



HYDRAULIC & PNEUMATIC SEALING SOLUTIONS



Under Technical Knowhow From Austria

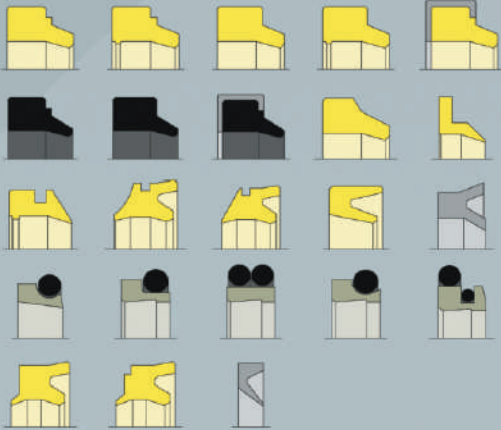
25 Years
Since 2000

PROFILES

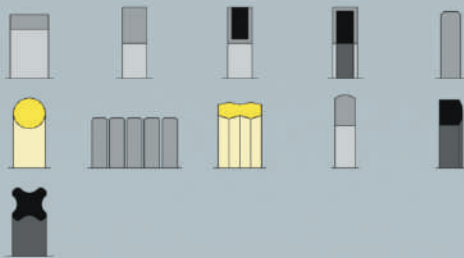
BACKRINGS



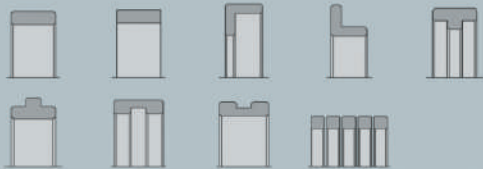
WIPERS



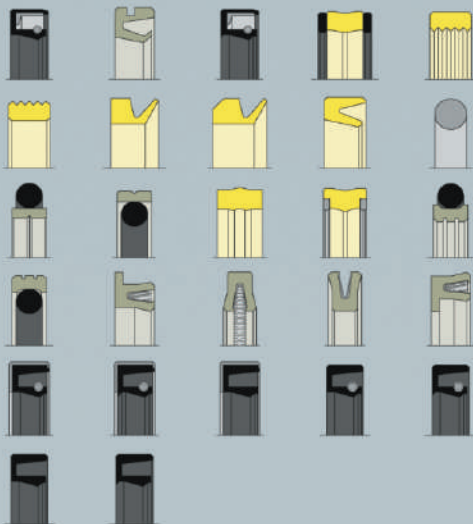
GASKETS



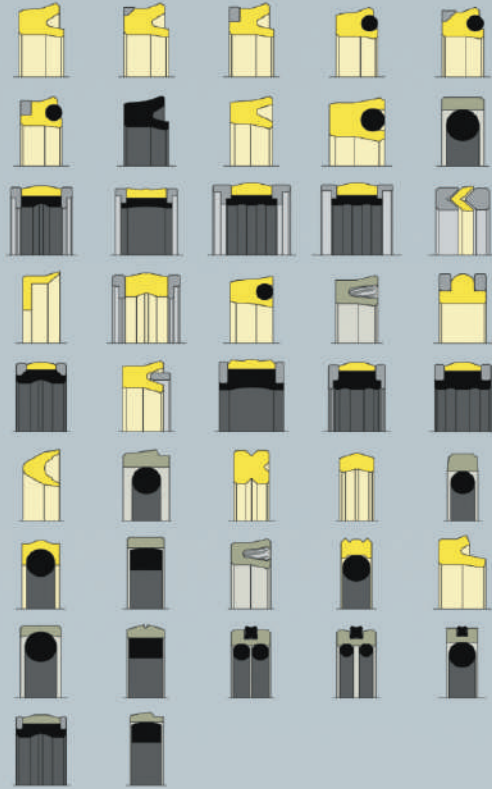
GUIDE RINGS



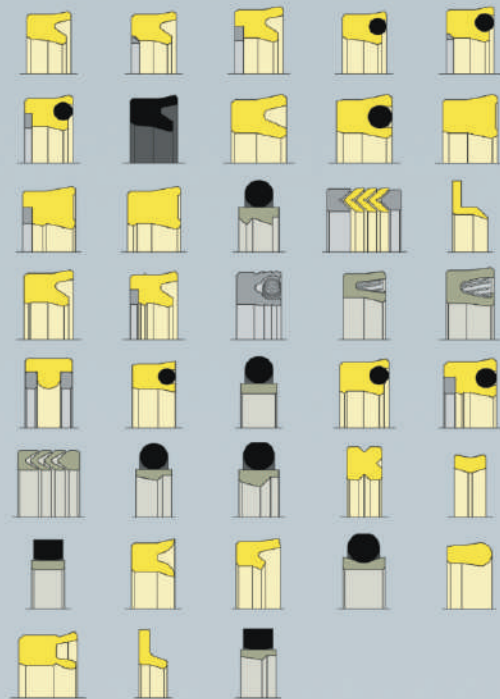
ROTARY SEALS



PISTON SEALS



ROD SEALS



Our Scope

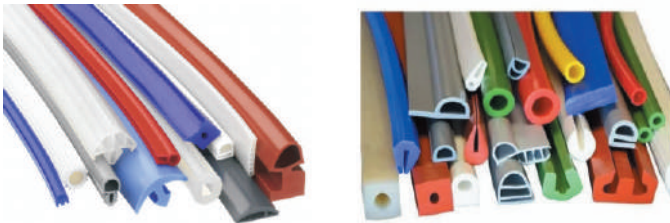
- Seals for Hydraulic & Pneumatic application
Standard and non-standard size of machined seals upto 2000mm



- Seals for Construction Equipment's
Ram of 180 & 200 Dia, Cable drilling Machine, Rock Breakers



- Beadings of NBR, EPDM, Silicon, PU



- O-Ring Chords- NBR, Viton, EPDM, Silicon, PU (2mm to 20mm)



- O-Rings of – NBR, Viton, Silicon, PU



- Customised & Remoulding of moulded Products
Rollers, diaphragm, wheels, gaskets (NBR, PU)



- PTFE Customised Profiles, Ropes



- Mechanical Seals as per samples and customer requirement.



- New Hydraulic & pneumatic cylinder manufacturing as per customer requirement.
Repair & Reconditioning of hydraulic & pneumatic cylinders
upto 1000mm with honing, grinding, machining facilities

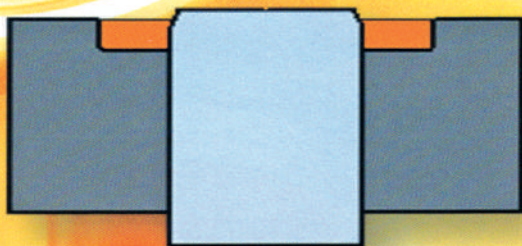
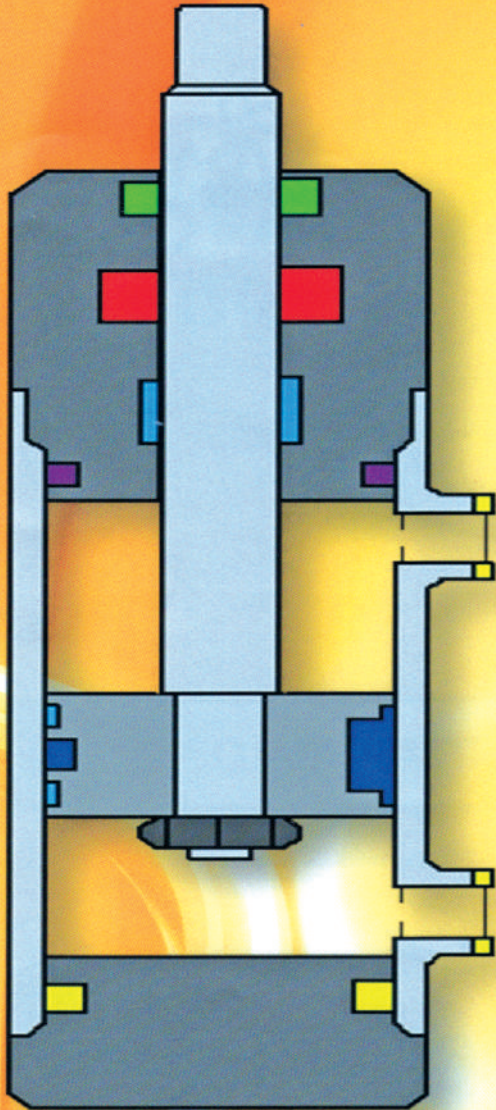


- CNC Chuck, Turret reconditioning



- All types of Aluminium die casting & Plastic Injection Mould Cylinders reconditioning.

TYPES OF SEALS



Page 01-06

Wipers

Page 07-16

Rod Seals

Page 17-19

Guide Rings

Page 20-31

Piston Seals

Page 32-35

Static Seals

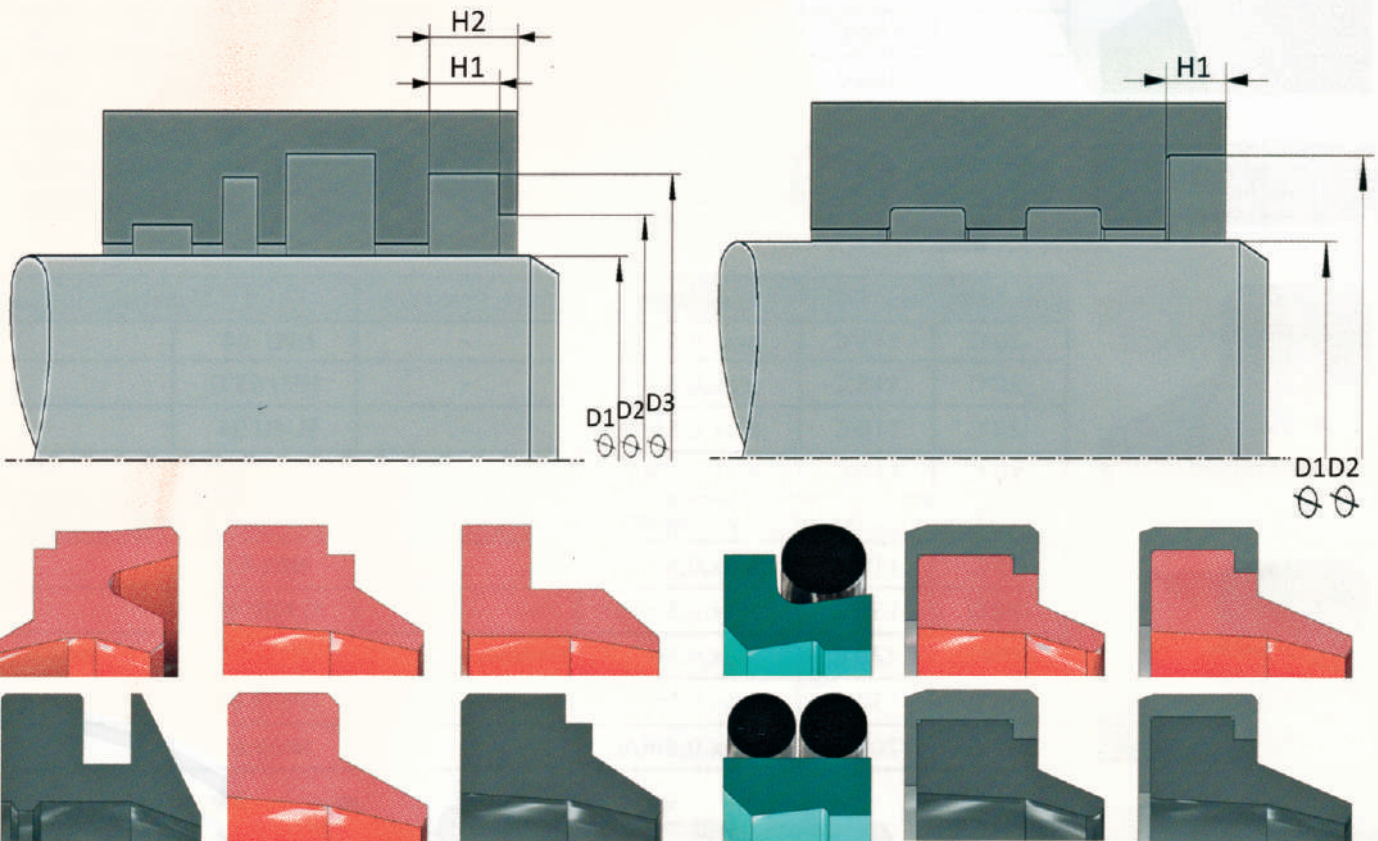
Page 36-43

Rotary Seals

Page 44-46

Backup Rings

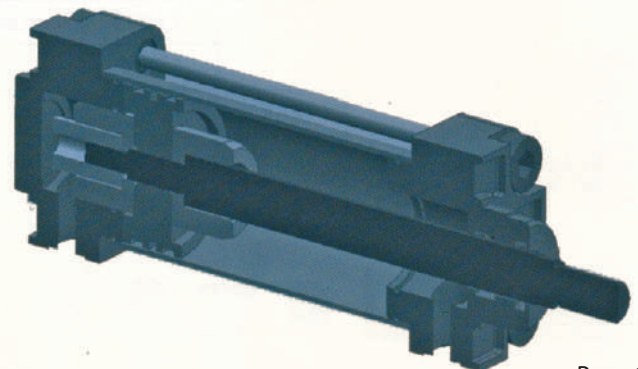
WIPERS

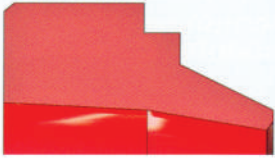


Scrapers or wipers are installed in the sealing configurations of hydraulic cylinders to scrape dirt, external particles, chips or moisture from the piston rods as they retract into the system. A hydraulic wiper or scraper prevents contamination of the hydraulic medium that could damage wear rings, seals and other components.

The selection of the shape and form of the wiper depends from several factors:

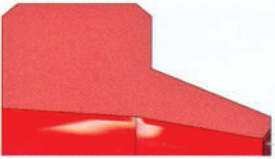
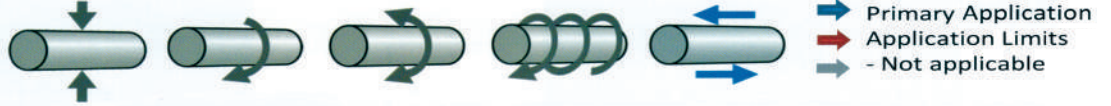
- Function as a wiper only or as a wiper/seal
- Dirtiness load in the external area of the system
- Sliding speed
- Space requirement in the design area
- Open or closed installation space
- Temperature range and/or medium (important for selection of material)





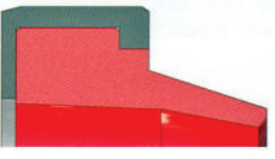
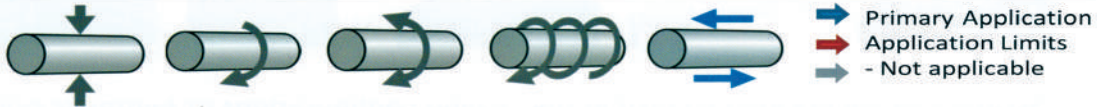
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	-	HPU 94'	
-20°C	115°C	max.0.4m/s	-	HPU 55'D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94'	
-50°C	110°C	max.0.4m/s	-	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85'	
-20°C	150°C	max.0,5m/s	-	H-NBR 85'	
-20°C	220°C	max.0,5m/s	-	FPM 82'	
-45°C	130°C	max.0,5m/s	-	EPDM 85'	
-60°C	200°C	max.0,3m/s	-	MVQ 85'	

SWA101



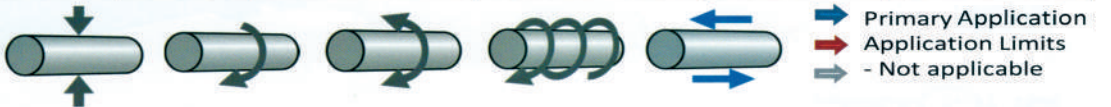
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	-	HPU 94'	
-20°C	115°C	max.0.5m/s	-	HPU 55'D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94'	
-50°C	110°C	max.0.5m/s	-	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85'	
-20°C	150°C	max.0,5m/s	-	H-NBR 85'	
-20°C	220°C	max.0,5m/s	-	FPM 82'	
-45°C	130°C	max.0,5m/s	-	EPDM 85'	
-60°C	200°C	max.0,4m/s	-	MVQ 85'	

SWA102



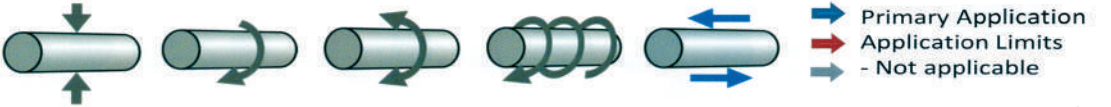
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Case	
-20°C	115°C	max.0.5m/s	-	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	-	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	-	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	-	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Case	
-30°C	110°C	max.0,5m/s	-	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	-	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	-	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	-	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	-	MVQ 85'	POM/PTFE/PEEK

SWA103



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	-	HPU 94'	
-20°C	115°C	max.0.4m/s	-	HPU 55'D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94'	
-50°C	110°C	max.0.4m/s	-	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85'	
-20°C	150°C	max.0,5m/s	-	H-NBR 85'	
-20°C	220°C	max.0,5m/s	-	FPM 82'	
-45°C	130°C	max.0,5m/s	-	EPDM 85'	
-60°C	200°C	max.0,3m/s	-	MVQ 85'	

SWA104-PN



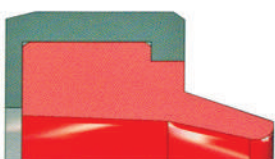
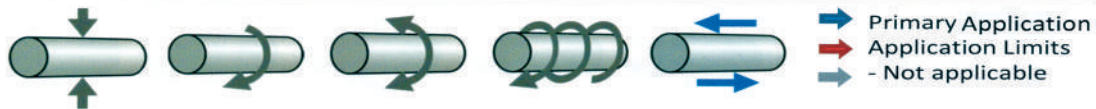


min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	-	HPU 94*	
-20°C	115°C	max.0.5m/s	-	HPU 55'D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94*	
-50°C	110°C	max.0.5m/s	-	LT-PU 94*	

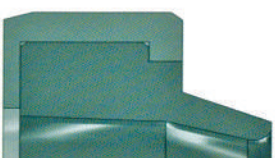


min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85*	
-20°C	150°C	max.0,5m/s	-	H-NBR 85*	
-20°C	220°C	max.0,5m/s	-	FPM 82*	
-45°C	130°C	max.0,5m/s	-	EPDM 85*	
-60°C	200°C	max.0,4m/s	-	MVQ 85*	

SWA105-PN

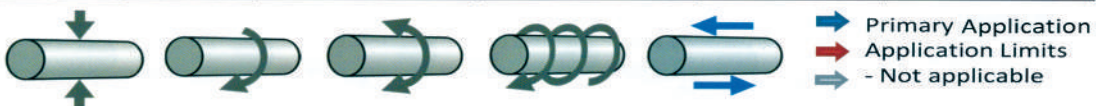


min.Temp	max.Temp	max. Speed	max. Pressure	Material	Case
-20°C	115°C	max.0.5m/s	max.500bar	HPU 94*	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.500bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.500bar	SL-PU 94*	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.500bar	LT-PU 94*	POM/PTFE/PEEK



min.Temp	max.Temp	max. Speed	max. Pressure	Material	Case
-30°C	110°C	max.0,5m/s	max.200bar	NBR 85*	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.200bar	H-NBR 85*	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.200bar	FPM 82*	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.200bar	EPDM 85*	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.200bar	MVQ 85*	POM/PTFE/PEEK

SWA106-PN

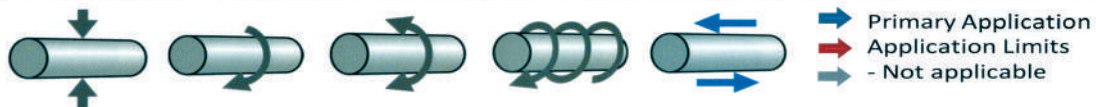


min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	-	HPU 94*	
-20°C	115°C	max.0.4m/s	-	HPU 55'D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94*	
-50°C	110°C	max.0.4m/s	-	LT-PU 94*	



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85*	
-20°C	150°C	max.0,5m/s	-	H-NBR 85*	
-20°C	220°C	max.0,5m/s	-	FPM 82*	
-45°C	130°C	max.0,5m/s	-	EPDM 85*	
-60°C	200°C	max.0,3m/s	-	MVQ 85*	

SWA107



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	-	HPU 94*	
-20°C	115°C	max.0.4m/s	-	HPU 55'D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94*	
-50°C	110°C	max.0.4m/s	-	LT-PU 94*	



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85*	
-20°C	150°C	max.0,5m/s	-	H-NBR 85*	
-20°C	220°C	max.0,5m/s	-	FPM 82*	
-45°C	130°C	max.0,5m/s	-	EPDM 85*	
-60°C	200°C	max.0,3m/s	-	MVQ 85*	

SWA108





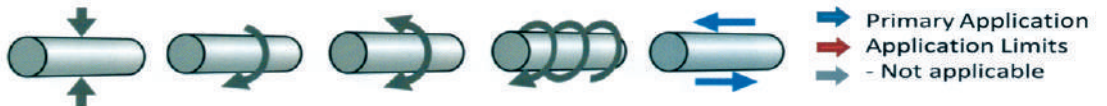
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	-	HPU 94°	
-20°C	115°C	max.0.5m/s	-	HPU 55°D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94°	
-50°C	110°C	max.0.5m/s	-	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85°	
-20°C	150°C	max.0,5m/s	-	H-NBR 85°	
-20°C	220°C	max.0,5m/s	-	FPM 82°	
-45°C	130°C	max.0,5m/s	-	EPDM 85°	
-60°C	200°C	max.0,4m/s	-	MVQ 85°	

SWA109



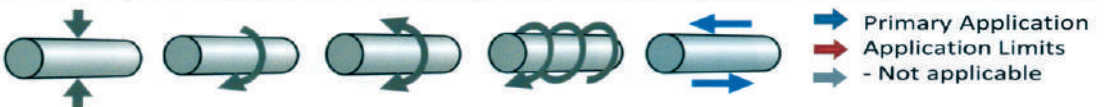
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	-	HPU 94°	
-20°C	115°C	max.0.4m/s	-	HPU 55°D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94°	
-50°C	110°C	max.0.4m/s	-	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85°	
-20°C	150°C	max.0,5m/s	-	H-NBR 85°	
-20°C	220°C	max.0,5m/s	-	FPM 82°	
-45°C	130°C	max.0,5m/s	-	EPDM 85°	
-60°C	200°C	max.0,3m/s	-	MVQ 85°	

SWA211



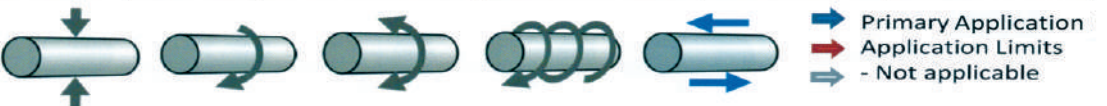
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	-	HPU 94°	
-20°C	115°C	max.0.5m/s	-	HPU 55°D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94°	
-50°C	110°C	max.0.5m/s	-	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85°	
-20°C	150°C	max.0,5m/s	-	H-NBR 85°	
-20°C	220°C	max.0,5m/s	-	FPM 82°	
-45°C	130°C	max.0,5m/s	-	EPDM 85°	
-60°C	200°C	max.0,4m/s	-	MVQ 85°	

SWA212



min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	-	HPU 94°	
-20°C	115°C	max.0.5m/s	-	HPU 55°D	
-20°C	110°C	max.0.5m/s	-	SL-PU 94°	
-50°C	110°C	max.0.5m/s	-	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	-	NBR 85°	
-20°C	150°C	max.0,5m/s	-	H-NBR 85°	
-20°C	220°C	max.0,5m/s	-	FPM 82°	
-45°C	130°C	max.0,5m/s	-	EPDM 85°	
-60°C	200°C	max.0,4m/s	-	MVQ 85°	

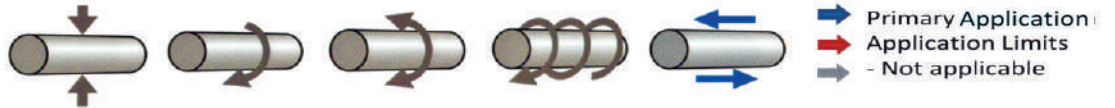
SWA113





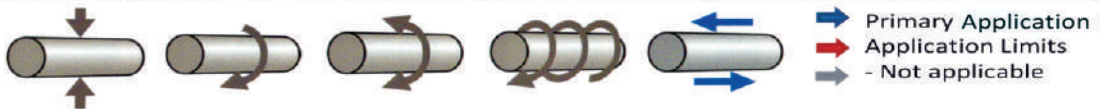
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50°C	80°C	max.1.0m/s			POM
-40°C	80°C	max.1.0m/s			PA
-50°C	110°C	max.1.0m/s			PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material	

SWA213



min Temp	max Temp	max. Speed	max. Pressure	Material	
-50°C	80°C	max.1.0m/s			POM
-40°C	80°C	max.1.0m/s			PA
-50°C	110°C	max.1.0m/s			PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material	

SWA114



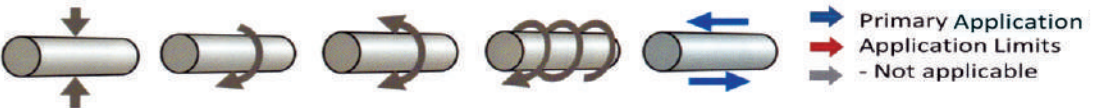
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-		PTFE pure
-200°C	260°C	max.10m/s	-		PTFE 1 glass
-200°C	260°C	max.10m/s	-		PTFE 2 bronze
-200°C	260°C	max.10m/s	-		PTFE carbone
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-		PTFE D05 turq
-200°C	260°C	max.10m/s	-		PTFE D05 glass
-200°C	260°C	max.10m/s	-		PTFE graphite
-200°C	260°C	max.10m/s	-		PTFE ekonol
-200°C	260°C	max.10m/s	-		PTFE 25%glass

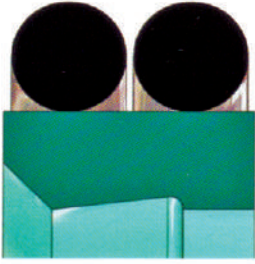
SWA115



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-		PTFE pure
-200°C	260°C	max.10m/s	-		PTFE 1 glass
-200°C	260°C	max.10m/s	-		PTFE 2 bronze
-200°C	260°C	max.10m/s	-		PTFE carbone
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-		PTFE D05 turq
-200°C	260°C	max.10m/s	-		PTFE D05 glass
-200°C	260°C	max.10m/s	-		PTFE graphite
-200°C	260°C	max.10m/s	-		PTFE ekonol
-200°C	260°C	max.10m/s	-		PTFE 25%glass

SWA116





min Temp	max Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-	PTFE pure	
-200°C	260°C	max.10m/s	-	PTFE 1 glass	
-200°C	260°C	max.10m/s	-	PTFE 2 bronze	
-200°C	260°C	max.10m/s	-	PTFE carbone	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-	PTFE D05 turq	
-200°C	260°C	max.10m/s	-	PTFE D05 glass	
-200°C	260°C	max.10m/s	-	PTFE graphite	
-200°C	260°C	max.10m/s	-	PTFE ekonol	
-200°C	260°C	max.10m/s	-	PTFE 25%glass	

SWA117



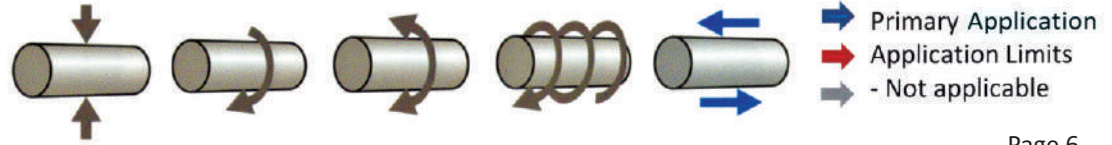
min Temp	max Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-	PTFE pure	
-200°C	260°C	max.10m/s	-	PTFE 1 glass	
-200°C	260°C	max.10m/s	-	PTFE 2 bronze	
-200°C	260°C	max.10m/s	-	PTFE carbone	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-	PTFE D05 turq	
-200°C	260°C	max.10m/s	-	PTFE D05 glass	
-200°C	260°C	max.10m/s	-	PTFE graphite	
-200°C	260°C	max.10m/s	-	PTFE ekonol	
-200°C	260°C	max.10m/s	-	PTFE 25%glass	

SWA118

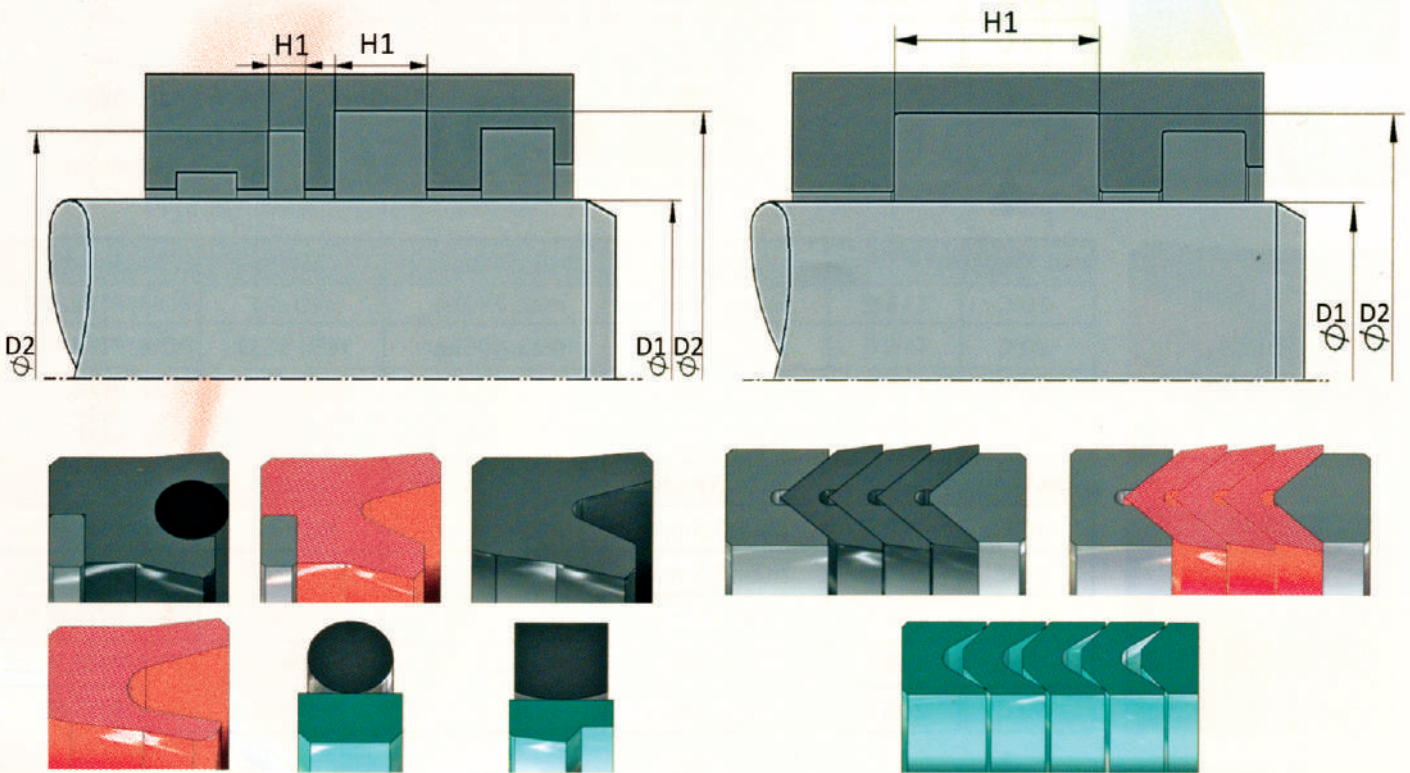


min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-	PTFE pure	
-200°C	260°C	max.10m/s	-	PTFE 1 glass	
-200°C	260°C	max.10m/s	-	PTFE 2 bronze	
-200°C	260°C	max.10m/s	-	PTFE carbone	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	-	PTFE D05 turq	
-200°C	260°C	max.10m/s	-	PTFE D05 glass	
-200°C	260°C	max.10m/s	-	PTFE graphite	
-200°C	260°C	max.10m/s	-	PTFE ekonol	
-200°C	260°C	max.10m/s	-	PTFE 25%glass	

SWA119



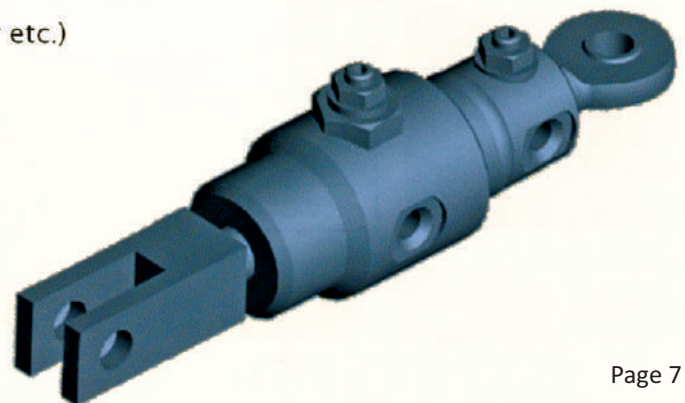
ROD SEALS



Rod seals are used in hydraulic cylinders for fluid sealing. They are external to the cylinder head and seal against the cylinder's rod, preventing leakage of fluid from within the cylinder to the outside. No double-acting hydraulic or pneumatic system could function without a rod seal (except systems with wiper seals).

The selection criteria for rod seals arise from a number of several factors:

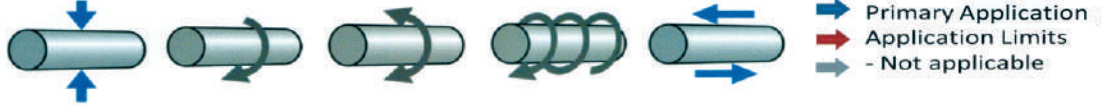
- Space requirement in the design area
- General system type (press, construction machinery, industrial cylinder etc.)
- Sliding speed
- Pressure load and/or gap width
- Open or closed installation space
- Temperature and medium (important for selection of material)





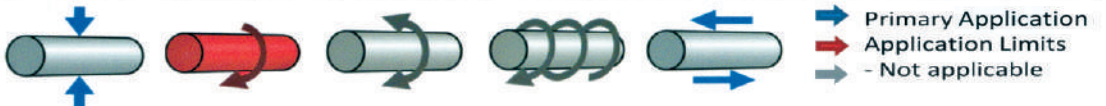
SWS101

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85'	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85'	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82'	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85'	
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85'	



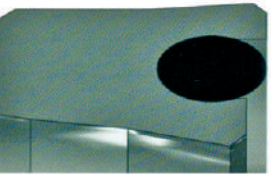
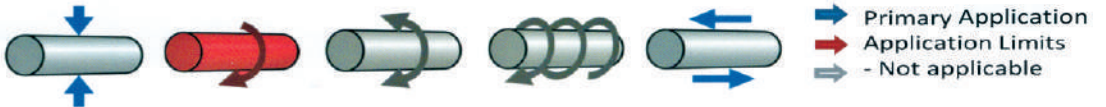
SWS102

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85'	POM/PTFE/PEEK



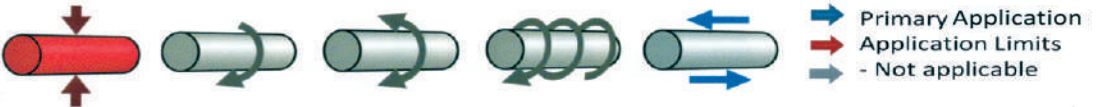
SWS102-R

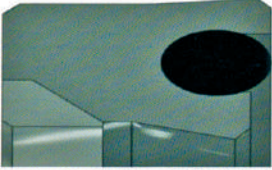
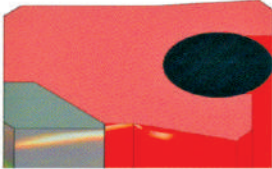
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85'	POM/PTFE/PEEK



SWS103

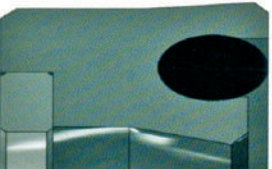
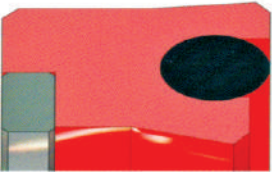
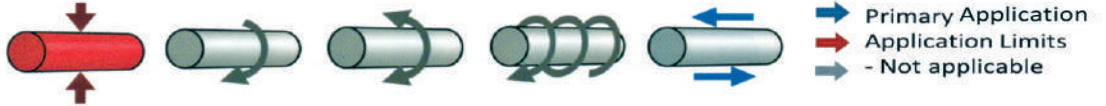
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	NBR70'/FPM75'
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	NBR70'/FPM75'
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	NBR70'/FPM75'
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	NBR70'/FPM75'
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85'	NBR70'/FPM75'
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85'	NBR70'/FPM75'
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82'	NBR70'/FPM75'
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85'	NBR70'/FPM75'
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85'	NBR70'/FPM75'





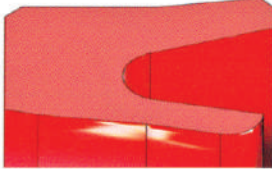
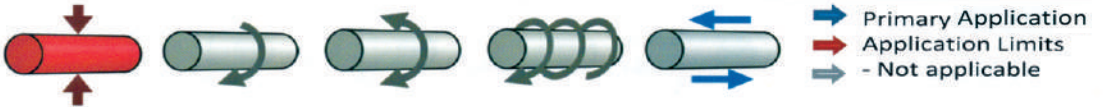
min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94*	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94*	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94*	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85*	NBR70*/FPM75*
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85*	NBR70*/FPM75*
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82*	NBR70*/FPM75*
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85*	NBR70*/FPM75*
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85*	NBR70*/FPM75*

SWS104



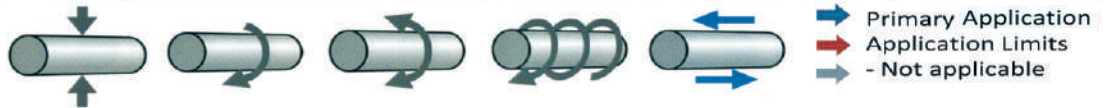
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.500bar	HPU 94*	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.500bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.500bar	SL-PU 94*	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.500bar	LT-PU 94*	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.200bar	NBR 85*	NBR70*/FPM75*
-20°C	150°C	max.0,5m/s	max.200bar	H-NBR 85*	NBR70*/FPM75*
-20°C	220°C	max.0,5m/s	max.200bar	FPM 82*	NBR70*/FPM75*
-45°C	130°C	max.0,5m/s	max.200bar	EPDM 85*	NBR70*/FPM75*
-60°C	200°C	max.0,4m/s	max.200bar	MVQ 85*	NBR70*/FPM75*

SWS104-R



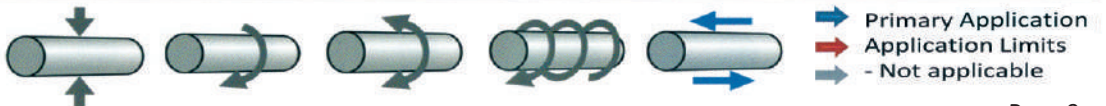
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94*	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94*	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94*	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85*	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85*	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82*	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85*	
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85*	

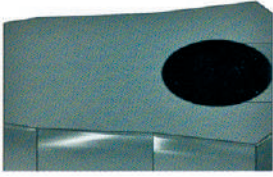
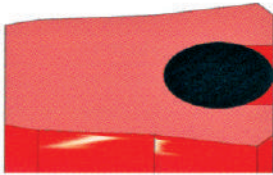
SWS105



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94*	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94*	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94*	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85*	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85*	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82*	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85*	
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85*	

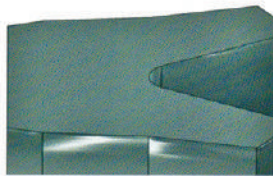
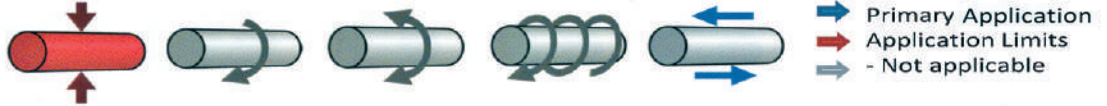
SWS205





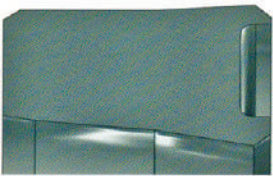
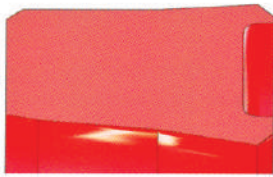
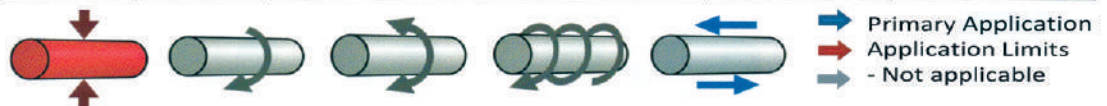
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	NBR70°/FPM75°
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	NBR70°/FPM75°
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	NBR70°/FPM75°
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85°	NBR70°/FPM75°
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85°	NBR70°/FPM75°
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82°	NBR70°/FPM75°
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85°	NBR70°/FPM75°
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85°	NBR70°/FPM75°

SWS107



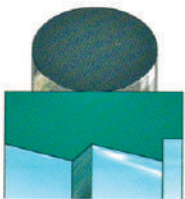
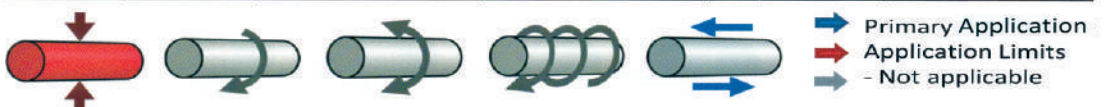
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85°	

SWS106



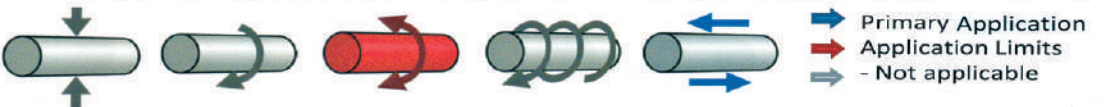
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	-
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85°	

SWS108



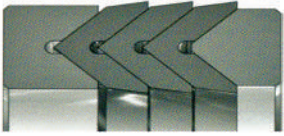
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05turqu	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	NBR70°/FPM75°

SWS109

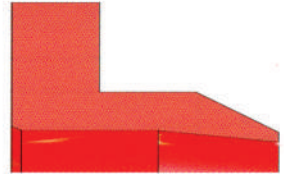
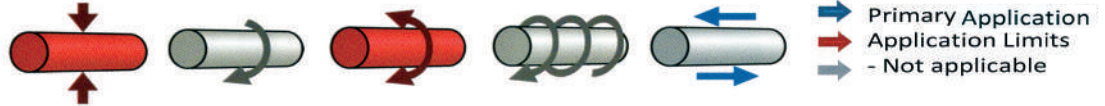




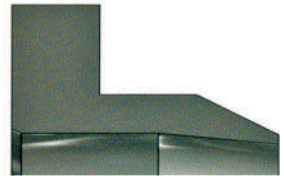
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.4m/s	max.500bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.500bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.500bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.500bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85°	POM/PTFE/PEEK



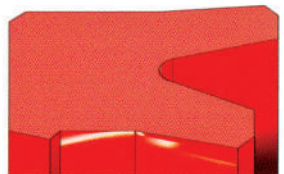
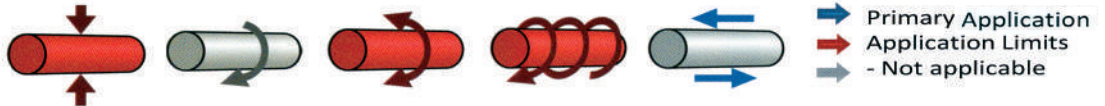
SWS110-112



min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	max.160bar	HPU 94°	
-20°C	115°C	max.0.5m/s	max.160bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.160bar	SL-PU 94°	
-50°C	110°C	max.0.5m/s	max.160bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.120bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.120bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.120bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.120bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	



SWS116



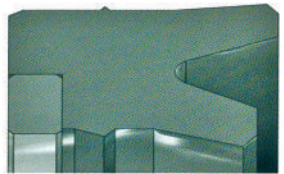
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85°	



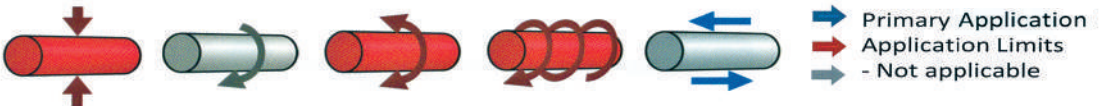
SWS117

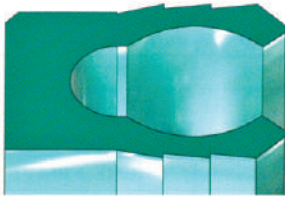


min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85°	POM/PTFE/PEEK



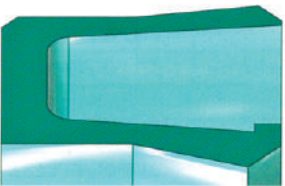
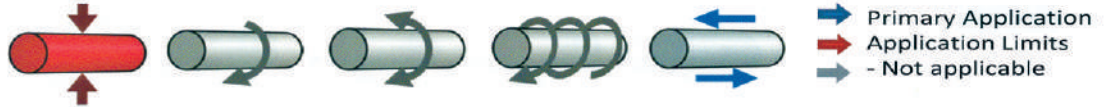
SWS17-R





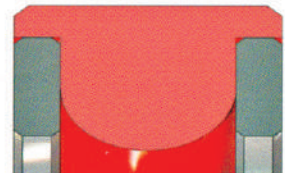
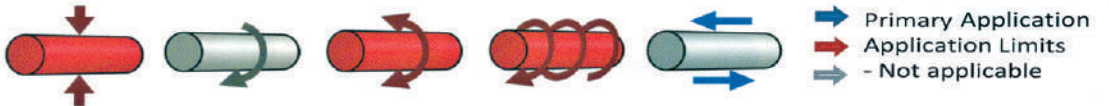
min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE pure	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 1glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.15m/s	max.100bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE D05 turq	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE D05 glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE graphite	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE ekonol	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 25%glass	1.4310

SWS118



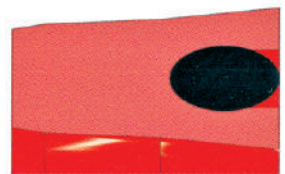
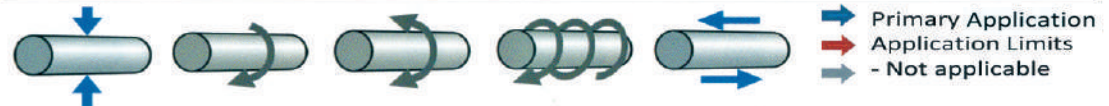
min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE pure	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 1glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.15m/s	max.100bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE D05 turq	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE D05 glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE graphite	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE ekonol	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 25%glass	1.4310

SWS119



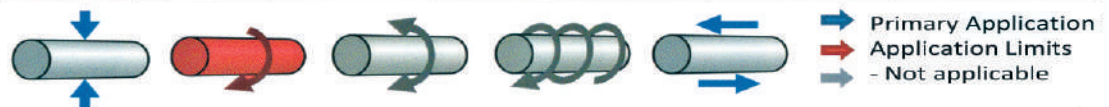
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.4m/s	max.500bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.500bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.500bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.500bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85°	POM/PTFE/PEEK

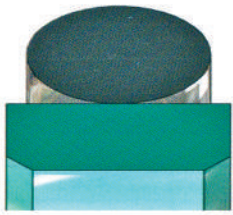
SWS120



min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	NBR70°,FPM75°
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	NBR70°,FPM75°
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	NBR70°,FPM75°
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	NBR70°,FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	NBR70°,FPM75°
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	NBR70°,FPM75°
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	NBR70°,FPM75°
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	NBR70°,FPM75°
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	NBR70°,FPM75°

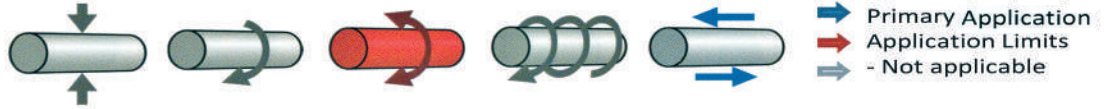
SWS121





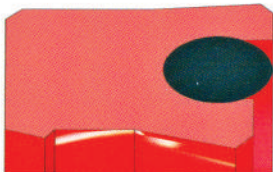
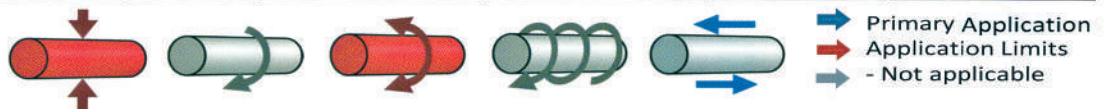
SWS124

min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFED05turqu	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	NBR70°/FPM75°



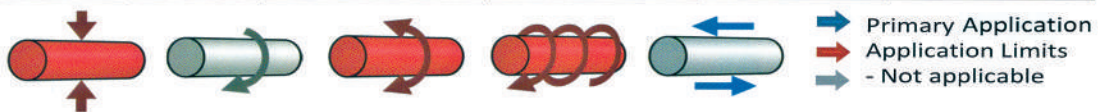
SWS126-128

min Temp	max Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	
-200°C	260°C	max.10m/s	max.400bar	PTFE 1glass	
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.400bar	PTFED05turqu	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass	
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	



SWS125

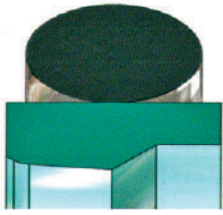
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	NBR70°,FPM75°
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	NBR70°,FPM75°
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	NBR70°,FPM75°
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	NBR70°,FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	NBR70°,FPM75°
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	NBR70°,FPM75°
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	NBR70°,FPM75°
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	NBR70°,FPM75°
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	NBR70°,FPM75°



SWS216

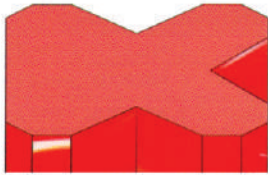
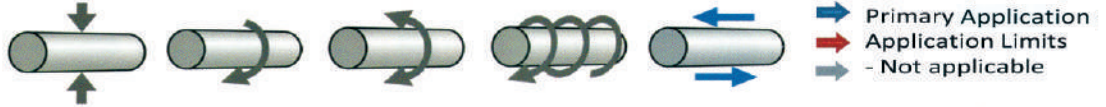
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.160bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.160bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.160bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.160bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	



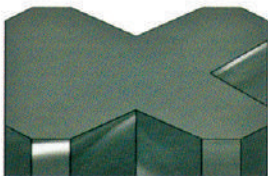


min.Temp	max.Temp	max. Speed	max. Pressure	Material /	O-Ring
-20°C	115°C	max.0.4m/s	max.500bar	HPU 94'	NBR70',FPM75'
-20°C	115°C	max.0.4m/s	max.500bar	HPU 55'D	NBR70',FPM75'
-20°C	110°C	max.0.5m/s	max.500bar	SL-PU 94'	NBR70',FPM75'
-50°C	110°C	max.0.4m/s	max.500bar	LT-PU 94'	NBR70',FPM75'
min.Temp	max.Temp	max. Speed	max. Pressure	Material /	O-Ring
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85'	NBR70',FPM75'
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85'	NBR70',FPM75'
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82'	NBR70',FPM75'
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85'	NBR70',FPM75'
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85'	NBR70',FPM75'

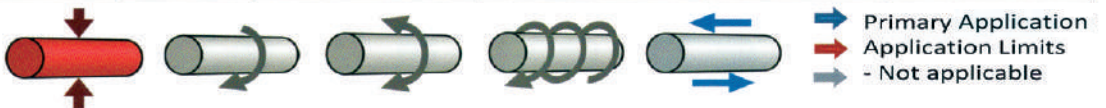
SWS129



min.Temp	max.Temp	max. Speed	max. Pressure	Material
-20°C	115°C	max.000m/s	max.000bar	HPU 94'
-20°C	115°C	max.000m/s	max.000bar	HPU 55'D
-20°C	110°C	max.000m/s	max.000bar	SL-PU 94'
-50°C	110°C	max.000m/s	max.000bar	LT-PU 94'
min.Temp	max.Temp	max. Speed	max. Pressure	Material
-30°C	110°C	max.000m/s	max.000bar	NBR 85'
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85'
-20°C	220°C	max.000m/s	max.000bar	FPM 82'
-45°C	130°C	max.000m/s	max.000bar	EPDM 85'
-60°C	200°C	max.000m/s	max.000bar	MVQ 85'



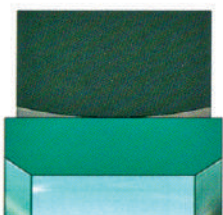
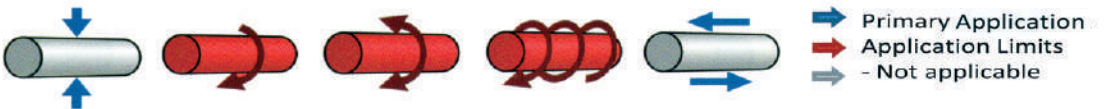
SWS130



min.Temp	max.Temp	max. Speed	max. Pressure	Material
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'
min.Temp	max.Temp	max. Speed	max. Pressure	Material
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85'
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85'
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82'
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85'
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85'

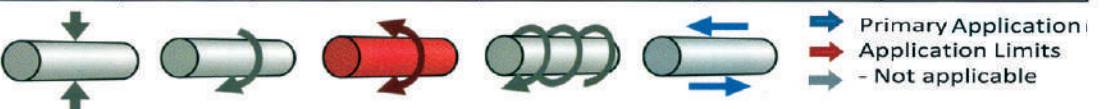


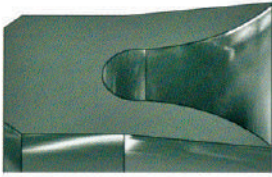
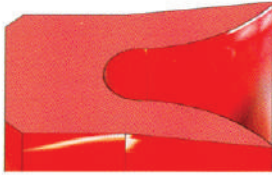
SWS131



min Temp	max Temp	max. Speed	max. Pressure	Material /	Energizer
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1glass	H-NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	FPM 82°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	EPDM85°
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.400bar	PTFED05turqu	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass	
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	

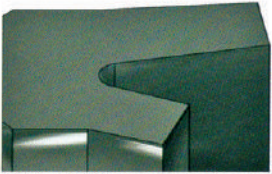
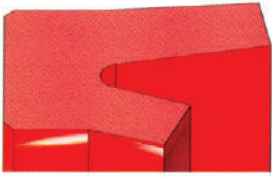
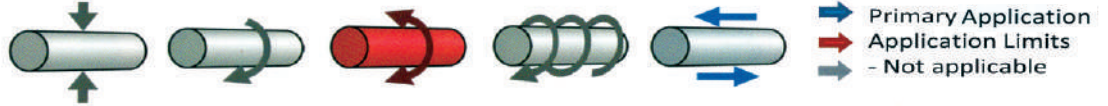
SWS138





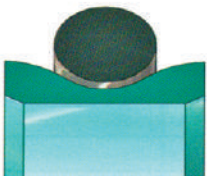
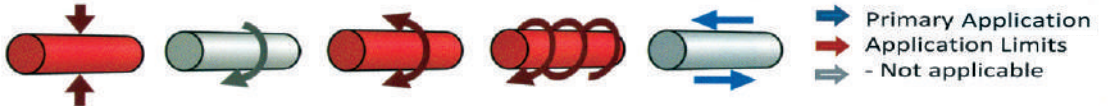
SWS139

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	



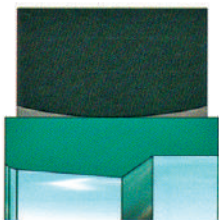
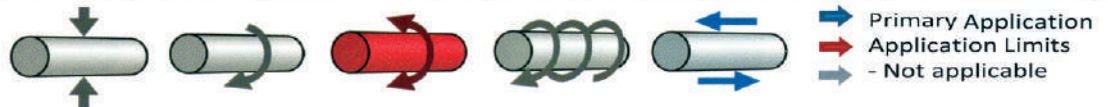
SWS141

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	-
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	-
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	-
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	-
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	-
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	-
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	-
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	-
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	-



SWS142

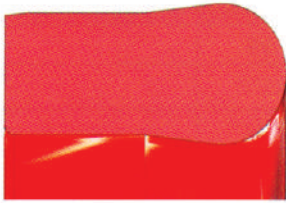
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFED05turqu	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	NBR70°/FPM75°



SWS238

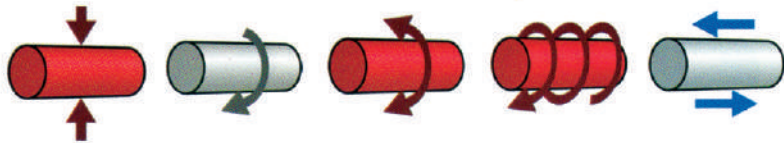
min Temp	max Temp	max. Speed	max. Pressure	Material / Energizer	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass	H-NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	FPM 82°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	EPDM85°
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05 turq	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05 glass	
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	





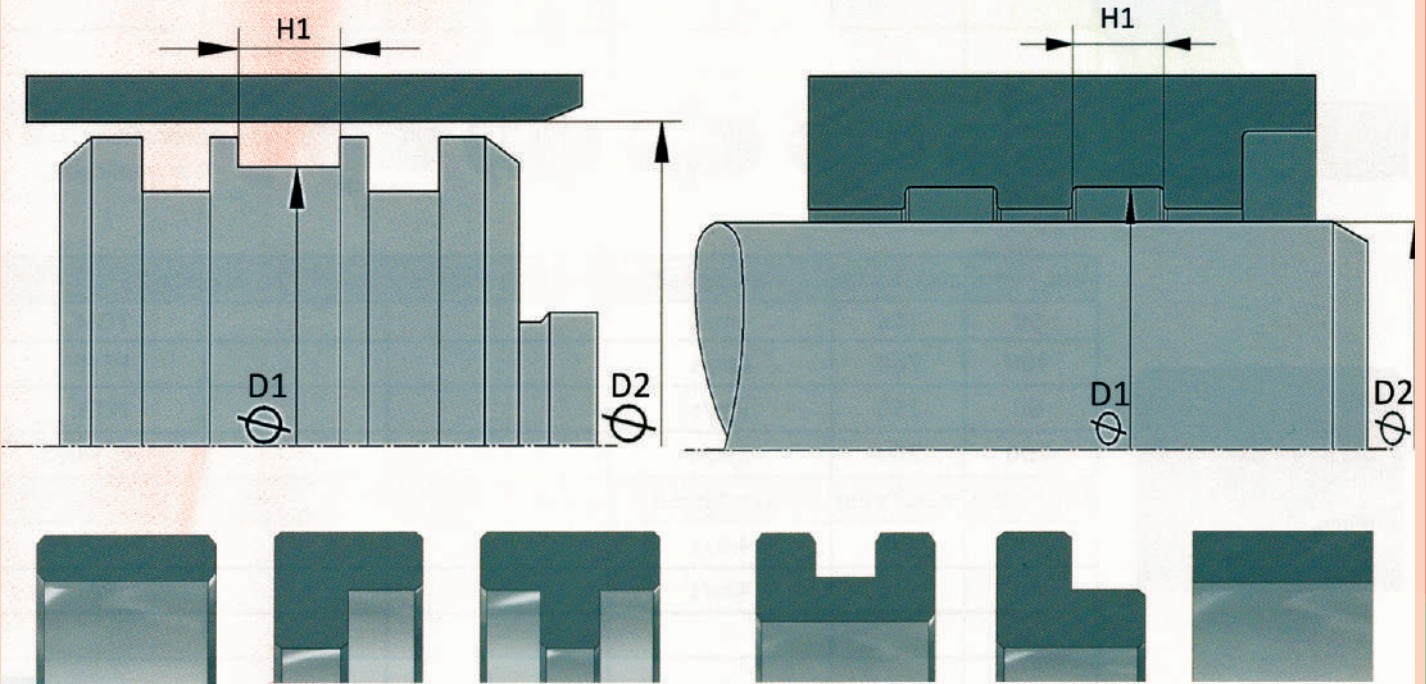
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85'	
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85'	
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82'	
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85'	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85'	

SWS199



Primary Application
 Application Limits
 - Not applicable

GUIDE RINGS

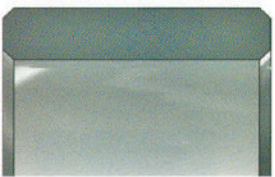


The function of guide rings is to guide precisely the piston rod and piston in the cylinder liner. This makes guide rings into very important elements of the complete system. The lifetime of the rod and piston seal would be seriously impaired without this guidance.



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

SWF102



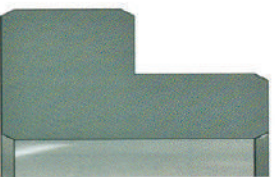
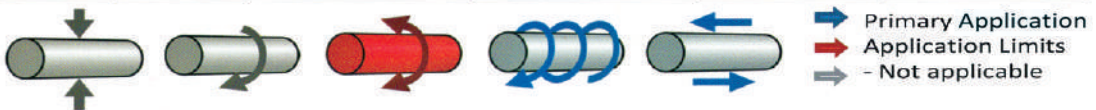
min Temp	max Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

SWF101



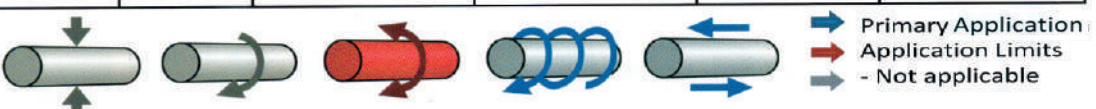
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

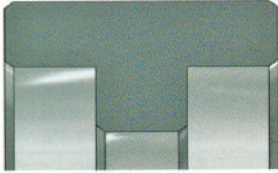
SWF103



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

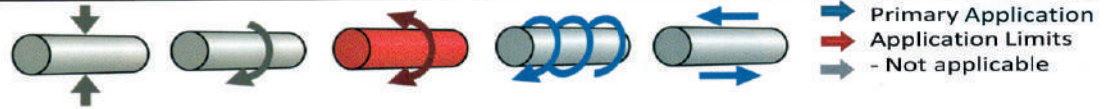
SWF104





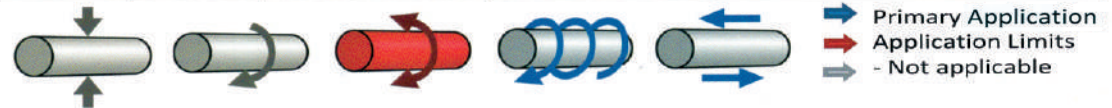
min Temp	max Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

SWF105



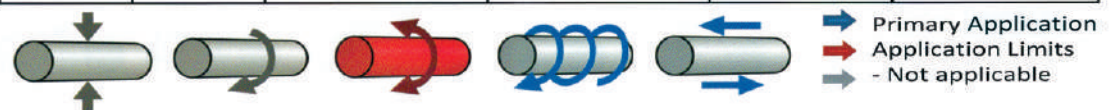
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

SWF106



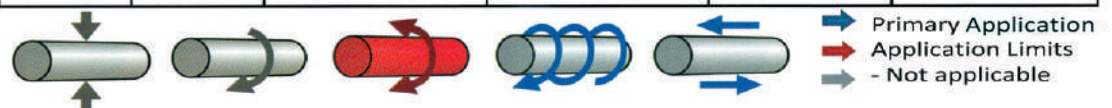
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

SWF107

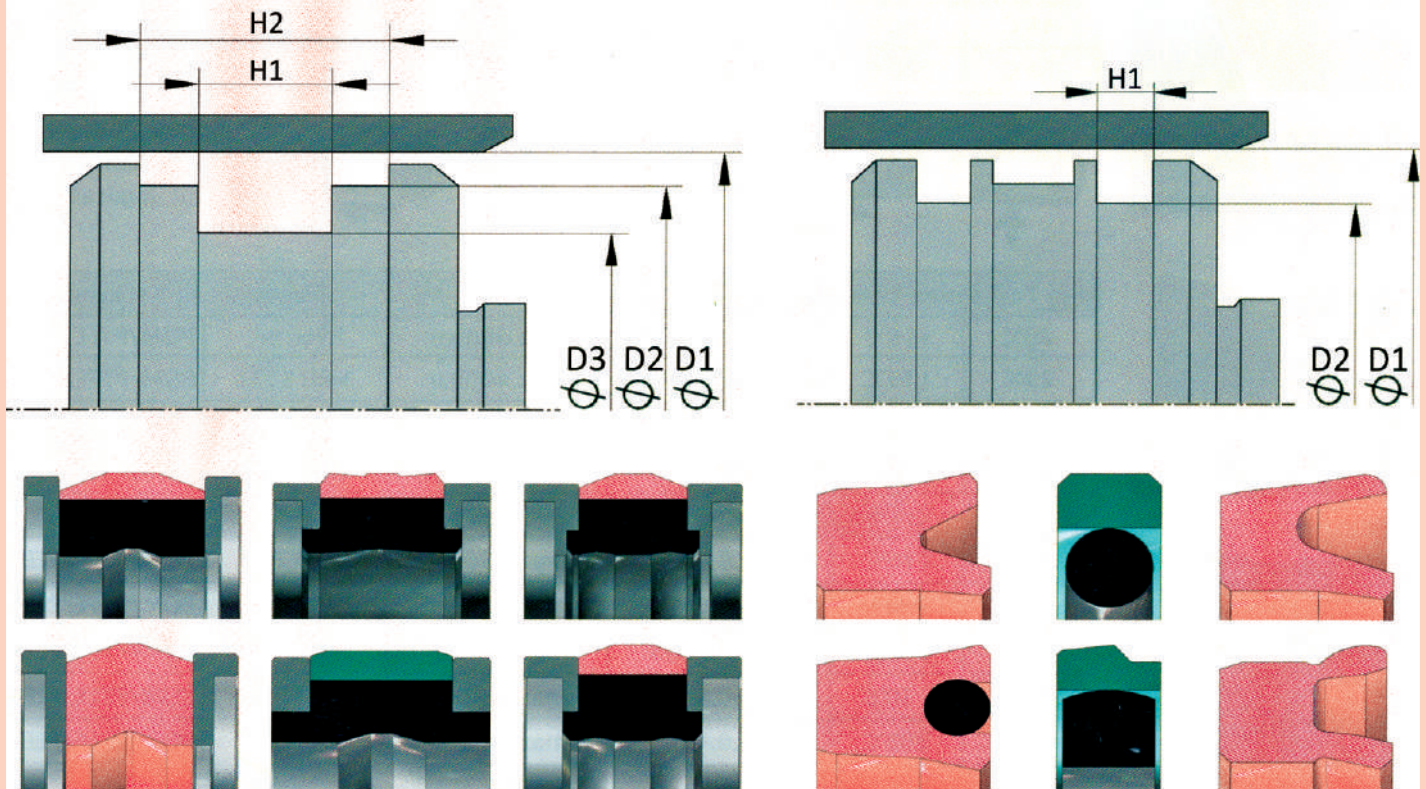


min Temp	max Temp	max. Speed	max. Pressure	Material	
-50	100	4m/s			POM
-200	260	4m/s			PTFE
-60	250	5m/s			PEEK
-200	260	5m/s			PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80	4m/s			UHMW-PE
-40	110	4m/s			PA

SWF108



PISTON SEALS



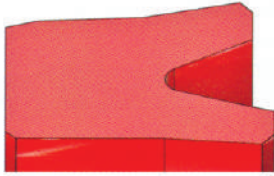
The piston seal is responsible for a system's mechanical function. The use of piston seals in cylinders facilitates leak tightness during every stroke and traction movement.

Regardless of whether it is single or double acting, the piston seal is the "workhorse" of all seals. Due to continuously increasing requirements in the area of hydraulics and pneumatics the diversity of shapes and sizes is immense in this area.

Only in the mechanical seal sector the combination of geometry and the highly developed materials continuously make new options possible.

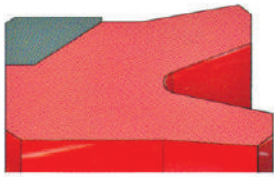
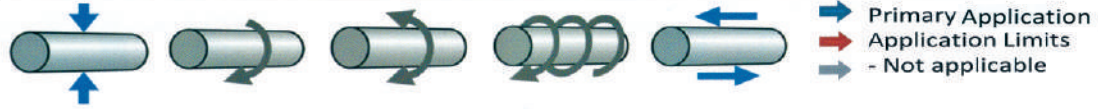
The following factors are important for the selection of this seal:

- Single or double action sealing system
- Space requirement
- Pressure load and/or gap width
- Sliding speed
- General system type
(press, construction machinery, industrial cylinder etc.)
- Open or closed installation space
- Temperature and/or medium
(important for selection of material)



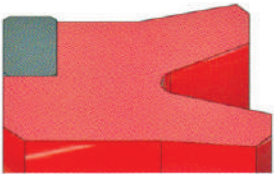
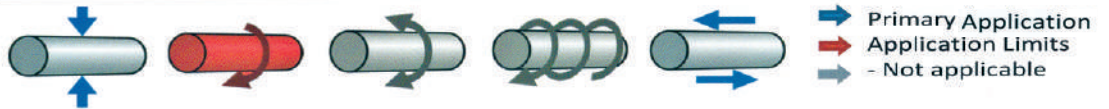
SWK101

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85°	



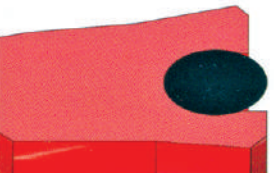
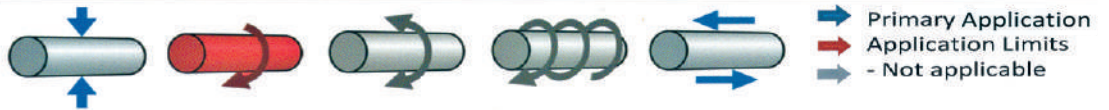
SWK102

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85°	POM/PTFE/PEEK



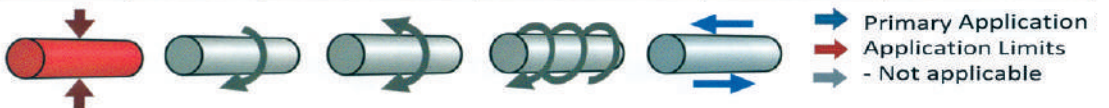
SWK102-R

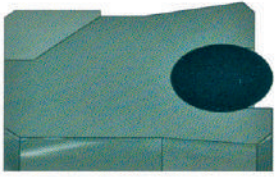
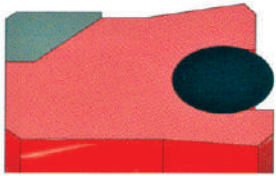
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.250bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.250bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.250bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.250bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.250bar	MVQ 85°	POM/PTFE/PEEK



SWK103

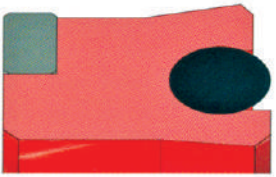
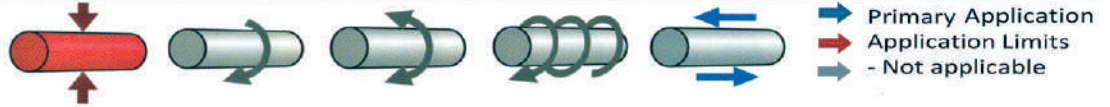
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	NBR70°/FPM75°
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	NBR70°/FPM75°
-20°C	110°C	max.0.7m/s	max.400bar	SL-PU 94°	NBR70°/FPM75°
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	NBR70°/FPM75°
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	NBR70°/FPM75°
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	NBR70°/FPM75°
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	NBR70°/FPM75°
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	NBR70°/FPM75°





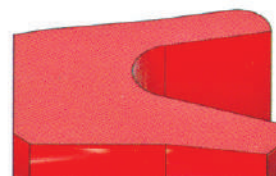
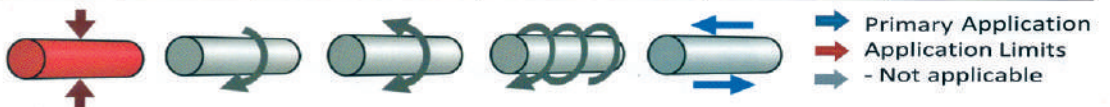
SWK104

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.500bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.500bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.500bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.500bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.200bar	NBR 85°	NBR70°/FPM75°
-20°C	150°C	max.0,5m/s	max.200bar	H-NBR 85°	NBR70°/FPM75°
-20°C	220°C	max.0,5m/s	max.200bar	FPM 82°	NBR70°/FPM75°
-45°C	130°C	max.0,5m/s	max.200bar	EPDM 85°	NBR70°/FPM75°
-60°C	200°C	max.0,4m/s	max.200bar	MVQ 85°	NBR70°/FPM75°



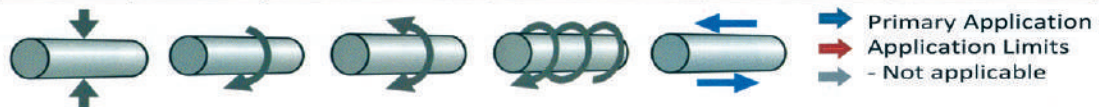
SWK104-R

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.500bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.500bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.500bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.500bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.200bar	NBR 85°	NBR70°/FPM75°
-20°C	150°C	max.0,5m/s	max.200bar	H-NBR 85°	NBR70°/FPM75°
-20°C	220°C	max.0,5m/s	max.200bar	FPM 82°	NBR70°/FPM75°
-45°C	130°C	max.0,5m/s	max.200bar	EPDM 85°	NBR70°/FPM75°
-60°C	200°C	max.0,4m/s	max.200bar	MVQ 85°	NBR70°/FPM75°



SWK105

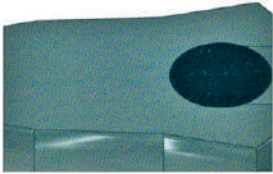
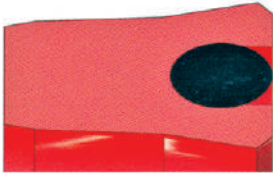
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.1 m/s	max.25bar	HPU 94°	
-20°C	115°C	max.0.1 m/s	max.25bar	HPU 55°D	
-20°C	110°C	max.0.2m/s	max.25bar	SL-PU 94°	
-50°C	110°C	max.0.1 m/s	max.25bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.1 m/s	max.25bar	NBR 85°	
-20°C	150°C	max.1 m/s	max.25bar	H-NBR 85°	
-20°C	220°C	max.1 m/s	Max.25bar	FPM 82°	
-45°C	130°C	max.1 m/s	max.25bar	EPDM 85°	
-60°C	200°C	max.0,5m/s	max.25bar	MVQ 85°	



SWK205

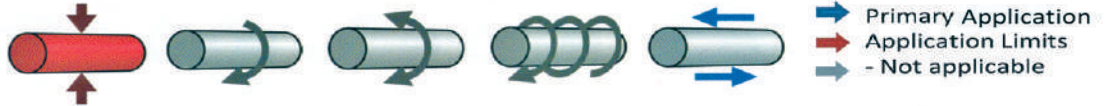
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.1 m/s	max.25bar	HPU 94°	
-20°C	115°C	max.1 m/s	max.25bar	HPU 55°D	
-20°C	110°C	max.1 m/s	max.25bar	SL-PU 94°	
-50°C	110°C	max.1 m/s	max.25bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.1 m/s	max.25bar	NBR 85°	
-20°C	150°C	Max.1 m/s	max.25bar	H-NBR 85°	
-20°C	220°C	max.1 m/s	max.25bar	FPM 82°	
-45°C	130°C	max.1 m/s	max.25bar	EPDM 85°	
-60°C	200°C	max.0,5m/s	max.25bar	MVQ 85°	





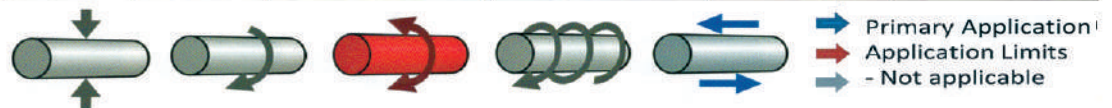
SWK107

min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	NBR70°/FPM75°
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	NBR70°/FPM75°
-20°C	110°C	max.0.7m/s	max.400bar	SL-PU 94'	NBR70°/FPM75°
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	NBR70°/FPM75°
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	NBR70°/FPM75°
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	NBR70°/FPM75°
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	NBR70°/FPM75°
-60°C	200°C	max.0,2m/s	max.120bar	MVQ 85°	NBR70°/FPM75°



SWK108

min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.1.0m/s	max.400bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE 1 glass	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.1.0m/s	max.400bar	PTFE D05turqu	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.1.0m/s	max.400bar	PTFE 25%glass	NBR70°/FPM75°



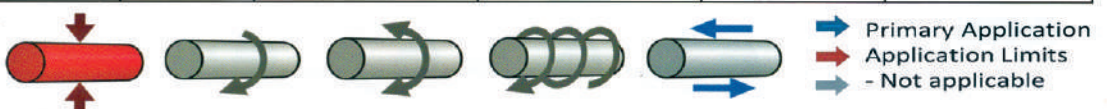
SWK109

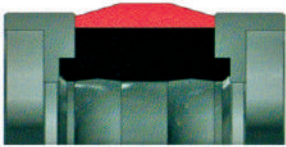
min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.0.00m/s	max.0.00bar	NBR 85°	-
-20°C	150°C	max.0.00m/s	max.0.00bar	H-NBR 85°	-
-20°C	220°C	max.0.00m/s	max.0.00bar	FPM 82°	-
-45°C	130°C	max.0.00m/s	max.0.00bar	EPDM 85°	-
-60°C	200°C	max.0.00m/s	max.0.00bar	MVQ 85°	-



SWK109D

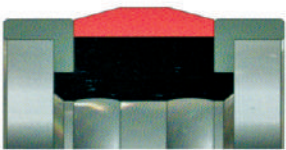
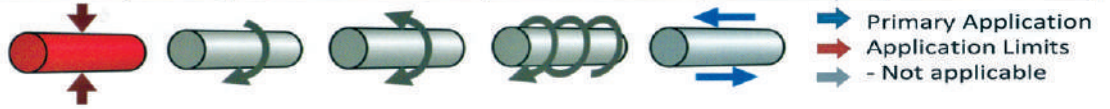
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.0.00m/s	max.0.00bar	NBR 85°	-
-20°C	150°C	max.0.00m/s	max.0.00bar	H-NBR 85°	-
-20°C	220°C	max.0.00m/s	max.0.00bar	FPM 82°	-
-45°C	130°C	max.0.00m/s	max.0.00bar	EPDM 85°	-
-60°C	200°C	max.0.00m/s	max.0.00bar	MVQ 85°	-





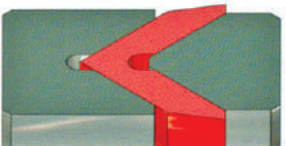
SWK109H

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.700bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.700bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.700bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.700bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.000m/s	max.000bar	NBR 85°	-
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85°	-
-20°C	220°C	max.000m/s	max.000bar	FPM 82°	-
-45°C	130°C	max.000m/s	max.000bar	EPDM 85°	-
-60°C	200°C	max.000m/s	max.000bar	MVQ 85°	-



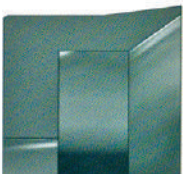
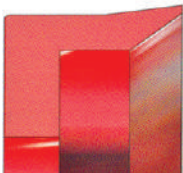
SWK109N

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.400bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.000m/s	max.000bar	NBR 85°	-
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85°	-
-20°C	220°C	max.000m/s	max.000bar	FPM 82°	-
-45°C	130°C	max.000m/s	max.000bar	EPDM 85°	-
-60°C	200°C	max.000m/s	max.000bar	MVQ 85°	-



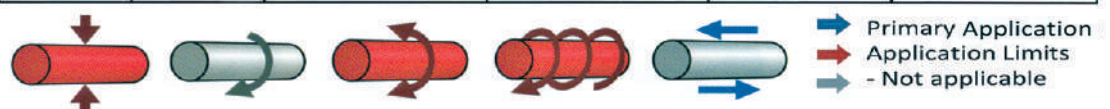
SWK110/112

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.500bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.500bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.500bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.500bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	POM/PTFE/PEEK



SWK116

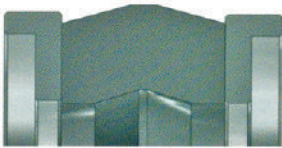
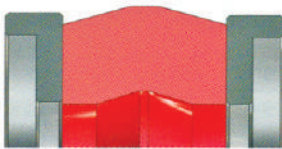
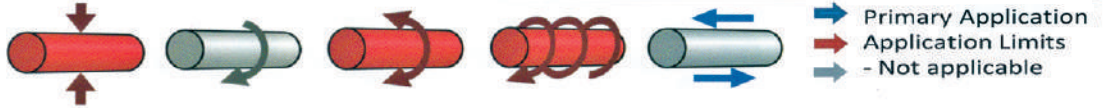
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.160bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.160bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.160bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.160bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.120bar	NBR 85°	
-20°C	150°C	max.0,4m/s	max.120bar	H-NBR 85°	
-20°C	220°C	max.0,4m/s	max.120bar	FPM 82°	
-45°C	130°C	max.0,4m/s	max.120bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	





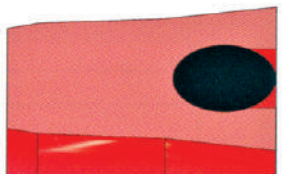
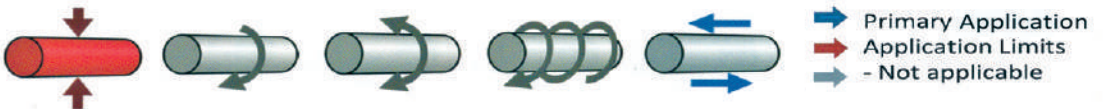
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.160bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.160bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.160bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.160bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	Application

SWK216



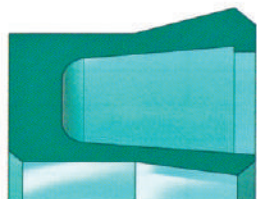
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.250bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.250bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.250bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.250bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.200bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.200bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.200bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.200bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,5m/s	max.200bar	MVQ 85°	POM/PTFE/PEEK

SWK117



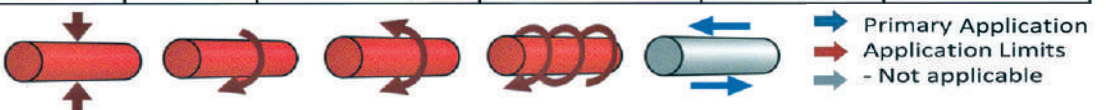
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	NBR70°,FPM75°
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	NBR70°,FPM75°
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	NBR70°,FPM75°
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	NBR70°,FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	NBR70°,FPM75°
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	NBR70°,FPM75°
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	NBR70°,FPM75°
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	NBR70°,FPM75°
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	NBR70°,FPM75°

SWK118



min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE pure	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 1 glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.15m/s	max.100bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE D05 turq	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE D05 glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE graphite	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE ekonol	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 25%glass	1.4310

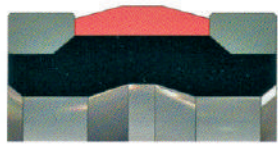
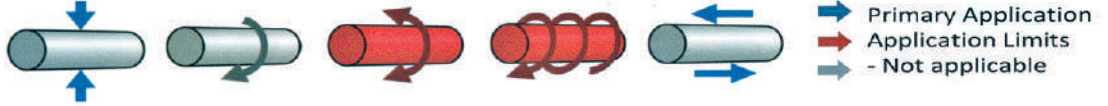
SWK119





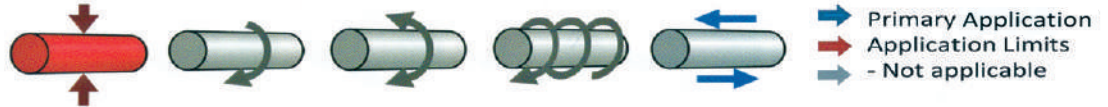
SWK120

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85'	POM/PTFE/PEEK



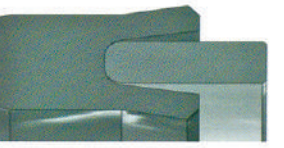
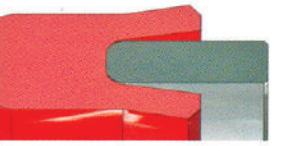
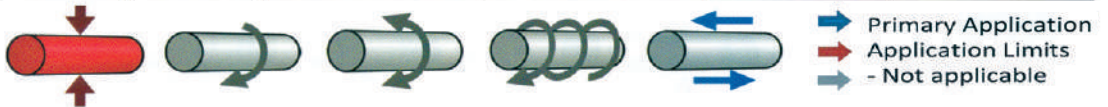
SWK122

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.000m/s	max.000bar	NBR 85'	-
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85'	-
-20°C	220°C	max.000m/s	max.000bar	FPM 82'	-
-45°C	130°C	max.000m/s	max.000bar	EPDM 85'	-
-60°C	200°C	max.000m/s	max.000bar	MVQ 85'	-



SWK222

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-200°C	260°C	max.1,5m/s	max.400bar	PTFE pure	POM/PTFE/PEEK
-200°C	260°C	max.1,5m/s	max.450bar	PTFE 1 glass	POM/PTFE/PEEK
-200°C	260°C	max.1,5m/s	max.450bar	PTFE 2 bronze	POM/PTFE/PEEK
-200°C	260°C	max.1,5m/s	max.450bar	PTFE carbone	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-200°C	260°C	max.000m/s	max.000bar	NBR 85°	-
-200°C	260°C	max.000m/s	max.000bar	H-NBR 85°	-
-200°C	260°C	max.000m/s	max.000bar	FPM 82°	-
-200°C	260°C	max.000m/s	max.000bar	EPDM 85°	-
-200°C	260°C	max.000m/s	max.000bar	MVQ 85°	-



SWK123

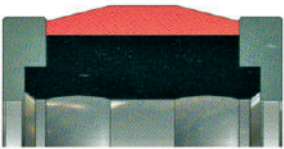
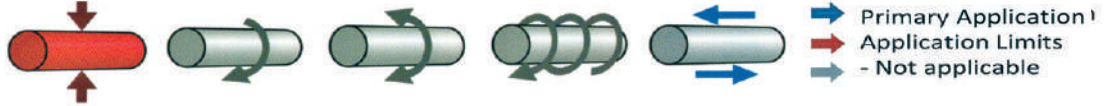
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Retainerring	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.7m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Retainerring	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85'	POM/PTFE/PEEK





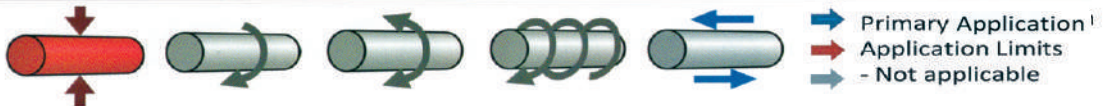
SWK123D

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backing	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.000m/s	max.000bar	NBR 85'	
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85'	
-20°C	220°C	max.000m/s	max.000bar	FPM 82'	
-45°C	130°C	max.000m/s	max.000bar	EPDM 85'	
-60°C	200°C	max.000m/s	max.000bar	MVQ 85'	



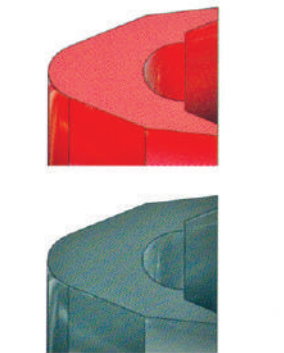
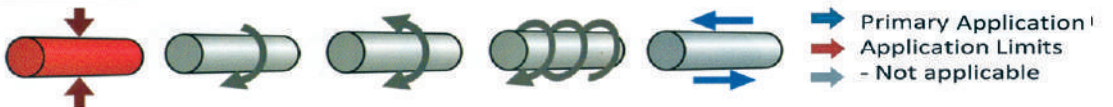
SWK123H

min Temp	max Temp	max. Speed	max. Pressure	Material / Backing	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.000m/s	max.000bar	NBR 85'	
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85'	
-20°C	220°C	max.000m/s	max.000bar	FPM 82'	
-45°C	130°C	max.000m/s	max.000bar	EPDM 85'	
-60°C	200°C	max.000m/s	max.000bar	MVQ 85'	



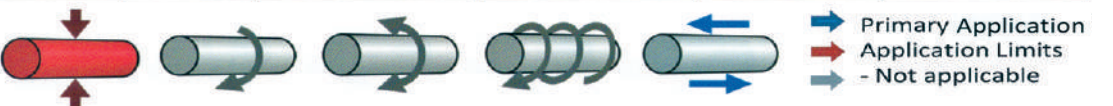
SWK123N

min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backing	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C	max.000m/s	max.000bar	NBR 85'	
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85'	
-20°C	220°C	max.000m/s	max.000bar	FPM 82'	
-45°C	130°C	max.000m/s	max.000bar	EPDM 85'	
-60°C	200°C	max.000m/s	max.000bar	MVQ 85'	



SWK124

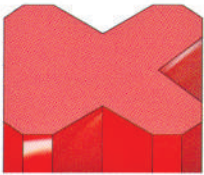
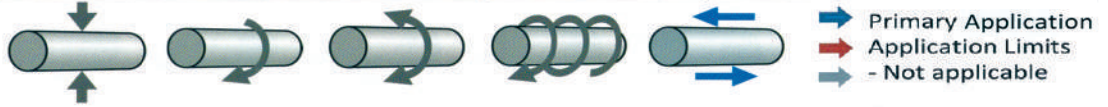
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94'	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55'D	
-20°C	110°C	max.0.7m/s	max.400bar	SL-PU 94'	
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.260bar	NBR 85'	
-20°C	150°C	max.0,5m/s	max.260bar	H-NBR 85'	
-20°C	220°C	max.0,5m/s	max.260bar	FPM 82'	
-45°C	130°C	max.0,5m/s	max.260bar	EPDM 85'	
-60°C	200°C	max.0,4m/s	max.220bar	MVQ 85'	





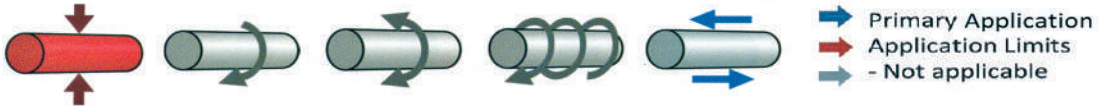
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.10m/s	max.400bar	PTFED05turqu	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	NBR70°/FPM75°

SWK125



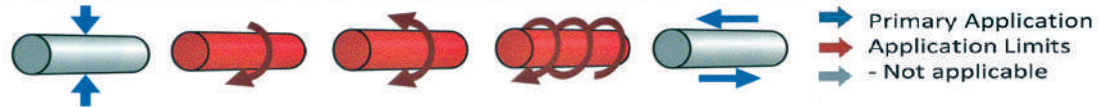
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.000m/s	max.000bar	HPU 94°	
-20°C	115°C	max.000m/s	max.000bar	HPU 55°D	
-20°C	110°C	max.000m/s	max.000bar	SL-PU 94°	
-50°C	110°C	max.000m/s	max.000bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.000m/s	max.000bar	NBR 85°	
-20°C	150°C	max.000m/s	max.000bar	H-NBR 85°	
-20°C	220°C	max.000m/s	max.000bar	FPM 82°	
-45°C	130°C	max.000m/s	max.000bar	EPDM 85°	
-60°C	200°C	max.000m/s	max.000bar	MVQ 85°	

SWK126



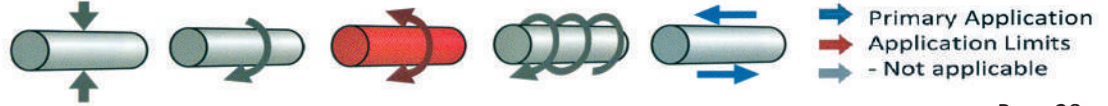
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	

SWK127



min Temp	max Temp	max. Speed	max. Pressure	Material / Energizer	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass	H-NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	FPM 82°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	EPDM85°
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05 turq	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05 glass	
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	

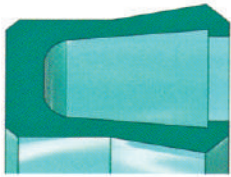
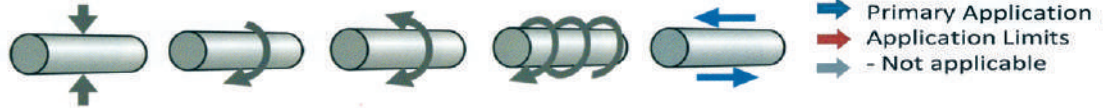
SWK138





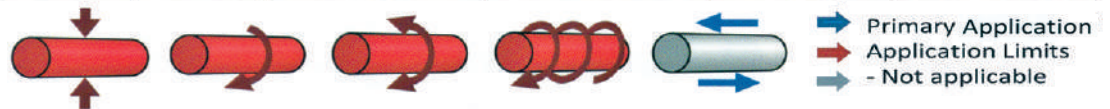
SWK238

min Temp	max Temp	max. Speed	max. Pressure	Material / Energizer	
-200°C	260°C	max.10m/s	max.400bar	PTFE pure	NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass	H-NBR 85°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze	FPM 82°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone	EPDM85°
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05 turq	
-200°C	260°C	max.10m/s	max.400bar	PTFE D05 glass	
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite	
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol	
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass	



SWK139

min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE pure	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 1 glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.15m/s	max.100bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.100bar	PTFE D05 turq	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE D05 glass	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE graphite	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE ekonol	1.4310
-200°C	260°C	max.15m/s	max.160bar	PTFE 25%glass	1.4310



SWK140

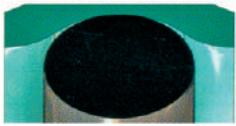
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-20°C	115°C	max.1m/s	max.400bar	HPU 94°	NBR70°/FPM75°
-20°C	115°C	max.1m/s	max.400bar	HPU 55°D	NBR70°/FPM75°
-20°C	110°C	max.1.4m/s	max.400bar	SL-PU 94°	NBR70°/FPM75°
-50°C	110°C	max.1m/s	max.400bar	LT-PU 94°	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material	



SWK141

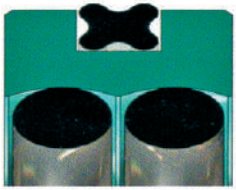
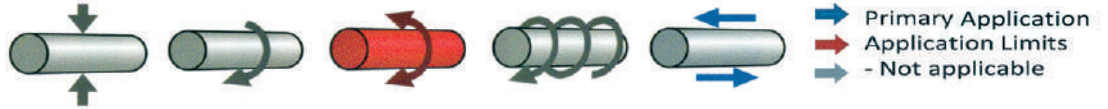
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.5m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.5m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,4m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,4m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,4m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,4m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,3m/s	max.120bar	MVQ 85°	





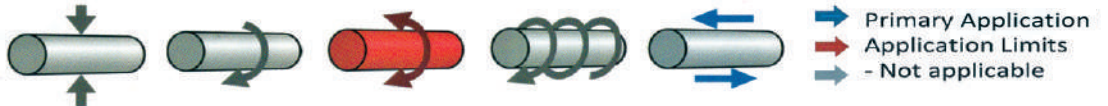
SWK142

min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring
-200°C	260°C	max.10m/s	max.400bar	PTFE pure / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass / NBR70° /FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone / NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring
-200°C	260°C	max.10m/s	max.400bar	PTFE D05turqu / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass / NBR70°/FPM75°



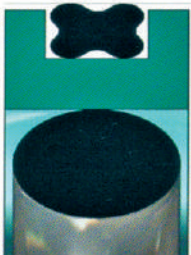
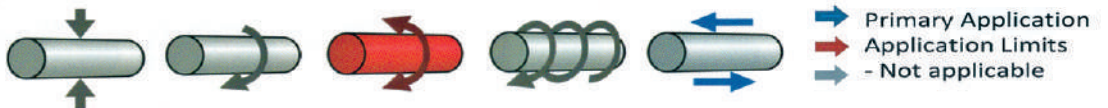
SWK144

min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring
-200°C	260°C	max.10m/s	max.400bar	PTFE pure / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 1 glass / NBR70° /FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 2 bronze / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE carbone / NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / X-Ring
-200°C	260°C	max.10m/s	max.400bar	PTFE D05turqu / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE D05glass / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE graphite / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE ekonol / NBR70°/FPM75°
-200°C	260°C	max.10m/s	max.400bar	PTFE 25%glass / NBR70°/FPM75°



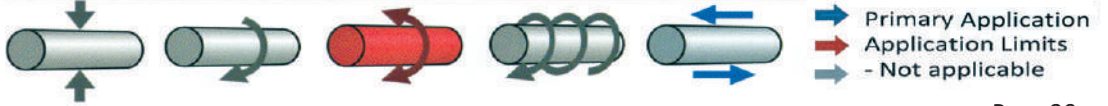
SWK143

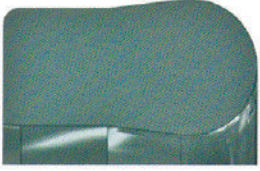
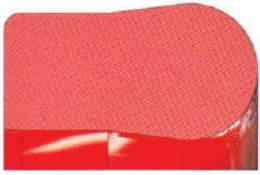
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94° / NBR 85°
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D / H-NBR 85°
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94° / FPM 82°
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94° / EPDM85°
min.Temp	max.Temp	max. Speed	max. Pressure	Material



SWK145

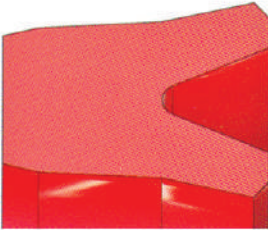
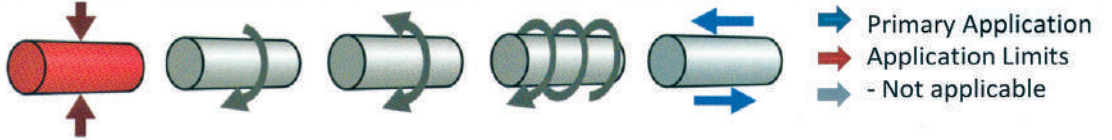
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94° / NBR70°/FPM75°
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D / NBR70°/FPM75°
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94° / NBR70°/FPM75°
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94° / NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / X-Ring
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85° / NBR70°/FPM75°
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85° / NBR70°/FPM75°
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82° / NBR70°/FPM75°
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85° / NBR70°/FPM75°
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85° / NBR70°/FPM75°





min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	

SWK199

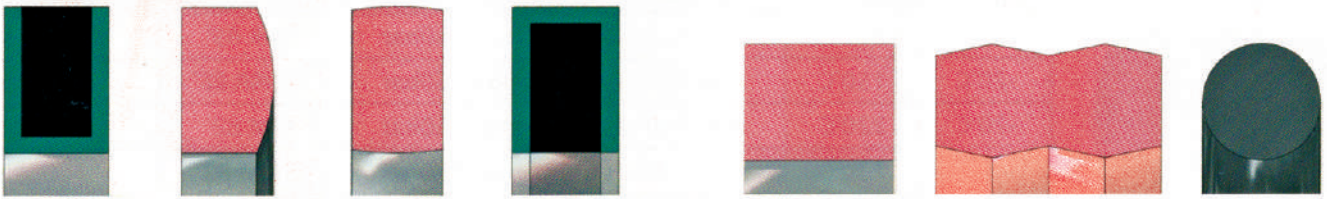
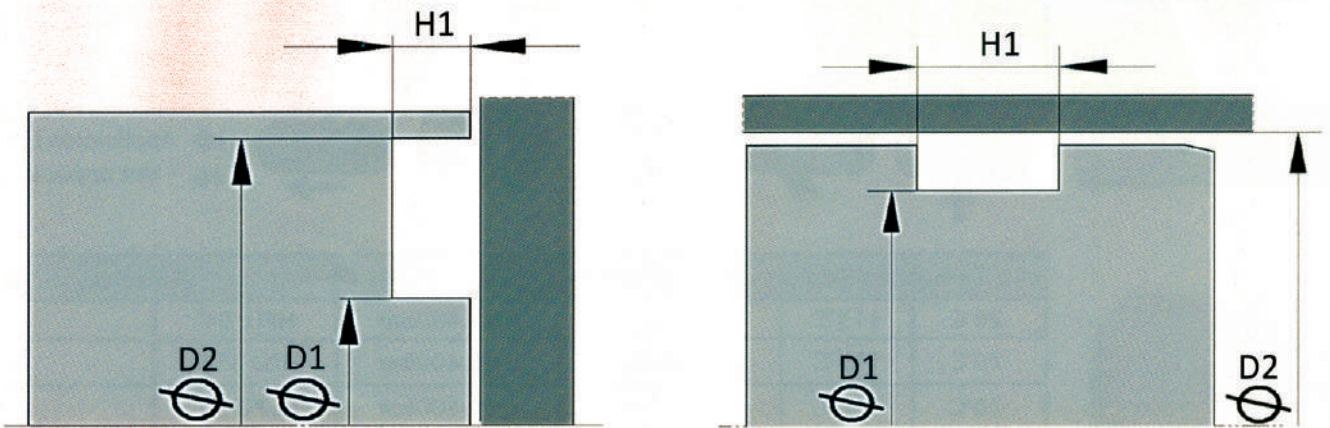


min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 94°	
-20°C	115°C	max.0.4m/s	max.400bar	HPU 55°D	
-20°C	110°C	max.0.5m/s	max.400bar	SL-PU 94°	
-50°C	110°C	max.0.4m/s	max.400bar	LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,5m/s	max.160bar	NBR 85°	
-20°C	150°C	max.0,5m/s	max.160bar	H-NBR 85°	
-20°C	220°C	max.0,5m/s	max.160bar	FPM 82°	
-45°C	130°C	max.0,5m/s	max.160bar	EPDM 85°	
-60°C	200°C	max.0,4m/s	max.120bar	MVQ 85°	

SWK106

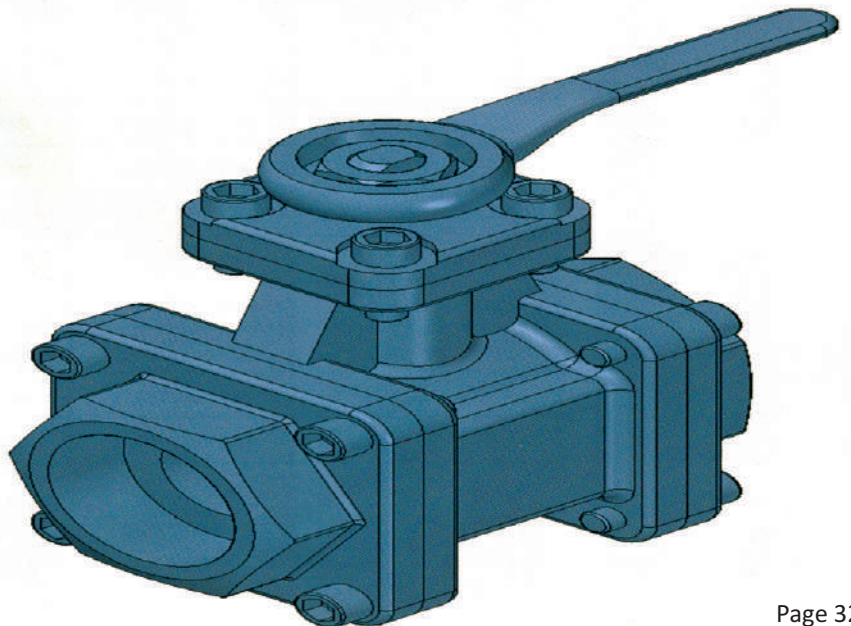


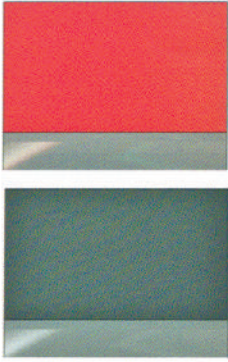
STATIC SEALS



Gaskets are most frequently used as static sealing elements. The availability of the widest variety of shapes and forms offers the greatest scope to designers in this area.

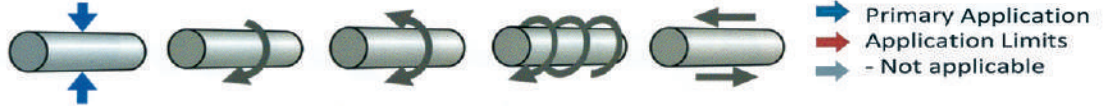
The selection of shape and form in these areas results mainly from the design of the system.





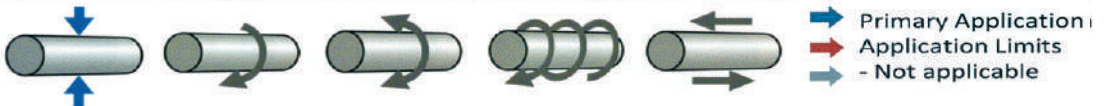
SWFL101

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94°	
-20°C	115°C			HPU 55°D	
-20°C	110°C			SL-PU 94°	
-50°C	110°C			LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85°	
-20°C	150°C			H-NBR 85°	
-20°C	220°C			FPM 82°	
-45°C	130°C			EPDM 85°	
-60°C	200°C			MVQ 85°	



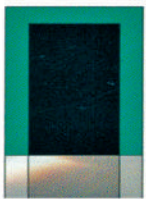
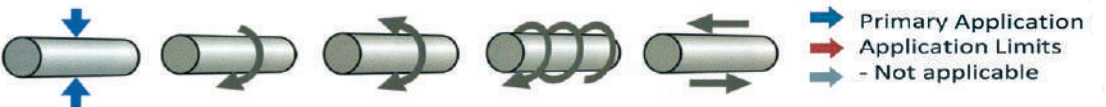
SWFL102

min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94°	
-20°C	115°C			HPU 55°D	
-20°C	110°C			SL-PU 94°	
-50°C	110°C			LT-PU 94°	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85°	
-20°C	150°C			H-NBR 85°	
-20°C	220°C			FPM 82°	
-45°C	130°C			EPDM 85°	
-60°C	200°C			MVQ 85°	



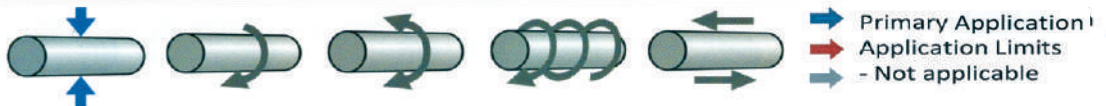
SWFL103

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C			PTFE pure	
-200°C	260°C			PTFE graphite	
-200°C	260°C			PTFE carbone	
-200°C	260°C			PTFE D05turqu	
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C			NBR 85°	
-20°C	150°C			H-NBR 85°	
-20°C	220°C			FPM 82°	
-45°C	130°C			EPDM 85°	
-60°C	200°C			MVQ 85°	



SWFL104

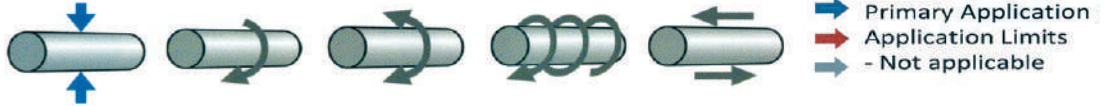
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C			PTFE pure	
-200°C	260°C			PTFE graphite	
-200°C	260°C			PTFE carbone	
-200°C	260°C			PTFE D05turqu	
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Energizer	
-30°C	110°C			NBR 85°	
-20°C	150°C			H-NBR 85°	
-20°C	220°C			FPM 82°	
-45°C	130°C			EPDM 85°	
-60°C	200°C			MVQ 85°	





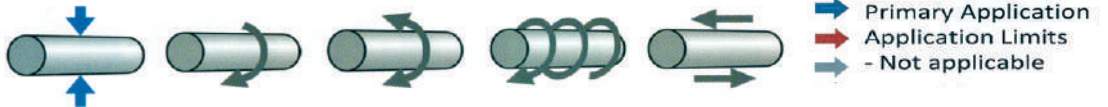
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

SWFL105



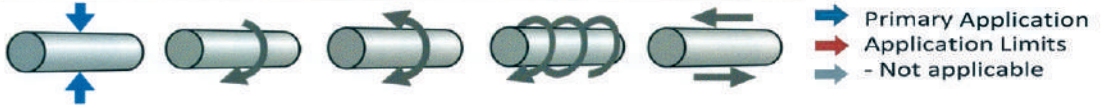
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

SWFL106



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

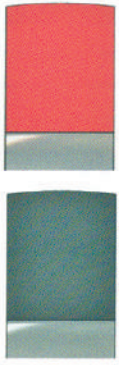
SWFL108-2



min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

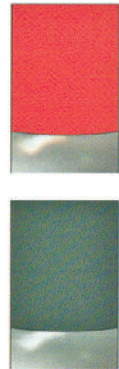
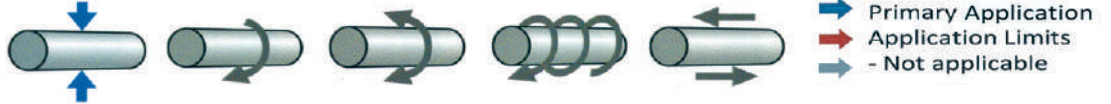
SWFL108-1





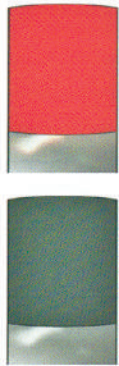
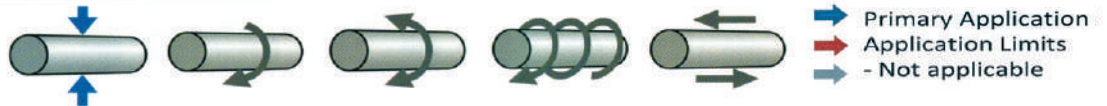
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

SWFL109



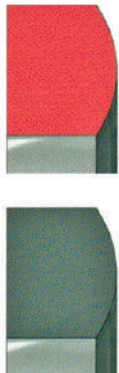
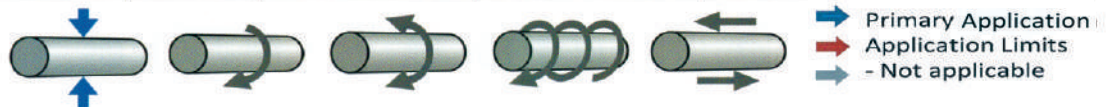
min Temp	max Temp	max. Speed	max. Pressure	Material	
-200°C	260°C			PTFE pure	
-200°C	260°C			PTFE 1 glass	
-200°C	260°C			PTFE 2 bronze	
-200°C	260°C			PTFE carbone	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C			PTFE D05turqu	
-200°C	260°C			PTFE D05glass	
-200°C	260°C			PTFE graphite	
-200°C	260°C			PTFE ekonol	
-200°C	260°C			PTFE 25%glass	

SWFL109-1



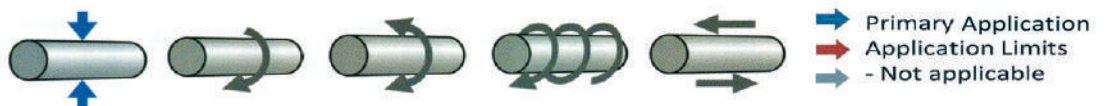
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

SWFL109-2

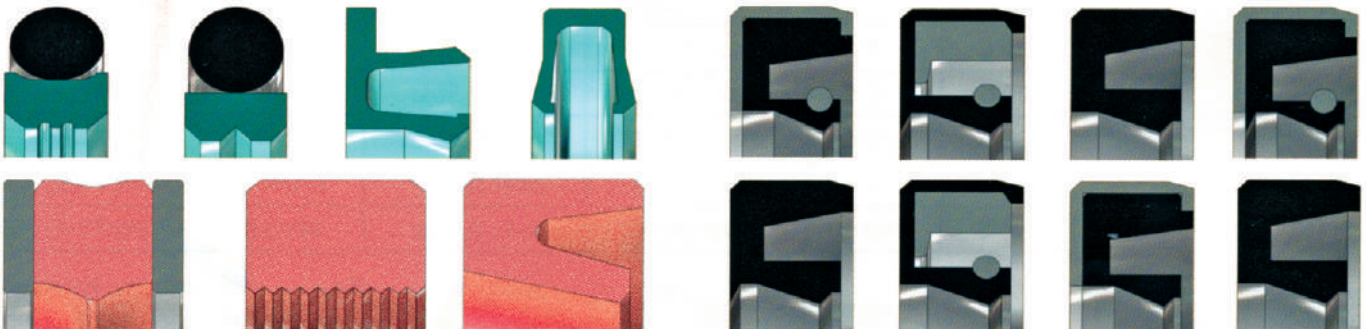
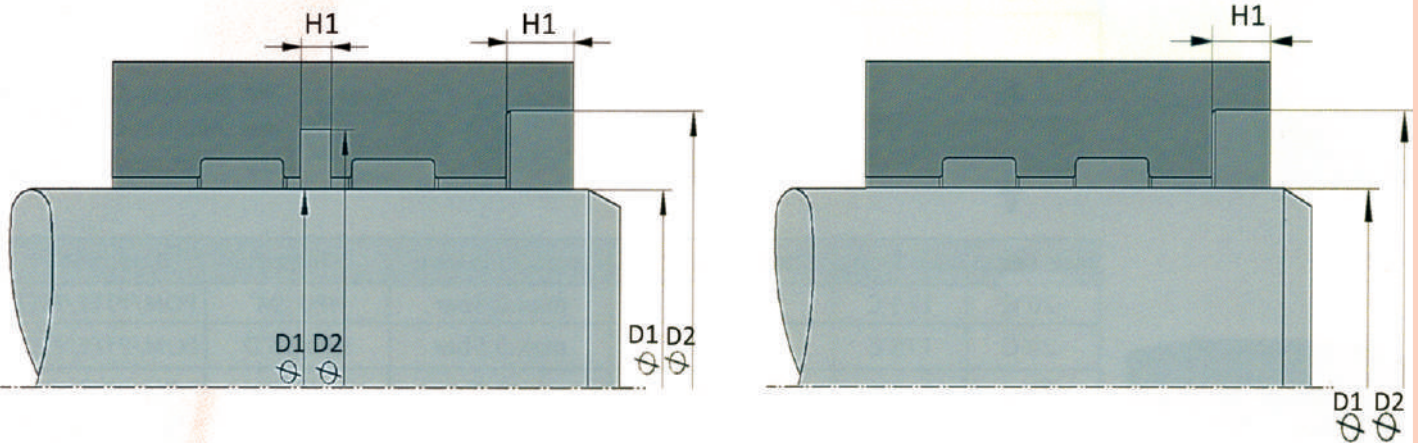


min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C			HPU 94'	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94'	
-50°C	110°C			LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C			NBR 85'	
-20°C	150°C			H-NBR 85'	
-20°C	220°C			FPM 82'	
-45°C	130°C			EPDM 85'	
-60°C	200°C			MVQ 85'	

SWFL110



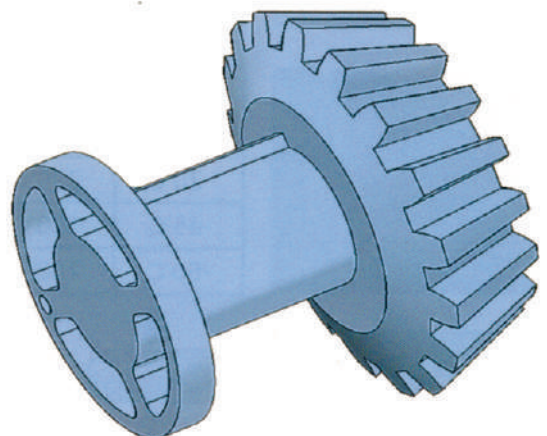
ROTARY SEALS

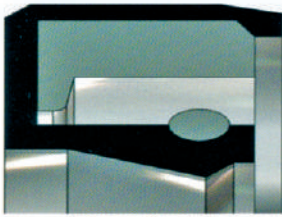


As the name suggests, this type of seal is suitable for sealing rotary (turning) parts. This is the most complex component in the entire field of sealing technology. Every manufacturer in the world market is continuously developing new techniques to avoid leakage from rotary shafts.

Attention should be paid to the following in order to make an approximate selection of the seal geometry:

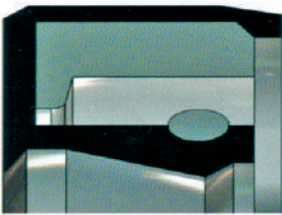
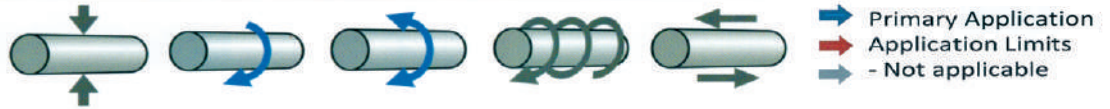
- Dirtiness load in the environment
- Space requirement
- Sliding speed – revolutions converted to m/sec (important for design and material selection)
- Pressure load or pressure-free application
- Choice of material the counter rotation piece (shaft, etc.)
- Temperature and/or medium (important for selection of material)





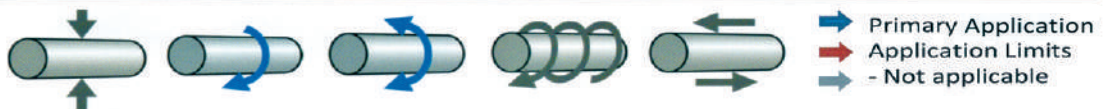
SWR101

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85'	POM/PTFE/PEEK



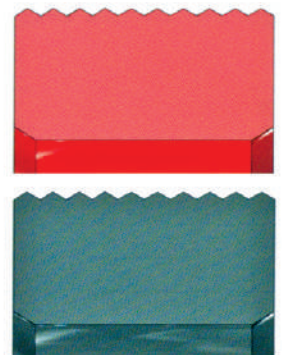
SWR102

min Temp	max Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85'	POM/PTFE/PEEK



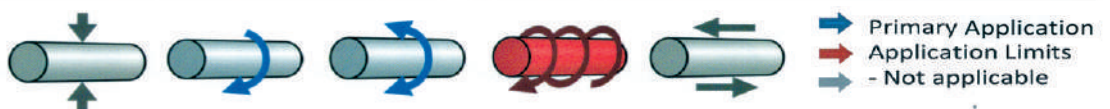
SWR103

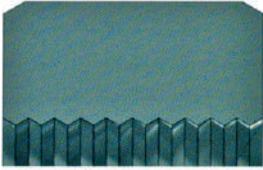
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.2m/s	max.400bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.0.2m/s	max.400bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.0.3m/s	max.400bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.0.2m/s	max.400bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,2m/s	max.250bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.0,2m/s	max.250bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.0,2m/s	max.250bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	max.0,2m/s	max.250bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.0,1 m/s	max.150bar	MVQ 85'	POM/PTFE/PEEK



SWR104

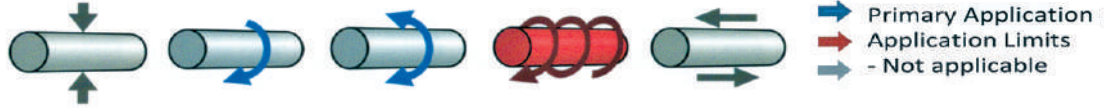
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.2m/s	max.160bar	HPU 94'	
-20°C	115°C	max.0.2m/s	max.160bar	HPU 55'D	
-20°C	110°C	max.0.3m/s	max.160bar	SL-PU 94'	
-50°C	110°C	max.0.2m/s	max.160bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,2m/s	max.100bar	NBR 85'	
-20°C	150°C	max.0,2m/s	max.100bar	H-NBR 85'	
-20°C	220°C	max.0,2m/s	max.100bar	FPM 82'	
-45°C	130°C	max.0,2m/s	max.100bar	EPDM 85'	
-60°C	200°C	max.0,1 m/s	max.100bar	MVQ 85'	





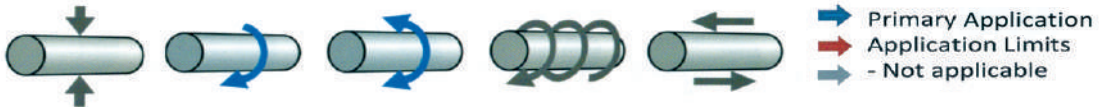
SWR105

min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.2m/s	max.160bar	HPU 94*	
-20°C	115°C	max.0.2m/s	max.160bar	HPU 55'D	
-20°C	110°C	max.0.3m/s	max.160bar	SL-PU 94*	
-50°C	110°C	max.0.2m/s	max.160bar	LT-PU 94*	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,2m/s	max.100bar	NBR 85*	
-20°C	150°C	max.0,2m/s	max.100bar	H-NBR 85*	
-20°C	220°C	max.0,2m/s	max.100bar	FPM 82*	
-45°C	130°C	max.0,2m/s	max.100bar	EPDM 85*	
-60°C	200°C	max.0,1m/s	max.100bar	MVQ 85*	



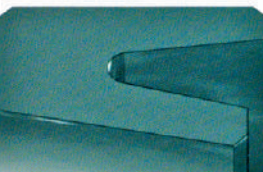
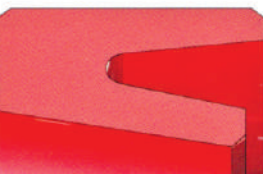
SWR106

min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.25m/s	max.000bar	HPU 94*	
-20°C	115°C	max.25m/s	max.000bar	HPU 55'D	
-20°C	110°C	max.25m/s	max.000bar	SL-PU 94*	
-50°C	110°C	max.25m/s	max.000bar	LT-PU 94*	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,2m/s	max.000bar	NBR 85*	
-20°C	150°C	max.0,2m/s	max.000bar	H-NBR 85*	
-20°C	220°C	max.0,2m/s	max.00bar	FPM 82*	
-45°C	130°C	max.0,2m/s	max.000bar	EPDM 85*	
-60°C	200°C	max.0,1m/s	max.000bar	MVQ 85*	



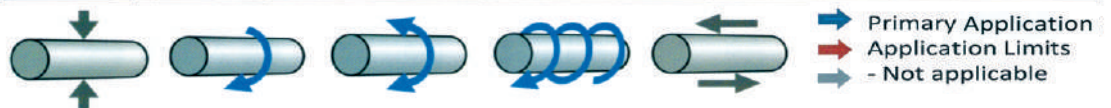
SWR107

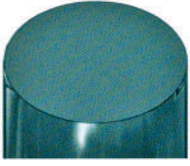
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.25m/s	max.000bar	HPU 94*	
-20°C	115°C	max.25m/s	max.000bar	HPU 55'D	
-20°C	110°C	max.25m/s	max.000bar	SL-PU 94*	
-50°C	110°C	max.25m/s	max.000bar	LT-PU 94*	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,2m/s	max.000bar	NBR 85*	
-20°C	150°C	max.0,2m/s	max.000bar	H-NBR 85*	
-20°C	220°C	max.0,2m/s	max.00bar	FPM 82*	
-45°C	130°C	max.0,2m/s	max.000bar	EPDM 85*	
-60°C	200°C	max.0,1m/s	max.000bar	MVQ 85*	



SWR108

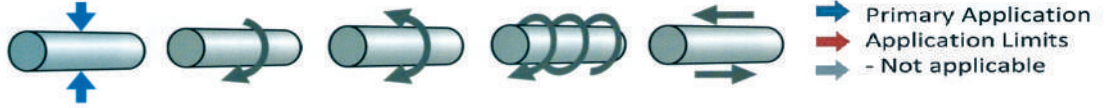
min Temp	max Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	Upon application		HPU 94*	
-20°C	115°C			HPU 55'D	
-20°C	110°C			SL-PU 94*	
-50°C	110°C			LT-PU 94*	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	Upon application		NBR 85*	
-20°C	150°C			H-NBR 85*	
-20°C	220°C			FPM 82*	
-45°C	130°C			EPDM 85*	
-60°C	200°C			MVQ 85*	





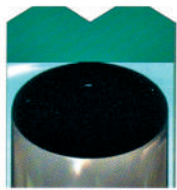
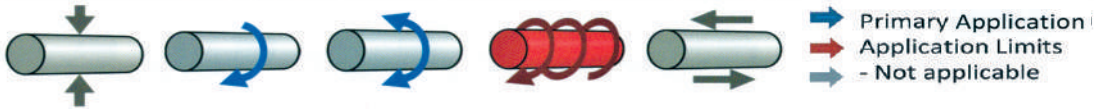
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.000m/s	max.400bar	HPU 94'	
-20°C	115°C	max.000m/s	max.400bar	HPU 55'D	
-20°C	110°C	max.000m/s	max.400bar	SL-PU 94'	
-50°C	110°C	max.000m/s	max.400bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.000m/s	max.160bar	NBR 85'	
-20°C	150°C	max.000m/s	max.160bar	H-NBR 85'	
-20°C	220°C	max.000m/s	max.160bar	FPM 82'	
-45°C	130°C	max.000m/s	max.160bar	EPDM 85'	
-200°C	260°C	max.000m/s	max.160bar	PTFE	

SWR109



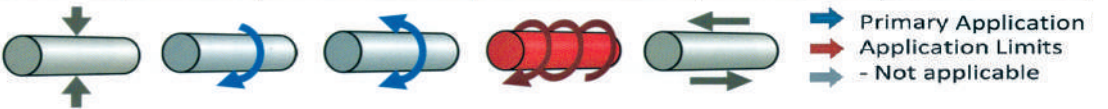
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 1 glass	NBR70° /FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max. 0,4m/s	max.300bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05turqu	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 25%glass	NBR70°/FPM75°

SWR110



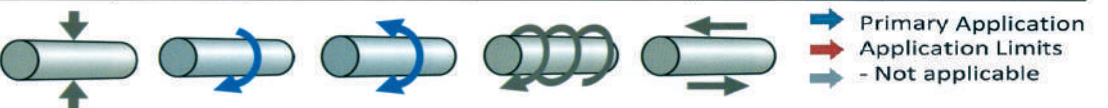
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 1 glass	NBR70° /FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max. 0,4m/s	max.300bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05turqu	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 25%glass	NBR70°/FPM75°

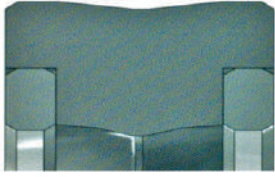
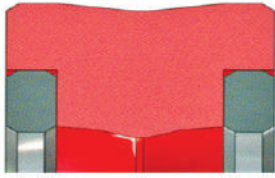
SWR111



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.0.2m/s	max.160bar	HPU 94'	
-20°C	115°C	max.0.2m/s	max.160bar	HPU 55'D	
-20°C	110°C	max.0.3m/s	max.160bar	SL-PU 94'	
-50°C	110°C	max.0.2m/s	max.160bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.0,2m/s	max.100bar	NBR 85'	
-20°C	150°C	max.0,2m/s	max.100bar	H-NBR 85'	
-20°C	220°C	max.0,2m/s	max.100bar	FPM 82'	
-45°C	130°C	max.0,2m/s	max.100bar	EPDM 85'	
-60°C	200°C	max.0,1m/s	max.100bar	MVQ 85'	

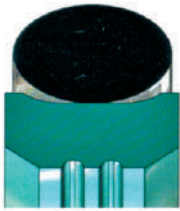
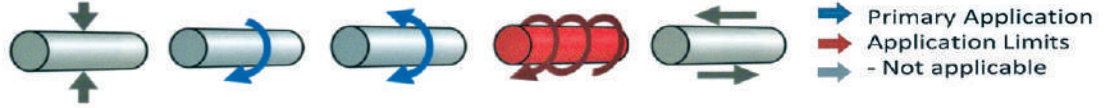
SWR112





min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.0.2m/s	max.400bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.0.2m/s	max.400bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.0.3m/s	max.400bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.0.2m/s	max.400bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.0,2m/s	max.250bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.0,2m/s	max.250bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.0,2m/s	max.250bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	max.0,2m/s	max.250bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.0,1m/s	max.150bar	MVQ 85°	POM/PTFE/PEEK

SWR113



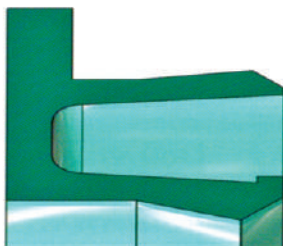
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 1glass	NBR70° /FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max. 0,4m/s	max.300bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05turqu	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 25%glass	NBR70°/FPM75°

SWR115



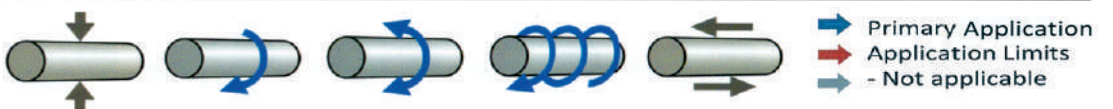
min Temp	max Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE pure	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 1glass	NBR70° /FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 2 bronze	NBR70°/FPM75°
-200°C	260°C	max. 0,4m/s	max.300bar	PTFE carbone	NBR70°/FPM75°
min.Temp	max.Temp	max. Speed	max. Pressure	Material / O-Ring	
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05turqu	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE D05glass	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE graphite	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE ekonol	NBR70°/FPM75°
-200°C	260°C	max.0,4m/s	max.300bar	PTFE 25%glass	NBR70°/FPM75°

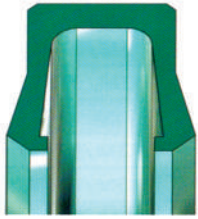
SWR116



min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.2m/s	max.150bar	PTFE pure	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE 1glass	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.2m/s	max.150bar	PTFE D05 turq	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE D05 glass	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE graphite	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE ekonol	1.4310
-200°C	260°C	max.2m/s	max.150bar	PTFE 25%glass	1.4310

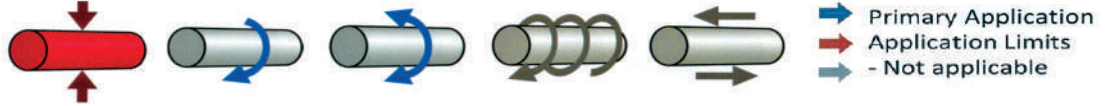
SWR117





min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.300bar	PTFE pure	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE 1glass	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.300bar	PTFE D05 turq	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE D05 glass	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE graphite	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE ekonol	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE 25%glass	1.4310

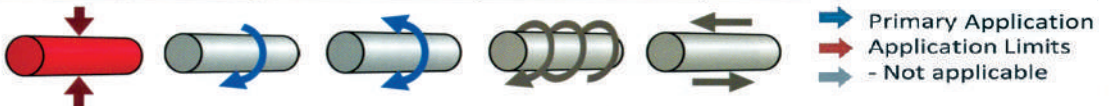
SWR118



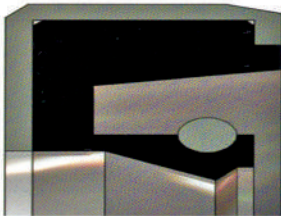
min Temp	max Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.300bar	PTFE pure	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE 1glass	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE 2 bronze	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE carbone	1.4310
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Spring	
-200°C	260°C	max.15m/s	max.300bar	PTFE D05 turq	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE D05 glass	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE graphite	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE ekonol	1.4310
-200°C	260°C	max.15m/s	max.300bar	PTFE 25%glass	1.4310



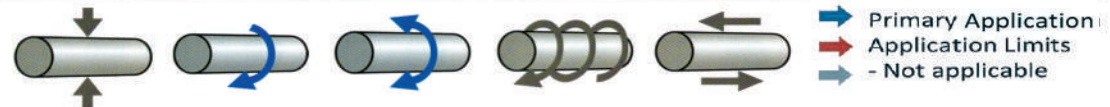
SWR119



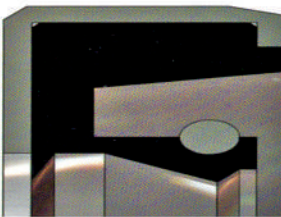
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85°	POM/PTFE/PEEK



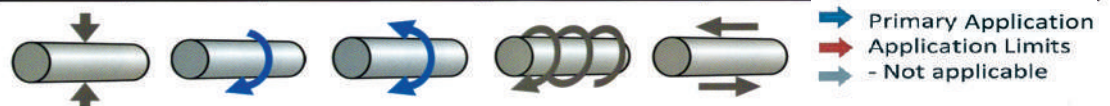
SWR201

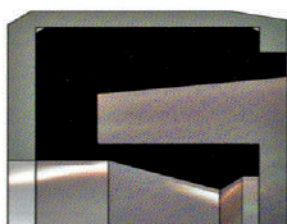


min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94°	POM/PTFE/PEEK
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55°D	POM/PTFE/PEEK
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94°	POM/PTFE/PEEK
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94°	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85°	POM/PTFE/PEEK
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85°	POM/PTFE/PEEK
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82°	POM/PTFE/PEEK
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85°	POM/PTFE/PEEK
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85°	POM/PTFE/PEEK



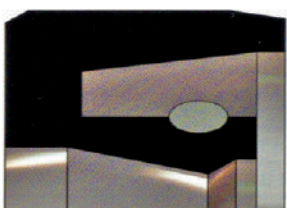
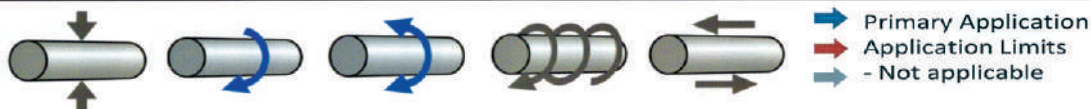
SWR202





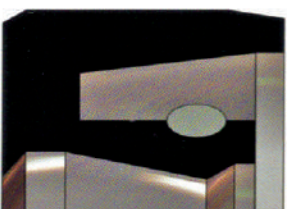
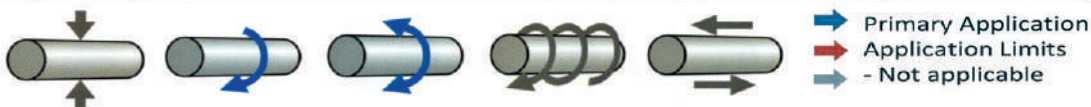
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94'	POM/PTFE/PEEK
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55'D	POM/PTFE/PEEK
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94'	POM/PTFE/PEEK
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94'	POM/PTFE/PEEK
min.Temp	max.Temp	max. Speed	max. Pressure	Material / Backring	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85'	POM/PTFE/PEEK
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85'	POM/PTFE/PEEK
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82'	POM/PTFE/PEEK
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85'	POM/PTFE/PEEK
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85'	POM/PTFE/PEEK

SWR203



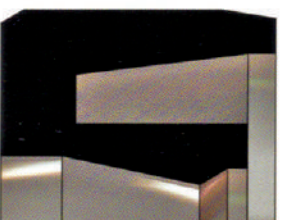
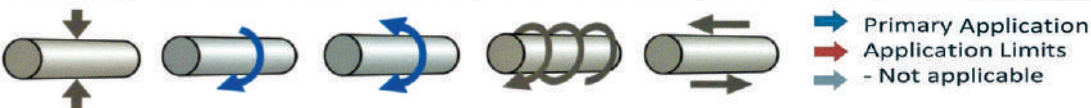
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94'	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55'D	
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94'	
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85'	
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85'	
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82'	
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85'	
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85'	

SWR204



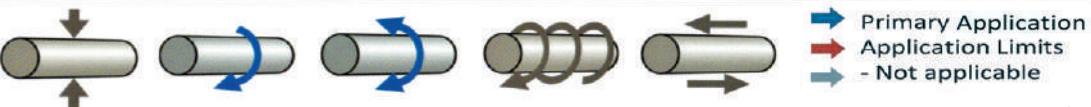
min Temp	max Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.5m/s	max.0,5bar	PTFE pure	
-200°C	260°C	max.5m/s	max.0,5bar	PTFE 1 glass	
-200°C	260°C	max.6m/s	max.0,5bar	PTFE 2 bronze	
-200°C	260°C	max.5m/s	max.0,5bar	PTFE carbone	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200°C	260°C	max.10m/s	max.0,5bar	NBR 85°	
-200°C	260°C	max.10m/s	max.0,5bar	H-NBR 85°	
-200°C	260°C	max.10m/s	max.0,5bar	FPM 82°	
-200°C	260°C	Max.10m/s	max.0,5bar	EPDM 85°	
-200°C	260°C	max.5m/s	max.0,2bar	MVQ 85°	

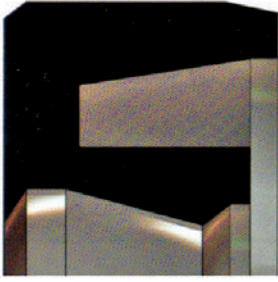
SWR205



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94'	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55'D	
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94'	
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85'	
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85'	
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82'	
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85'	
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85'	

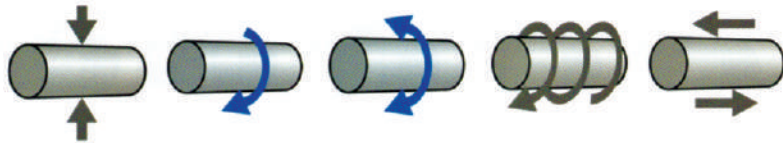
SWR206





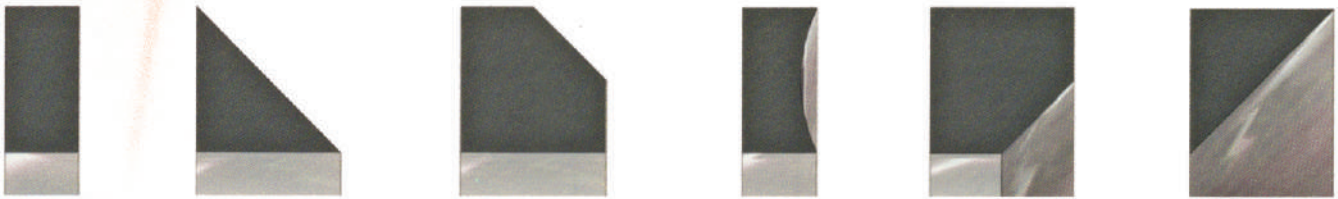
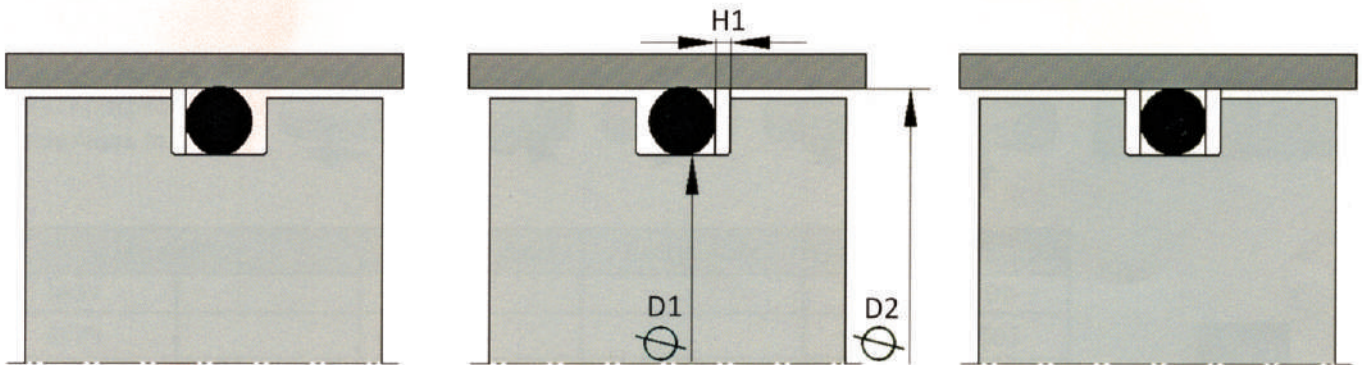
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 94'	
-20°C	115°C	max.5m/s	max.0,5bar	HPU 55'D	
-20°C	110°C	max.6m/s	max.0,5bar	SL-PU 94'	
-50°C	110°C	max.5m/s	max.0,5bar	LT-PU 94'	
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-30°C	110°C	max.10m/s	max.0,5bar	NBR 85'	
-20°C	150°C	max.10m/s	max.0,5bar	H-NBR 85'	
-20°C	220°C	max.10m/s	max.0,5bar	FPM 82'	
-45°C	130°C	Max.10m/s	max.0,5bar	EPDM 85'	
-60°C	200°C	max.5m/s	max.0,2bar	MVQ 85'	

SWR207



- Primary Application
- Application Limits
- - Not applicable

BACKUP RINGS



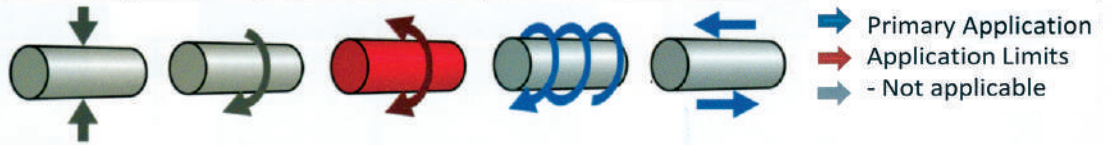
Backrings are mainly used to minimise gaps that arise during production or as a result of wear and tear on metal components.

By using such accessories (multi-part geometries with the aid of elastomers or thermoplastics) the backrings become an active aid to ensure the completeness of the seal.



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100				POM
-200	260				PTFE
-60	250				PEEK
-200	260				PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80				UHMW-PE
-20°C	115°C				HPU 94'
-20°C	115°C				HPU 55'D
-20°C	110°C				SL-PU 94'
-50°C	110°C				LT-PU 94'

SWST108



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100				POM
-200	260				PTFE
-60	250				PEEK
-200	260				PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80				UHMW-PE
-20°C	115°C				HPU 94'
-20°C	115°C				HPU 55'D
-20°C	110°C				SL-PU 94'
-50°C	110°C				LT-PU 94'

SWST109



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100				POM
-200	260				PTFE
-60	250				PEEK
-200	260				PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80				UHMW-PE
-20°C	115°C				HPU 94'
-20°C	115°C				HPU 55'D
-20°C	110°C				SL-PU 94'
-50°C	110°C				LT-PU 94'

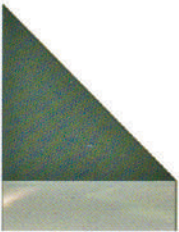
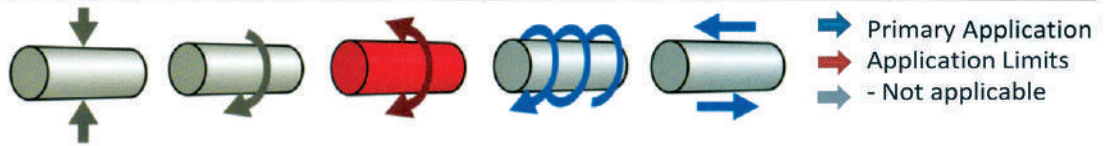
SWST110





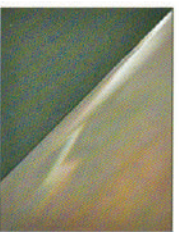
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100				POM
-200	260				PTFE
-60	250				PEEK
-200	260				PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80				UHMW-PE
-20°C	115°C				HPU 94°
-20°C	115°C				HPU 55°D
-20°C	110°C				SL-PU 94°
-50°C	110°C				LT-PU 94°

SWST111



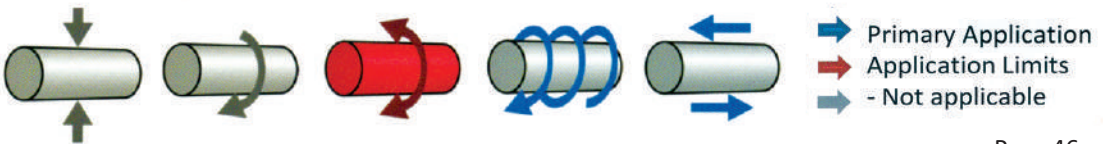
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100				POM
-200	260				PTFE
-60	250				PEEK
-200	260				PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80				UHMW-PE
-20°C	115°C				HPU 94°
-20°C	115°C				HPU 55°D
-20°C	110°C				SL-PU 94°
-50°C	110°C				LT-PU 94°

SWST112



min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-50	100				POM
-200	260				PTFE
-60	250				PEEK
-200	260				PTFE filled
min.Temp	max.Temp	max. Speed	max. Pressure	Material	
-200	80				UHMW-PE
-20°C	115°C				HPU 94°
-20°C	115°C				HPU 55°D
-20°C	110°C				SL-PU 94°
-50°C	110°C				LT-PU 94°

SWST113





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