



SEALS FOR FLUID POWER APPLICATIONS





ROD SEALS (HYDRAULICS)

U-RINGS

Single-acting rod seal with asymmetric profile, recessed inner lip, and press fit on the external diameter for excellent tightness.

U-ring LF300

U-ring with grooved internal diameter contact surface. Use both as an individual seal and secondary seal in sealing systems.





MATERIAL	94 AU 925	92 AU 21100	94 AU 30000
 MAX.	-30 to +110 °C	-50 to +110 °C	-35 to +120 °C
 MAX.	0.6 m/s	0.6 m/s	0.6 m/s
 MAX.	32 MPa	32 MPa	32 MPa
	Earth-moving equipment, forklift trucks, tail lifts, agricultural machine, truck cranes, injection molding machines		

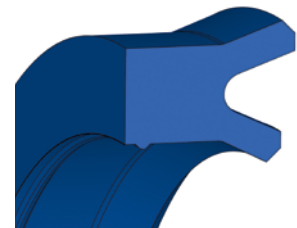


LF300

U-ring NI300

U-ring with additional support edge and sealing edge. An additional sealing edge largely prevents ingress of dirt.





MATERIAL	94 AU 925	94 AU 30000
 MAX.	-30 to +110 °C	-35 to +120 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	40 MPa	45 MPa
	Earth-moving equipment, presses, support cylinders	

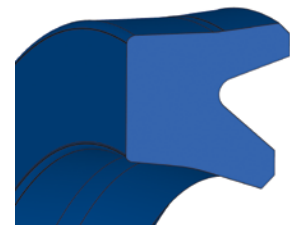


NI300

U-ring T20

Use both as an individual seal and secondary seal in the seal system.





MATERIAL	94 AU V142	94 AU 30000
 MAX.	-30 to +110 °C	-35 to +120 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	40 MPa	45 MPa
	Earth-moving equipment, forklift trucks, tail lifts, agricultural machines, truck cranes, injection molding machines, support cylinders	

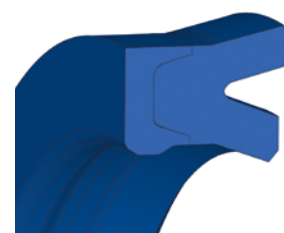


T20

U-ring HDR-2C

Particularly pressure-resistant material type (hard/soft combination in 2 K technology). Use both as an individual seal and secondary seal in sealing systems.





MATERIAL	92 AU 21100 / 98 AU 928
 MAX.	-50 to +110 °C
 MAX.	0.5 m/s
 MAX.	50 MPa
	Earth-moving equipment, forklift trucks, tail lifts, truck cranes, support cylinders



HDR-2C

U-ring NI150

Use both as an individual seal and secondary seal in the seal system.





MATERIAL	80 NBR 878
 MAX.	-30 to +100 °C
 MAX.	0.5 m/s
 MAX.	10 MPa
	Primarily for spare parts requirements. For new designs, we recommend more modern series, such as the T20, LF300

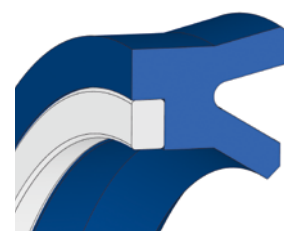


NI150

U-ring NI250

U-ring with integrated backup ring.





MATERIAL	80 NBR 878 / POM
 MAX.	-30 to +100 °C
 MAX.	0.5 m/s
 MAX.	25 MPa
	Primarily for spare parts requirements. For new designs, we recommend more modern series, such as the T20, LF300

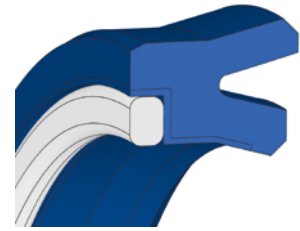


NI250

U-ring NI400

U-ring with integrated backup ring.





MATERIAL	80 NBR 878 / POM
 MAX.	−30 to +100 °C
 MAX.	0.5 m/s
 MAX.	40 MPa
	Primarily for spare parts requirements. For new designs, we recommend more modern series, such as the T20, LF300, HDR-2C

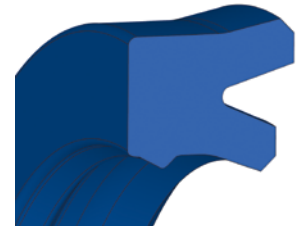


NI400

U-ring T22

U-ring with additional support edge and sealing edge. Use in combination with double-acting wipers not recommended.





MATERIAL	95 AU V142
 MAX.	−30 to +110 °C
 MAX.	0.5 m/s
 MAX.	40 MPa
	Earth-moving equipment, support cylinders, ship hydraulics, mobile hydraulics



T22

U-ring T23

U-ring with integrated backup ring. Use in combination with double-acting wipers not recommended.





MATERIAL	95 AU V142 / POM
 MAX.	−30 to +110 °C
 MAX.	0.5 m/s
 MAX.	50 MPa
	Earth-moving equipment, hydraulic steelwork, support cylinders, ship hydraulics, heavy mobile hydraulics, scrap shears



T23

U-ring T24

U-ring with additional support edge and sealing edge. Use in combination with double-acting wipers not recommended.





MATERIAL	95 AU V142
 MAX.	-30 to +110 °C
 MAX.	0.5 m/s
 MAX.	40 MPa
	Telescopic cylinder



T24

Merkel U-ring TM20

U-ring made of polyurethane with asymmetric profile and shortened inner lip.





MATERIAL	95 AU V142	93 AU V167
 MAX.	-30 to +110 °C	-20 to +110 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	40 MPa	40 MPa
	Secondary seal in a seal system or as individual seal in the pressure range up to 26 MPa	

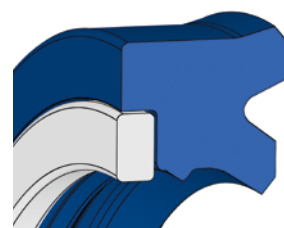


TM20

Merkel U-ring TM23

Two-piece seal set, comprising a polyurethane profile ring and a backup ring made of POM.





MATERIAL	93 AU V167 / PA or POM
 MAX.	+5 to +60 °C
 MAX.	0.5 m/s
 MAX.	50 MPa
	Mining

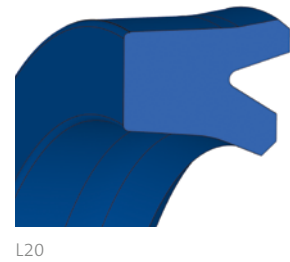


TM23

Merkel U-ring L20

Asymmetric elastomer U-ring with shortened inner lip.





MATERIAL	85 NBR B203, 85 NBR B247	85 FKM K664
 MAX.	-30 to +100 °C	-10 to +200 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	16 MPa	16 MPa
	Operating media: water and water emulsion	



L20

U-ring Syprim SM

Two-piece seal set with integrated backup ring and pressure-relief function. Use as a primary rod seal within a seal system, typically in combination with a U-ring.





MATERIAL	95 AU V142/POM	94 AU 30000/POM
 MAX.	-30 to +110 °C	-35 to +120 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	40 MPa	40 MPa
	Earth-moving equipment, forklift trucks, agricultural machines, truck cranes, injection molding machines	

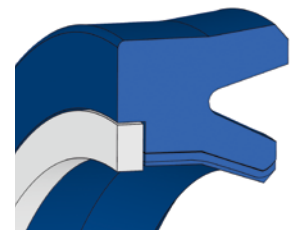


Syprim SM

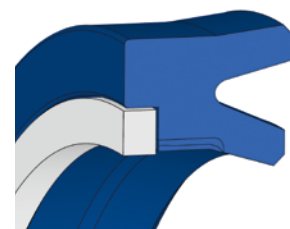
Merkel U-ring 0214, 0216

Two-piece seal set with an elastomer sealing edge, fabric reinforcement on the running surface (continuous on type 0214), and with an active backup ring.

MATERIAL	80 NBR B246 with BI-NBR B4 B248 / PA 6.G200 or POM PO202
 MAX.	-30 to +100 °C
 MAX.	1.5 m/s
 MAX.	25 MPa or 40 MPa (depending on profile)
	Iron and steel industries, presses, ship hydraulics, scrap shears, special cylinders, injection molding machines, hydraulic steelwork







0214

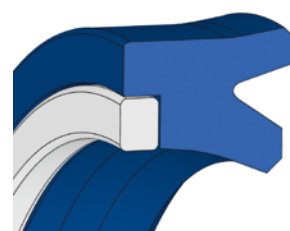


0216

Merkel U-ring 0503

Two-piece seal set with an asymmetric U-ring made of polyurethane and plastic backup ring.





MATERIAL	95 AU V142 / PA or POM	94 AU 925 / PA or POM
 MAX.	-30 to +110 °C	-30 to +110 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	50 MPa	50 MPa
	Individual seal for heavy engineering applications. Ideally suited to large diameters and for bridging large sealing gaps.	

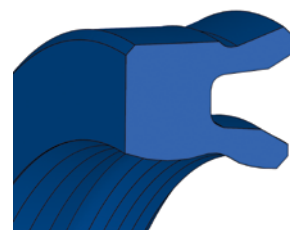


0503

Merkel U-ring TMP20

U-ring made of abrasion-resistant polyurethane.





MATERIAL	93 AU V167
 MAX.	-10 to +80 °C
 MAX.	1.5 m/s
 MAX.	2 MPa
	Pneumatic applications with strict operational requirements

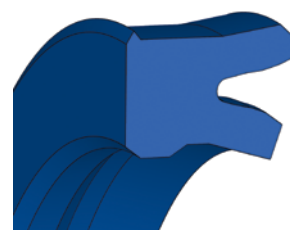


TMP20

Merkel U-ring 8009

Custom U-ring for sealing drag bearings that are subject to heavy soiling.





MATERIAL	93 AU V167
 MAX.	on request
 MAX.	on request
 MAX.	on request
	Iron and steel industries, hydraulic steelwork, tunnel boring machines

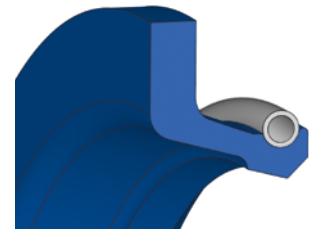


8009

Hat seal H with/without spring

Lip seal with/without spring load. Clamping flange for securing in the installation space.

MATERIAL	88 NBR 101
 MAX.	-30 to +100 °C
 MAX.	0.5 m/s
 MAX.	1 MPa
	Primarily for spare parts requirements. For new designs, we recommend more modern series, such as the T20, LF300







H MF

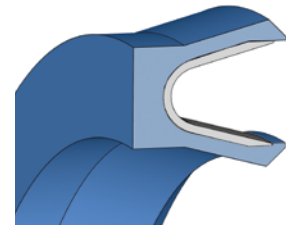


H OF

Forseal FOI

Single-acting, U-ring-type seal made of PTFE with stainless steel tension spring.

MATERIAL	PTFE F56110
 MAX.	-200 to +260 °C
 MAX.	15 m/s
 MAX.	30 MPa
	Fittings, hydraulic cylinders, accumulators, pneumatic cylinders, applications in the food technology, medical engineering, and chemical engineering sectors







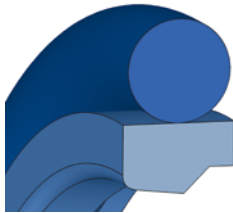
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COMPACT SEALS

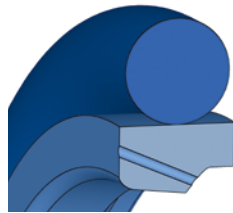
Merkel Omegat OMS-MR, OMS-MR PR, OMS-MR DW

Two-piece seal set, comprising a PTFE profile ring, on the OMS-MR PR version with patented pressure-relief function, and an elastomer ring as pre-load element. Pressure activation grooves on the OMS-MR DW version for pressurization on both sides.

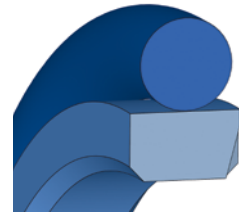
MATERIAL	PTFE B602, GM201, C104 / NBR	PTFE B602, GM201, C104 / FKM
 MAX.	-30 to +100 °C	-10 to +200 °C
 MAX.	5 m/s	5 m/s
 MAX.	40 MPa	40 MPa
	Primary seal in a seal system. The pressure-relief version for long strokes and major differences in speed	



OMS-MR







OMS-MR PR

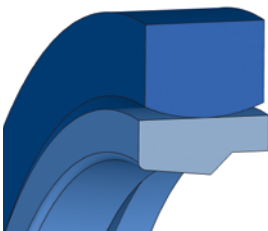


OMS-MR DW

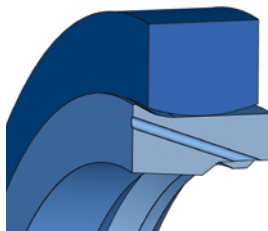
Merkel Omegat OMS-S, OMS-S PR, OMS-S SR

Two-piece seal set, comprising a PTFE or PE profile ring, on the OMS-S PR version with patented pressure-relief function, and skids. An elastomer profile ring serves as the pre-load element on both versions.

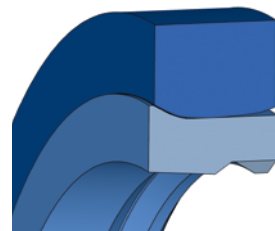
MATERIAL	PTFE B602, GM201, C104; PE E083 / NBR	PTFE B602, GM201, C104 / FKM
 MAX.	-30 to +100 °C	-10 to +200 °C
 MAX.	5 m/s	5 m/s
 MAX.	40 MPa	40 MPa
	Heavy industry, for example roller adjustment cylinders at steel works	



OMS-S







OMS-S PR

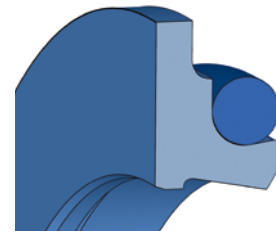


OMS-S SR

Merkel Omegat OMS-DR HB

Two-piece seal set, comprising a PTFE profile ring with holding flange to securely prevent rotation, and an O-ring as pre-load element.





MATERIAL	PTFE C104 / FKM	
 MAX.	+10 to +200 °C	
 MAX.	4 m/s	
 MAX.	26 MPa	
	For rotary / swivel movements and for combined lifting and turning movements	



OMS-DR HB

Merkel Omegat OMSU-MR, OMSU-MR PR

Two-piece seal set, comprising a polyurethane profile ring and an elastomer ring as pre-load element. Version OMSU-MR PR with patented pressure-relief function.

MATERIAL	95 AU V142 / NBR	98 AU V211 / NBR
 MAX.	-30 to +100 °C	-30 to +100 °C
 MAX.	0.5 m/s	0.5 m/s
 MAX.	16 MPa	16 MPa
	Can be used as an individual seal when working with exacting operating parameters up to an operating pressure of 16 MPa in connection with a double wiper	







OMSU-MR

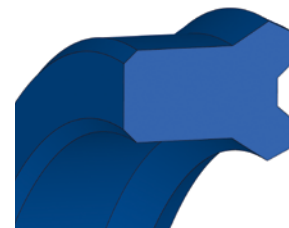


OMSU-MR PR

Compact seal KI310

Compact seal with symmetrical profile and press fit on the external diameter. Use in combination with double-acting wipers not recommended.





MATERIAL	94 AU 925	
 MAX.	-30 to +110 °C	
 MAX.	0.5 m/s	
 MAX.	40 MPa	
	Earth-moving equipment, forklift trucks, agricultural machines, telescopic cylinders	

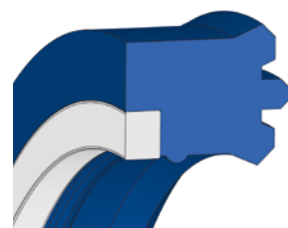


KI310

Compact seal KI320

Compact seal with integrated backup ring. Profile with additional support edge and sealing edge, elements for axial securing in the installation space, as well as press fit on the external diameter. Use in combination with double-acting wipers not recommended.





MATERIAL	94 AU 925 / POM
 MAX.	-30 to +110 °C
 MAX.	0.5 m/s
 MAX.	50 MPa
	Earth-moving equipment, presses, support cylinders

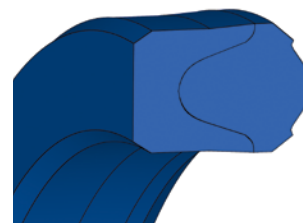


KI320

Merkel compact seal S8

Compact seal with a rubber head set in the fabric part. Among other applications, for installation spaces as per ISO 5597.





MATERIAL	70 NBR B209
 MAX.	-30 to +100 °C
 MAX.	0.5 m/s
 MAX.	25 MPa
	Spindles, standard cylinders, telescopic cylinders, machine tools

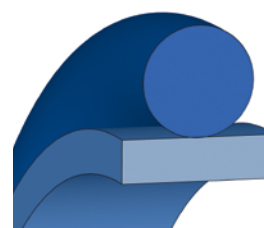


S8

Compact seal TFMI

Double-acting rod seal, comprising a profile ring and an O-ring as pre-load element.





MATERIAL	PTFE 177023 / NBR
 MAX.	-30 to +100 °C
 MAX.	2 m/s
 MAX.	16 MPa
	Primarily for spare parts requirements. For new designs, we recommend more modern series, such as the Omegat OMS-MR-DW

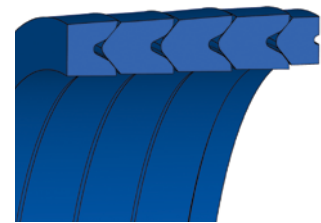


TFMI

Merkel V-packing set V 1000

Multi-piece seal set made of rugged rubber/fabric components: Compression ring, multiple seals, and backup ring. The seal sets intended for heavy engineering applications are supplied in an open design and extra length.





MATERIAL	BI-NR B5A151 (B/A), BI-NR B5B210 (B/B)
 MAX.	-30 to +100 °C
 MAX.	0.5 m/s
 MAX.	63 MPa
	Iron and steel industries, manipulators, scrap baling presses, heavy engineering

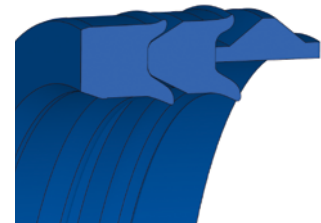


V 1000

Merkel V-packing set VPS40

New development for use in challenging heavy industry applications and for large seal diameters. The sets fit in standard installation spaces of V-Seal Set packing kits, as well as V-packings from the Merkel V 1000 series. The sets are supplied ready-for-assembly in open design.





MATERIAL	93 AU V167 / NBR
 MAX.	-20 to +100 °C
 MAX.	0.5 m/s
 MAX.	40 MPa
	Large diameters (up to 1,900 mm), high operating pressure, adjustable and non-adjustable installation spaces

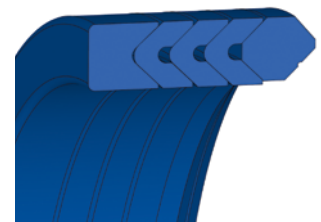


VPS40

Merkel V-Seal Set packing kit DMS0180

Multi-piece seal set, comprising a polyethylene compression ring, polyethylene seals, and an elastomer backup ring.





MATERIAL	PE E083 / NBR
 MAX.	-30 to +80 °C
 MAX.	0.5 m/s
 MAX.	40 MPa
	Sealing of piston rods in harsh operating conditions. Suitable for use on ceramic running surfaces

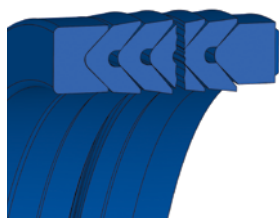


DMS0180

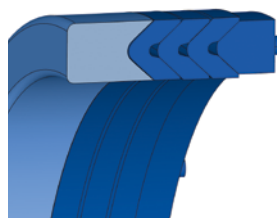
Merkel V-Seal Set packing kit ES, ESV, ES61, ES81

Multi-piece seal set in various designs, comprising one compression ring, at least three sealing elements, and one backup ring. The versions ES61 and ES81 employ different compression rings for increased extrusion protection or increased sealing effect.

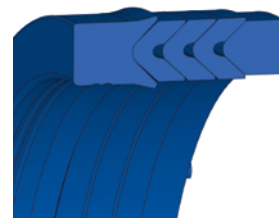
MATERIAL	BI-NBR / 85 NBR	BI-FKM / 85 FKM	PTFE B570 / BI-NBR / 85 NBR (ES 61)	94 AU 925 / BI-NBR / 85 NBR (ES 81)
 MAX.	-30 to +100 °C	-15 to +140 °C	-30 to +100 °C	-30 to +100 °C
 MAX.	0.5 m/s	0.5 m/s	0.5 m/s	0.5 m/s
 MAX.	40 MPa	40 MPa	40 MPa	40 MPa
	Harsh operating conditions and large sealing gaps, for example in the iron and steel industries, in industrial presses, ship hydraulics, scrap shears, special cylinders, injection molding machines, hydraulic steelwork			



ES, ESV







ES61

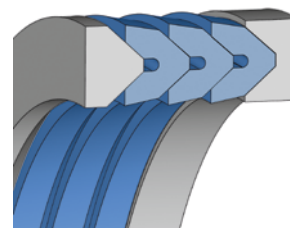


ES81

Packing ring TFW

V-shaped sealing ring made of PTFE to build up packings. Only TFW rings available from stock. Complete packings available on request.



MATERIAL	PTFE F52902
 MAX.	-200 to +220 °C
 MAX.	0.2 m/s to max. 1.5 m/s (depending on the application and direction of movement)
 MAX.	31.5 MPa
	Axially moved valve spindles, rods, and plungers, slowly rotating shafts

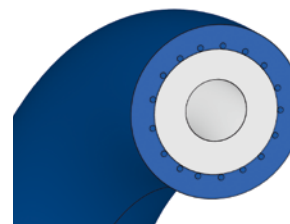


TFW

Merkel Vocomatic

Patented storage element for drag oil compensation within rod sealing systems.

MATERIAL	70 VQM 10801 / POM PO 202
 MAX.	-30 to +100 °C
	Long-stroke cylinders, very different cylinder extension and retraction speeds



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