



MECHANICAL SEALS **GULLIVER®**

The solution to your dynamic
sealing problems

DYNAMIC SEALING GULLIVER® MECHANICAL SEALS

Since 1967, Technetics Group has designed and produced a wide range of mechanical seals to respond to the most varied operating conditions. Installed on the rotary shaft of pumps, mixers, metering screws, and blowers, these mechanical seals are used in demanding applications in the following sectors: industrial, oil and gas, energy production, food, pharmaceutical, agriculture, and many more.

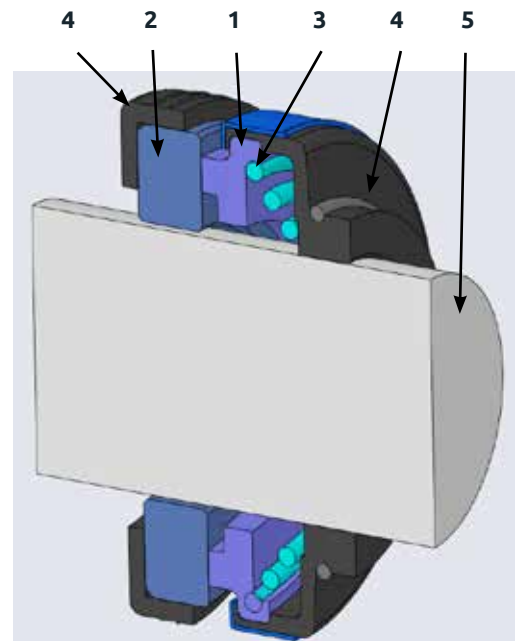
This brochure presents our range of GULLIVER® products. Other types of seals can also be examined by our in-house engineering department and developed by our maestral® research laboratory to respond to our customers' specific requirements.

DESCRIPTION

GULLIVER® mechanical seals ensure that two rotating parts are properly sealed. The force applied by an elastic component (3) (generally a spring) on the friction faces of the mobile or stationary part (2) helps ensure dynamic sealing (1). The secondary seals (4) guarantee static sealing between the shaft (5) and the rotary part as well as between the housing and the stationary part of the mechanical seal.

ADVANTAGES

These mechanical seals are easy to assemble and are characterized by their long lifetime and excellent reliability. GULLIVER® seals are a good economical dynamic sealing solution because of their excellent reliability and cost ratio as well as their prevention of shaft wear. Technetics Group offers a broad variety of technical materials for friction faces. Furthermore, our expertise in the field of elastomers helps provide innovative solutions for the secondary sealing of mechanical seals, adapted to the most varied operating conditions.



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SEAL REFERENCE

SEAL:

 Model Shaft Diameter Material Code

Example : GY 025 BPPF

SEAL & COUNTERFACE UNIT:

 Model Shaft Diameter Material Code

Example : GY GCN 025 BGPFF

COUNTERFACE :

 Model Shaft Diameter Material Code

Example : GCN 025 GP

MATERIAL CODE :

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	3	4	5
Rotating face	Stationary face	Secondary seal	Spring	Metal parts

FRICITION FACES	1-2
Resin-impregnated carbon	B
Molded graphite-phenolic resin	B1
Special graphite	C
Silicon carbide	Q8
Tungsten carbide	U5
Alumina	V
Steatite	V2
304L stainless steel	F
316L stainless steel	G
Chromium oxide plasma coating	W
Hardening treatment on stainless steel	GN

SECONDARY SEALS	3	
Butyl	IIR	B
Ethylene-propylene	EPDM	E
PTFE-coated neoprene		M5
Neoprene	CR	N
Nitrile	NBR	P
Hydrogenated nitrile	HNBR	P1
Silicone	VMQ	S
Fluorocarbon	FKM	V
Perfluorinated compound	FQQM	X1

SPRING OR SPRING MEMBRANE	4
304L stainless steel	F
316L stainless steel	G
PTFE-coated neoprene	M5
FKM	V
HNBR	P1

METAL COMPONENT	5
Carbon steel	D
304L stainless steel	F
316L stainless steel	G
Other metals (to be specified)	T
Other coatings (to be specified)	X
Chromium oxide plasma coating	W

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APPLICATIONS

Markets	Equipment	Media
Food industry/Pharmaceuticals	Meat cutter	Meat-delicatessen
	Emulsifying machine	Cosmetic cream
	Milk tank	Milk - curd
	Wine pumps	Wine - vinegar
	Kneader	Pasta
	Agitator - mixer	Food products – cosmetics
	Bottling machines	Beverages
Consumer goods	Washing machines	Water with detergent
	Swimming pool equipment	Water - seawater
Agriculture	Sprayers	Treatment products
	Irrigation turbines	Irrigation water
	Watering pumps	Irrigation water
Pumps	Wastewater pumps	Contaminated water
	Cooling pumps	Water with glycol
	Chemical pumps	Chemicals
	Sanitation pumps	Contaminated water
Production equipment	Machine tool	Oil
	Gear boxes	Oil
	Textile machine	Dye



Sprayer



Bottling machine



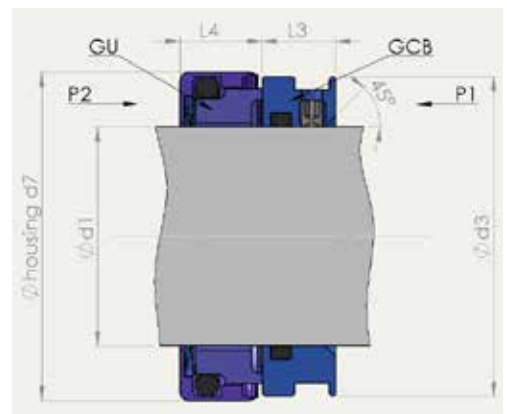
Irrigation pump

GULLIVER® GU / GCB & GU / GCG

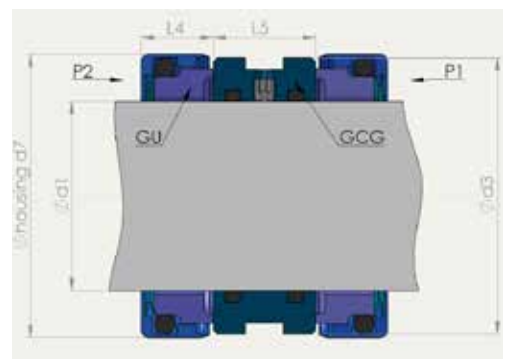
GU SEALS			GCB / GCG COUNTERFACE		
d ₁ mm	d ₇ mm	L ₄ (0 ±1 mm)	d ₃ mm	L ₃ mm	L ₅ mm
10	30	16	28	13	21
12	32	16	30	13	21
15	35	16	33	13	21
18	38	16	36	13	21
20	40	16	38	14	25
22	42	16	40	14	25
25	45	16	43	14	25
26	50	19	48	14	25
28	53	19	51	14	25
30	55	19	53	14	25
35	60	19	58	14	25
40	65	19	63	17	27
45	70	19	68	17	27
50	75	19	73	17	27
55	80	21	78	17	27
60	85	21	83	17	27
65	90	21	88	17	27
70	95	21	93	17	27
75	100	21	98	17	27
80	105	21	103	17	27
85	110	21	108	17	27
90	115	21	113	17	27
100	125	21	123	17	27
110	140	25	138	17	32
120	150	25	148	20	32
130	160	25	158	20	32
140	170	25	168	20	32
150	180	25	178	20	32



Mixer



GU / GCB (single mounting)



GU / GCG (double mounting)

CHARACTERISTICS OF THE SEAL

- Balanced
- Stationary
- Compact
- Independent of the direction of rotation
- Maximum operating pressure:
(External $P_1 = 15$ bar, Internal $P_2 = 5$ bar)

APPLICATIONS

- Milk tanks
- Meat cutters
- Homogenizers
- Kneaders

TOLERANCES

- Housing: H7 / H8
- Shaft: h6

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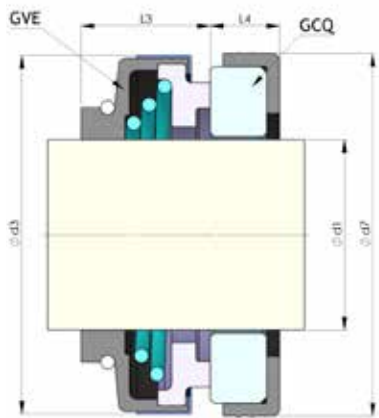
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GULLIVER® GVE / GCQ



GVE / GCQ



Pump



GVE SEALS				GCQ COUNTERFACE		
Shaft Diam. d1 mm	Type	Ext. diam. d3 mm	L3 (0 ±1mm) after installation mm	Type	Ext. diam. d7 mm	L4 mm
8	GVE 8	24	13	GCQ 8	26	8
10	GVE 10	24	13	GCQ 10	31	8
12	GVE 12	24	13	GCQ 12	35	8
14	GVE 14	36	13	GCQ 14	38	8
14-15*	GVE 14-15	36	13	GCQ 16	38	8
15-16*	GVE 15-16	36	13	GCQ 16	38	8
17-18*	GVE 17-18	36	13	GCQ 18	42	8
19	GVE 19	42	13	GCQ 20	45	10
20	GVE 20	42	13	GCQ 20	45	10
22	GVE 22	42	13	GCQ 22	45	10
25*	GVE 25	47	13	GCQ 25	50	10
28*	GVE 28	54	15	GCQ 28	57	10
30*	GVE 30	54	15	GCQ 30	57	10
32*	GVE 32	54	15	GCQ 32	57	10
35*	GVE 35	59	16	GCQ 35	63	10
40	GVE 40	65	18	GCQ 40	68	12
45	GVE 45	70	20	GCQ 45	73	12
50	GVE 50	85	23	GCQ 50	88	15
55	GVE 55	85	24,5	GCQ 55	88	15

* a GVM option comes with a lug case to ensure the mechanical drive of the seal

CHARACTERISTICS OF THE SEAL

- Conical spring protected from the media
- Maximum operating pressure: 5 bar
- Unbalanced
- External pressure only

APPLICATIONS

- Watering pumps
- Sprayers
- Swimming pool pumps

TOLERANCES

- Housing: H7 / H8
- Shaft: h6

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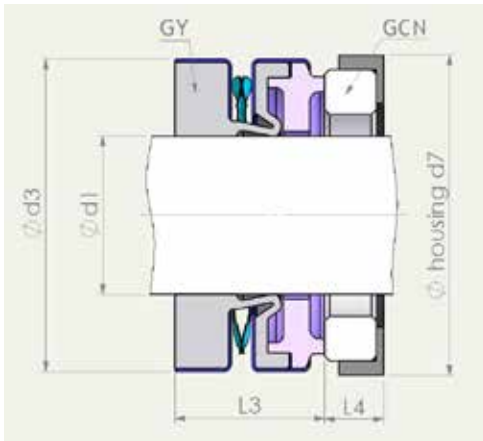
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GULLIVER® GY / GCN



GY / GCN

Irrigation turbine

GY SEALS					GCN COUNTERFACE		
Shaft diameter d1 mm	Type	Ext. diam. d3 mm	L3 after installation mm		Type	Ext. diam. d7 mm	L4 mm
10	GY 10	20	12	(0; +1)	GCN 10	21	6
12	GY 12	22	14	(0; +1)	GCN 12	23	6
14	GY 14	24	15	(0; +1)	GCN 14	25	6
15	GY 15	25	15,5	(0; +1)	GCN 16	27	6
16	GY 16	26	15,5	(0; +1)	GCN 16	27	6
18	GY 18	32	16	(0; +1)	GCN 18	33	6
20	GY 20	34	18	(0; +1)	GCN 20	35	6
22	GY 22	36	18	(0; +1)	GCN 22	37	6
24	GY 24	38	18	(0; +1)	GCN 24	39	6
25	GY 25	39	18	(0; +1)	GCN 25	40	6
28	GY 28	42	20	(0; +1.5)	GCN 28	43	6
30	GY 30	44	20	(0; +1.5)	GCN 30	45	7
32	GY 32	46	20	(0; +1.5)	GCN 32	48	7
33	GY 33	47	20	(0; +1.5)	GCN 33	48	7
35	GY 35	49	20	(0; +1.5)	GCN 35	50	7
40	GY 40	56	23	(0; +1.5)	GCN 40	58	8
43	GY 43	59	23	(0; +1.5)	GCN 43	61	8
45	GY 45	61	23	(0; +1.5)	GCN 45	63	8
50	GY 50	66	23	(0; +1.5)	GCN 50	70	8

CHARACTERISTICS OF THE SEAL

- Dimensions in accordance with standards NFE 29-991 and DIN 24960
- Balanced
- Independent of the direction of rotation
- Maximum operating pressure: 10 bar

APPLICATIONS

- Standardized industrial pumps
- Pumps for the food industry
- Irrigation turbines

TOLERANCES

- Housing: H7 / H8
- Shaft: h6

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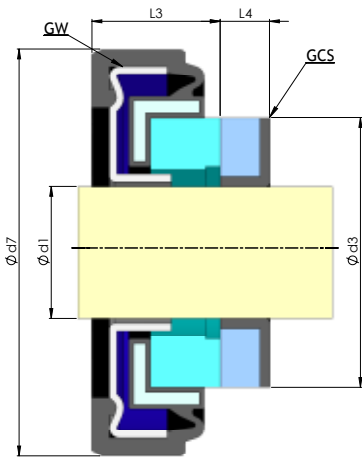
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GULLIVER® GW / GCS



GW / GCS



Industrial washing machine

GW SEALS				GCS COUNTERFACE		
Shaft diam. d1 mm	Type	Ext. diam. d7 mm	L3 (± 0,5) after installation mm	Type	Ext. diam. d3 mm	L4 mm
40	GW 40	68	12	GW 40	58	5
50	GW 50	80	13	GW 50	70	5
58	GW 58	88	18	GW 58	75	7
85	GW 85	130	20	GW 85	112	10
90	GW 90	130	20	GW 90	112	8.5
100	GW 100	140	20	GW 100	122	7

CHARACTERISTICS

- Stationary bellows seal
- No retention area
- Maximum operating pressure: 1.5 bar

APPLICATIONS

- Industrial washing machines
- Food, cosmetic or pharmaceutical product tanks and agitators
- Pool equipment

TOLERANCES

- Housing: H7 / H8
- Shaft: h6

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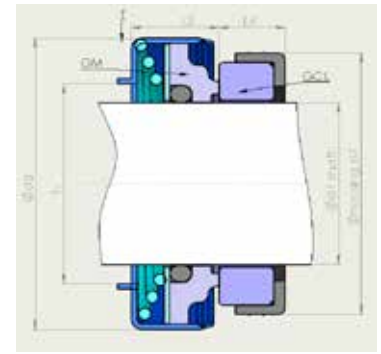
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GULLIVER® GM / GCQ, GCL, GCN

GM SEALS					DRIVE RING		
Shaft diam. d1 mm	Type	Ext. diam. d3	h mm	L3 (0 ± 1mm) after installation mm	Type	e mm	D mm
8	GM 8	23	13	13	BE8	8	20
10	GM 10	25	15	13	BE10	8	21
12	GM 12	27	18	13	BE12	8	25
14	GM 14	29	19	13	BE14	8	30
15	GM 15	31	21	13	BE15	8	31
16	GM 16	31	21	13	BE16	8	31
17	GM 17	33	23	13	BE17	8	32
18	GM 18	33	23	13	BE18	8	32
20	GM 20	35	25	13	BE20	8	35
22	GM 22	40	28	13	BE22	8	35
25	GM 25	45	32	14	BE25	8	40
28	GM 28	50	35	15	BE28	8	43
30	GM 30	54	37	15	BE30	8	45
35	GM 35	60	42	16	BE35	10	52
40	GM 40	65	47	18	BE40	10	55
45	GM 45	70	52	20	BE45	10	60
50	GM 50	76	57	20	BE50	10	68



GM / GCL

GCL COUNTERFACE			GCN COUNTERFACE			GCQ COUNTERFACE		
Type	Ext. diam. d7 mm	L4 mm	Type	Ext. diam. d7 mm	L4 mm	Type	Ext. diam. d7 mm	L4 mm
GCL 8	20	7,3	GCN 8	18	5	GCQ 8	26	8
GCL 10	22	7,3	GCN 10	21	6	GCQ 10	31	8
GCL 12	25	7,3	GCN 12	23	6	GCQ 12	35	8
GCL 14	28	7,3	GCN 14	25	6	GCQ 14	38	8
GCL 15	28	7,3	GCN 16	27	6	GCQ 16	38	8
GCL 16	30	9,6	GCN 16	27	6	GCQ 16	38	8
GCL 18	32	9,6	GCN 18	33	6	GCQ 18	42	8
GCL 18	32	9,6	GCN 18	33	6	GCQ 18	42	8
GCL 20	38	9,6	GCN 20	35	6	GCQ 20	45	10
GCL 22	38	9,6	GCN 22	37	6	GCQ 22	45	10
GCL 25	42	9,6	GCN 25	40	6	GCQ 25	50	10
GCL 28	45	9,6	GCN 28	43	6	GCQ 28	57	10
GCL 30	48	12	GCN 30	45	7	GCQ 30	57	10
GCL 35	55	12	GCN 35	50	7	GCQ 35	63	10
GCL 40	62	12	GCN 40	58	8	GCQ 40	68	12
GCL 45	67	12	GCN 45	63	8	GCQ 45	73	12
GCL 50	75	14	GCN 50	70	8	GCQ 50	88	15



Water pump

CHARACTERISTICS OF THE SEAL

- Rotating mechanical seal
- Maximum operating pressure: 5 bar
- Mechanical drive provided by the lugs of the case
- Unbalanced

APPLICATIONS

- Fuel pumps
- Relay boxes in aeronautics
- Washer pumps
- Wine pumps

TOLERANCES

- Housing: H7 / H8
- Shaft: h6

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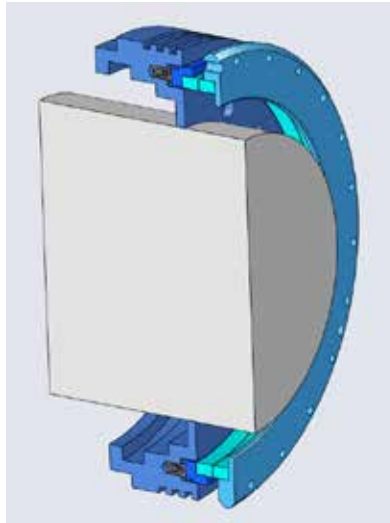
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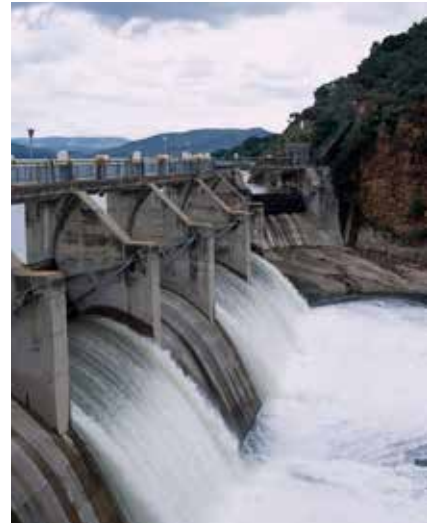
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CUSTOM MECHANICAL SEALS

With our extensive experience, Technetics Group can also provide customers with custom mechanical seals which respond to specific requirements. Our engineers develop technical solutions to solve problems which cannot be addressed by standard mechanical seals: custom dimensions, high temperatures, special liquids, abrasive liquids and solids, pressure reversal, limited space, dry friction, etc.



Seal for bulb group



Dam

METAL BELLOWS MECHANICAL SEALS

Specifically designed to withstand high temperatures, metal bellows mechanical seals help replace elastomer bellows seals for high temperature applications.

CHARACTERISTICS OF THE SEAL

- Can withstand temperatures up to 500°C (1000°F)
- Possibility of significant axial and radial misalignment
- Good dynamic response and limited hysteresis
- Good chemical compatibility of the metal bellows with numerous media

APPLICATIONS

- Aircraft engines
- Gearboxes
- Oil & Gas pumps



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