



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 $\varnothing 22, 27$ 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 direction of rotation

simple mounting

Shaft sizes for ex.: $\varnothing 31.75\text{mm}$, $\varnothing 41.28\text{mm}$

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.: $\varnothing 40, 53$ and 60mm

Seal faces made of Carbone/SiC or SiC/SiC

Bellow EPDM, FKM

Spring AISI 316

special constructions on request



Pumps W-

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

simple mounting

Shaft sizes $\varnothing 25$ 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 $\varnothing 25$ 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 $\varnothing 20, 25$ 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 $\varnothing 25,4$ or $38,1\text{mm}$

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
Bel lows	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



Mechanical seals

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



TUCHENHAGEN (centrifugal pumps)

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

Single seal, balanced, dependent of direction of rotation

simple mounting

Shaft sizes $\varnothing 22, 30 and 35mm$

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)

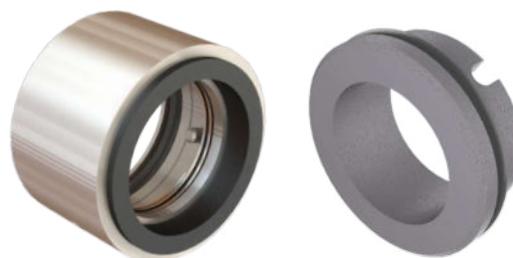
Shaft sizes $\varnothing 25, 30, 35 and 50$

Seal faces made of SiC/Carbon
SiC/SiC

O-rings EPDM, FKM, FFKM

Spring AISI 316

Metal parts AISI 316



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

Mechanical seals

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
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Seal faces made of	many different combinations
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O-rings	EPDM, FKM, FFKM
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Spring	AISI 316
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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
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Seal faces made of	Carbon/SiC SiC/SiC
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O-rings	EPDM, FKM, FFKM
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Spring	AISI 316
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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
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Seal faces made of	AISI 316/Carbon tungsten/tungsten SiC/SiC
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O-rings	EPDM, FKM, FFKM, MVQ, FEP
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Spring	AISI 316
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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

Mechanical seals

Mixers, agitators

Mechanical seals

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



see brochure

OMSG
MECHANICAL SEALS GERMANY



Mixer/agitator
Mechanical seals

2-2CA
83K
EHS
7XB
7XC
7XE
74
RW184 / L
RW184D / L
RWVR5D / L
RWVR34D / L
Special versions
Pharmaceutical ind.
Seal supply systems
Repair Service

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



Mechanical seals

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

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

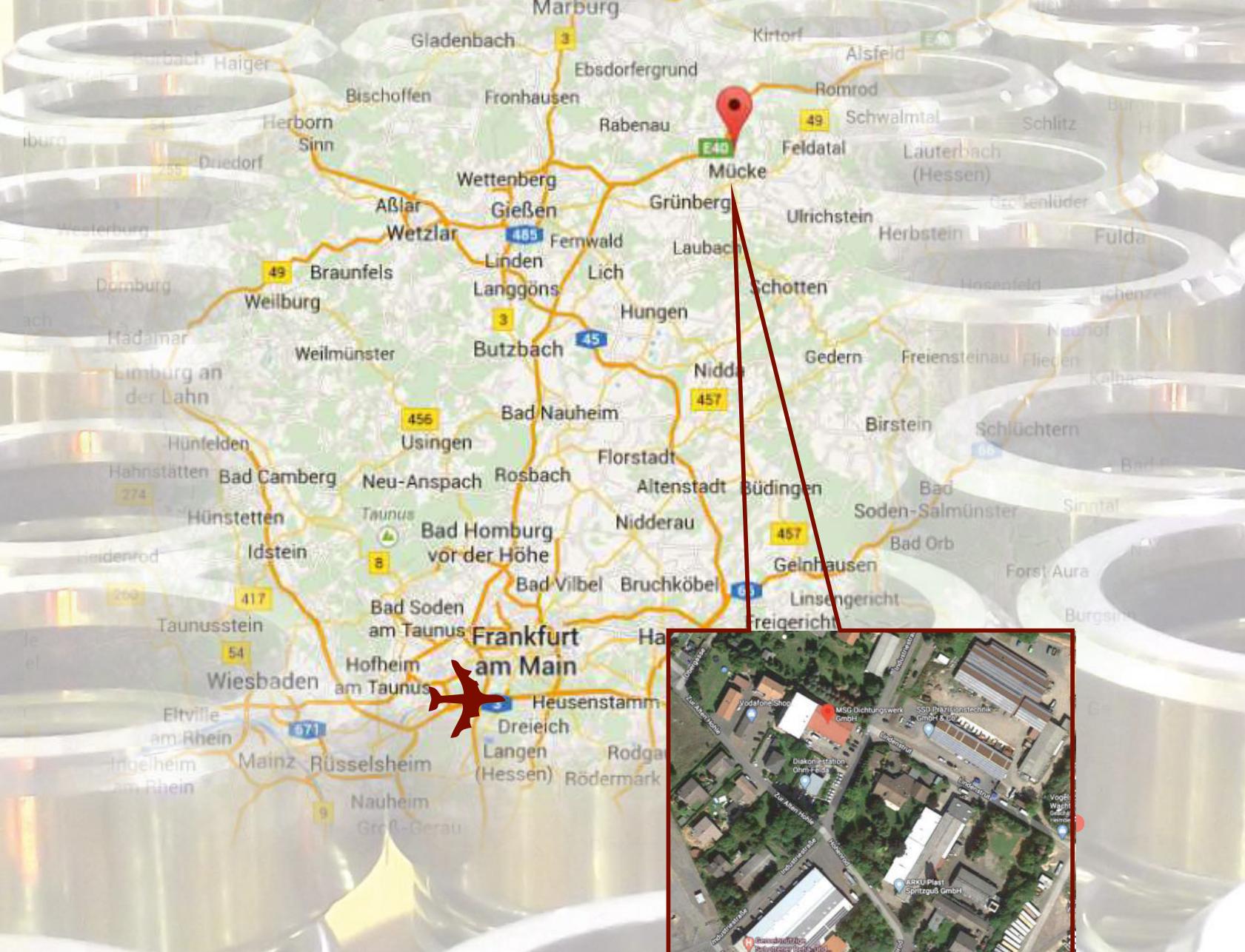
- Diamond coating
- Chrome oxide coating



On-site service

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





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