

Packer Systems



 **ILTOOLS**
a member of the heat-group

The Solution for Your Success

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INTRODUCTION

LOG Oiltools Ltd. produces the most versatile type of casing packers used in the oil industry based on the requirements of MOL Plc. (Hungarian Oil Company).

The long decades experiences in usage and the production make possible the implementation of new generation of economical hole constructions. The high-level reliability in the application is ensured by the simple structure, the up to date production technology, the strict quality-insurance.

Based on the choice of the equipment has expanded and the volume of the product increased. The LOG Oiltools Ltd. and its predecessors like LOG Co. and DKG Co. during the last 40 years produced thousands of different casing packers and other equipment used successfully in all oil-fields.

In beginning of 2009, we jointed to HEAT Group. Within the Group we are supported by the purposeful designed, high-tech equipped production areas, altogether 6000 m².

The HEAT Group has many references in the international market of oil and gas industry since 1984.

We would like to help you in your beneficial choice, with our new edition of packer catalogue, to get the most suitable ones.

Sincerely yours,



Zsolt Vékási
managing director



MATERIALS, QUALITY INSURANCE AND CERTIFICATES

The applied materials for our products (steels and elastomers) are in accordance with the materials, used and recommended in the international oil industry.

The following alloys and groups of alloys are currently the most common materials used for the construction of packers and related equipment:

Standard, non-corrosive service: Low alloy steels (4140) with mechanical properties compatible with API P110 tubular.

Non-corrosive service containing H₂S: Low alloy steels (4140) with mechanical properties compatible with API L80 tubular.

Corrosive CO₂ service with little or no H₂S: Martensitic and PH stainless steels (9Cr, 13Cr, 17-4PH) with mechanical properties that vary from 80 ksi to 110 ksi minimum yield strength. The selection of the specific corrosion resistant alloy depends on the environment and strength requirements.

Severely corrosive CO₂ and H₂S: Nickel alloys such as Inconel718, Incoloy 925 at strength levels of 110 ksi minimum yield strength and higher.

Applied material of seals: NBR, HNBR, Kalrez, Viton, Aflas, Teflon, Ryton, PEEK.

The LOG OILTOOLS Ltd. has been working according to the requirements of API 11D1, ISO 9001, ISO 14001 and other relevant international standards (like EN, API 5B, API 5CT, API 14A, ASTM, NACE MR01-75, etc.) since the establishment.

Therefore, we are going to meet the determined parts of requirements, detailed in the inquiry, as the follows:

1. Certificate of the applied steels, according to the MSZ EN 10204 3.1.
2. Certificate and quality insurance of the elastomer, according to the ASTM D-1414, ASTM D-395, ASTM D-412, ASTM 2240.
3. All critical dimensions of each part measured and recorded in the Measuring Data Sheet.
4. ULTRASONIC test is applied for all rolled and forged products based on DIN STAHL EISEN PRÜFBLATT 1921.
5. The outside and inside threads are gauged based on API and threading license requirements.
6. The ready made seals of the packers are checking with air pressure.
7. The packing elements are tested on operational temperature (up to 200 °C) and operational pressure (up to 10.000 psi).
8. All types and each size of the packers are tested in operation in the trial well.
9. Ensured the detailed Operational Manual of the products and drawings as well.



PERMANENT PRODUCTION PACKERS, DRILLABLE

FH-N, FH-NA type

These **FH**-system packers are characteristic permanent packers to be used for long period in oil and gas wells for the controlled production and protect the casing string.

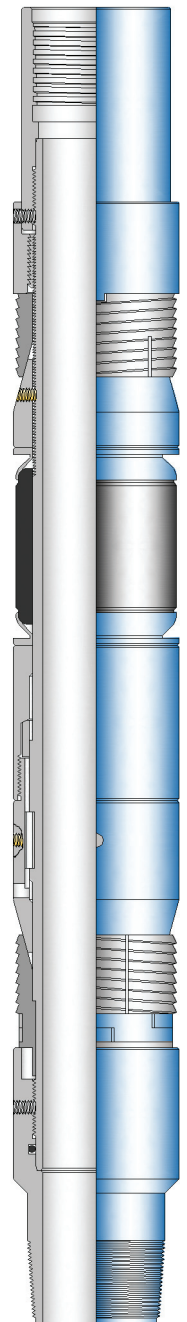
These types are favorably used gas lift systems, for one or two zones water injection wells as lower packers, high pressured formation treating, and as bridge plugs as well.

APPLICATIONS

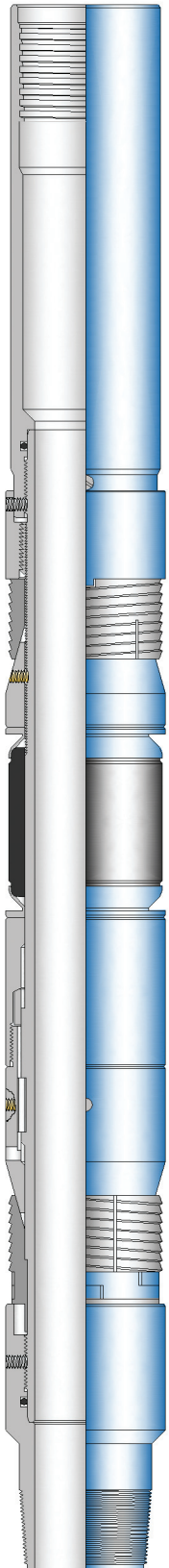
- Production, injection and zonal isolation
- Sump packer
- Deviated and horizontal wells
- Permanent or temporary bridge plug

BENEFITS

- The largest possible opening through a drillable packer (full bore type)
- The **FH-N** packers designed to withstand pressure differentials up to 10,000 psi
- Solid construction and packing element
- Partial milling under removal (only till the upper slip)



FH-N



FH-NA

FEATURES

- Two opposed sets of full-circle, high strength slips assure that the packer will stay where it is set and minimize casing damage
- Mill-out extension or seal bore extension should be connected to the bottom of packer
- Unique interlocked, expandable metal back-up rings contact the casing and create a positive barrier to packing element extension
- AFLAS packing element is available in select casing weight ranges

The **FH-NA** type permanent packers have lengthened sealing bore, this results in the largest possible ID in the packer.

The equipments of **FH-N** and **FH-NA** type packers are the tubing seal assemblies, which are marked based on the construction of sealing system with the following codes:

- R-2 type: double row, V-ring sealing set
- RC type: single-row, V-ring sealing set
- B type: double row, two-section V-ring sealing set
- RB-11-M type: double row, BONDED SEAL sealing set

FH-N packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
6 5/8	168,3	20-24	5,768	146,5	4,000	101,6	4,000	101,6	3 1/2" B	3,000	76,2
7	177,8	32-38	5,768	146,5	4,000	101,6	4,000	101,6	3 1/2" B	3,000	76,2
7	177,8	23-29	5,984	152	4,000	101,6	4,000	101,6	3 1/2" B	3,000	76,2
9 5/8	244,5	36-47	8,438	214,3	5,000	127,0	5,000	127	4 1/2" B	4,000	101,6

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

FH-NA packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
4 1/2	114,3	9,5-13,5	3,740	95	2,374	60,3	3,000	76,2	2 7/8" RC	2,374	60,3
5 1/2	139,7	14-20	4,606	117	3,000	76,2	3,750	95,25	3 1/2" R-2	3,000	76,2
6 5/8	168,3	20-24	5,768	146,5	4,000	101,6	4,803	122	4 1/2" RB-11-M	3,937	100
7	177,8	32-38	5,768	146,5	4,000	101,6	4,803	122	4 1/2" RB-11-M	3,937	100
7	177,8	23-29	5,984	152	4,000	101,6	4,803	122	4 1/2" RB-11-M	3,937	100
9 5/8	244,5	36-47	8,438	214,3	5,000	127,0	6,000	152,4	5 1/2" RB-11-M	5,000	127

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

HIDRAULIC SET, PERMANENT PRODUCTION PACKERS

FH-D, FH-DA and FH-DN type

These kinds of packers are drillable permanent packers, where the setting hydraulic parts are the main components of the packer, hereby with the final tubing and other equipment can be run into the well and the hanging into the X-mass tree the setting of the packer can be perform without the movement of the tubing.

The **FH-D** type permanent packers are mostly used, high performance ones, which are indispensable equipment of the efficiently working oil and gas production wells. They can be used favorably, in any case, when significant differential pressure shortening load can be expected. The FH-D type packers can be used favorably at flowing, CO₂ injection, water-injection, gas lifted and one or two zoned oil-production well completions, but the packers can be used in any production improvement operations.

APPLICATIONS

- Production, injection and zonal isolation
- Sump packer
- Deviated and horizontal wells
- Permanent or temporary bridge plug

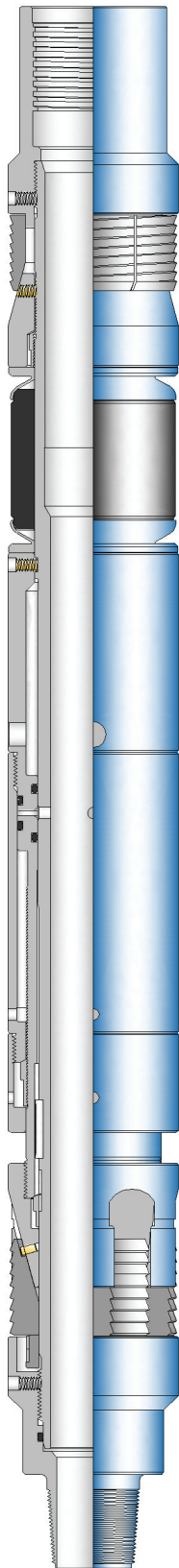
BENEFITS

- Hydraulically set, one-trip completion packer
- Solid construction and packing element system
- Setting requires no rotation or reciprocation, thereby eliminating the problems of spacing out, landing, setting should be under the flanged wellhead
- The packing element ensures long life operation (securely and permanently)
- Partial milling under removal (only till the upper slip)
- FH-D packers designed to pressure differentials up to 10,000 psi

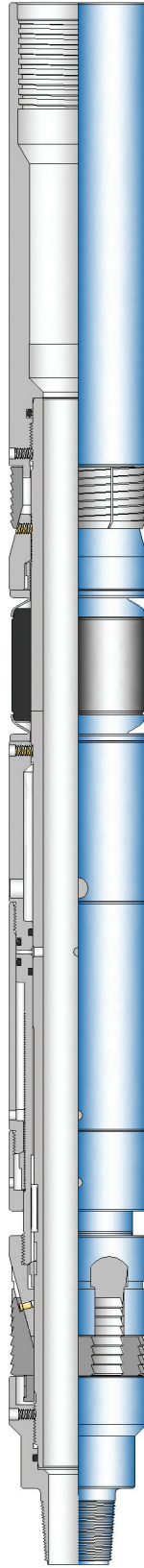
FEATURES

- Two opposed sets of high strength slips assure that the packer will stay where it is set
- Mill-out extension or seal bore extension should be connected to the bottom of packer
- FH-DN has a double setting pistons
- AFLAS packing element is available in select casing weight ranges

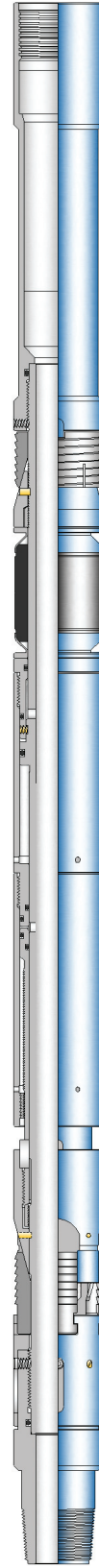




FH-D



FH-DA



FH-DN

The equipments of **FH-D**, **FH-DA** and **FH-DN** type packers are the tubing seal assemblies, which are marked based on the construction of sealing system with the following codes:

- R type: single-row, V-ring sealing set
- R-2 type: double row, V-ring sealing set
- RB-22 type: double row, BONDED SEAL sealing set

FH-D packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
6 5/8	168,2	24-32	5,433	138	2,441	62	3,250	82,55	2 7/8" R	2,374	60,3
7	177,8	32-38	5,709	145	2,441	62	3,250	82,55	2 7/8" R	2,374	60,3
7	177,8	23-29	5,906	150	2,441	62	3,250	82,55	2 7/8" R	2,374	60,3
9 5/8	244,5	36-47	8,438	214,3	4,000	101,6	5,000	127	4 1/2" RB-22	3,937	100

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

FH-DA packer specification guide

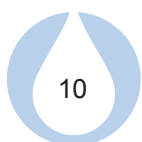
Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
5 1/2	139,7	14-17	4,606	117	2,390	60,7	3,250	82,55	2 7/8" RB-22	2,374	60,3
6 5/8	168,2	24-32	5,710	145	3,000	76,2	4,000	101,6	4 1/2" RB-22	3,937	100
7	177,8	32-38	5,710	145	3,000	76,2	4,000	101,6	4 1/2" RB-22	3,937	100
7	177,8	20-32	5,874	149,2	3,000	76,2	4,000	101,6	4 1/2" RB-22	3,937	100

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

FH-DN packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
4 1/2	114,3	11,6-13,5	3,740	95	1,902	48,3	2,874	73	2 3/8" R-2	1,902	48,3
7	177,8	26-32	5,874	149,2	3,874	98,4	4,803	122	4 1/2" RB-22	3,937	100
9 5/8	244,5	36-47	8,438	214,3	4,800	122,0	5,750	146	5 1/2" R	4,800	122

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.



Mill-out extension

A Mill-out Extension can be run directly below a seal bore packer when a seal bore extension or other tailpipe is run below the packer. For permanent packers, the Mill-out Extension is required to accommodate the mandrel and catch sleeve of the LOG OILTOOLS packer milling tool during packer milling.

Seal Bore Extension

Seal Bore Extension can be run below a seal bore packer.

A Seal Bore Extension is run to provide additional sealing bore when a long seal assembly is run to accommodate considerable tubing movement. The Seal Bore Extension has the same ID as the corresponding packer seal bore it is run with, thus all seals of a long seal assembly seal off in the Seal Bore Extension.

Flow Coupling

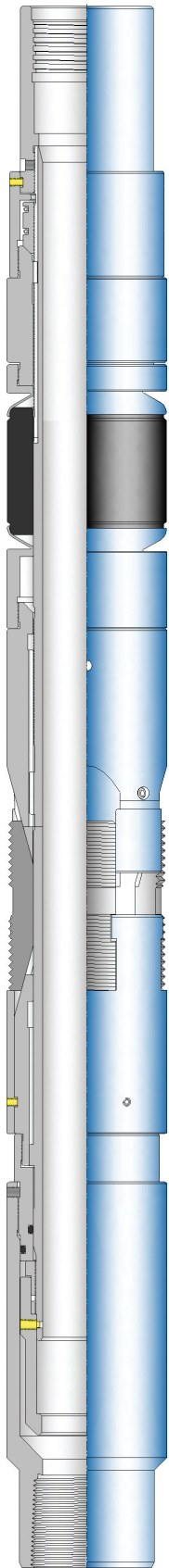
The Flow Coupling is used to protect the integrity of tubing from erosive turbulence. Flow Couplings are often used above and below a geometric restriction in the flow path, depending on the well conditions.

Wireline entry guide

The wireline entry guide is designed to be run on the bottom of the tubing string. It will aid wireline tools re-entry into the tubing.

The wireline entry guide with pump-out plug and with shear-out ball seat are installed on the bottom end of the tubing string to be pressured.

When the differential pressure at the tool reaches a pre-determined value, the plug, or ball and seat are pumped out of the tool. After the plug or ball seat have been pumped out, these subs unrestricted access from the tubing into the casing below the tubing string.



UR-D

RETRIEVABLE PRODUCTION SEALBORE PACKER

UR-D type

The **UR-D** packer is a hydraulically set, operational and/or production retrievable packer with a setting tool consists of hydraulic elements. For the releasing and run out of the packer, a mechanical releasing tool is needed.

APPLICATIONS

- Production, injection and zonal isolation
- Extended Reach Drilling (ERD) application
- TCP guns suspended below a packer
- Deviated and horizontal wells

BENEFITS

- Reliable, dependable field-proven design
- Easy to retrieve and redress
- High performance in compact size
- Versatile packer with wide selection of accessories and materials

FEATURES

- To set the packer, the movement of the tubing is not necessary, which is extremely advantageous for inclined wells or where two packers application is beneficial.
- The body of the packer doesn't move off during setting.
- The full setting force has an effect on the packing elements.
- It has the same sealing and fixing features as the drillable permanent packers, but with the advantage of running out without any damages.
- The sealing element has long lifetime, reliable sealing system, the alternate directional forces not affect to the sealing ability under operation (elongation or contraction of the tubing).
- The packer is removable with safety, as the slips and the releasing mechanism is on protected place, under the packing element, where protected against pollution.

The standard accessory of the UR-D packer is the R or RB-22 typed tubing seal unit, delivered and assembled with the packer.

UR-D packer specification guide

Casing			Packer						Accessories		
OD		Weight	OD		ID		Diameter of Sealing Bore		Code number	Setting Tool	Retrieving Tool
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm			
5 1/2	139,7	14-20	4,606	117	3,000	76,2	3,000	76,2	7484.03.000	7491.00.000	7497.50.000
6 5/8	168,3	28-32	5,512	140	3,250	82,55	3,250	82,55	7484.04.000	7491.01.000	7497.51.000
7	177,8	32-38	5,768	146,5	4,000	101,6	4,000	101,6	7484.05.000	7491.02.000	7497.52.000
7	177,8	23-29	5,983	152	4,000	101,6	4,000	101,6	7484.06.000	7491.02.000	7497.52.000
9 5/8	244,5	43,5-47	8,310	211	4,750	120,65	4,750	120,65	7484.07.000	7491.03.000/A	7497.53.000/A
9 5/8	244,5	43,5-47	8,310	211	4,000	101,6	4,000	101,6	7484.08.000	7491.03.000	7497.53.000

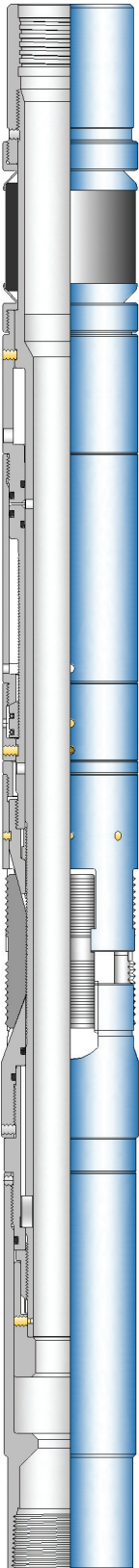
For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

HYDRAULIC SETTING TOOL (Type: H1 or H2)

The Hydraulic Setting Tool is used to convey and set permanent and retrievable sealbore packers on a workstring. Heavy-duty construction allows packer assembly to be worked through tight spots and into horizontal sections. The packer is set by surface pressure, or a combination of surface pressure and workstring tension. The packer can be tested from surface down the annulus before the setting tool is released. The setting tool can be released by right-hand rotation or shear release using hydraulic pressure.

RETRIEVING TOOL (Type: RT-22)

The releasing and the removal made by a mechanical type retrieving tool by straight pulling of the tubing.



UR-D2

HYDRAULIC SET, RETRIEVABLE PRODUCTION PACKER

UR-D2 type

The UR-D2 packer is hydraulic operated production and and/or operational one with the same characteristic features as the FH-D type in sealing and setting but its advantage, it can be retrieve without any damages.

APPLICATIONS

- Production, injection and zonal isolation
- Primary application in one-trip perforate and completion systems
- Squeeze or test packer

BENEFITS

- Solid construction ensure the fast and easy running
- Hydraulic set for safe, dependable operation in multiple packer application
- One-trip installation
- Hydraulically set with pump pressure, the tubing can be displaced and the packer set after the well is flanged up.
- No tubing manipulation required
- Packer's releasing mechanism is not affected by differential pressure or tail pipe weight

FEATURES

- The sealing element has long lifetime, reliable sealing system, the alternate directional forces not affect to the sealing ability under operation (elongation or contraction of the tubing).
- Bi-directional, case hardened slips are suitable for all grades of casing
- Designed to pressure differentials up to 7,500 psi
- The packer is removable with safety, as the slips and the releasing mechanism is on protected place, under the packing element, where protected against pollution.
- AFLAS packing element is available in select casing weight ranges

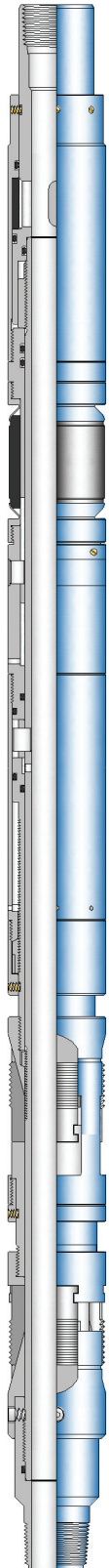
Further favorable, the releasing and the removal made by a mechanical type tool (RT-22 or M-21 type) by straight pulling of the tubing.

The accessory of the UR-D2 packer is the R or RB-22 typed tubing seal unit, delivered and assembled with the packer.

UR-D2 packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
5 1/2	139,7	14-20	4,606	117	2,374	60,3	3,250	82,55	2 7/8" RB-22	2,374	60,3
6 5/8	168,3	20-24	5,768	146,5	3,000	76,2	4,000	101,6	3 1/2" RB-22	3,000	76,2
7	177,8	32-38	5,768	146,5	3,000	76,2	4,000	101,6	3 1/2" RB-22	3,000	76,2
7	177,8	23-29	5,984	152	3,000	76,2	4,000	101,6	3 1/2" RB-22	3,000	76,2
9 5/8	244,5	36-47	8,346	212	4,000	101,6	4,803	122	4 1/2" R	4,000	101,6

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.



LH-RT

HYDRAULIC SET, STRAIGHT PULLING RETRIEVABLE PACKER

LH-RT type

The LH-RT type packer single string hydraulic set, retrievable by straight pulling well completion equipment, which is applicable for technological operations in cased high pressured oil and gas wells. It is applicable for zone tests, production improving formation treating but it is suitable for final production equipment as well. The formation of its structure makes advantageous application in deviated holes.

The packer is set by applying hydraulic pressure flanging up with tubing hanging in the christmas tree.

APPLICATIONS

- Production, injection and zonal isolation
- Primary application in one-trip perforate and completion systems
- Squeeze or test packer

BENEFITS / FEATURE

- Double action, fixing in opposition directions, slip system.
- During setting the shaft of the packer does not move so the tubing remains in neutral position.
- The whole setting force has the effect on the sealing element. The sealing element has long lifetime, reliable sealing system, the alternate directional forces not affect to the sealing ability under operation (elongation or contraction of the tubing).
- The hydraulic balancing element increases the bearing capacity of the packer.
- The advantageous feature of the packer is, the realizing and run out is taken place by straight pulling of the tubing.

LH-RT packer specification guide

Casing			Packer			
OD		Weight lb/ft	OD		ID	
in.	mm		in.	mm	in.	mm
5	127	15-18	4,126	104,8	1,902	48,3
5 ½	139,7	14-17	4,724	120	2,374	60,3
5 ½	139,7	17-20	4,567	120	2,374	60,3
5 ½	139,7	20-23	4,500	114,3	2,374	60,3
7	177,8	32-38	5,709	145	2,441	62
7	177,8	20-29	5,984	152	2,441	62

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

HYDRAULIC SET, RETRIEVABLE DUAL PACKER

HDR-H6 type

The HDR-H6 type dual packers are the basic equipments of selective multiple well completion. The packer allows two opened formation controlled production in the same time and/or fluids injection to formation. First of all at gas lift systems and in case of water injection can be used as single or double set.

APPLICATIONS

- Production, injection and zonal isolation
- Multiple well completion
- Gas lift application

BENEFITS

- Solid construction ensure the fast and easy running
- Hydraulic set for safe, dependable operation in multiple packer application
- One-trip installation
- Hydraulically set with pump pressure under the short string
- No tubing manipulation required



HDR-H6

FEATURES

- Reliable performance through packing element design and mechanically locked setting force system
- Bi-directional, case hardened slips are suitable for all grades of casing
- Two parallel pipes (Primer Pipe = long string and Secondary Pipe = short string)
- Designed to pressure differentials up to 5,000 psi
- AFLAS packing element is available in select casing weight ranges

HDR-H6 packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
7	177,8	23-32	5,906	150	1,898 1,898	48,2 48,2	2,618	66,5	2 3/8" RK-2B	1,898	48,2
9 5/8	244,5	43,5- 47	8,510	216	2,374 2,374	60,3 60,3	3,250	82,55	2 7/8" RK-2B	2,374	60,3

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

HYDRAULIC SET, RETRIEVABLE DUAL PACKER

HDR-HW type

APPLICATIONS

The HDR-HW Dual String Retrievable Packer is a high performance dual string hydraulic set, straight pull retrievable packer that requires no mandrel movement during setting, and can be released on either or both strings simultaneously.

The HDR-HW Dual String Retrievable Packer is utilized for both production and injection applications. The packer can be run as an upper packer where the bottom packer is a single-bore packer, or as the upper or intermediate packer in tandem dual completions.

BENEFITS / FEATURES

- The design has two parallel Pipes
- The construction has Body Bars squarely to the pipes to increase the capacity,
- The fully symmetric construction ensures the interchangeability of the two strings and also ensures the changing of the way of the setting process too. Field adjustable facility to set the packer through short string as well as long string
- There is a bi-directional fixing Slip-system below the Packing Elements,
- The bi-directional setting mechanism ensures that there is no down-acting pulling force on the Pipes,
- The full setting force has an effect on the packing elements,



HDR-HW

- The sealing element has long lifetime, reliable sealing system, the alternate directional forces not affect to the sealing ability under operation (elongation or contraction of the tubing).
- The packing element system incorporates a back-up system which prevents elastomer extrusion,
- The construction of fixing of the Pipes ensures the independent rotation of the Pipes after the releasing.

HDR-HW packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
7	177,8	23-32	5,906	150	1,898 1,898	48,2 48,2	2,618	66,5	2 3/8" RK-2B	1,898	48,2
9 5/8	244,5	43,5- 47	8,510	216	2,374 2,374	60,3 60,3	3,250	82,55	2 7/8" RK-2B	2,374	60,3

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

HYDRAULIC SET, RETRIEVABLE PRODUCTION GRAVEL-PACK PACKER

LH-GP-2 Type

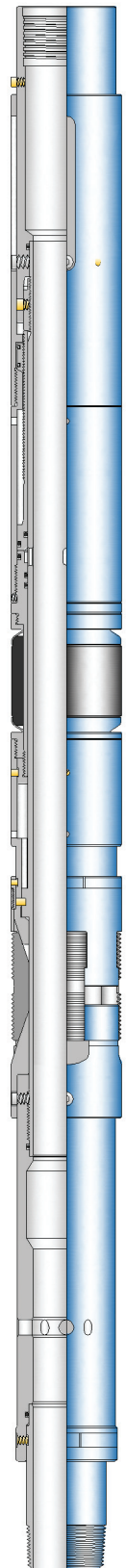
The LH-GP-2 packer and its accessories designed to protect the gas production and storage wells against the sand inflow. The setting of the packer and gravel packing can be performed in one step.

APPLICATION

- Gas production,
- Underground gas-storage

BENEFITS

- Solid construction ensure the fast and easy running
- Hydraulic set for safe, dependable operation in gravel-pack packer application
- One-trip installation
- Setting tool (GPE-2) releasing by straight pulling of the tubing
- Packer releasing by straight pulling



LH-GP-2

FEATURES

- Reliable performance
- Bi-directional, case hardened slips are suitable for all grades of casing
- Designed to pressure differentials up to 5,000 psi
- AFLAS packing element is available in select casing weight ranges

The accessory of the LH-GP-2 packer is the GP-11 type tubing seal unit, delivered and assembled with the packer.

LH-GP-2 packer specification guide

Casing			Packer						Standard Seal Assembly		
OD		Weight	OD		ID		Diameter of Sealing Bore		Type	Min Bore Thru Seal A.	
in.	mm	lb/ft	in.	mm	in.	mm	in.	mm		in.	mm
6 5/8	168,2	20-24	4,768	146,5	3,504	89	3,504	89	3 1/2" GP-11	2,795	71
7	177,8	32-38	4,768	146,5	3,504	89	3,504	89	3 1/2" GP-11	2,795	71
7	177,8	23-29	5,984	152	3,504	89	3,504	89	3 1/2" GP-11	2,795	71

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

RETRIEVABLE MECHANICAL SET PACKER

MRP-01 type

The MRP-01 type packer can be set by the tubing loading, which is a retrievable casing packer safely resisting to the lower and upper direction differential pressure.

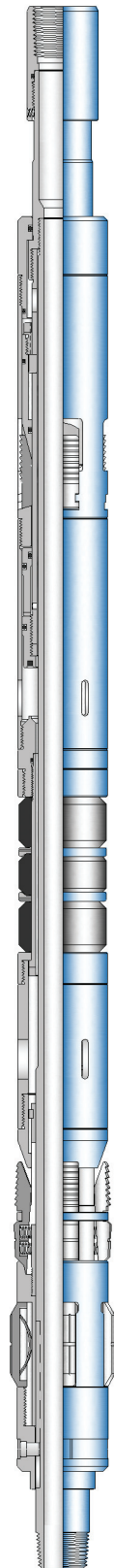
It is hydraulically balanced and has a pressure-balancing bypass-valve with hydraulic upper sleeves operated by bottom direction differential pressure.

APPLICATION

- Squeezing operations
- Casing testing,
- Fracturing, high pressure acidizing,
- Production test and different production tasks.

FEATURES / BENEFITS

- The lower and upper direction differential pressures have no effects on sealing ability of the tool.
- The balancing piston of the bypass ensures that the lower and upper direction differential pressures keep the valve in closed position.
- Setting is to right direction. The simple operation of the packer is ensured by J-slot and a dowel fixing mechanism can be operated by (1/4 turn) turning in right direction



MRP-01

- The packer can be relocated many times with one run.
- During run in and out there is enough bypass opportunity for the fluid inside and outside of the tool.
- Presetting (pump up) is hindered by mechanically braked slips.
- Safe fixing. Followed by the setting of the tool and the tubing pressure exceeds the pressure of the annulus the upper taper piston packs off the upper slips.
- The bypass remains in closed position until tubing loading is applied.
- The equalizer piston system hinders the tubing pressure to open the bypass valve.
- Safe releasing. The sliding sleeves make possible to flush out the contaminations and solid materials above the sealing element prior to the setting.

MRP-01 packer specification guide

Casing			Packer			
OD		Weight	OD		ID	
in.	mm	lb/ft	in.	mm	in.	mm
4 ½	114,3	9,5-13,5	3,772	95,8	1,890	48
4 ½	114,3	13,5-15,1	3,681	93,5	1,614	41
5 ½	139,7	20-23	4,500	114,3	1,890	48
5 ½	139,7	13-17	4,724	120	1,890	48
6 5/8	168,2	26-32	5,472	139	2,441	62
7	177,8	23-29	5,984	152	2,441	62
7	177,8	32-35	5,827	148	2,441	62

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative.

RETRIEVABLE MECHANICAL SET PACKER

LA-2 type

The LA-2 type packer is a general purpose, mechanical set, retrievable packer that combines features of both permanent and retrievable packers.

APPLICATION

- Production as a single packer installation
- Injection and remedial operations
- In multiply string hookups as a lower packer
- Selective isolation completion

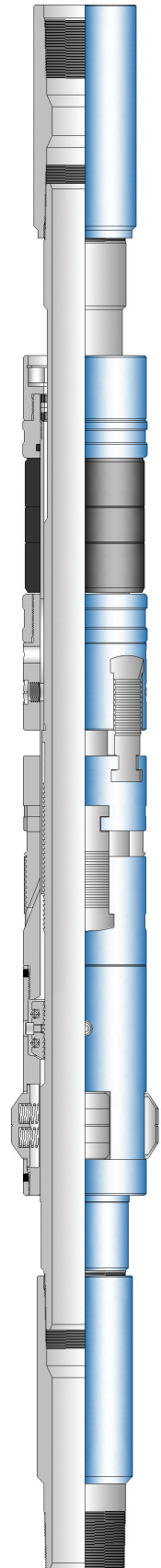
FEATURES / BENEFITS

- Tubing can be left in compression, tension or neutral
- Holds pressure from above or below
- Built-in unloader speeds running and releasing
- Opposed, non-transferring dovetail slips for positive set
- Right hand rotation sets and releases packer.

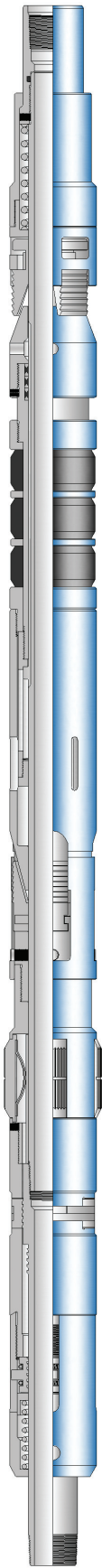
LA-2 packer specification guide

Casing			Packer			
OD		Weight	OD		ID	
in.	mm	lb/ft	in.	mm	in.	mm
4 ½	114,3	9,5-13,5	3,772	95,8	1,890	48
4 ½	114,3	13,5-15,1	3,681	93,5	1,890	48
5 ½	139,7	20-23	4,500	114,3	1,890	48
5 ½	139,7	13-17	4,724	120	1,890	48
6 5/8	168,2	26-32	5,472	139	2,441	62
7	177,8	23-29	5,984	152	2,441	62
7	177,8	32-35	5,827	148	2,441	62

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative



LA-2



RTM

RETRIEVABLE MECHANICAL SET PACKER

RTM type

The RTM type packer is a general purpose, mechanical set, retrievable packer that combines features of both permanent and retrievable packers.

The RTM packer design allows the packer to be run depth, set with minimal weight, then fully packed off with tubing tension. The packer can be run at much shallower depths than most compression-set, double-grip packers.

APPLICATION

- Production completion
- Well-treating operations

BENEFITS

- Cost-effective design
- Tubing may be in left tension, compression, or neutral
- Pressure equalization before unsetting the slips

FEATURES

- Simple setting and releasing procedure
- Case hardened friction blocks with Inconel springs
- Fullbore mandrel
- Field-proven design

RTM packer specification guide

Casing			Packer			
OD		Weight	OD		ID	
in.	mm	lb/ft	in.	mm	in.	mm
4 ½	114,3	9,5-13,5	3,765	95,6	1,933	49,1
5	127,0	15-18	4,062	103,2	1,933	49,1
5 ½	139,7	15,5-17	4,641	117,9	2,375	60,3
5 ½	139,7	20-23	4,515	114,7	2,375	60,3
6 5/8	168,3	24-28	5,630	143	2,437	61,9
6 5/8	168,3	28-32	5,489	139,4	2,437	61,9
7	177,8	23-26	6,088	154,6	2,437	61,9
7	177,8	26-29	5,978	151,8	2,437	61,9
7	177,8	32-35	5,822	147,9	2,437	61,9

For information on packer or accessory sizes not found in this specification guide, refer to LOG OILTOOLS representative

DRILLABLE BRIDGE PLUG

LH-BP-2 type

The LH-BP-2 permanent cast iron bridge plug is designed to set with a combination of hydraulic pressure and mechanical pull.

APPLICATION

- Well abandonment
- Temporary and zonal isolation
- Squeeze cementing
- Fracturing
- Deviated wells

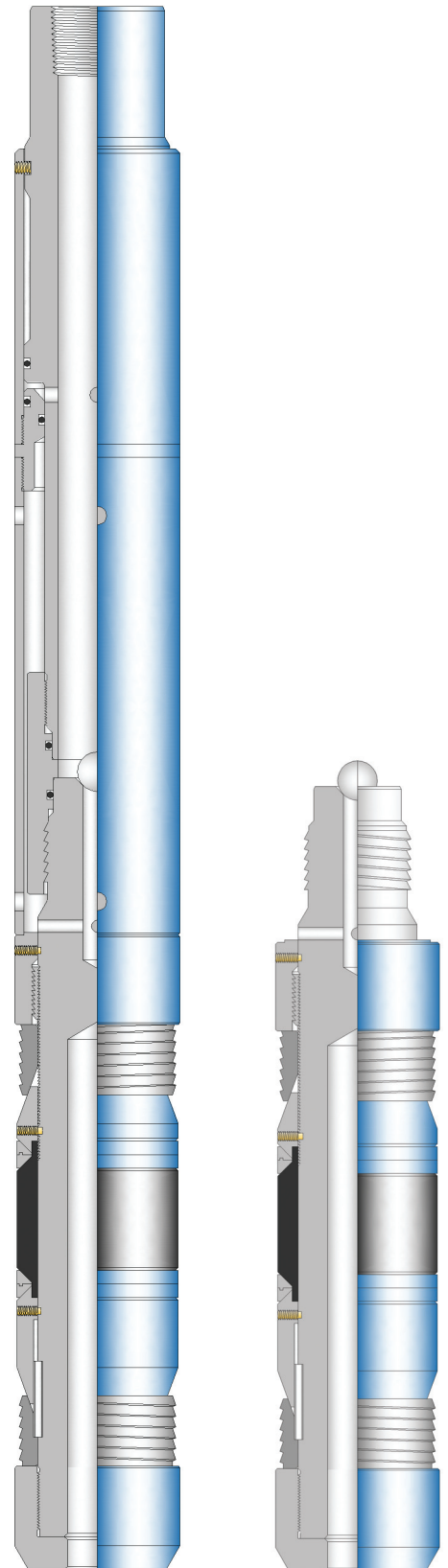
FEATURES

- Field-proven design
- Drillable materials
- Right-hand rotation releases setting tool from plug
- Standard packing element rated 300°F
- One-piece slips

BENEFITS

- One setting tool for different sizes
- Sets with the combination of hydraulic pressure and mechanical pull
- Excellent for use in deviated application
- Thermal version available

Casing		Bridge plug	
OD In	Weight lb/ft	OD mm	Connection
5 1/2"	14-20	117	2 7/8"
6 5/8"	20-32	139	
7"	23-32	148	
9 5/8"	43,5-70,3	198	3 1/2"



LH-BP-2

HIDRAULIC SET, DRILLABLE BRIDGE PLUG

LM-BP TYPE

The LM-BP type bridge plugs provides an economical solution.

APPLICATION

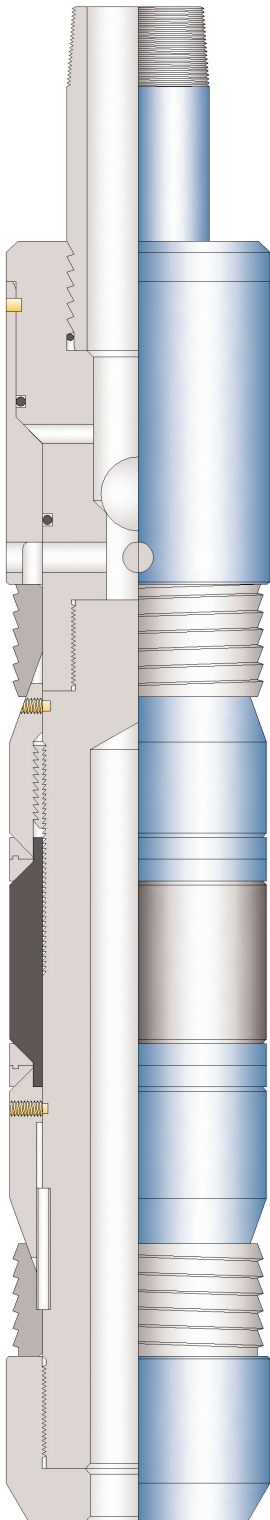
- Well abandonment
- Temporary and zonal isolation
- Squeeze cementing
- Fracturing
- Deviated wells

FEATURES

- Field-proven design
- Drillable materials
- Drillpipe releasing by the right-hand rotation
- Standard packing element rated 300°F
- One-piece slips

BENEFITS

- Built-in setting mechanism
- Sets with the combination of hydraulic pressure and mechanical pull
- Excellent for use in deviated application
- Thermal version available



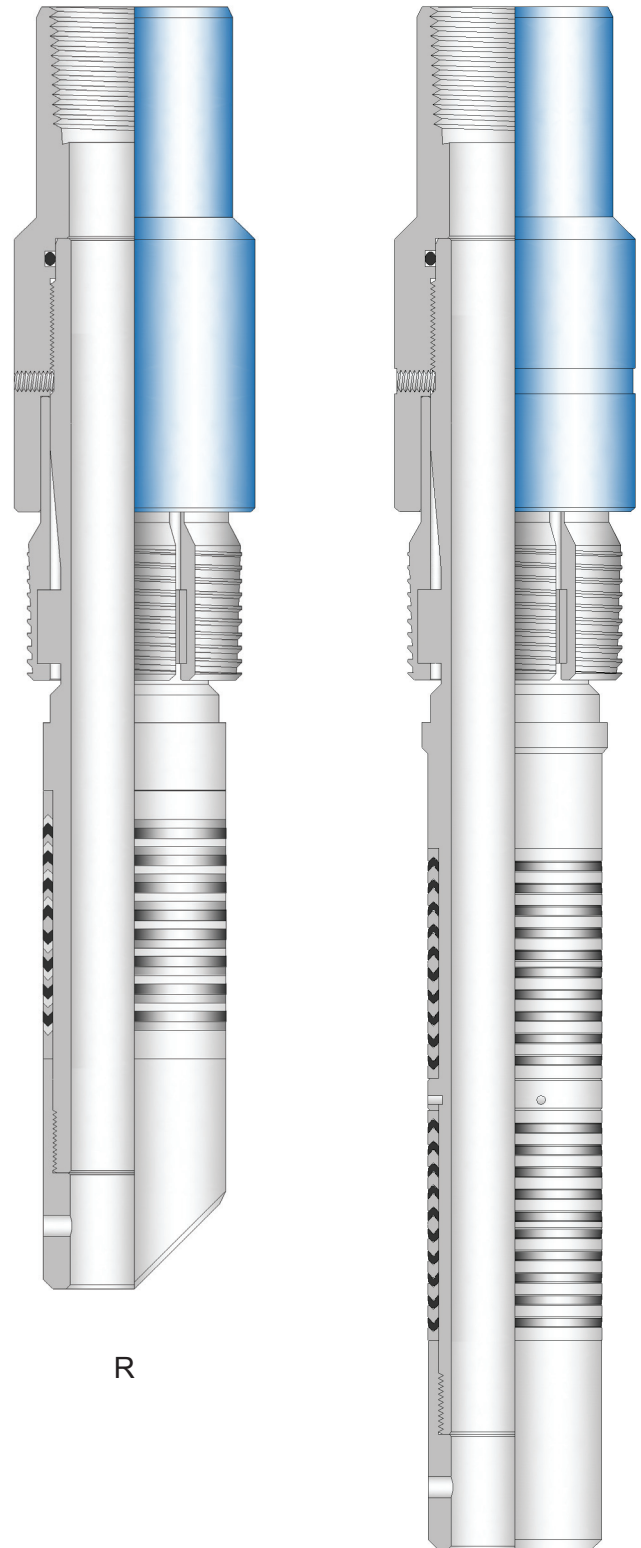
LM-BP

Casing		Bridge plug	
OD In	Weight lb/ft	OD mm	Connection
5 1/2"	14-20	117	2 7/8"
6 5/8"	20-32	139	
7"	23-32	148	
9 5/8"	43,5-70,3	198	3 1/2"

ANCHOR SEAL ASSEMBLY

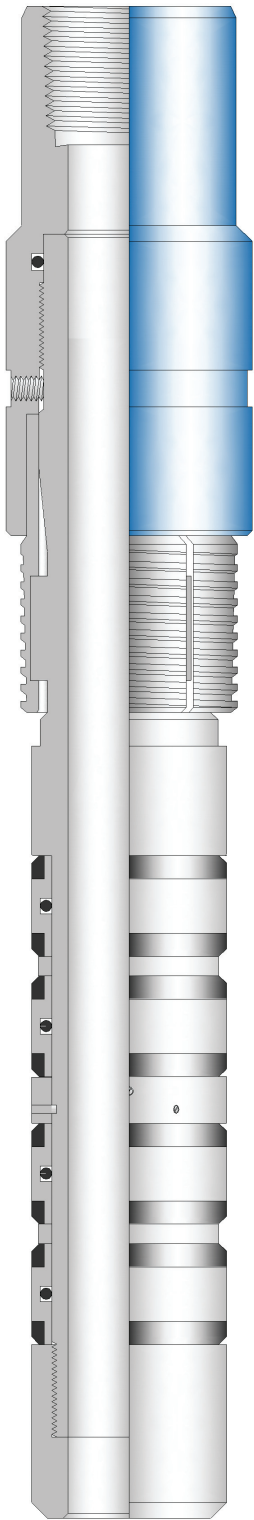
Anchor seal assemblies lock, or anchor, into the packer top and seal in the bore of the packer or seal bore extension below the packer. The anchor seal assembly transfers tubing forces through the anchor into the packer, the seals are static and are only subjected to pressure differentials. The anchor seal assembly consists of the seal mandrel, seal units as required, mule-shoe guide bottom and a latch mechanism and locator.

In some cases, a spacer tube is used to properly position the seals within the seal bore. The anchor seal assembly is released by right-hand rotation.

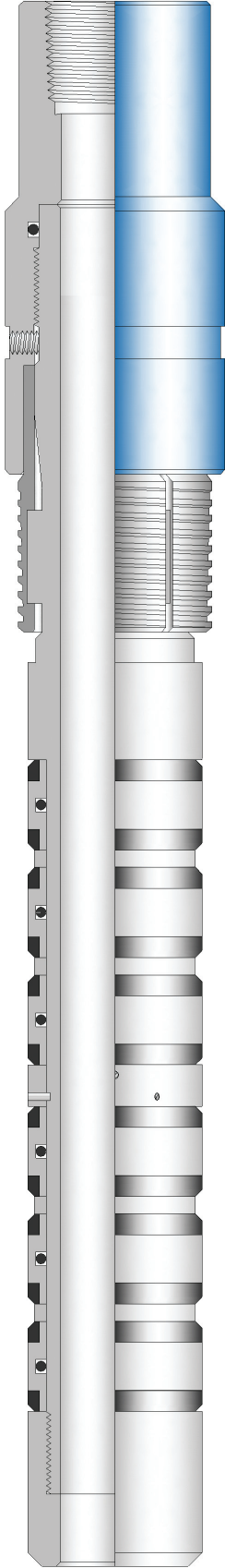


R

R-2



RB-22



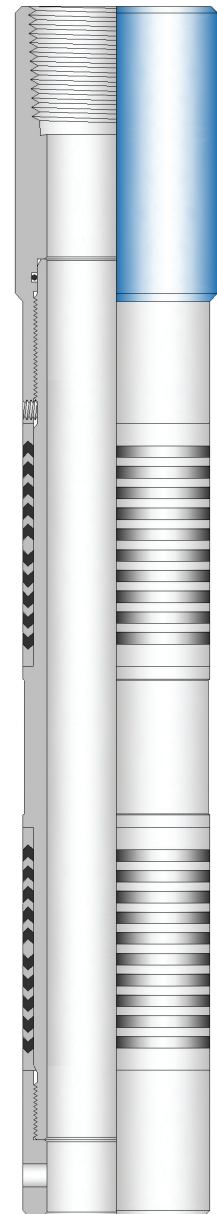
RB-11-M

LOCATOR SEAL ASSEMBLY

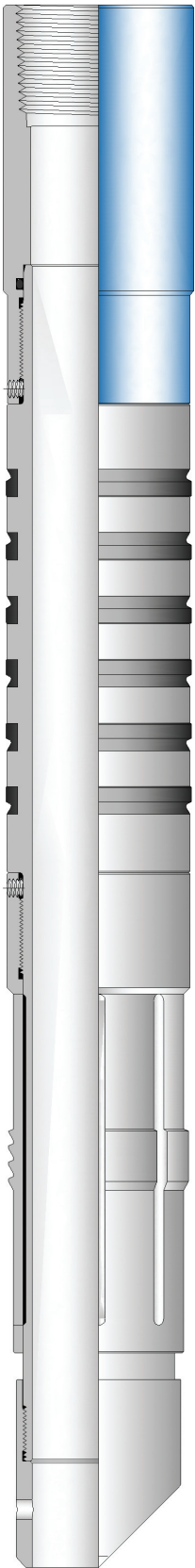
The locator seal assembly is used when it is not desirable to anchor the seals into the packer. The locator seal assembly allows movement of the seals in response to pressure and temperature changes on the tubing string. Force changes tending to elongate the tubing string are transferred through the locator into the packer and casing.

Seals are dynamic and must be designed to accommodate sliding or reciprocation, in addition to temperature and well bore fluids.

The locator seal assembly is retrieved by straight pick-up.



RK



RK-2B

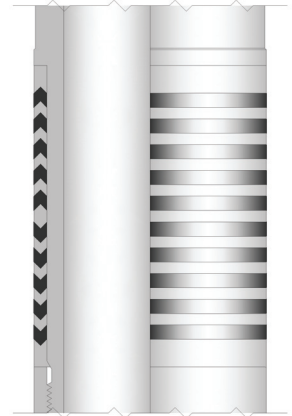


LBS

SEAL STACKS

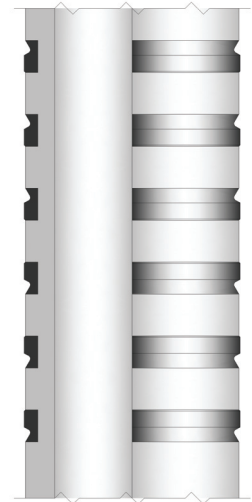
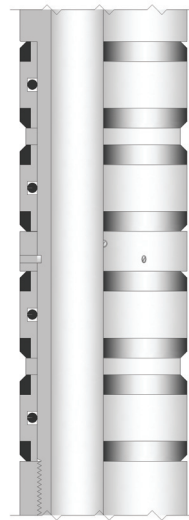
Standard Seal Stack

Made up of nitrile, Viton or Aflas V-ring seals and steel spacer rings. Should not be allowed to leave seal bore in service.



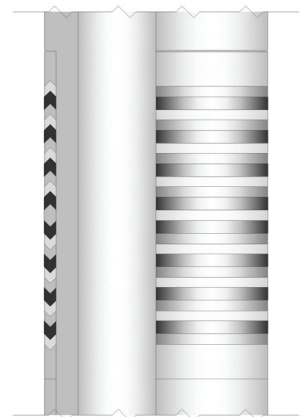
Bonded Seal Stack

Two nitrile, Viton or Aflas seals are bonded to each metal insert. These inserts are separated by steel spacers. Bonded seals should be used when seals cannot be prevented from moving out of the seal bore while holding differential pressure.



Premium Seal Stack

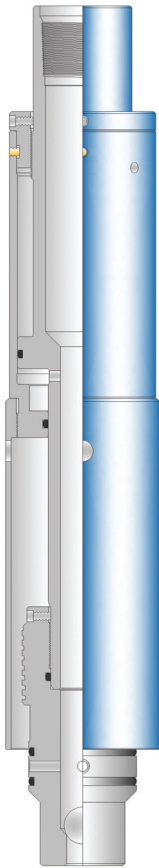
Made up Viton or Aflas V-ring seals with Teflon, Ryton or Peek back-up ring and stainless steel separators. Should not be allowed to leave seal bore in service.



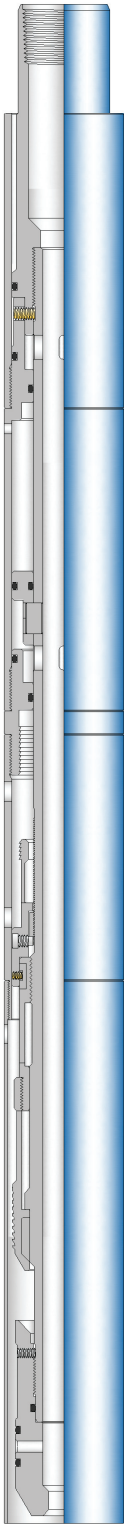
ACCESSORIES OF THE PACKERS

Setting tools

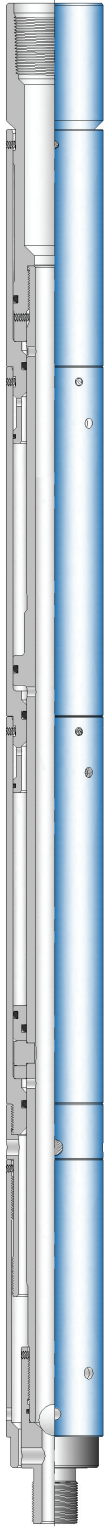
Available types: H1, H2B, HS3



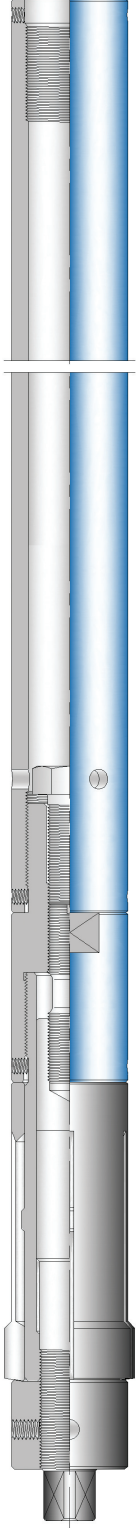
H1



H2B



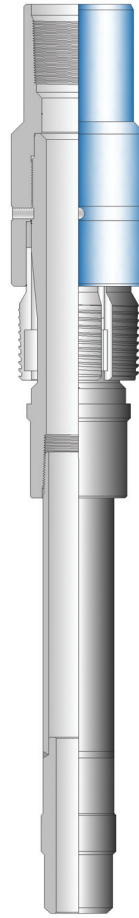
HS3
Setting
tool



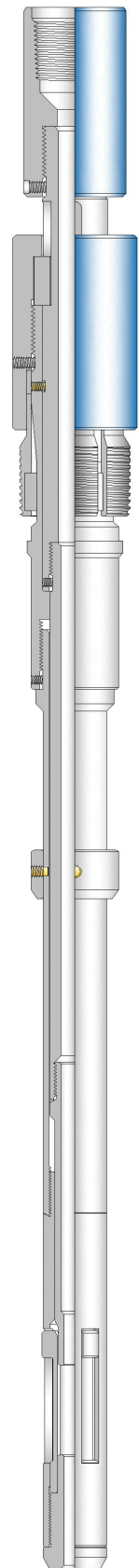
HS3
Setting
adapter

Releasing tools

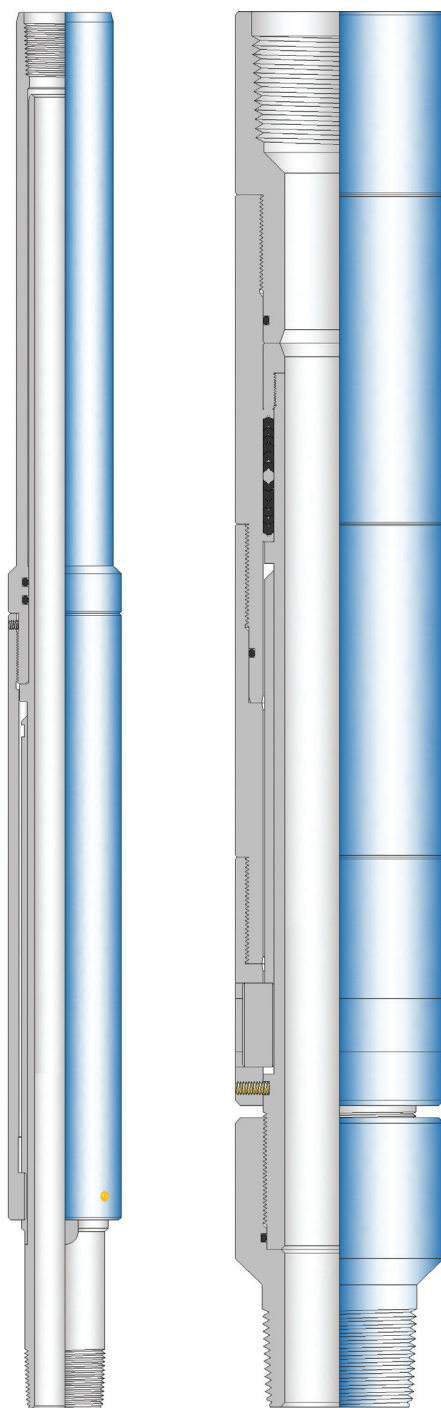
Available types: M-21, RT-22



M-21



RT-22



K

LBR

OTHER ACCESSORIES OF WELL COMPLETION

On Customer's demand LOG Oiltools Ltd. can deliver the following accessories:

Polished Bore Receptacles (PBR)

Lengths: 4 ft, 5 ft, 6 ft, 10 ft

Splined Expansion Joints (LBR or K type)

Lengths: 2-10 ft

Sliding Sleeve

Sizes: 2 3/8", 2 7/8", 3 1/2", 4 1/2"

Safety Joints

Left- and right-hand release available

Tubing sizes: 2 3/8", 2 7/8", 3 1/2"

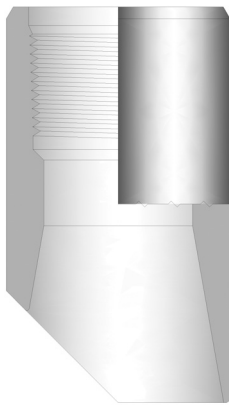
Cross-overs:

Lengths: 2 ft, 3 ft

Flow Couplings:

Lengths: 3 ft, 6 ft

Wireline Entry Guides



WE-1
 Wireline
 Entry Guide



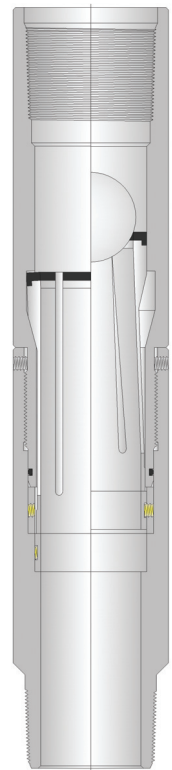
WE-2
 Wireline Entry
 Guide with Shear
 Out Ball Seat



WE-3
 Wireline Entry
 Guide with Shear
 Out Ball Seat



Sealbore Extension
 Millout Extension Xover



HTPS

OTHER AVAILABLE CATALOGUES



CERTIFICATES



Approvals

QA system
EN ISO 9001 : 2008

Product requirement
API 11D1
ARNCO Welding Process
GOST Standard

Threading licence
TENARIS BLUE

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Distributor / Sole Agent

Headquarter:

LOG OILTOOLS Kft. HUNGARY
H-8800 Nagykanizsa, Erdész u. 28.
Tel.: (+36 93) 537 140 • Fax: (+36 93) 537 142
E-mail: info@logoiltools.hu • <http://www.logoiltools.hu>

A member of the

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GROUP