	9.950	10.192	9.687	4.000	4-1/2 EU 8 RD
13-3/8	48-72	12.347	12.716	12.000	4.000	4-1/2 EU 8 RD

MECHANICAL SET RETRIEVABLE SERVICE PACKER – PRTS

The PPSL mechanical set retrievable service packer PRTS is a full-opening, hook wall packer used for testing, treating, and squeeze cementing operations. In most cases, the tool runs with a circulating valve assembly. Packer body includes a J-slot mechanism, mechanical slips, packer elements and hydraulic slips. Large, heavy-duty slips in the hydraulic hold down mechanism help prevent the tool from being pumped up the hole. Drag blocks operate the J-slot mechanism on packer bodies. Automatic J-slot sleeves are standard equipment on all packer bodies.

Circulating valve, if used, is a locked-open/locked-closed type that serves as both a circulating valve and bypass. Valve automatically locks in the closed position when the packer sets. During testing or squeezing operations, the lock prevents the valve from being pumped open. A straight J-slot in the locked-open position matches with a straight J-slot (optional) in the packer body. This combination eliminates the need to turn the tubing to close the circulating valve or reset the packer after the tubing has been displaced with cement.



Key Features

- ◆ The full-opening design of the packer mandrel bore allows large volumes of fluid to pump through the tool. Tubing-type guns and other wire-line tools can be run through the packer.
- ◆ The packer can be set and relocated as many times as necessary with simple tubing manipulation.
- ◆ Bi-directional slips provide greater holding ability and improved wear resistance in high-strength casing.
- ◆ Pressure through the tubing activates the slips in the hydraulic hold down mechanism.
- ◆ An optional integral circulating valve locks into open or closed position during squeezing or treating operations and opens easily to allow circulation above the packer.
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

PRTS PACKER

(SPECIFICATION GUIDE)

CASING				PACKER		
Size (in)	Weight (lb/ft)	Min ID (in)	Max ID (in)	Gage Ring OD (in)	ID (in)	Connection
4-1/2	9.5	4.090	4.154	3.89	1.8	3 3/32 IN. 10 UNS X 2 3/8 IN. 8 RD EU
	11.6-13.5	3.920	4.000	3.75	1.8	
	15.1-18.1	3.754	3.826	3.55	1.51	2 11/16 IN. 10 UNS X 2 3/8 IN. 8 RD EU
5	11.5-13	4.494	4.670	4.25	1.8	3 3/32 IN. 10 UNS X 2 7/8 IN. 8 RD EU
	15-18	4.276	4.408	4.06	1.8	3 3/32 IN. 10 UNS X 2 7/8 IN. 8 RD EU
	21.4	4.090	4.154	3.89	1.8	3 3/32 IN. 10 UNS X 2 3/8 IN. 8 RD EU
	23.2	4.044	4.044	3.75	1.8	
	13-20	4.778	5.044	4.55	1.8	2 3/8 in. 8 Rd EU
5-1/2	20-23	4.670	4.778	4.38	1.8	2 7/8 in. 8 Rd EU
5-3/4	23-26	4.494	4.670	4.25	1.9	2 7/8 in. 8 Rd EU
	14-18	5.100	5.365	4.89	1.9	
	15-23	5.240	5.524	5.06	1.9	
6	20-26	5.100	5.365	4.89	1.9	2 7/8 in. IF, 2 7/8 in. 8 Rd EU
	17-20	5.920	6.538	5.65	2.37	
6-5/8	24-32	5.675	5.921	5.43	1.9	2 7/8 in. 8 Rd EU
7	17-38	5.920	6.538	5.65	2.37	2 7/8 in. IF, 2 7/8 in. 8 Rd EU
	49.5	5.540	5.920	5.25	2	2 7/8 in. 8 Rd EU
7-5/8	20-39	6.625	7.125	6.35	2.37	2 7/8 in. 8 Rd EU 3 1/2 in. IF
	29.7-45.3	6.430	6.901	6.16	2.37	
7-3/4	33.2-50	6.430	6.901	6.16	2.37	2 7/8 in. 8 Rd EU 3 1/2 in. IF
8-5/8	24-29	7.511	8.097	7.31	3.00	4 1/2 in. API IF TJ
9-5/8	29.3-53.5	8.535	9.063	8.15	3.75	4 1/2 in. API IF TJ
	40-71.8	8.125	8.835	7.80	3.00	



MECHANICAL SET TENSION PACKER - PAD-1

The PPSL mechanical set tension packer PAD-1 is a compact and cost-effective retrievable packer, engineered for a wide range of applications. While it is primarily designed for use in water flood operations, it is also highly versatile and can be employed in production and treating operations. The PAD-1 is an ideal solution for scenarios where a set-down packer would not be practical, offering flexibility in well interventions.

One of the standout features of the PAD-1 is its tension-set design, which makes it particularly well-suited for shallow wells. In these wells, the absence of sufficient set-down weight often presents challenges when using traditional packers. The PAD-1 overcomes this limitation by relying on tension to set the packer, allowing it to be used in situations where set-down weight is not available or practical. This capability enhances the packer's versatility, making it an effective tool for various well conditions, particularly in shallow depths where other packer options may not be feasible.

Key Features

- ◆ Uses rugged rocker-type slips
- ◆ Bore-through-the-packer mandrel is larger than drift
- ◆ Simple, low-cost packer for fluid injection
- ◆ Three release methods ensure retrievability
- ◆ Uses one-piece packing element
- ◆ Pressure differential rating: 5,000 psi
- ◆ Temperature rating: 250°F

PAD-1 PACKER

(SPECIFICATION GUIDE)

CASING		PACKER	
OD (in)	Weight Lb/ft	Nom ID (in)	Max Gage Ring OD
4	9.5-11.6	1.890	3.281
4-1/2	12.6-15.1	1.890	3.609
	9.5-13.5		3.786
5	15-18	1.890	4.140
	11.5-15		4.265
5-1/2	26	1.890	4.265
	20-23	1.953	4.515
	15.5-20		4.656
	13-15.5		4.796
5-3/4	22.5	1.953	4.796
6	26	1.953	4.796
	20-23		5.077
	15-18		5.171
6-5/8	34	1.953	5.421
	28-32	2.409	5.499
	24		5.671
	17-20		5.827
7	38	2.409	5.671
	32-35		5.827
	26-29		5.983
	20-26		6.093
	17-20		6.281
7-5/8	33.7-39	2.409	6.468
	24-29.7		6.687
	20-24		6.827
8-5/8	40-49	3.000	7.327
	32-40		7.546
	20-28		7.796
9-5/8	47-53.5	4.000	8.218
	40-47		8.437
	29.3-36		8.593
10-3/4	32.7-55.5	4.000	9.515
11-3/4	38-60	4.000	10.515
12-3/4	48-53	4.000	11.625
13-3/8	48-72	4.000	12.000



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