



HEAVY INDUSTRY SEALING TECHNOLOGY





THE TRADITION OF HIGHEST QUALITY

DICHTA designs, produces and distributes shaft seals and other sealing products with highest quality standards using advanced manufacturing techniques and approved quality systems.

Building on 30 years experience, the DICHTA GROUP has developed to a true world class supplier, serving clients on all continents through offices in Switzerland and Italy, with modern production facilities in Italy and the Far-East.

DICHTA manufactures products in accordance to the ISO 9001:2008 system ensuring to supply continuous high quality with full batch traceability, encoded in a barcode system. In addition, the newly obtained ISO 14001:2004 certification ensures our attention to the latest rules in terms of respect to the environment.

Through its in-house design team, the company is capable to produce bespoke solutions with realistic lead times at competitive condition.

A worldwide distributor network backed by highly qualified personnel, ensures that our customers receive a fast and reliable service to solve even their most demanding requirements.

Moreover, the recently new built Headquarter is hosting a large modern warehouse with a wide range of items which availability is published online and updated every 24 hours.











HEAVY INDUSTRY

This is the sector of industry transforming and processing natural resources, such as steel, minerals, cement and paper into primary products.

These sectors have also allowed the expansion and the development of many countries, and therefore Dichta has a worldwide distribution network.

Safety and reliability are the main features of the sealing technology used in hydraulic devices and rotary systems.

IRON AND STEEL INDUSTRY:

- · Hot and cold rolling mills
- Continuous casting steel mills
- Plants and presses for steel forging
- Plants and presses for extruding metals
- Oil-dynamic interlocking devices
- Hydraulic actuators
- Moving rollers
- Thermal treatment plants

CEMENT MILLS:

- Hydraulic plants for extraction and crushing of raw materials
- Hydraulic plants and rotary systems used for processing and thermic treatment of clinker
- Specific plants and rotary systems such as crushers, mills, tubular klins, etc.....
- Hydraulic interlocking plants

PAPER MILLS:

- Plants and rotary systems for pulp mechanical processing
- Hydraulic plants and rotary systems for continuous pressing
- Hydraulic plants and rotary systems for calendering and drying process

HYDRAULIC DEVICES IN GENERAL:

- Rotary hydraulic cylinders
- Hydraulic plunger cylinders
- Telescopic cylinders
- Actuators
- Hydraulic caps
- Hydraulic cylinders for moulding presses
- Hydraulic cylinders for extrusion presses
- Hydraulic cylinders for forging presses

ROTARY SYSTEMS IN GENERAL:

- Lamination rollers
- Speed reducers
- Devices for the protection of bearings
- Devices for the protection of bushes or guide strips
- Supporting devices for grinding cylinders and rollers
- Supporting devices for rotary machines





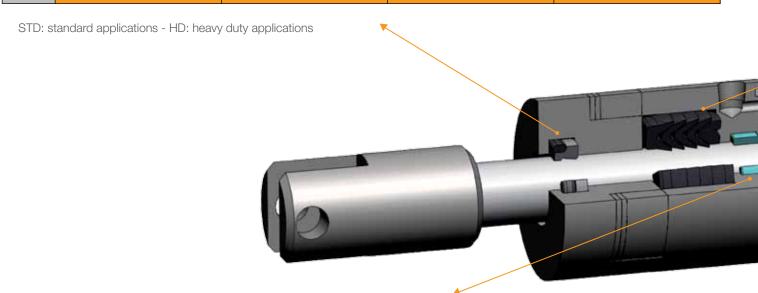
INDEX

HYDRAULIC CYLINDER	6-7
) WIPERS	8
] GUIDE STRIPS	9
) ROD SEALS	10-11
) PISTON SEALS	12-13
ROTARY MOVEMENTS	14-15
) STATIC SEALS	16
RADIAL SEALS FOR ROTARY SHAFTS	17
FRONTSEALS®	18
HYDRAULIC CYLINDER APPLICATIONS	19-20
ROTARY MOVEMENT APPLICATIONS	21-22
OTHER APPLICATIONS	23-24
) KEY SUCCESS FACTORS	25
) NOTES	26



HYDRAULIC CYLINDER

	WIPERS								
STD									
	DP6	DAS	DP9	CPPT1					
HD									
	CPPT2	WM	CPWTFA	CPWTFB					

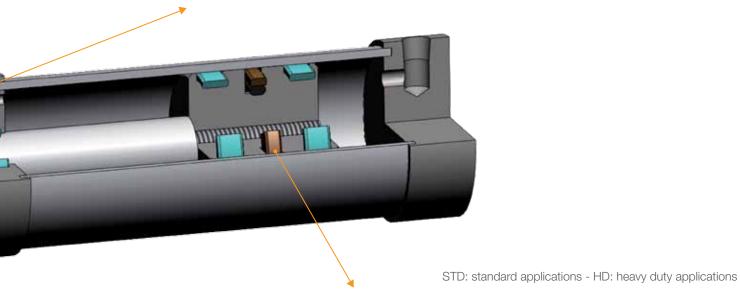


	GUIDE STRIPS									
STD										
	FGI6 – FGE6	FGI0 – FGE0	FGI4 – FGE4							
HD										
	FGI5 - FGE5	FGI1 – FGE1	FGI7 – FGE7							



HYDRAULIC CYLINDER

	ROD SEALS											
STD												
	IGR/A	IGR/B	TEOL 1	TEOL 1/B	TEOL 2	TG	ТО					
HD												
	IGR/A/P	IGR/B/P	IGR/AW	IGR/BW	TG 40	W	BL PACKING					



	PISTON SEALS									
STD	EGR/A	EGR/B	G26	DGB	DSM					
010										
	TG-TO	TG3	JWT	TEOL 2	TEOL 8					
HD		10								
	EGR/A/P	EGR/B/P	EGR/AW	EGR/BW	W					



WIPERS

Item code	Profile	Dim. range [mm]	Materials	S [m/s]	T [°C]	Applications
DP6		8 ÷ 900	NBR FPM PTFE PTFE + glass PU	2 2 5 5 0,5	-30 ÷ 120 -10 ÷ 200 -200 ÷ 260 -200 ÷ 260 -30 ÷ 105	Hydraulic cylindersPressesMobile hydraulicsTooling machines
DAS		8 ÷ 320	NBR PU FPM Metal part: Carbon steel	2 0,5	-30 ÷ 120 -10 ÷ 200	Earth moving machinesPressesMobile hydraulicsTooling machines
DP9		250 ÷ 1800	NBR FPM	1	-30 ÷ 120 -10 ÷ 200	 Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
CPPT1		25 ÷ 1200	PTFE + bronze PTFE + glass + MoS ₂ O-ring: NBR FPM	5	-30 ÷ 120 -10 ÷ 200	 Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
CPPT2		200 ÷ 1200	PTFE + bronze O-ring: NBR FPM	5	-30 ÷ 120 -10 ÷ 200	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
WM		25 ÷ 400	Metal case: carbon steel First lip: brass Second lip: FPM	1	-10 ÷ 120	 Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
CPWTFA		10 ÷ 500	PTFE + bronze PTFE + glass + MoS ₂ O-ring: NBR FPM	5	-30 ÷ 120 -10 ÷ 200	 Steel mill plants Injection moulding presses Forging presses Extruding presses Hydraulic cylinders Tooling machines Earth moving machines
CPWTFB		10 ÷ 1200	PTFE + bronze PTFE + glass + MoS ₂ O-ring: NBR FPM	5	-30 ÷ 120 -10 ÷ 200	Steel mill plants Injection moulding presses Forging presses Extruding presses Hydraulic cylinders Tooling machines Earth moving machines
LINEAR WIPERS		Supplied in strips	NBR Metal		-30 ÷ 120	Tooling machines



GUIDE STRIPS

Item code	Profile	Dim. range [mm]	Materials	Metal contact	Applications
FGI5 FGE5		Tapes up to 700 mm	Phenolic resin + cotton	Steel Steel, hardchromed Casted iron Stainless stell	Mobile hydraulics Standard cylinders Presses
FGI1 FGE1		Tapes up to 700 mm	PTFE + bronze	Steel Steel, hardchromed Casted iron	Mobile hydraulics Standard cylinders Tooling machines Injection moulding presses
FGI7 FGE7		Max 1500 mm	C380	Steel Steel, hardchromed Casted iron Stainless stell	Mobile hydraulics Standard cylinders Water hydraulics Ship engineering Presses
FGI4 FGE4		Tapes up to 700 mm	PTFE + carbon	Mild steel Stainless stell Aluminium, Bronze	Mobile hydraulics Standard cylinders Tooling machines Injection moulding presses
FGI6 FGE6		15 ÷ 300 mm	POM + glass	Steel Steel, hardchromed Casted iron	Mobile hydraulics Standard cylinders
FGI0 FGE0		15 ÷ 1200 mm	PTFE	Steel Steel, hardchromed Casted iron	Mobile hydraulics Standard cylinders







ROD SEALS

Item code	Profile	Ма	terials	P [bar]	S [m/s]	T [°C]	Applications
IGR/A		Seal ring	PTFE + bronze PTFE + carbon PTFE + graphite PTFE + glass PTFE + glass MoS ₂	400 400 250 250 400	5		Steel mills Shipbuilding Civil engineering Injection moulding machines
IGR/B		O-ring	NBR 70 FPM 70			-30 ÷ 120 -10 ÷ 200	Presses Tarth moving machines Valves for hydraulic and pneumatic circuits
IGR/A/P		Seal ring O-ring	PTFE + bronze PTFE + glass MoS ₂ NBR 70 FPM 70	600	5	-30 ÷ 120 -10 ÷ 200	Cylinders for special applications
IGR/B/P		Back-up ring	High performance thermoplastic material				Heavy industry
IGR/AW		Seal ring	PTFE + glass MoS ₂ PTFE + carbon	300	5		Injection moulding machines Steel plants Marine hydraulic systems
IGR/BW		Energizing ring	NBR 80	400		-30 ÷ 120	Steel mills Moulding presses Manipulator
TEOL/1	/A	Seal ring Thrust ring Back-up ring	NBR + fabric FPM + fabric NBR 70 FPM 70 PA6 Nylon PTFE	200	0,5	-30 ÷ 120 -10 ÷ 200	Injection moulding machines Steel plants Marine hydraulic systems Steel mills Moulding presses Manipulators



ROD SEALS

Item code	Profile	Ma	aterials	P [BAR]	S [m/s]	T [°C]	Applications
TEOL/2		Seal ring NBR + fabric FPM + fabric Energizing NBR 70 FPM 70		200	0,5	-30 ÷ 120 -10 ÷ 200	Hydraulic cylinders Presses Mobile hydraulics Tooling machines
TO - TG	TO endless TG endless or split	NBR + fabric FPM + fabric HNBR + fabric Intermediate rings in NBR 70 Intermediate rings in FPM 70 Intermediate rings in HNBR 70		400	0,5	-30 ÷ 120 -10 ÷ 200 -30 ÷ 150	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses
w		NBR + fabric FPM + fabric		600	0,5	-30 ÷ 120 -10 ÷ 200	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
TG 40		NBR + fabric FPM + fabric		300	0,5	-30 ÷ 120 -10 ÷ 200	Hydraulic cylinders Presses Mobile hydraulics Tooling machines
BL PACKING		NBR + fabric		600	0,5	-30 ÷ 120	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications



PISTON SEALS

Item code	Profile	Mat	terials	P [bar]	S [m/s]	T [°C]	Applications
EGR/A		Seal ring	PTFE + bronze PTFE + carbon PTFE + graphite PTFE + glass PTFE + glass MoS ₂	400 400 250 250 400	5		Steel mills plants Injection moulding presses forging presses Extruding presses
EGR/B		O-ring	NBR 70 FPM 70		-	-30 ÷ 120 -10 ÷ 200	Hydraulic cylinders Tooling machines Earth moving machines Valves for hydraulic and pneumatic circuits
EGR/A/P		Seal ring O-ring	PTFE + bronze PTFE + glass MoS ₂ NBR 70 FPM 70	600	5	-30 ÷ 120 -10 ÷ 200	Cylinders for special applications
EGR/B/P	10	Back-up ring	High performance thermoplastic material			-10 ÷ 200	Heavy industry
EGR/AW		Seal ring	PTFE + glass MoS ₂ PTFE + carbon	300 400	5		Hydraulic cylinders for special applications
EGR/BW		Energizing ring	NBR 80			-30 ÷ 120	Heavy industry
G 26		Seal ring Back-up ring	NBR + fabric/NBR POM	300	0,5	-30 ÷ 120	Hydraulic cylinders for special applications Heavy industry
DSM		Seal ring Supporting ring Back-up ring	NBR NBR + fabric POM	700	0,5	-30 ÷ 120	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications

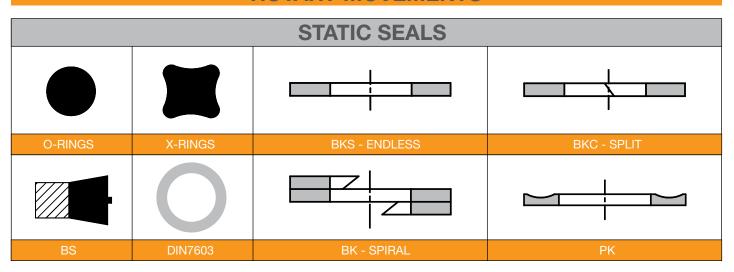


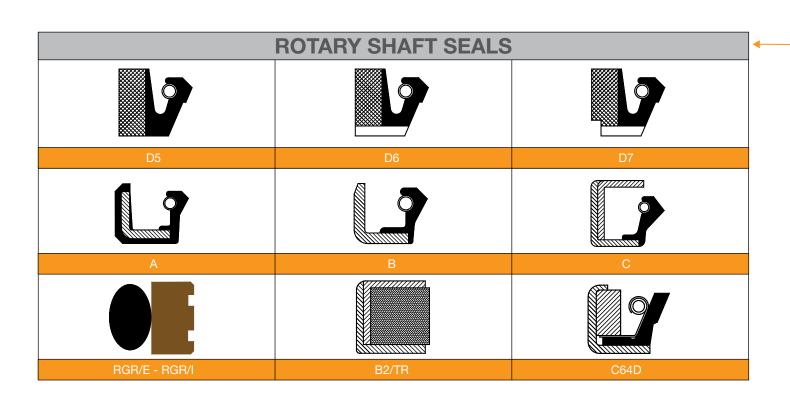
PISTON SEALS

Item code	Profile	Mater	ials	P [bar]	S [m/s]	T [°C]	Applications
DGB		Seal ring Supporting ring Back-up ring	NBR NBR + fabric POM	350	0,5	-30 ÷ 120	Oil dynamic plants Plunger cylinders
TO - TG	TO endless	NBR + fabric FPM + fabric Intermediate rings in NBR 70 Intermediate rings in FPM 70		400	0,5	-30 ÷ 120 -10 ÷ 200	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses
	TG endless or split						
w		NBR + fabric		600	0,5	-30 ÷ 120	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
TG3		NBR + fabric FPM + fabric HNBR + fabric		400	0,5	-30 ÷ 120 -10 ÷ 200 -30 ÷ 150	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses
JWT		U-ring NBR + fabric Hard material Head ring nylon type		340		-30 ÷ 120	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Hydraulic valves
TEOL/2		Seal ring (back) Energizing ring	FPM + fabric	250	0,5	-10 ÷ 120	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications
TEOL/8		NBR + fabric Hard NBR + fabric		400	0,5	-30 ÷ 120	Hydraulic cylinders Injection moulding presses Forging presses Extruding presses Heavy duty applications



ROTARY MOVEMENTS

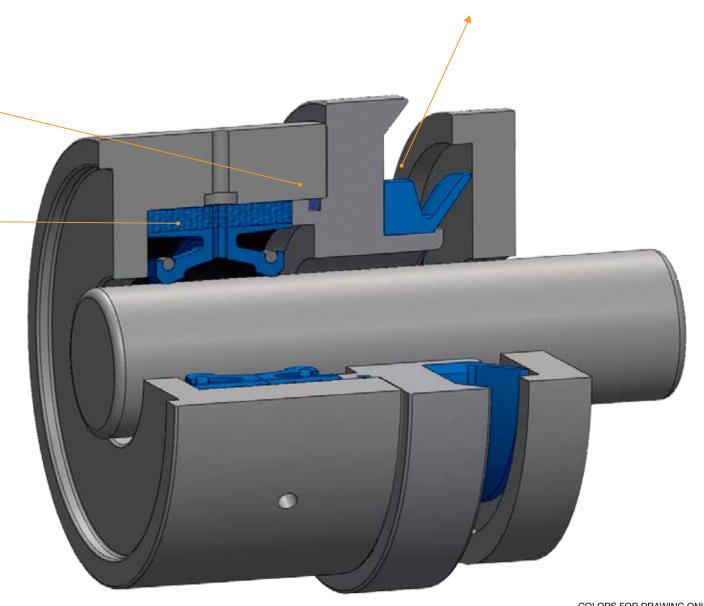






ROTARY MOVEMENTS

FRONTSEALS®						
VA	VL	VAX	VS			
VRME	VE	VRM	TF			



COLORS FOR DRAWING ONLY



STATIC SEALS

Item code	Profile	Materials	P [bar]	S [m/s]	T [°C]	Applications
O-RINGS		NBR EPDM SIL HNBR FPM FFKM	200	0,5	-30 ÷ 120 -40 ÷ 150 -50 ÷ 230 -30 ÷ 160 -20 ÷ 230 -15 ÷ 315	Static or dynamic applications
X -RINGS		NBR FPM	400	0,5	-30 ÷ 120 -10 ÷ 200	Static or dynamic applications
BACK-UP RINGS	BKS – endless	PTFE			-50 ÷ 200	Injection moulding machines Tooling machines Forging presses Extruding presses Excavators Agricultural machines Valves for hydraulic circuits
	BKC - split	PTFE + glass MoS ₂	2500	0,5	-50 ÷ 200	
	BK – spiral	PTFE + glass			-50 ÷ 200	
	PK	PTFE PTFE + carbon Special thermoplastic material NBR 90 Shore A			-30 ÷ 120	
BS BONDED SEALS		NBR Carbon steel	1000		-30 ÷ 120	FlangesPlatesEnginesValvesCylinders
DIN 7603		Copper Aluminium CAF asbestos free				Screw connection in engine blocks and cylinder heads, in all hydraulic plants



RADIAL SEALS FOR ROTARY SHAFTS

Item code	Profile	Materials	P [bar]	S [m/s]	T [°C]	Applications
D5		NBR + fabric FPM + fabric HNBR + fabric	0,5	20	Max 130 Max 220 Max 150	Iron and steel plants Shipbuilding industry
D 6		NBR + fabric FPM + fabric HNBR + fabric	0,5	20	Max 130 Max 220 Max 150	Wind power applications Paper industry Hydropower industry
D7		NBR + fabric FPM + fabric HNBR + fabric	0,5	20	Max 130 Max 220 Max 150	Mining industry Cement mills
R GR/E R GR/I		Seal ring PTFE + glass + MoS ₂ PTFE + carbon PTFE + bronze O-ring NBR FPM	0,5	20	-30 ÷ 120 -10 ÷ 200	Rotary distributors Pivoting motors Mobile hydraulics Tooling machines
B2/TR		Packing Graphite fibre PTFE fibre + graphite Virgin PTFE fibre Outside Carbon steel layer AISI 304/316	0,5	50	Max 500 Max 280 Max 280	Rotary applications in high temperature
A		NBR + steel			-30 ÷ 100	
В		FPM + steel HNBR + steel NEO + steel SIL + steel ACM + steel EPDM + steel	0,5	20	-30 ÷ 100 -10 ÷ 200 -30 ÷ 140 -40 ÷ 180 -50 ÷ 200 -10 ÷ 150 -45 ÷ 150	General rotary applications
С		LI DIVI T SICOI			45 ÷ 130	
C64D		NBR + steel FPM + steel SIL + steel	0,5	25 35 35	-20 ÷ 120 -10 ÷ 200 -60 ÷ 120	Steel plants Heavy industry



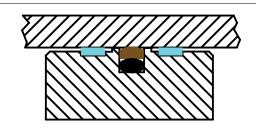
FRONTSEALS®

Item code	Profile	Materials	P [bar]	T [°C]	Applications	
VA						
vs						
VL	V	NBR		-30 ÷ 100		
VRM		FPM HNBR NEO SIL	FPM HNBR NEO	-	-30 ÷ 200 -30 ÷ 140 -40 ÷ 180 -50 ÷ 200	On any rotary application to prevent dirt, dust, water or any other external contact media from penetrating
VRME		L. 5		-45 ÷ 150		
VAX						
VE						
TF		NBR + steel SIL + steel		-30 ÷ 100 -50 ÷ 200	Hydraulic systems	



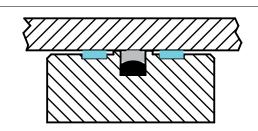
HYDRAULIC CYLINDER APPLICATIONS





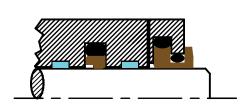
Piston seal consisting of:
 guide strip type FGE7
gasket set type EGR /A with back-up ring in PTFE + bronze
and O-ring for applications on double-acting
cylinders with Max p=400bar, S=5m/s





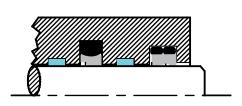
Piston seal consisting of:
guide strip type FGE7 – gasket set type EGR/AW
with back-up ring in PTFE + glass + MoS₂ and energizing
ring for applications on double-acting cylinders
with Max p=300bar, S=5m/s





Rod seal consisting of:
guide strip type FG I7 primary seal with gasket set type IGR/B
with back-up ring in PTFE + bronze and O-ring
wiper type CPPT 2 in PTFE + bronze and O-ring
for applications in conditions of Max p=400bar, S=5m/s



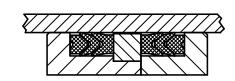


Rod seal consisting of :
guide strip type FG I7 primary seal with gasket set type IGR/BW
with back-up ring in PTFE + glass + MoS₂ and energizing ring.
Wiper type CPPT 1 in PTFE + glass + MoS₂ and O-ring for applications
on double-acting cylinders with Max p=300bar, S=5m/s



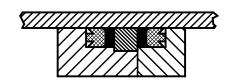
HYDRAULIC CYLINDER APPLICATIONS





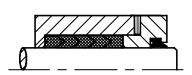
Piston seal consisting of:
Vee-packing set – TG3 in cotton fabric - assembled back-to-back for applications on double-acting cylinders with Max p=400bar, S=0.5m/s.





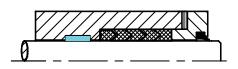
Piston seal consisting of:
Gasket type TEOL8 in cotton fabric assembled
back-to-back for applications on double-acting cylinders
with Max p=400bar, S=0.5m/s.





Rod seal consisting of: Vee-packing set in cotton fabric, wiper type DP9 for applications with Max p=600bar, S=0.5m/s.



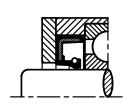


Rod seal consisting of: guide strip type FGI7, vee-packing set TG5 in cotton fabric, wiper type DP6 for applications with Max p=400bar, S=0.5m/s.



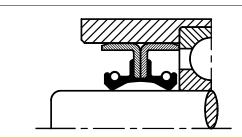
ROTARY MOVEMENT APPLICATIONS





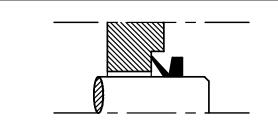
Sealing systems on rotary shaft consisting of: seal type A for applications with Max p=0.5bar, S=20m/s





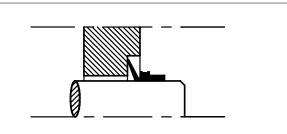
Sealing system on rotary shaft consisting of: two seals type B assembled back-to-back for applications with Max P=0.5bar, S=20m/s





V-ring type VA for applications with Max S=18m/s



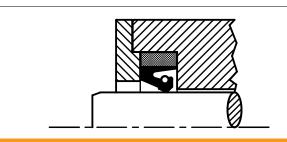


V-ring type VRM for applications with Max S=18m/s

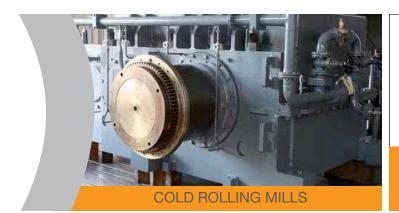


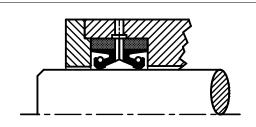
ROTARY MOVEMENT APPLICATIONS





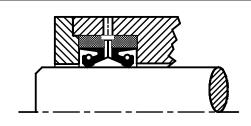
Sealing system on rotary shaft consisting of: seal type D5 for applications with Max p=0.5bar, S=20m/s





Sealing system on rotary shaft consisting of: seal type D6 assembled back-to-back for applications with Max p=0.5bar, S=20m/s





Sealing system on rotary shaft consisting of: seal type D7 assembled back-to-back for applications with Max p=0.5bar, S=20m/s





Rotary shaft seal in split form



OTHER APPLICATIONS

WIND ENERGY



MARINE INDUSTRY



EARTH MOVING EQUIPMENT



CEMENT PLANTS





OTHER APPLICATIONS

MINING



DRILLING



PAPER INDUSTRY



MECHANICAL







KEY SUCCESS FACTORS

-)) ISO 9001:2008 and ISO 14001:2004 certification for manufacturing and sales of technical products.
- Italian, German, French, English and Spanish speaking team.
- Urgent shipments leave our premises on same day delivery or within 24 hours.
- Big range of articles available from stock, even unusual sizes.
- Professional technical assistance & support.
- Long term employees with deep know-how of products and markets.
- Active after sales service & marketing team.
- RFQ normally processed within 24/48 hours.
- Swiss reliability.
- Full batch traceability.
- Central European location.



NOTES

DISCLAIMER

All technical information published on this brochure are for general reference only and cannot be considered to be binding. DICHTA SA will not be held liable for any claim or damage arising from the malfunction or the wrong utilization of our products, or from the misinterpretation of this brochure.

Please contact our technical department for all information on precise operating conditions of our products.

Changes on this brochure cannot be communicated and will appear in the next release. DICHTA SA cannot be held responsible for any typing error appearing on the brochure.

COPYRIGHT

FRONTSEAL® RADIASEAL® SPLITRING® are Trademarks of Dichta Ltd, Switzerland, Register Nr. 361481 / 360372 / 361482 EBGE, Bern, Switzerland and at WIPO World Intellectual Property Organization in Geneva, Switzerland, according the Madrid Protocol.

Copyright by Dichta SA, Switzerland.

Version 3 / July 2011

www.dichta.com

DICHTA SA

Via Sottobisio 28 Balerna - P.O. Box 219 CH-6830 CHIASSO 3

SWITZERLAND

P +41 91 683 85 02 F +41 91 683 00 50

info.ch@dichta.com