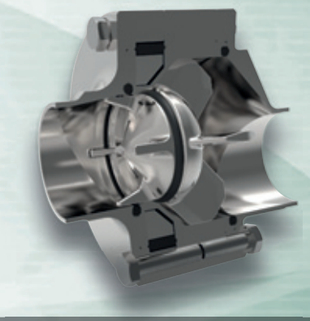
Self draining eccentric version
for horizontal installation
also available



Check out all YGROS SPRINGLESS valve solutions!

3-A

The 3-A authorized
version of EDF

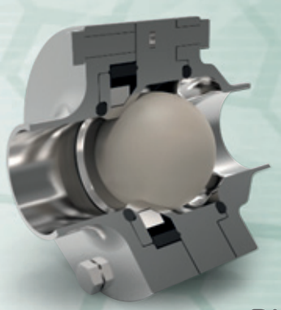
58-02

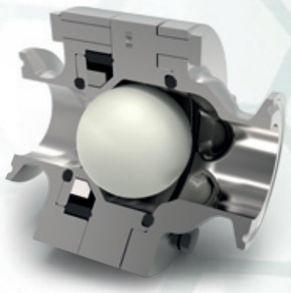
WAFER

The springless Wafer check valve
for water treatment,
vacuum and gas applications

AGGROBALL

Specially engineered for handling
of acids and aggressive chemicals





PHARMABALL

The high purity evolution
of Ygros

YGROS® VALVES Let it flow
Carollo ENGINEERING passion for Excellence

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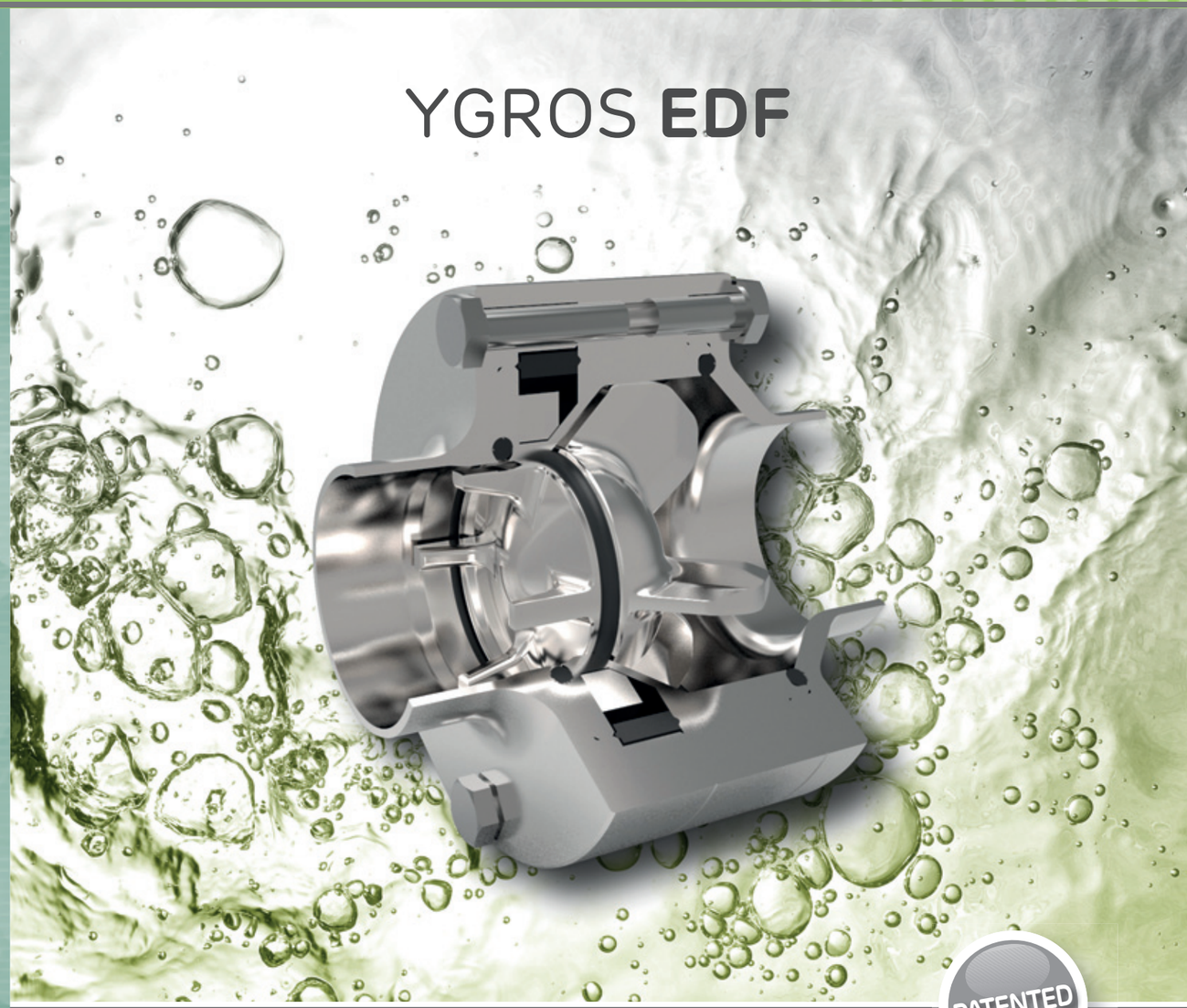
M 7.2.2 Rev. 3 30/10/2018

YGROS **EDF**



PATENTED

The latest sanitary SPRINGLESS check valve.
Fully hygienic design. CIP - able. Maintenance free.
Suitable for horizontal, vertical up and down installation.

YGROS® VALVES
Let it flow

Springless check valves. Magnetic Technology

YGROS technology sets new standards in the world of plant design, thanks to a patented magnetic principle replacing the conventional spring in Non Return Valves

For fluids and steam. Fitting for horizontal and vertical installation.
Up to 220°C. A smart solution for your clean applications.

> No more springs that can break or misfire
> No flow obstructing components
> No media entrapment > No stagnation point

Main applications

> Pharmaceutical > Chemical Industry > Dairy
> Food > Cosmetic > Beverage

Suitable for CIP/SIP, Brine Systems

Benefits at a glance

Maximum Hygiene (Springless design): only the shutter comes into contact with the product. There are no springs, discs or other components, which means no contamination and no stagnation point

No leakage: provided by integral magnets

Any installation position possible: unlike other springless check valves, YGROS EDF can be installed in the horizontal, vertical up and down positions

Energy saving: the innovative working principle and design allow for a smooth flow, minimising pressure drop

Laminar flow: no turbulence

Maintenance free

High chemical resistance: Longer valve life

The main operational difference between a spring loaded check valve and the innovative YGROS EDF valve is the resistance to flow. An ordinary check valve in the open position imposes significant resistance, because the compressed spring pushes the shutter against the flow with considerable force.

How The YGROS Principle Works

The magnets built into the valve body keeps the shutter in a closed position. The YGROS check valve opens when the inflow pressure exceeds the magnetic force. In the open position the shutter moves away from the magnet, which means lower attraction to the seat and therefore lower resistance to flow, so pressure drop is minimal. When the forward flow in the pipe stops, the magnet will attract the shutter back to its seat, stopping any backwards flow.

Technical data	
Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex)
Non product contact materials	Magnet: Neodymium
Seal material options	EPDM, NBR, HNBR, VMQ (silicone), FKM (viton), FEP, PTFE
Surface finishes	-Internal: Ra≤0,8 (standard) ,up to Ra≤0.4 electropolished and passivated (optional) -External: Ra≤3,2 (standard) up to Ra≤0.4 electropolished and passivated (optional)
Sizes	From DN06 to DN200 / from ½" to 8"
End connection options	-WELDING, TRI-CLAMP, THREADED
Temperature range	-40°C/+150°C (Standard). Up to +220°C (optional)
Operating pressure	PN16 (standard). Further operating pressures on request
Media	Liquid, gas, steam
Certifications (on request)	Material (EN10204-3.1) / Seals (FDA) / Surface roughness ATEX - PED - 3-A - EC 1935/2004

All product contact materials and seals are fully traceable

YGROS EDF standard opening pressures

Table applies to water at 20° C (68°F)

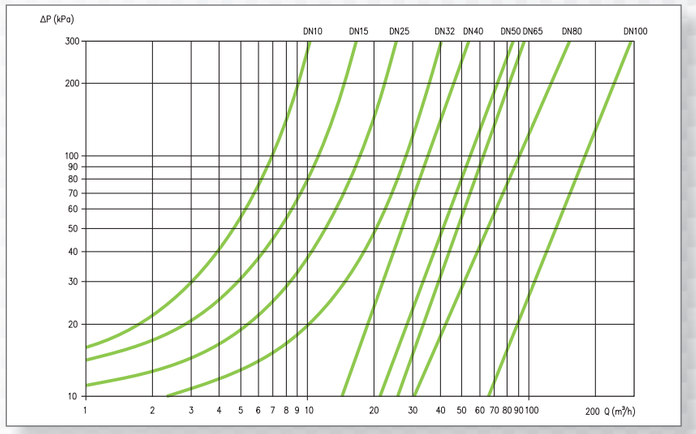
Once opened, the required pressure to keep the shutter fully open is about 10 mbar.

Installation	Flow Direction	Opening pressure
HORIZONTAL lines		30/50 mbar
VERTICAL lines	Top to bottom	27/45 mbar
VERTICAL lines	Bottom to top	33/55 mbar

Alternative opening pressure options are available on request

Pressure drop chart

Graph reading applies to water at 20° C (68°F) installed in horizontal pipes



Ordering information

Max pressure
16 = PN 16 (Standard)
40 = PN 40

Flanges/ Body Material
1= AISI 316L/1.4404 (Standard)
2= AISI 316LM / 1.4435

Shutter
0 = DUPLEX / 1.4462 (Standard)

Internal Finishing
M = Ra<0,8 (Standard)
A = Ra<0,8 electropolished
P = Ra<0,8 passivated
C = Ra<0,8 electr. + passiv.
F = Ra<0,4
E = Ra<0,4 electropolished
J = Ra<0,4 passivated
B = Ra<0,4 electr.+ passiv.

External Finishing
R = Ra<3,2 (Standard)
D = Ra<3,2 electropolished
O = Ra<3,2 passivated
I = Ra<3,2 electr. + passiv.
M = Ra<0,8
A = Ra<0,8 electropolished
P = Ra<0,8 passivated
C = Ra<0,8 electr.+ passiv.
F = Ra<0,4
E = Ra<0,4 electropolished
J = Ra<0,4 passivated
B = Ra<0,4 electr.+ passiv.

Seals
N = N B R
E = E PDM
V= FKM
S = VMQ
H = HNBR
F = FEP
P = PTFE

E 1 0040 R R 16 1 0 M R E 1

Form
E = EDF

Version
1 = Standard
4 = ATEX
5 = Eccentric
6 = ATEX + Eccentric

Dimension
DN=0010 (for DN10)
0100 (for DN100)
Inch = 01-2 (for 0,5")
11-2 (for 1,5")

Inlet connection
R = Welding DIN 11850 (11866-A)
S= Welding DIN 11851
T= Welding ASME BPE (11866-C)
Y= Welding ISO 1127 (11866-B)
N= Welding SMS (EN 10357-D)
C= Tri- Clamp ASME BPE
I = Tri- Clamp ISO 1127 seal 2852
M = Tri- Clamp SMS seal 2852
A = Tri-Clamp DIN 32676
D = Threaded Female DIN 405
F = Threaded Female BSP 60°
B = Threaded Male BSP 60°

Outlet connection
R = Welding DIN 11850 (11866-A)
S= Welding DIN 11851
T= Welding ASME BPE (11866-C)
Y= Welding ISO 1127 (11866-B)
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M = Tri- Clamp SMS seal 2852
A = Tri-Clamp DIN 32676
D = Threaded Female DIN 405
F = Threaded Female BSP 60°
B = Threaded Male BSP 60°

Max temperature
1 = 150°C (Standard)
2 = 180°C
3 = 220°C

Custom materials, finishings and further configurations available on request