



# 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.

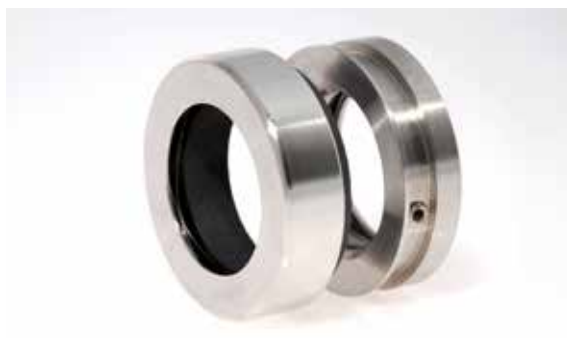
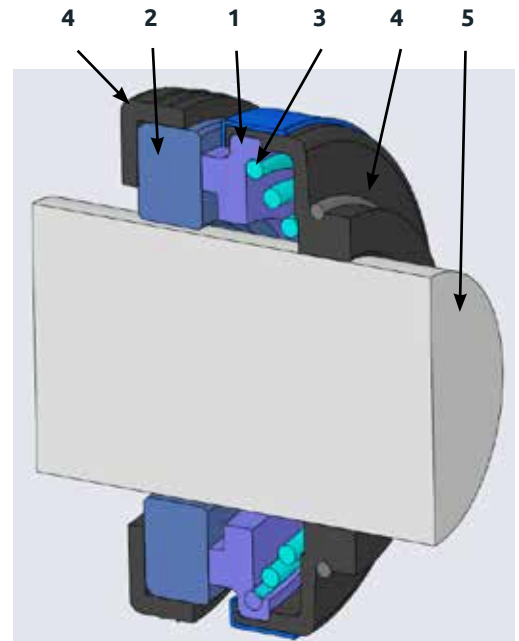
This brochure presents our range of GULLIVER® products. Other types of seals can also be examined by our in-house engineering department and developed by our *maestral*® research laboratory to respond to our customers' specific requirements.

### 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.



**TECHNETICS GROUP**  
EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913  
42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00  
Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

**Technetics**  
GROUP

EnPro Industries companies

## 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

#### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

**Technetics**  
GROUP

EnPro Industries companies

## 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

### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

**Technetics**  
GROUP

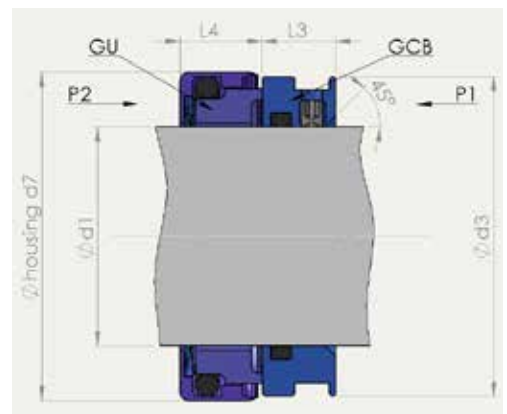
EnPro Industries companies

## GULLIVER® GU / GCB & GU / GCG

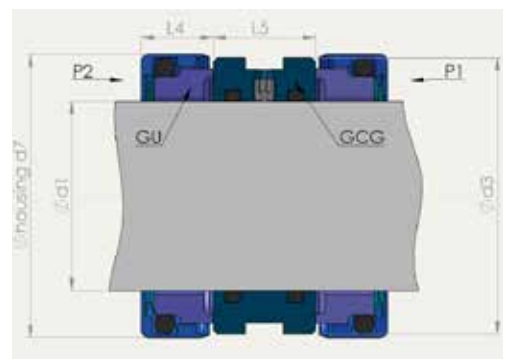
GU SEALS			GCB / GCG COUNTERFACE		
d <sub>1</sub> mm	d <sub>7</sub> mm	L <sub>4</sub> (0 ±1 mm)	d <sub>3</sub> mm	L <sub>3</sub> mm	L <sub>5</sub> mm
10	30	16	28	13	21
12	32	16	30	13	21
15	35	16	33	13	21
18	38	16	36	13	21
20	40	16	38	14	25
22	42	16	40	14	25
25	45	16	43	14	25
26	50	19	48	14	25
28	53	19	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

### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

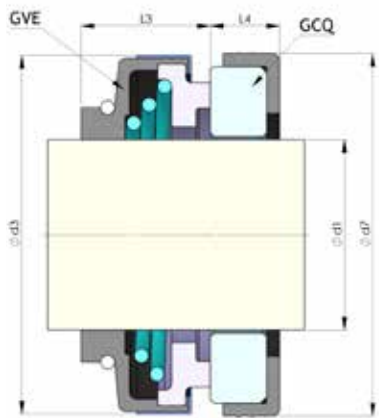
Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

**Technetics**  
GROUP

EnPro Industries companies

## 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

### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

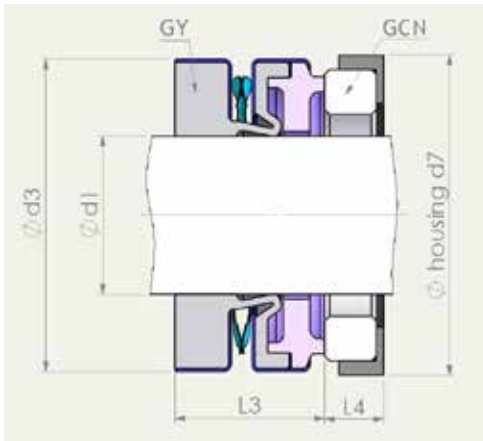
Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

**Technetics**  
GROUP

EnPro Industries companies

## 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

#### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

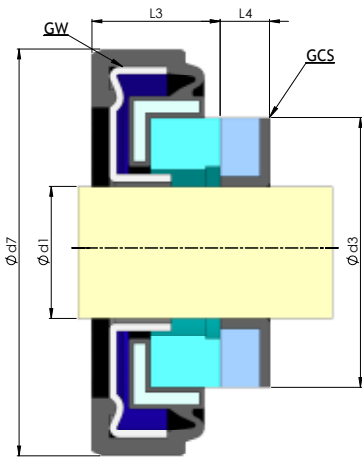
Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

**Technetics**  
GROUP

EnPro Industries companies

## 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

### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

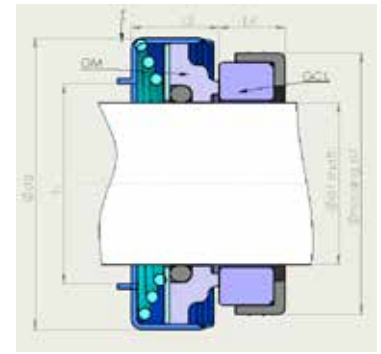
**Technetics**  
GROUP

EnPro Industries companies



# 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

## TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

Fax: +33 (0) 4 77 43 51 51

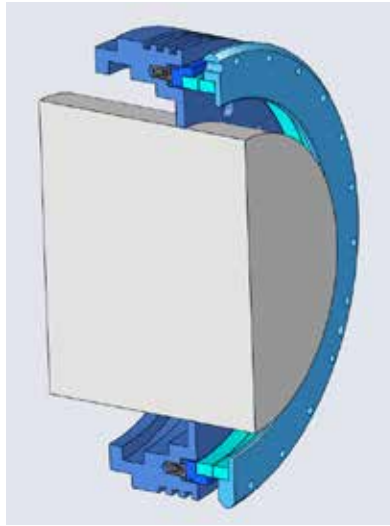
france@technetics.com  
technetics.com

**Technetics**  
GROUP

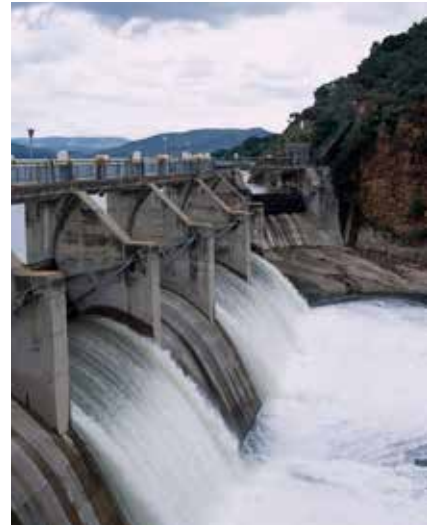
EnPro Industries companies

## 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



### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com

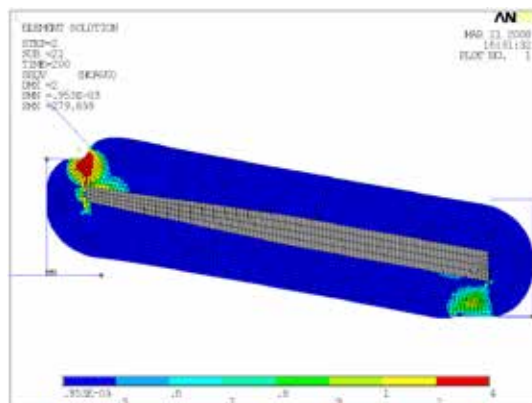
**Technetics**  
GROUP

EnPro Industries companies

## INNOVATION AND ADVANCED ENGINEERED SEALING SOLUTIONS

With our expertise in the field of dynamic sealing, Technetics Group develops and sells innovative sealing solutions suitable for our customers' most varied applications.

With our in-house engineering department, calculation tools and numerical modelization, Technetics Group adapts and designs mechanical seals, which respond to your most specific demands: high-viscosity products, abrasive materials, high temperatures, high speed, high pressure, etc.



Finite Element Analysis (FEA)



Instrumented test bench



Test bench for slurry & liquor applications

## TEST RESOURCES

Technetics Group owns a number of instrumented test benches to develop and characterize our seals under extreme operating conditions (abrasion, speed, etc.), by reproducing all the principal working conditions. These test benches help assess the leakage rates of the seals as well as their tribological properties.

## APPRAISAL AND FAILURE ANALYSIS

With its next-generation characterization resources, our maestral® sealing laboratory can analyze your seals comprehensively and rapidly. Damaged seals can be appraised by determining the degradation modes and identifying the probable causes. Your existing seals can also be analyzed and improved to optimize their operation and lifetime with unique solutions relating to the key parameters of the seal: materials, design, installation, etc.



THE TECHNICAL DATA CONTAINED HEREIN IS BY WAY OF EXAMPLE AND SHOULD NOT BE RELIED ON FOR ANY SPECIFIC APPLICATION. TECHNICS GROUP WILL BE PLEASED TO PROVIDE SPECIFIC TECHNICAL DATA OR SPECIFICATIONS WITH RESPECT TO ANY CUSTOMER'S PARTICULAR APPLICATIONS. USE OF THE TECHNICAL DATA OR SPECIFICATIONS CONTAINED HEREIN WITHOUT THE EXPRESS WRITTEN APPROVAL OF TECHNICS GROUP IS AT USER'S RISK AND TECHNICS GROUP EXPRESSLY DISCLAIMS RESPONSIBILITY FOR SUCH USE AND THE SITUATIONS WHICH MAY RESULT THEREFROM.

TECHNETICS GROUP MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT UTILIZATION OF THE TECHNOLOGY OR PRODUCTS DISCLOSED HEREIN WILL NOT INFRINGE ANY INDUSTRIAL OR INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES.

TECHNETICS GROUP IS CONSTANTLY INVOLVED IN ENGINEERING AND DEVELOPMENT. ACCORDINGLY, TECHNICS GROUP RESERVES THE RIGHT TO MODIFY, AT ANY TIME, THE TECHNOLOGY AND PRODUCT SPECIFICATIONS CONTAINED HEREIN.

ALL TECHNICAL DATA, SPECIFICATIONS AND OTHER INFORMATION CONTAINED HEREIN IS DEEMED TO BE THE PROPRIETARY INTELLECTUAL PROPERTY OF TECHNICS GROUP. NO REPRODUCTION, COPY OR USE THEREOF MAY BE MADE WITHOUT THE EXPRESS WRITTEN CONSENT OF TECHNICS GROUP.

Revised June 2015 - This document replaces any previous versions

### TECHNETICS GROUP

EnPro Industries companies

90, rue de la Roche du Geai  
CS 52913

42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00

Fax: +33 (0) 4 77 43 51 51

france@technetics.com  
technetics.com



EnPro Industries companies

For more information on how  
Technetics Group affects your critical  
markets, visit [technetics.com](http://technetics.com).

#### ASIA

Blk 203, #05-52  
Woodlands Avenue 9  
Woodlands Spectrum 2,  
738956 Singapore

Phone: +65 6759 2335  
Fax: +65 6759 7319

#### FRANCE

90, rue de la Roche du Geai  
CS 52913  
42029 Saint Etienne cedex 1 FRANCE

Phone: +33 (0) 4 77 43 51 00  
Fax: +33 (0) 4 77 43 51 51

49 Avenue Charles de Gaulle  
Z.I. Survaure  
42607 Montbrison cedex FRANCE

Phone: +33 (0) 4 77 96 79 80

#### GERMANY

Falkenweg 1  
41468 Neuss  
Germany

Phone: 0800-627-0151

#### UK

Unit 3 Smitham Bridge Road  
Hungerford, Berkshire RG17 0QP UK

Phone: +44 (0) 1488 662218  
Fax: +44 (0) 1488 680938

Acan Way, Coventry Road  
Narborough, Leicester LE19 2FT UK

Phone: +44 (0) 1162 727411  
Fax: +44 (0) 1162 727412

#### USA

2791 The Boulevard  
Columbia, SC 29209 USA

Phone: +1-803-783-1880  
Fax: +1-803-783-4279

305 Fentress Boulevard  
Daytona Beach, FL 32114 USA

Phone: +1-386-253-0628  
Fax: +1-386-257-0122

1700 E. International Speedway Blvd  
DeLand, FL 32724 USA

Phone: +1-386-736-7373  
Fax: +1-386-738-4533

1600 Industry Road  
Hatfield, PA 19440 USA

Phone: +1-800-618-4701  
Fax: +1-215-855-3570

10633 W Little York, Bldg 3, Suite 300  
Houston, TX 77041 USA

Phone: +1-713-983-4201  
Fax: +1-713-466-3721

10 Old Webster Road  
Oxford, MA 01540 USA

Phone: +1-508-987-5900

831 Bransten Road  
San Carlos, CA 94070 USA

Phone: +1-650-594-9797  
Fax: +1-650-594-9620

#### TECHNETICS GROUP

EnPro Industries companies

[sales@technetics.com](mailto:sales@technetics.com)  
[technetics.com](http://technetics.com)



EnPro Industries companies