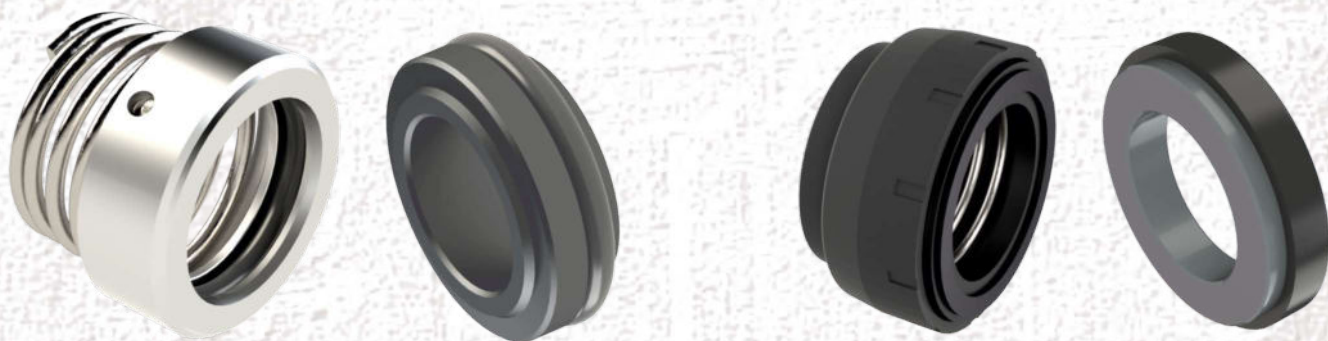


OMSEG[®]

MECHANICAL SEALS GERMANY

Food & Pharma

Mechanical seals



Rotary lobe pumps
Continuous freezer
Screw spindle pumps
Progressing cavity pump
Hygienic centrifugal pumps

Food industry
Biotechnology
Sterile processes
Beverage industry
Chemical, pharmaceutical industry

ALFA-LAVAL, APV, CSF, EBARA, EDUR,
EVOGUARD, FRISTAM, GRUNDFOS, HILGE,
INOXPA, KPA, KSB, PACKO, POMAC, SAWA,
SEEPEX, SPX, TUCHENHAGEN,
PUMPENFABRIK-WANGEN, WAUKESHA, ...

Alfa-Laval (centrifugal pumps)

Pumps FM serie 0-4, FMS, MR-serie, CM, EM, GM

Single seal,double seal, unbalanced, (in)dependent of direction of rotation

simple mounting	
Shaft sizes	ø22, 27 and 65mm
Seal faces made of	Carbone/AISI 316 or Carbone/SiC
Stationary seat	with thread
O-rings	EPDM, FKM, FFKM, PTFE
Spring	AISI 316

Pumps LKM serie LKH 5 - 60, LKH 70, LKHP, LKR

Single seal (SSS), flushead seal (FSS) or
Double seal (DMS), balanced, independent of dorection of rottion

simple mounting	
Shaft sizes	for ex.: ø31.75mm, ø41.28mm
Seal faces made of	Carbone/SiC or SiC/SiC
Stationary seat	with thread
O-rings	EPDM, FKM, FFKM,
Spring	AISI 316

Pumps ALC serie 1 and 2 and 3

Rubber bellow single seal, unbalanced, independent of direction of rotation

simple mounting	
Shaft sizes	for ex.: ø40, 53 and 60mm
Seal faces made of	Carbone/SiC or SiC/SiC
Bellow	EPDM, FKM
Spring	AISI 316

special constructions on request



APV, SPX (centrifugal pumps)

Pumps W-

Single seal,double seal, unbalanced, independent of direction of rotation

simple mounting	
Shaft sizes	ø25 and 35mm
Seal faces made of	Carbone/tungsten or Carbone/SiC SiC/tungsten or SiC/SiC
Stationary Face	with flushing holes
O-rings	EPDM, FKM, FFKM
Spring	AISI 316

Pumps W+

Single seal,double seal, balanced, independent of direction of rotation

simple mounting	
Shaft sizes	ø25 and 35mm
Seal faces made of	SiC/SiC or Carbone/SiC
O-rings	EPDM, FKM, FFKM

Pumps Rosista serie ZMA, ZMH and ZMK

Single seal, unbalanced, dependent of direction of rotation (left)

simple mounting	
Shaft sizes	ø20, 25 and 30mm
Seal faces made of	Carbone/AISI 316
O-rings	EPDM, FKM, FFKM
Spring	AISI 316

Pumps serie Puma

Single seal, unbalanced, dependent of direction of rotation

simple mounting	
Shaft sizes	ø25,4 or 38,1mm
Seal faces made of	Carbone/Ceramic or SiC/SiC
Spring	AISI 316

special constructions on request



EDUR (centrifugal pumps)

Cooling pumps, hot water pumps

Single seal, double seal, unbalanced, independent of direction of rotation

simple mounting

Shaft sizes	For ex.: ø18, 22, 28 and 30mm
Seal faces made of	Carbone/SiC tungsten/Carbone SiC/SiC tungsten/tungsten
O-rings	EPDM, FKM, FFKM
Spring	AISI 316



special constructions on request



FRISTAM (centrifugal pumps)

Pumps serie FC, FM, FP, FZ

Single seal or rubber bellow seal, unbalanced, dependent of direction of rotation (right hand)

simple mounting

Shaft sizes	ø22, 30 and 35mm
Seal faces made of	Carbone/AISI 316 Carbone/ceramic tungsten/tungsten SiC/SiC
O-rings	EPDM, FKM, FFKM, NBR, PTFE
Spring	AISI 316

Rubber bellow single seals, independent of direction of rotation

simple mounting

Rubber bellow	NBR, EPDM, FKM
Metallic parts	AISI 316

With quenching, atmosphere side with rubber bellow single seals, independent of direction of rotation or as single seal dependent of direction of rotation (right hand)

Double assembly

Seal faces made of	Carbone/ceramic Carbone/AISI 316
Bellows	NBR, EPDM, FKM
Metallic parts	AISI 316

With special stationary seats for double use

Double assembly

Seal faces made of	AISI 316, ceramic or tungsten
O-rings	EPDM, FKM, FFKM, NBR



special constructions on request

flushing cover (with and without carbon bearing) on request



Grundfos (centrifugal pumps)

CR, LM, LP, DM, NM, JP, CH, NB, NK, TP, SV ...

Single cartridge seals, single seal, unbalanced, independent of direction of rotation

simple mounting

Shaft sizes (metric)	For ex.: ø12, 16, 22, 28, 33mm, ...
Seal faces made of	SiC/SiC, WoC/WoC, SiC/WoC, SiC/Carbon, WoC/Carbon
O-rings	EPDM, FKM, FFKM
Spring	AISI 316



special constructions on request



KSB (centrifugal pumps)

Pumps serie Etachrom, Movichrom, Etanorm, Etabloc...

Pumps serie Vitachrom

Pumps serie KWPA..., KWP-K..., CPK-S1...

Single seal,double seal, unbalanced, (in)dependent of direction of rotation

simple mounting

Shaft sizes	For ex.: ø22, 28, 33, 38, 43, 48, 53 and 65mm
Seal faces made of	SiC/SiC or Carbon/SiC
O-rings	EPDM, FKM, FFKM, PTFE

special constructions on request



INOXPA (centrifugal pumps)

Pumps serie KSE, ASPIR

Single seal,double seal, unbalanced, (in)dependent of direction of rotation

simple mounting (product side)

Shaft sizes	ø25, 30, 32, 35, 38, 43, 55, ...
Seal faces made of	SiC/SiC tungsten/tungsten
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Metal parts	AISI 316



Pumps VP serie B, C, D ... L

Single seal, balanced, dependent of direction of rotation

simple mounting

Shaft sizes	ø22, 30 and 35mm
Seal faces made of	Carbon/AISI 316
O-rings	EPDM,FKM, FFKM, PTFE
Spring	AISI 316



Pumps serie AR (former models)

Rubber bellow single seal, unbalanced, independent of direction of rotation

simple mounting

Execution	1A, 2A, 3A
Seal faces made of	Carbon/AISI 316
Bellows	NBR
Spring	AISI 316



Pumps serie TP 1020, 2030, 5060
Pumps serie KN 2030, 5060, 8080

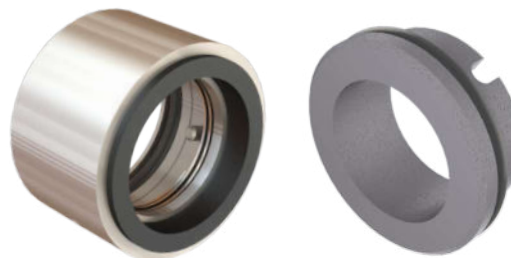
balanced, independent of direction of rotation

simple mounting (product side)

Shaft sizes	ø25, 30, 35 and 50
Seal faces made of	SiC/Carbon SiC/SiC
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Metal parts	AISI 316

double mounting

Seal faces made of	Product: SiC/SiC tungsten/tungsten Atmosphere: SiC/Carbon SiC/SiC
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special constructions on request



Pumps CF Wiking (Fristam/Tuchenhagen)
Pumps ZG Wiking (Abel/Tuchenhagen)

Single seal, balanced, independent of direction of rotation

simple mounting

Sizes	I, II, III, IV
Seal faces made of	Carbon/SiC, Carbon/AISI 316 SiC/SiC
O-rings	EPDM, FKM, FFKM, FEP
Spring	AISI 316



special constructions on request

Progressing cavity pump

ALLWEILER (serie SEP, ACN...)
Netzsch (serie NE, NL, NM...)
Seepex (serie CS, BTM)
PCM (serie MR)

Single seal, unbalanced, dependent of direction of rotation

simple mounting

Shaft sizes	For ex.: ø20, 25, 28, 30, 35, 38, 40, 43, 45, 48, 50, 55, 60, 65, 70, 80, 85, 90 and 100mm
Seal faces made of	many different combinations
O-rings	EPDM, FKM, FFKM
Spring	AISI 316

Single seal, unbalanced, independent of direction of rotation

simple mounting

Super sinus spring	AISI 316
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Double seals, unbalanced, independent of direction of rotation (without photo)

Fully pre-assembled cartridge units

simple mounting

special constructions on request

Rubber bellow, single seal, unbalanced, independent of direction of rotation
simple mounting

Shaft sizes	For ex.: ø20, 25, 28, 30, 35, 38, 40, 43, 45, 48, 50, 55, 60, 65, 70, 80, 85, 90 and 100mm
Seal faces made of	Carbon/SiC SiC/SiC
O-rings	EPDM, FKM, FFKM
Spring	AISI 316



Continuous freezer

Ice cream machines

Single seal, unbalanced, dependent of direction of rotation

simple mounting

Shaft sizes	For ex.: ø40, 45, 50, 60, 65, 70 and 75mm
Seal faces made of	AISI 316/Carbon tungsten/tungsten SiC/SiC
O-rings	EPDM, FKM, FFKM, MVQ, FEP
Spring	AISI 316

special constructions on request



Rotary Lobe pumps

ALFA-LAVAL serie SR, LKPL	
Single seal,double seal, unbalanced, independent of direction of rotation	
simple mounting	
Shaft sizes	ø20, 30, 35, 45, 55 and 75mm
Seal faces made of	SiC/SiC, AISI 316/Carbon tungsten/tungsten
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Metal parts	AISI 316

APV serie DW 1, 2, 3, 4, 5	
Single seal, balanced, independent of direction of rotation	
simple mounting	
Shaft sizes (inch)	ø1.187", 1.500" and 1.875"
Seal faces made of	SiC/SiC Carbon/SiC
O-rings	EPDM, FKM, FFKM

WILD-INDAG, NAKAKIN	
Single seal, unbalanced, independent of direction of rotation	
simple mounting	
Shaft sizes	ø28, 35 and 50mm
Seal faces made of	Carbon/ceramic Carbon/SiC
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Metal parts	AISI 316

INOXPA serie SLR, HLR	
Single seal, unbalanced, independent of direction of rotation	
simple mounting	
Shaft sizes	ø28, 35 and 50mm
Seal faces made of	SiC/SiC, AISI 316/Carbon tungsten/tungsten
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Metal parts	AISI 316

OMAC serie B100-B680, C100-C570	
Single seal,double seal, unbalanced, independent of direction of rotation	
simple mounting	
Shaft sizes	ø28, 30, 35, 50, 65, 80 and 100mm
Seal faces made of	SiC/SiC, AISI 316/Carbon tungsten/tungsten
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Metal parts	AISI 316

WAUKESHA serie z.B. SCPP1, SCPP2	
Single seal,double seal, unbalanced, independent of direction of rotation	
simple mounting	
Shaft sizes	ø30.1, 38.1, 47.6 and 69.8mm
Seal faces made of	SiC/SiC Carbon/SiC
O-rings	EPDM, FKM, FFKM
Spring	AISI 316

ohter POMAC, JABSCO, JOHNSON on request



Mixers, agitators

see brochure

Stelzer	Miromatic
PRG	Ytron
Alfa-Laval	Leubner
Ystral	
Single seal, unbalanced, dependent of direction of rotation	
simple mounting	
Shaft sizes	For ex.: ø25, 35, 40, 45, 50, 60, 70 and 80mm
Seal faces made of	AISI 316/Carbon SiC/SiC tungsten/tungsten
O-rings	EPDM, FKM, FFKM
Spring	AISI 316
Single seal, unbalanced, independent of direction of rotation	
simple mounting	
Super sinus spring	AISI 316

Double seals, unbalanced, independent of direction of rotation
special constructions on request



Dryer

Contherm	
Single seal,double seal, unbalanced, independent of direction of rotation	
simple mounting	
Shaft sizes	ø38,1 and 50,8mm
Seal faces made of	Carbon/Chromoxid
O-rings	EPDM, FKM, FFKM
Spring	AISI 316



Screw spindle pumps

Pumps serie Bornemann SL, SLC, SLH 80, 125, ... Pumps serie Jung Hyghspin 50, 70, 90, 125, ...

Single seal,double seal, balanced, independent of direction of rotation

simple mounting (product side)	
Shaft sizes	ø40, 55
Seal faces made of	SiC/SiC tungsten/tungsten
O-rings	EPDM, FKM, FFKM, HNBR, NBR
Spring	AISI 316
Metal parts	AISI 316

double mounting	
Seal faces made of	Product: SiC/SiC tungsten/tungsten
	Atmosphere: SiC/Carbon tungsten/Carbon SiC/SiC tungsten/tungsten



Pumps serie BornemannSLH4G 1000, 2050, 3000,5020, 5037, ...

Single seal,double seal, balanced, independent of direction of rotation

simple mounting (product side)	
Shaft sizes	ø40, 50, 80, 85
Seal faces made of	SiC/SiC tungsten/tungsten
O-rings	EPDM, FKM, FFKM, HNBR, NBR
Spring	AISI 316
Metal parts	AISI 316

double mounting	
Seal faces made of	Product: SiC/SiC tungsten/tungsten
	Atmosphere: SiC/Carbon tungsten/Carbon SiC/SiC tungsten/tungsten



Pumpenfabrik Wangen, FRISTAM VPS on Inquiry

Many different manufacturers of centrifugal pumps CSF, EBARA, EVOGUARD, HILGE, KPA, PACKO, SAWA, ...

Many different manufacturers of centrifugal pumps

Single seal, unbalanced, dependent of direction of rotation
(right or left rotating, „back to back“ or Tandem-versions possible)

Single seal, balanced, (in)dependent of direction of rotation

Double seal, unbalanced and balanced

simple mounting	
Shaft sizes	ø14, 18, 19, 20, 24, 28, 30, 35, 38, 40, 45, 50, 65, 80
Seal faces made of	Carbon/AISI 316 Carbon/ceramic tungsten/tungsten SiC/SiC
O-rings	EPDM, FKM, FFKM, PTFE
Spring	AISI 316

double mounting

special constructions on request



Attachment to the repair order

REPAIR REPORT

Key data on the application

Description of the condition of the used seal and its components as delivered, after disassembly and cleaning if necessary.

Additional assessment of the state of wear / ageing and the functionality of the components, taking into account the machine and environment.

If applicable, identification of possible cause of damage and suggestions for improvement

Informations of the mechanical seal		Identification image
Name		
Drawing-nr.		
Fabrication-nr.		
Material code		
Application		
Maschine type		
Installation location		
Pump type & size		
First installation date		
Commissioning		
Operating time		

Know operating conditions as specified by the customer			Identification image
Speed		min ⁻¹	
Product media			
Media designation			
Viscosity during use		cSt	
Density		kg/m ³	
Temperature		°C	
Static pressure		bar	
Dynamic pressure		bar	
Quench liquid- / barrier liquid (if present)			
Media designation			
Viscosity during use		cSt	
Density		kg/m ³	
Temperature – IN		°C	
Temperature – OUT		°C	
Pressure		bar	
Flushing (if present)			
API plan			

Scope and purpose of the investigation			
Client			
Expansion reason			
Received from			
Date of receipt			
Input status			
Purpose of the Investigation	<input type="checkbox"/> Repair offer	<input type="checkbox"/> Expert opinions for clients	<input type="checkbox"/> Complaint
Further procedure of the Examined parts	<input type="checkbox"/> Return	<input type="checkbox"/> Repair order	<input type="checkbox"/> Waste disposal

Repair service

An additional service of MechanicalSealsGermany is our own repair department. We can analyse, examine, clean, recondition, repair, supplement and test all types of models from a wide range of manufacturers and all diverse materials in their various applications. On request, of course, on a cost estimate and with a test certificate!



Let's give a new life to your seal !

Damage analysis & assessment

Condition of the running surfaces

- Uniformity of the contact
- Running lines
- Cracking
- Chipping
- Chipping on the edges
- Chemical attack of the material

Condition of the side seals

- Elasticity
- Overheating signs
- Cracks or fractures
- Chemical attack of the material

Torque driving condition

- Mechanical wear
- Movement
- Cracks or fractures

General condition

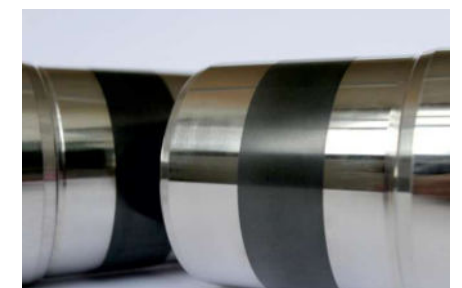
- Abrasion marks on sealing surfaces for secondary seals
- Chemical attack of the materials
- Product deposits / adhesions

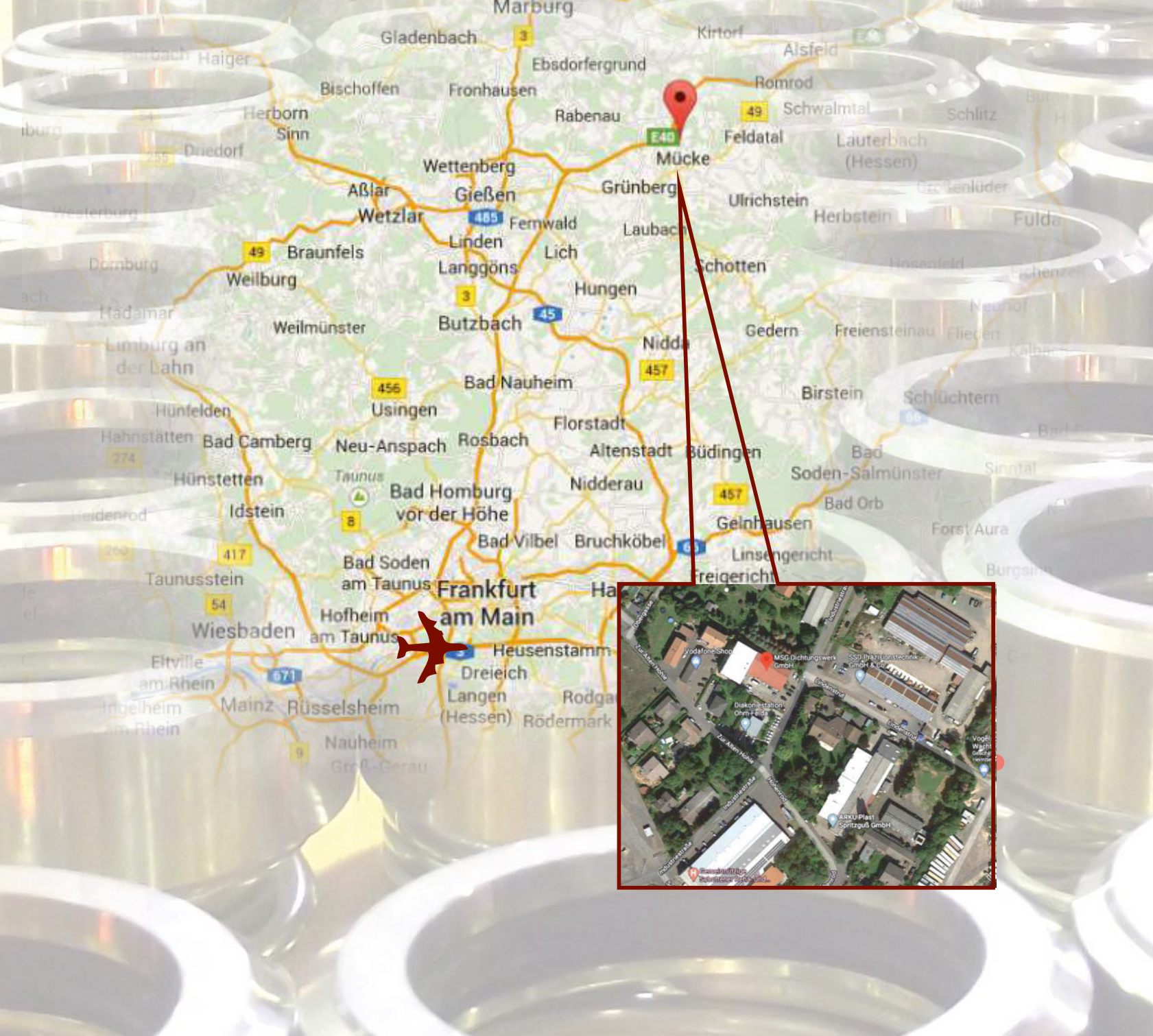
Wear protection

- Diamond coating
- Chrome oxide coating

On-site service

- On-site pick-up
- Disassembly and assembly on site





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