

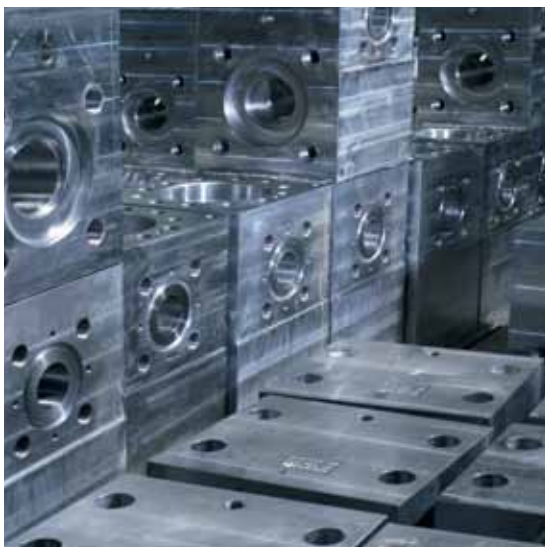
Mud pump consumables

Reliable spare parts service for your project

Our company offers global drilling lifecycle services (DLS) to all drilling equipment and systems customers around the world. Uninterrupted installation, commissioning and operation are essential benefits for our customers due to financial gains. Besides training, personnel for installation and commissioning, and providing support throughout the operational phase, the supply of spare parts is a vital part of our service.

We are a professional provider of OEM (Original Equipment Manufacturer) parts with a vision to be the preferred partner for the supply of spare parts. We guarantee our customers the constant availability of all critical replacement parts and delivery within 24 hours – and of course all our delivered components come with a comprehensive performance guarantee.

With DLS offices and warehouses situated in local hubs, we are always close to your project. Our experienced Service Account Managers are ready and available to support you in resolving any difficulties that may occur – if need be within a matter of hours – anywhere in the world.



Fluid end modules and accessories – suction and discharge modules

Fluid ends manufactured both from carbon steel and stainless steel as alternative material have a very positive impact on the lifecycle costs for triplex pumps operating under difficult conditions. The stainless steel modules have a lifespan that exceeds the general two-year lifespan associated with carbon steel modules. Consequently, they are economically viable, but are depending on various parameters out of the operating conditions.

The suction and discharge valve housings are manufactured from high-strength chrome alloy steel, with carefully worked transitions to ensure favourable fluid flow conditions and to reduce the material strains at critical points.

The valve chambers have been designed to comply with the requirements for valve installation according to API specification 7K.

Inlet and outlet valve bonnets, and all of the component parts therein, are identical and can be easily interchanged. Valve bonnets incorporate a hydraulically-operated bolt-tensioning system, which permits the rapid and safe removal of internal elements.

It is a simple matter to replace the sealing rings since the telescopic-flange assemblies can easily be removed as a pair, without the valve blocks being disturbed.

Part numbers for fluid end modules and accessories

	Discharge module	Suction module	Discharge module	Suction module	Fluid end
	Carbon steel	Carbon steel	Stainless steel	Stainless steel	L-type
TPK 800–5000 psi ¹	10232017	10232016	11027931	11027930	–
TPK 1000–5000 psi ¹	10232017	10232016	11027931	11027930	–
TPK 1300–5000 psi ²	10230217	10230216	11070565	11070564	–
TPK 1600–5000 psi ²	10230217	10230216	11070565	11070564	10228500
TPK 1600–7500 psi	10230572	10230571	10230559	10230558	–
TPK 2000–7500 psi	10230572	10230571	10230559	10230558	–
TPK 2200–7500 psi	10230572	10230571	10230559	10230558	–

¹ Only suitable for TPK 800–1000 to serial no. 46 | ² Only suitable for TPK 1300–1600 from serial no. 47 to serial no. 57

Mud pump consumables

We offer fluid end parts and consumables suitable for various types of mud pumps for each individual application. The hydraulic quick release system guarantees low downtimes when replacing fluid end parts, and ensures the highest possible degree of safety (HSE).

Liners

We offer two types of mud pump liners. They are designed to be highly durable for operating pressures of up to 7 500 psi.

Premium chrome liners

We offer high chrome-plated liners for the triplex mud pumps. All liners have forged-steel external hulls, which provide resistance to hoop stress, and centrifugally-cast high-chrome sleeves for a greater hardness.

A retaining lip at the rear of the liner helps to maintain the internal chrome/iron wear sleeve and protects against the high pressures encountered in today's market applications. Production with computer-controlled machining ensures tighter tolerances and consistent durability and value. The liner is set to match the pressure rating of the pump for each liner size.

>
Premium chrome
liners

>>
Zirconia liners



Zirconia liners

Zirconia liners are commonly used with Wirth TPK 2200 and Wirth TPK 1600/2000 mud pumps. These liners do not produce ID ridges which are common in high-chrome liners. ID ridges are a cause of piston failure. Zirconia sleeves are much harder than chrome sleeves and are also more durable, resulting in reduced rig downtimes and lower ownership costs. The liners are available in sizes ranging from 4 ½" to 7 ½".

Regarding its properties, zirconia has three important advantages compared other premium liners:

- Better impact strength
- Harder
- Finer surface

The improved wear properties directly results in an extended service life for the sleeve, while the

improved impact strength leads to a reduction in the significant costs for the replacement of broken liners in the field. As a consequence of the finer surface finish, there is less friction with the elastomer-metal pump pistons, which in turn ensures an extended piston life and reduced pump-cooling requirements.

With a zirconia liner, less maintenance at the pump is required, due to the extended service life achieved for both pistons and liners, consequently leading to a safer environment.

Zirconia ceramic liners have been proven to be the most cost-effective liners in use in the industry today. These liners offer the consistent quality needed for reliable pump performance, improved safety, and cost savings.

Part numbers for liners and liner gaskets

	TPK 800/TPK 1000			
	Liners incl. gaskets		Liner gaskets	
	Zirconia	Chrome	Zirconia	Chrome
Drawing, Liner size	B0000518	A2407641	B0000518	A2407641
4 ½	11003140	10263641	20263423	20263423
5	11003140	10263642	20263561	21000922
5 ½	11003139	10263643	20263558	20263561
6	11003138	10263644	20263554	20263558
6 ½	11003136	10263645	20263555	20263554
7	11003134	10263646	20263588	20263555

Part numbers for liners and liner gaskets

TPK 1300				
	Liners incl. gaskets		Liner gaskets	
	Zirconia	Chrome	Zirconia	Chrome
Drawing, Liner size	–	A2407897	–	B0020825
5 ½	–	10263534	–	20263561
6	–	10263536	–	20263558
6 ½	–	10263537	–	20263554
7	–	10263538	–	20263555

TPK 1600 ¹				
	Liners incl. gaskets		Liner gaskets	
	Zirconia	Chrome	Zirconia	Chrome
Drawing, Liner size	–	B0033030	B0033030	B0033030
5 ½	11056233	11050064	20263555	20263555
6	11056232	11050065	20263555	20263555
6 ½	11056231	11050067	20263555	20263555
7	11056230	11050068	20263555	20263555

¹ Only suitable up to serial no. 46

> Premium chrome liners

>> Zirconia liners



TPK 1600/2000 ²				
Drawing, Liner size	Liners incl. gaskets		Liner gaskets	
	Zirconia	Chrome	Zirconia	Chrome
	B0000615	B0020825	B0000615	B0020825
4 ½	11051528	11051512	20263561	20263561
5	11051507	11051514	20263561	20263561
5½	11003520	10263550	20263558	20263561
6	11003519	10263551	20263554	20263558
6 ½	11003518	10263552	20263555	20263554
7	11003514	10263553	20263588	20263555
7 ½	–	10263574	–	20263588

² Only suitable for TPK 1600 from serial no. 47 onwards

TPK 2200				
Drawing, Liner size	Liners incl. gaskets		Liner gaskets	
	Zirconia	Chrome	Zirconia	Chrome
	B0000614	A2407644	B0000614	A2407644
4 ½	–	–	–	–
5	11049656	11049653	20263561	20263561
5 ½	10263617	10263567	20263558	20263561
6	10263618	10263562	20263554	20263558
6 ½	10263619	10263563	20263555	20263554
7	10263620	10263564	20263588	20263555
7 ½	–	10263568	–	20263588

Pistons

Our different types of mud pump pistons are suitable for various applications. Our pistons are designed to deliver maximum performance under almost all drilling conditions. The pistons have sizes ranging from 4 ½" to 7 ½" and are used with all Wirth mud pump types. They are fully interchangeable with other API-compatible pistons. The most common piston types recommended by us are described below; additional alternatives are available upon request.

Standard black piston with guide belt

These pistons are designed to resist wear and abrasion in medium service applications involving water-based mud environments.

Applications

- All drilling applications featuring water-based drilling muds
- Can withstand temperatures of up to 176° F (80° C)
- Operating pressure ranges from 1 000 psi to 7 500 psi

Black compound

The piston rubber is made from specially formulated compounds which are resistant to the effects of heat, oil and water. A fabric-reinforced backing of the piston rubbers creates a wear-resistant seal. The hub is formed from a high-grade steel to ensure high tensile strength and a long service life.

Seal design

This piston uses a guide belt to help direct the piston into the liner while reducing the wear on the piston rubber. With the guide belt, small degrees of misalignment can be compensated for and a proper fit in the liner is ensured.

Stingray piston

These pistons are designed to resist wear and abrasion in service applications involving high pressures and non-aqueous mud systems.

Applications

- All drilling applications featuring any type of oil-based drilling mud (OBM)
- Can withstand temperatures of up to 212° F (100° C)
- Operating pressure ranges from 1 000 psi to 7 500 psi
- One piston per open hole drilling section
- Suitable for all synthetic and oil-based muds

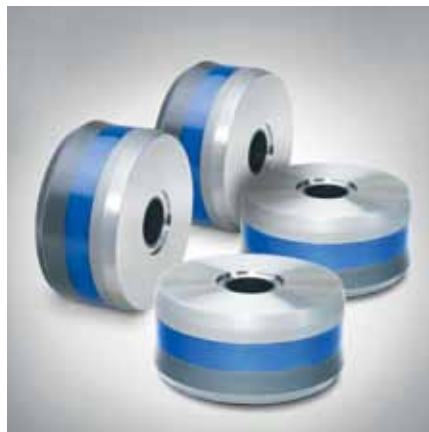
Stingray compound

- An improved 'bull-nose' lip design and urethane of the highest quality enable the stingray to significantly outperform the leading competition.
- Two different urethanes bonded together for superior performance. All urethane pistons require adequate cooling for optimum operation.
- 30 % more urethane compared to cup lip piston
- Bonded to hub for increased strength
- Cut-back hub protects liner

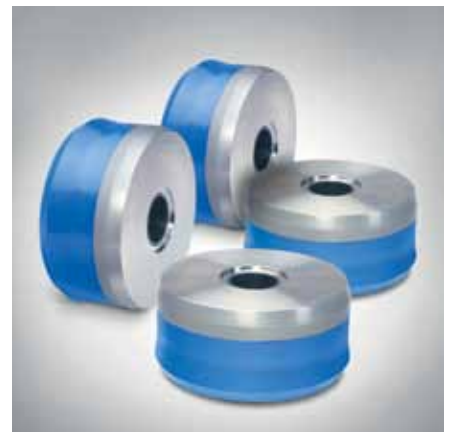
Standard black piston with guide belt



Stingray piston



Stingray HT extreme piston



Seal design

- Designed especially for triplex pumps to maximise performance
- Constant seal prevents any fluids being squirted by piston
- Solid lip aids piston alignment in liner
- Superior abrasion resistance

Stingray HT extreme piston

These pistons are designed to resist wear and abrasion in service applications involving high temperatures and non-aqueous mud systems.

Applications

- All drilling applications featuring any type of drilling mud
- Can withstand temperatures of up to 300° F (148° C)
- Operating pressure ranges from 1 000 psi to 7 500 psi
- One piston per open hole drilling section
- Not affected by OBM or synthetic-based mud

Stingray HT extreme compound

- Superior design and high-temperature urethane of the highest quality enable the stingray HT to significantly outperform the leading competition
- Bonded dual hardness with 45 % more urethane compared to other pistons
- Special additive to reduce friction between piston and liner. All urethane pistons require adequate cooling for optimum operation.
- Enhanced chemical degradation resistance
- Premium urethane compounds with higher tensile strength

Seal design

- Designed especially for triplex pumps to maximise performance
- Constant seal prevents any fluids being squirted by piston
- Higher seal area moves piston hub away from liner
- Seal allows piston to run more concentrically in liner

Part numbers for pistons

	Pistons – complete assembly			Replacement parts/piston inserts	
	Stingray HT extreme	Stingray	Standard black with guide belt	Standard black	Guide belt
Drawing, Liner size	B0054069	B0015984	B0004476	B0004476	B0004476 B0004496
4 ½	21051357	21029389	11050894	20261888	21037926
5	21051358	21029385	11050812	20261912	21037840
5 ½	21051360	21025627	10261990	20261887	21004485
6	21051382	21025628	10261991	20261919	21000915
6 ½	21051383	21025630	10261992	20261918	21004481
7	21051385	21025631	10261993	20261917	21004927
7 ½	21051386	21027241	10261994	20261916	21002761

Valves

Full range of valves and seats for triplex pumps; there are two different designs for valves and seats which can be selected according to the specific drilling conditions.

Full open (FO) valves

Full open valves enable uniform fluid end loading, leading to a longer fluid end life. Virtually no warpage due to heat treatment has been encountered because of very small insert extrusion gaps. The axisymmetric shape results in nearly-uniform seat warpage. Serrations in the valve insert groove lock insert in place, thereby reducing swelling of the insert in all environments.

The proven design minimises metal-to-metal bearing area between valve and web seat with larger flows involved, increasing valve and seat lives.

The newly-developed insert compound has a temperature rating of 300°F (148° C) for the full open premium valve and 212° F (100° C) for the full open standard valve, both designed in accordance with API 7K (styles # 6 and # 8).

Cross web (CW) valves

The cross web valve is made from carburised premium alloy steel to resist wear, to provide an accurate seal, and to protect against washout or damage to the pump. The original 3-web design allows a maximum flow area through the seat while providing a maximum seating area for the valve. The body consists of a one-piece design that contains the insert to the fullest extent with the minimum use of the material. A patented polyurethane insert is equipped with a double angle (55°) seal contact surface, which allows cylinder priming to be maintained during pump shutdown.

The valves are intended for all drilling operations with pressures of up to 7500 psi and a maximum operating temperature of 176°F (80° C). The large bearing area on the valve seat promotes a long service life.

> Open premium valve

>> Cross web (CW) valves



Part numbers for valve parts

	TPK 800/1000		
Style	Full open premium	Full open standard	Cross web
Valve style	11041389	11007110	–
Valve cone	21032294	20260761	–
Valve cone HT extreme	–	–	–
Spring	20260707	20260707	–
Valve seat	21032293	20260760	–
Guide bushing	20228205	20228205	–
O-ring	21004390	21004390	–
O-ring	21004391	21004391	–

	TPK 1300/1600/2000/2200		
Style	Full open premium	Full open standard	Cross web
Valve style	11095570	10260799	10260811
Valve cone	21030726	10260791	20260813
Valve cone HT extreme	21051412	–	–
Spring	20260794	20260794	20260815
Valve seat	11095891	10260790	20260812
Guide bushing	–	–	–
O-ring	21006661	20631519	21006661
Valve plate	–	20260793	20260814
Valve nut	–	20260792	–

Valve design

Temperature limit

Full open premium

300° F (148° C)

Full open standard

212° F (100° C)

Cross web

176° F (80° C)

Tools

We can offer several types of tools for the safe and easy handling of the spare parts.

For your safety:



- Before any maintenance work is carried out, read the pump safety guidelines thoroughly and apply whenever applicable.
- Periodically review the information in the safety section with all persons who operate or work on the pumps.



WARNING!

- Loose clothing may be caught in rotating parts, pulling the wearer into the machinery. Refrain from wearing loose clothing and tie back long hair.



WARNING!

- Wear safety harnesses, and ensure safe access is provided to all mud pump items which cannot be reached from floor/deck level.



WARNING!

- Wear appropriate personal protection equipment, safety is of paramount importance.
- Wear ear protection. The area close to the main drive motors will have noise levels in excess of 80 dB(A) when blowers are running.



- Work on the mud pump may only be performed by physically, mentally and technically competent, duly authorised and certified personnel.
- Use the permit to work system (PTWS)!
- The work area must be adequately lit to assure sufficient all round vision.
- Hydraulic hand pump pressure gauges must be calibrated periodically.
- Maintain a good housekeeping regime during any service/repair on the mud pumps.
- Spare parts should always meet the technical requirements specified by the manufacturer. This is ensured when using Aker Wirth original spare parts.
- Ensure that adequate and suitable tools and equipment are available to perform all maintenance work.

**CAUTION!**

- Pump, motors, lubrication oil, pipe work and gearboxes may reach temperatures approaching 60 degrees Celsius during normal operation. Maintenance personnel shall be made aware of this and sufficient cooling off time shall be allowed before commencing work on hot parts.

**WARNING!**

- Stop and isolate the mud pump from all sources of hydraulic energy and the electrical power supply as per the operator's lock out procedure.
- The pump must be completely depressurised before attempting any work on the fluid end or piston and liner assemblies.
- Bursting bladder of pre-charged suction and discharge dampener may cause serious injury to personnel and damage to equipment.
- Jets and leaks from high pressure oil may be fatal. Ensure the system is switched off, depressurised and locked out before any work is performed on the mud pump.

Safety instructions for HP hose as part of tool package

High pressure hoses require special safety precautions and instructions for use!



- Do not kink or bend the hose below the specified minimum bending radius. The specified minimum bending radius is valid for static applications; for dynamic applications we advise that the minimum bending radius should be doubled.
- Do not subject the hose to any twisting or torsion stress.
- Do not use the hoses as traction components for lifting or dragging other equipment.



- Use only adaptors and reduction pieces which have been approved by RK Kutting.
- The lines must be inspected at regular intervals.
- Before each installation, the hoses must be inspected for damage, kinks, wear, corrosion, cracks and other kinds of damage.
- It is absolutely essential to replace damaged hoses immediately.
- Use only hoses with a known working pressure.
- To extend the service life of the hose, use only clean media.
- If a malfunction is suspected, immediately shut down the product or machine in which the hose is installed and replace the hose.
- The maximum permitted operating pressure is determined by the weakest element in the installation.

Listing of standard mud pump tool package

Picture	Description	Part no
Fig 10	1 Liner puller	11002584
Fig 11	1 Valve cover puller	11012412
Fig 12	1 High pressure hydraulic pump	10234283
Fig 13	1 Hydraulic tool for suction valve housing	11002814
Fig 14	1 Charge hose for suction dampener	10234311
Fig 15	1 Wrench for liner clamping	10267556
Fig 16	1 Socket wrench for valve closure	10234304
Fig 17	1 Torque bar	11002706
Fig 18	1 Discharge strainer removal bar ¹	10234293
Fig 19	1 Torque bar	10234289
Fig 20	1 Wear ring pulling device	11004045
Fig 21	1 Chain tensioning tool ²	11030324
Fig 22	1 Pressure intensifier ¹	10234285
Fig 23	1 Piston assembly tool ¹	11019861

¹ Only for TPK 2200 | ² Only for chain-driven pumps



All tools in our standard tool package are supplied in an aluminium box, except the piston assembly tool which is mounted to the pump frame local to the fluid end. ¹
The size of the aluminium box is:
L x W x H 1200 mm x 800 mm x 500 mm



The liner puller shall not be used for lifting



Fig 10: liner puller
Part no: 11002584

Used for pulling the cylinder liners clear of the fluid end.



Fig 11: valve cover puller
Part no: 11012412

Used for removing the valve covers on the discharge valve housing and the suction valve housings.



Fig 12: hydraulic pump
Part no: 10234283

The hand pump is used to pressurise the various stud tensioning devices used during regular maintenance and for expelling the valve seat. It is also used to break the taper lock on some bearings.

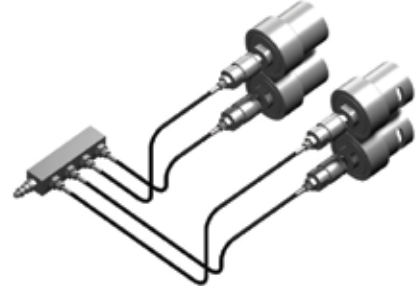


Fig 13: hydraulic tool for suction valve housing
Part no: 11002814

Four hydraulic tensioning nuts and one hydraulic manifold is used to tension the studs that fasten the suction valve housing to the discharge valve housing.



The charge hose is only the connecting piece between the suction dampener and the pressure regulator/bleed valve at the nitrogen bottle (NB. connector to the nitrogen bottle is not scope of supply).



Fig 14: charge hose for suction dampener
Part no: 10234311

This is used to connect the suction dampener to the nitrogen supply, which is used to charge the bladder.



Fig 15: wrench for liner clamping
Part no: 10267556

This is used to tighten the jacking nuts as part of the hydraulic bolt tensioning procedure, used for installation and removal of the cylinder liners.



Fig 16: socket wrench for valve closure
Part no: 10234304

This is used to turn the jacking screw as part of the hydraulic bolt tensioning procedure, used for installation and removal of the discharge and suction valve closures. The torque bar (part no: 11002706) from the standard tools set is used in conjunction with this tool.



Fig 17: torque bar
Part no: 11002706

This is used in conjunction with the socket wrench for valve closure drawing (part no: 10234304), and used in conjunction with driveshaft turning in order to turn the driveshaft by hand during maintenance procedures.



Fig 18: discharge strainer removal bar
Part no: 10234293

Used to loosen or tighten the threaded closure ring of the discharge strainer, to be used on 7 500 psi rated fluid ends.



Fig 19: torque bar
Part no: 10234289

Used in conjunction with the hydraulic tools for suction valve housing, to nip tight the base nuts (part no: 11002814)



Fig 20: wear ring pulling device
Part no: 11004045

Used for pulling the wear rings.



Fig 21: chain tensioning tool
Part no: 11030324

Used to tension/de-tension the chain.



Fig 22: pressure intensifier
Part no: 10234285

The pressure intensifier is used in conjunction with the hydraulic pump. It increases the pressure output of the pump threefold to 3 000 bar (43 500 psi). It is used to expel the valve seats in the discharge valve housings and the suction valve housings.

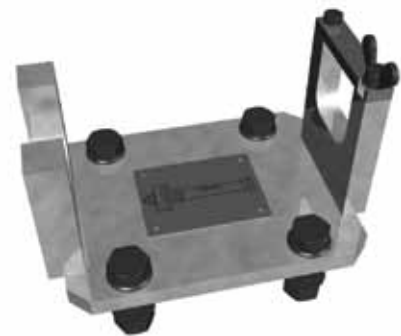


Fig 23: Piston assembly tool
Part no: 11019861

The piston assembly tool is used to install and de-install the piston on the piston rod.

Listing of special mud pump tool package

Picture	Description	Part no
Fig 24	1 Special wear ring pulling device	11004321
Fig 25	1 Manual valve seat puller "cross web"	11023700
Fig 26	1 Manual valve seat puller "full open"	11051795
Fig 27	1 Air operated wrench type	21027571
Fig 28	1 Hydraulic power pack unit	21040609
Fig 29	1 Filling & Flushing unit	21059454



The special tools will reduce human work-load during regular standard maintenance activities and can be ordered upon request.



Fig 24: special wear ring pulling device
Part no: 11004321

To be used as an alternative to pull the wear rings, see fig 20.



Fig 25: manual valve seat puller for "cross web" seats
Part no: 11023700



Fig 26: manual valve seat puller for "full open" seats
Part no: 11051795



Fig 27: air operated wrench type CLS 315
Part no: 21027571

Power supply: Compressed air 4–7 bar, (58–101.5 psi)
Torque: 1 180 to 3 460 Nm
Impact size: SW 65
Weight approximately: 9 kg

To be used as an alternative to turning the mud pump by hand.



Fig 28: hydraulic power pack unit LHP 2500
Part no: 21040609

Operating pressure: max. 2 500 bar/36 250 psi
Power supply: Compressed air 6–10 bar, (87–145 psi)
Dimension: 400 x 350 x 550 mm (L x W x H)
Weight approximately: 35 kg

To be used as an alternative to the hand lever pump, see fig 11.



Fig. 29: Filling & Flushing Unit - BS 25-CL
Part no. 21059454

Operating pressure: max. 5 bar
Flow rate: 25 l/min
Power supply: Compressed air 6–max. 8,4 bar
Weight approximately: 170 kg

Details concerning your spare parts order at a glance

We want to make the process of ordering spare parts as simple as possible for you. Simply choose the type and size of your Wirth mud pump from the table below and order the corresponding spare parts (using the part numbers) at www.myDrilling.com. If you need additional information or have further questions, please contact your local Service Account Manager.

Quick reference guide

Wear parts for TPK 800 & 1000–5000 psi

	Liners incl. gaskets		Liner gaskets		Pistons – complete assembly			
	Zirconia	Chrome	Zirconia	Chrome	Stingray HT extreme	Stingray	Standard black with guide belt	Urethane bonded
Drawing Liner size	B0000518	A2407641	B0000518	A2407641	B0054069	B0015984	B0004476	B0004491
4 ½	11046140	10263641	20263423	20263423	21051357	21029389	11050894	21001283
5	11003140	10263642	20263561	21000922	21051358	21029385	11050812	20261904
5 ½	11003139	10263643	20263558	20263561	21051360	21025627	10261990	20261905
6	11003138	10263644	20263554	20263558	21051382	21025628	10261991	20261913
6 ½	11003136	10263645	20263555	20263554	21051383	21025630	10261992	20261914
7	11003134	10263646	20263588	20263555	21051385	21025631	10261993	20261915

Drawing Liner size	Replacement parts/ piston inserts		Valve parts			
	Standard black	Guide belt		Full open premium	Full open standard	Cross web
Drawing Liner size	B0004476	B0004476 B0004496	Drawing Style	B0025089	–	–
4 ½	20261888	21037926	Valve API style # 6	11041389	11007110	–
5	20261912	21037840	Valve cone	21032294 ¹	20260761	–
5 ½	20261887	21004485	Spring	20260707	20260707	–
6	20261919	21000915	Valve seat	21032293	20260760	–
6 ½	20261918	21004481	Guide bushing	20228205	20228205	–
7	20261917	21004927	O-ring	21004390 ²	21004390	–
			O-ring	21004391	21004391	–

Fluid end modules & accessories

¹ Including valve plate | ² Included in valve seat

Discharge module	Suction module	Discharge module stainless steel	Suction module stainless steel	Wear ring	Gasket for wear ring	Gasket for valve cover
10230217	10230216	11027931	11027930	10232018	20232027	20232028

Tools/seat puller assemblies

	Full open premium	Full open standard	Cross web		Premium	Standard	Note
Mechanical valve seat puller API style # 6	–	–	–	Wear ring puller	11004321	11031722	–
Hydraulic valve seat puller API style # 6	21032541 ³	–	–	Liner puller	11041842	–	Suitable from serial no. 17 upwards

³ Only for pumps which are equipped with hydraulic quick release system

Wear parts for TPK 1300–5000 psi

	Linings incl. gaskets		Liner gaskets		Pistons – complete assembly			
	Zirconia	Chrome	Zirconia	Chrome	Stingray HT extreme	Stingray	Standard black with guide belt	Urethane bonded
Drawing Liner size	–	A2407897	–	B0020825	B0054069	B0015984	B0004476	B0004491
5 ½	–	10263534	–	20263561	21051360	21025627	10261990	20261905
6	–	10263536	–	20263558	21051382	21025628	10261991	20261913
6 ½	–	10263537	–	20263554	21051383	21025630	10261992	20261914
7	–	10263538	–	20263555	21051385	21025631	10261993	20261915

Replacement parts/
piston inserts

	Standard black	Guide belt
Drawing Liner size	B0004476	B0004476 B0004496
5 ½	20261887	21004485
6	20261919	21000915
6 ½	20261918	21004481
7	20261917	21004927

Valve parts

	Full open premium	Full open standard	Cross web
Drawing Style	B0024715	A2203044	A2407149
Valve API style # 8	11095570	10260799	10260811
Valve cone	21030726	10260791	20260813
Valve cone HT extreme	21051412	–	–
Spring	20260794	20260794	20260815
Valve seat	11095891	10260790	20260812
O-ring	21006661 ¹	20631519	21006661 ¹
Valve plate	–	20260793	20260814 ²
Valve nut	–	20260792	–

¹ Including valve seat | ² Included in valve cone

Fluid end modules & accessories

Discharge module	Suction module	Discharge module stainless steel	Suction module stainless steel	Wear ring	Gasket for wear ring	Gasket for valve cover
10230217	10230216	11070565	11070564	10230244	20230445	20228419

Tools/seat puller assemblies

	Full open premium	Full open standard	Cross web		Premium	Standard	Note
Mechanical valve seat puller API style # 8	11051795	11051760	11023700	Wear ring puller	11004321	11031722	–
Hydraulic valve seat puller API style # 8	10234283 ³	10234283 ³	10234283 ³	Liner puller	10267285	–	suitable from serial no. 17 upwards
Amplifier for hydraulic puller	10234285	10234285	10234285				

³ Only for pumps which are equipped with hydraulic quick release system

Wear parts for TPK 1600–5000 psi

	Liners incl. gaskets		Liner gaskets		Pistons – complete assembly			
	Zirconia	Chrome	Zirconia	Chrome	Stingray HT extreme	Stingray	Standard black with guide belt	Urethane bonded
Drawing Liner size	–	B0033030	B0033030	B0033030	B0054069	B0015984	B0004476	B0004491
5 ½	11056233	11050064	20263555	20263555	21051360	21025627	10261990	20261905
6	11056232	11050065	20263555	20263555	21051382	21025628	10261991	20261913
6 ½	11056231	11050067	20263555	20263555	21051383	21025630	10261992	20261914
7	11056230	11050068	20263555	20263555	21051385	21025631	10261993	20261915

Drawing Liner size	Replacement parts/ piston inserts		Valve parts			
	Standard black	Guide belt		Full open premium	Full open standard	Cross web
Drawing Liner size	B0004476	B0004476 B0004496	Drawing Style	B0024715	A2203044	A2407149
5 ½	20261887	21004485	Valve API style # 8	11095570	10260799	10260811
6	20261919	21000915	Valve cone	21030726	10260791	20260813
6 ½	20261918	21004481	Valve cone HT extreme	21051412	–	–
7	20261917	21004927	Spring	20260794	20260794	20260815
			Valve seat	11095891	10260790	20260812
			O-ring	21006661 ¹	20631519	21006661 ¹
			Valve plate	–	20260793	20260814 ²
			Valve nut	–	20260792	–

Fluid end modules & accessories

¹ Including valve seat | ² Included in valve cone

Discharge module	Suction module	Discharge module stainless steel	Suction module stainless steel	Fluid end L-type	Wear ring	Gasket for wear ring	Gasket for valve cover
10230217 ⁴	10230216 ⁴	11070565	11070564	10228500	10230244	20230445	20228419

Tools/seat puller assemblies

	Full open premium	Full open standard	Cross web		Premium	Standard	Note
Mechanical valve seat puller API style # 8	11051795	11051760	11023700	Wear ring puller	–	11031722	–
Hydraulic valve seat puller API style # 8	10234283 ³	10234283 ³	10234283 ³	Liner puller	–	–	–
Amplifier for hydraulic puller	10234285	10234285	10234285				

³ Only for pumps which are equipped with hydraulic quick release system | ⁴ Only for “modification kit”

Wear parts for TPK 1600/2000 – 7500 psi

Drawing Liner size	Liners incl. gaskets		Liner gaskets		Pistons – complete assembly			
	Zirconia	Chrome	Zirconia	Chrome	Stingray HT extreme	Stingray	Standard black with guide belt	Urethane bonded
B0000615	B0020825	B0000615	B0020825	B0054069	B0015984	B0004476	B0004491	
4 ½ ¹	11051528	11051512	20263561	20263561	21051357	21029389	11050894	21001283
5 ¹	11051507	11051514	20263561	20263561	21051358	21029385	11050812	20261904
5 ¼ ²	11003524	10263573	20263561	20263561	21051359	21035606	11010112	21001284
5 ½	11003520	10263550	20263558	20263561	21051360	21025627	10261990	20261905
6	11003519	10263551	20263554	20263558	21051382	21025628	10261991	20261913
6 ½	11003518	10263552	20263555	20263554	21051383	21025630	10261992	20261914
7	11003514	10263553	20263588	20263555	21051385	21025631	10261993	20261915
7 ½	–	10263574	–	20263588	21051386	21027241	10261994	21001285

Drawing Liner size	Replacement parts/ piston inserts		Valve parts			
	Standard black	Guide belt		Full open premium	Full open standard	Cross web
B0004476	B0004476	B0004496		B0024715	A2203044	A2407149
4 ½ ¹	20261888	21037926	Valve API style # 8	11095570	10260799	10260811
5 ¹	20261912	21037840	Valve cone	21030726	10260791	20260813
5 ¼ ²	20261920	21006682	Valve cone HT extreme	21051412	–	–
5 ½	20261887	21004485	Spring	20260794	20260794	20260815
6	20261919	21000915	Valve seat	11095891	10260790	20260812
6 ½	20261918	21004481	O-ring	21006661 ³	20631519	21006661 ³
7	20261917	21004927	Valve plate	–	20260793	20260814 ⁴
7 ½	20261916	21002761	Valve nut	–	20260792	–

¹ Only for 1600 HP – 7500 psi type | ² Only for 2000 HP³ Including valve seat | ⁴ Included in valve cone

Fluid end modules & accessories

Discharge module	Suction module	Discharge module stainless steel	Suction module stainless steel	Wear ring	Gasket for wear ring	Gasket for valve cover
10230572	10230571	10230559	10230558	10230224	20230218	20228419

Tools/seat puller assemblies

	Full open premium	Full open standard	Cross web		Premium	Standard	Note
Mechanical valve seat puller API style # 8	11051795	11051760	11023700	Wear ring puller	11004321	11004045	–
Hydraulic valve seat puller API style # 8	10234283 ⁵	10234283 ⁵	10234283 ⁵	Liner puller	10267285	–	TPK 1600 suitable from serial no. 47 up to serial no. 57 TPK 2000 suitable up to serial no. 21
Amplifier for hydraulic puller	10234285	10234285	10234285	Liner puller	11002584	–	TPK 1600 suitable from serial no. 58 upwards TPK 2000 suitable from serial no. 58 upwards

⁵ Only for pumps which are equipped with hydraulic quick release system

Wear parts for TPK 2200 – 7500 psi

	Liners incl. gaskets		Liner gaskets		Pistons – complete assembly			
	Zirconia	Chrome	Zirconia	Chrome	Stingray HT extreme	Stingray	Standard black with guide belt	Urethane bonded
Drawing Liner size	B0000614	A2407644	B0000614	A2407644	B0054069	B0015984	B0004476	B0004491
5	11049656	11049653	20263561	20263561	21051358	21029385	11050812	20261904
5 ½	10263617	10263567	20263558	20263561	21051360	21025627	10261990	20261905
6	10263618	10263562	20263554	20263558	21051382	21025628	10261991	20261913
6 ½	10263619	10263563	20263555	20263554	21051383	21025630	10261992	20261914
7	10263620	10263564	20263588	20263555	21051385	21025631	10261993	20261915
7 ½	-	10263568	-	20263588	21051386	21027241	10261994	21001285

Replacement parts/
piston inserts

Drawing Liner size	Standard black	Guide belt
	B0004476	B0004476 B0004496
5	20261912	21037840
5 ½	20261887	21004485
6	20261919	21000915
6 ½	20261918	21004481
7	20261917	21004927
7 ½	20261916	21002761

Valve parts

Drawing Style	Full open premium	Full open standard	Cross web
	B0024715	A2203044	A2407149
Valve API style # 8	11095570	10260799	10260811
Valve cone	21030726	10260791	20260813
Valve cone HT extreme	21051412	-	-
Spring	20260794	20260794	20260815
Valve seat	11095891	10260790	20260812
O-ring	21006661 ¹	20631519	21006661 ¹
Valve plate	-	20260793	20260814 ²
Valve nut	-	20260792	-

¹ Including valve seat | ² Included in valve cone

Fluid end modules & accessories

Discharge module	Suction module	Discharge module stainless steel	Suction module stainless steel	Wear ring	Gasket for wear ring	Gasket for valve cover
10230572	10230571	10230559	10230558	10230224	20230218	20228419

Tools/seat puller assemblies

	Full open premium	Full open standard	Cross web		Premium	Standard	Note
Mechanical valve seat puller API style # 8	11051795	11051760	11023700	Wear ring puller	11004321	11004045	-
Hydraulic valve seat puller API style # 8	10234283 ³	10234283 ³	10234283 ³	Liner puller	10234300	-	-
Amplifier for hydraulic puller	10234285	10234285	10234285				

³ Only for pumps which are equipped with hydraulic quick release system

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