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YGROS YEV

THE SIMPLEST MAGNETIC CHECK VALVE

FOR FOOD AND BEVERAGE PLANTS



YGROS[®]
VALVES
Let it flow

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

Suitable for horizontal, vertical up and down installation

For food and beverage plants. Up to 150°C

Finally the Simplest Model of YGROS Magnetic Check Valves



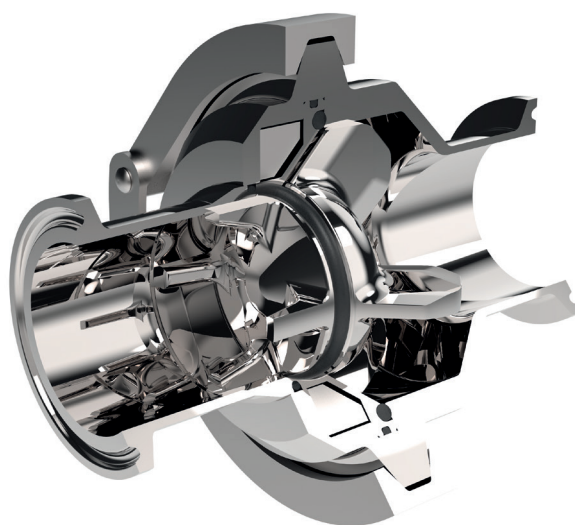
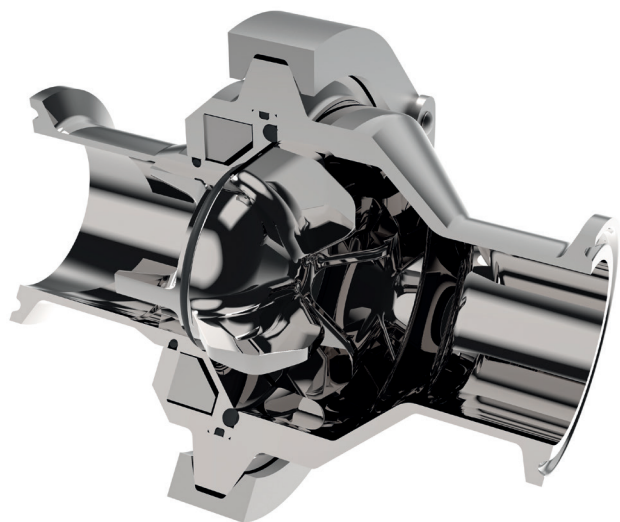
BENEFITS:

- *Energy Saving:* The innovative working principle and design allow for a smooth flow, minimizing pressure drop
- *Any installation position possible:* unlike other check valves, an Ygros Valve can be installed in horizontal and vertical up and down positions
- *Laminar flow:* no turbulences. This is particularly suitable for carbonated drinks or beer
- *Maintenance free*



TECHNICAL DATA

Product contact materials	Body and flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex)
Seal material options	EPDM, VMQ (Silicone), FKM (Viton)
Surface finishes	• Internal: Ra ≤ 0.8 • External: Ra ≤ 3.2
End connection options	WELDING DIN 11850 (DIN 11866 Reihe A) WELDING ASME BPE (DIN 11866 Reihe C) TRI-CLAMP ASME BPE
Sizes	From DN15 to DN100 / From ¾" to 4"
Temperature range	-40°C / +150°C
Operating pressure	PN16
Media	Food and beverage, liquid
Certifications (on request)	3.1 / FDA / Surface roughness / EC 1935/2004 / 3-A

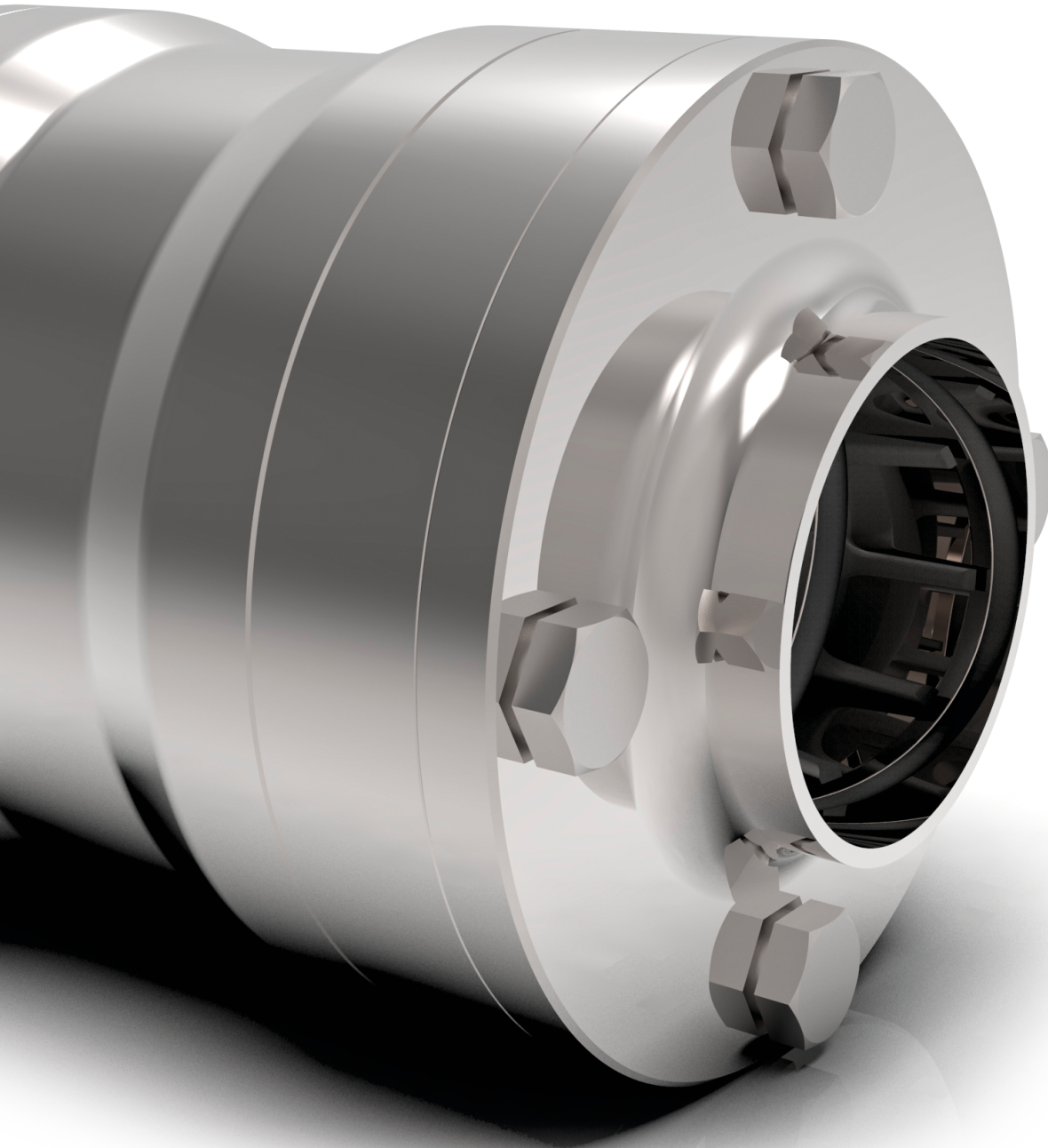


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YGROS YSV

THE EXTRACTABLE MAGNETIC CHECK VALVE

FOR FLUIDS, STEAM AND GAS



YGROS[®]
VALVES
Let it flow

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

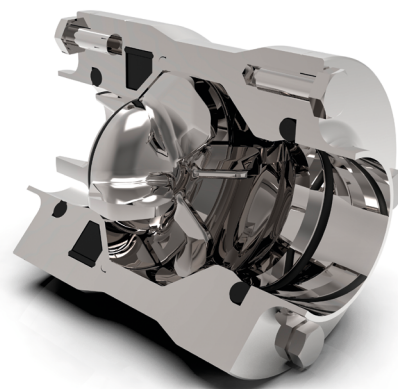
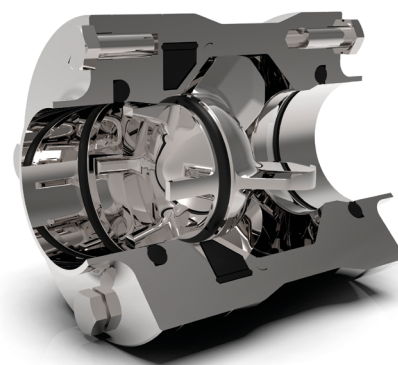
*Suitable for horizontal, vertical up and down installation
For fluids, steam and gas. Up to 150°C*

Finally the Extractable Model of YGROS Magnetic Check Valves



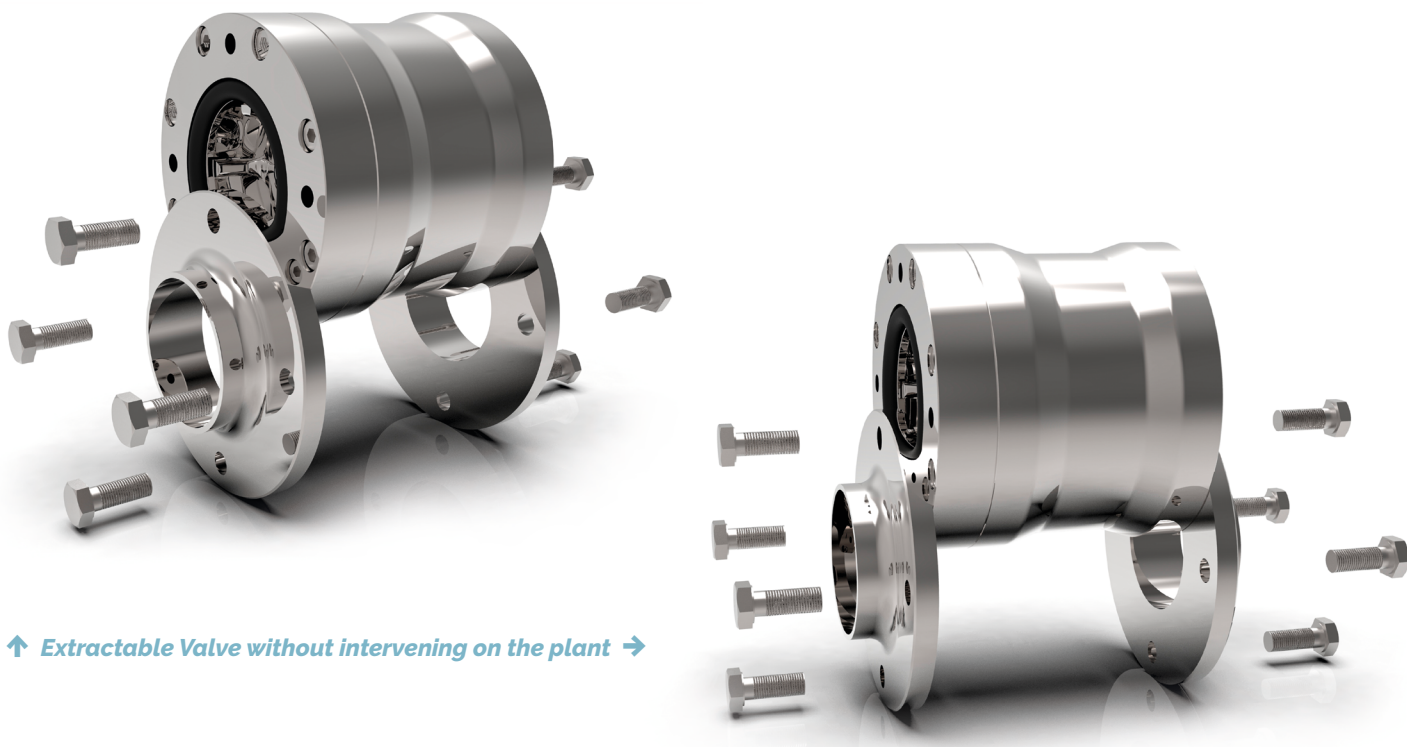
BENEFITS:

- *Energy Saving:* The innovative working principle and design allow for a smooth flow, minimizing pressure drop
- Extractable Valve without intervening on the plant
- *Any installation position possible:* unlike other check valves, an Ygros Valve can be installed in horizontal and vertical up and down positions
- *Laminar flow:* no turbulences
- Maintenance free



TECHNICAL DATA

Product contact materials	Body and flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex)
Seal material options	EPDM, NBR, HNBR, VMQ (Silicone), FKM (Viton), FEP, PTFE <small>*If the valve is 3A certified, HNBR, FEP and PTFE are NOT available</small>
Surface finishes	<ul style="list-style-type: none">• Internal: $Ra \leq 0.8$ (standard), up to $Ra \leq 0.4$ electropolished and passivated (optional)• External: $Ra \leq 3.2$ (standard), up to $Ra \leq 0.4$ electropolished and passivated (optional)
End connection options	WELDING DIN 11850 (DIN 11866 Reihe A) WELDING ASME BPE (DIN 11866 Reihe C)
Sizes	From DN25 to DN100 / From 1" to 4"
Temperature range	-40°C / +150°C
Operating pressure	PN16
Media	Liquid, Gas, Steam
Certifications (on request)	31 / FDA / Surface roughness / EC 1935/2004 / 3-A





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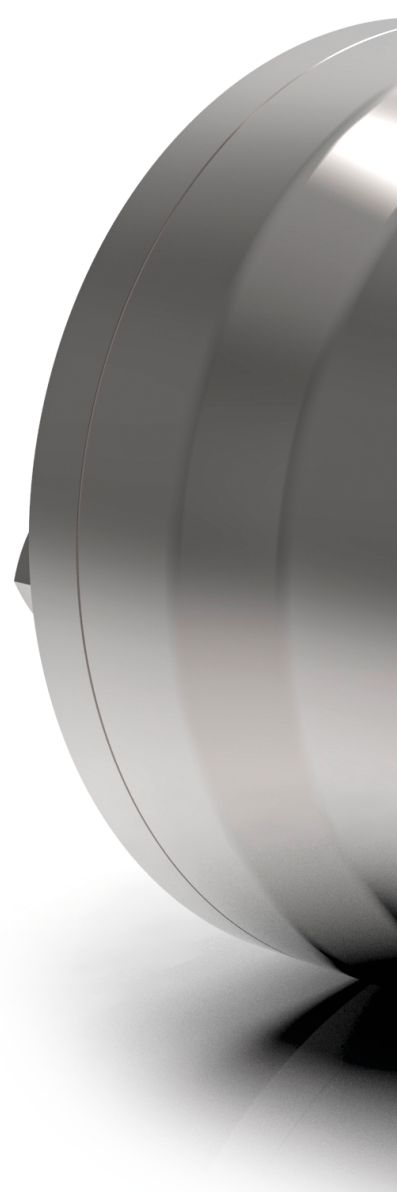
Tel: +420 241 402 206

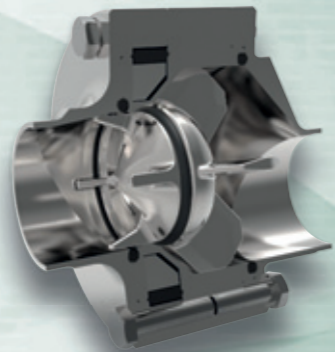
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Self draining eccentric version
for horizontal installation
also available

Check out all YGROS SPRINGLESS valve solutions!



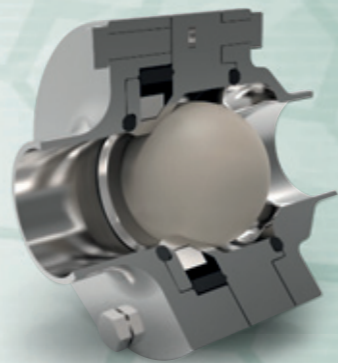
3-A

The 3-A authorized
version of EDF



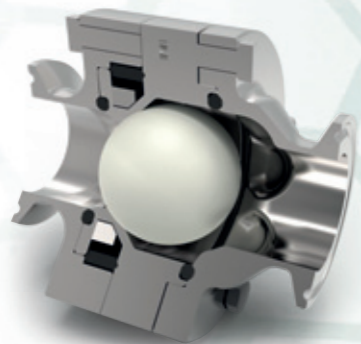
WAFER

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



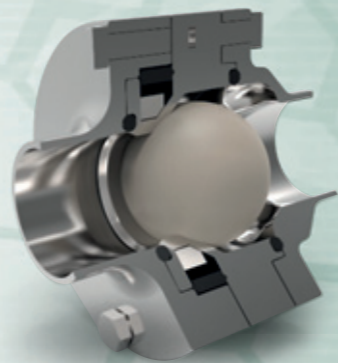
AGGROBALL

Specially engineered for handling
of acids and aggressive chemicals



PHARMABALL

The high purity evolution
of Ygros



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M 7.2.2 Rev. 3 30/10/2018

YGROS EDF



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

PATENTED



Springless check valves. Magnetic Technology

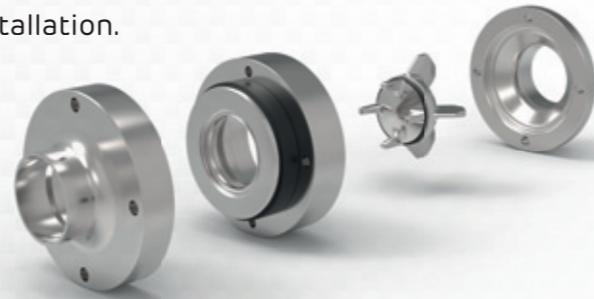
YGROS technology sets new standards in the world of plant design, thanks to a patented magnetic principle replacing the conventional spring in Non Return Valves

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 1/2" 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)

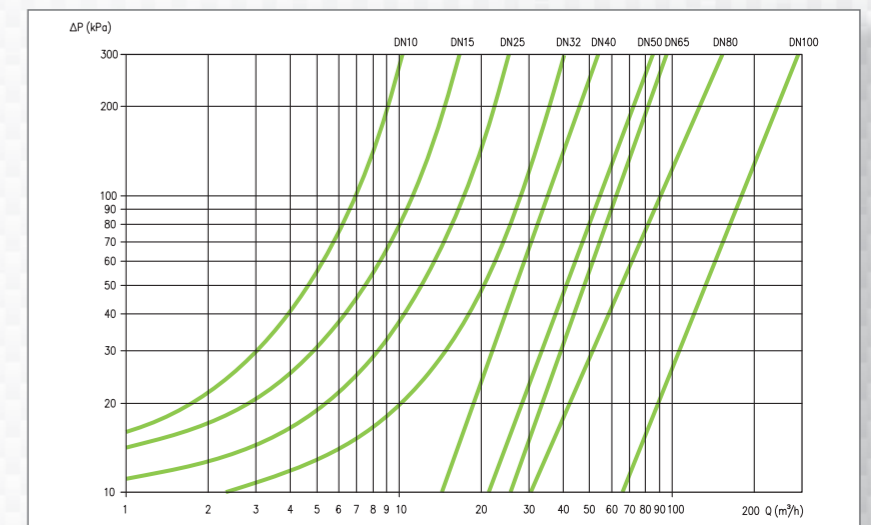
Once opened, the required pressure to keep the shutter fully open is about 10 mbar.

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

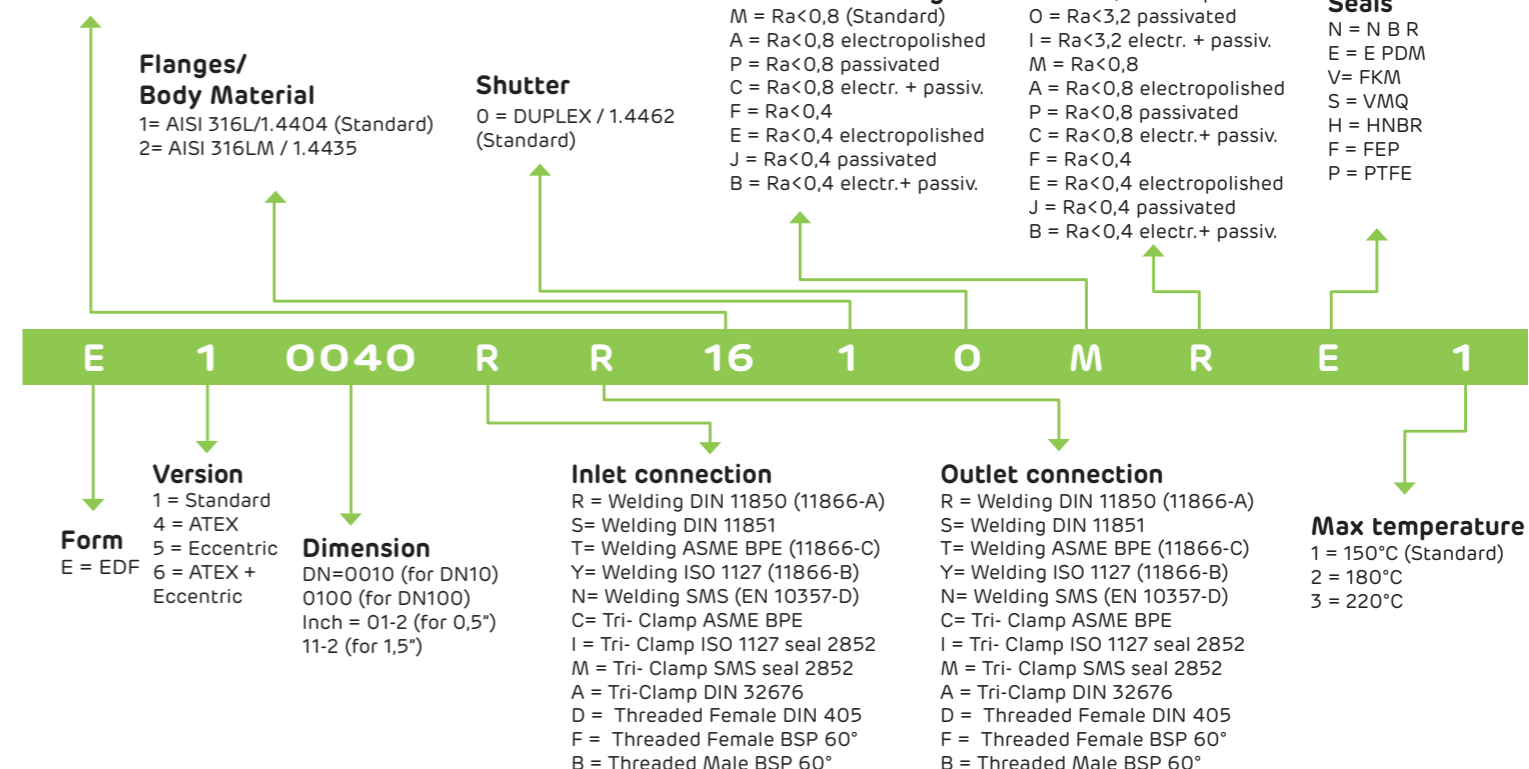
Flanges/ Body Material
1= AISI 316L/1.4404 (Standard)
2= AISI 316LM / 1.4435

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 = NBR
E = EPDM
V = FKM
S = VMQ
H = HNBR
F = FEP
P = PTFE



Custom materials, finishings and further configurations available on request

Finally a smart solution for water treatment,
vacuum and gas applications

YGROS®
VALVES
Let it flow

WAFER



PATENTED

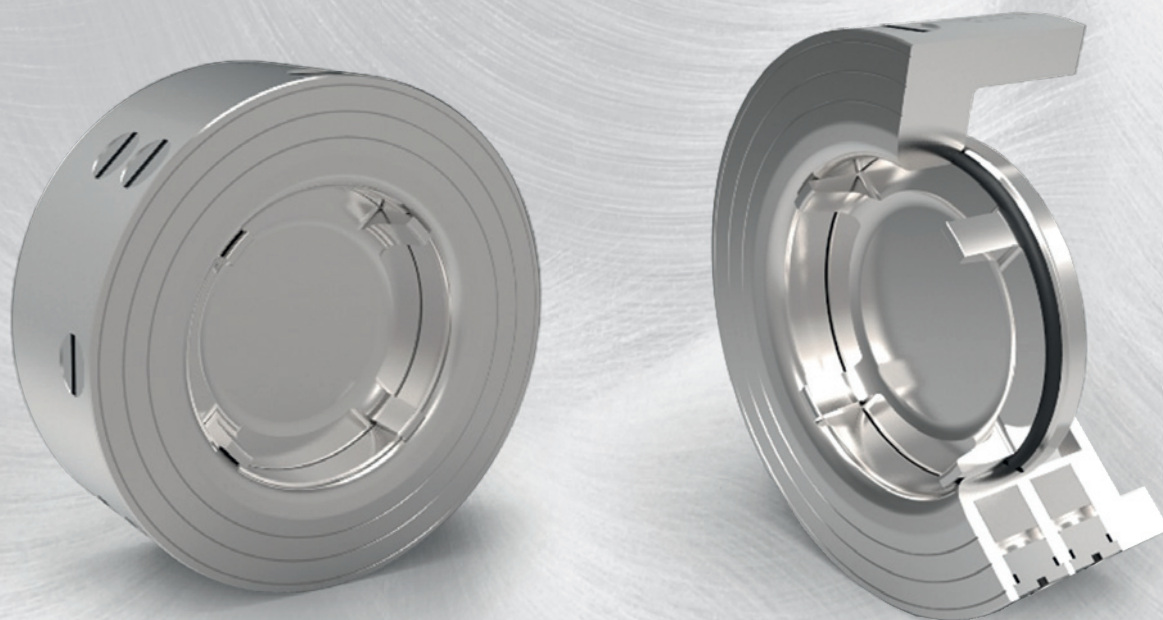
YGROS **patented technology** sets new standards in the world of plant design, thanks to a patented magnetic principle replacing the conventional spring in Non Return Valves.
Suitable for horizontal, vertical up and down installation (even in vertical pipes with flow down).
For gases, fluids and steam. Up to +220°C .

BENEFITS AT A GLANCE

- _ **No chatter:** the magnetic principle is particularly suitable for compressible media (such as gas) or low pressure processes. Very low difference pressure needed to keep the disc fully open
- _ **High chemical resistance / longer valve life:** due to the 1.4404 (AISI 316 L) / 1.4462 (Duplex) construction
- _ **Safe closing:** provided by integral magnets
- _ **Any installation position possible:** unlike other springless check valves, YGROS WAFER can be installed in the horizontal, vertical up and down positions
- _ **Energy saving (laminar flow):** the innovative working principle and design allow for a smooth flow, minimising turbulence and pressure drop
- _ **Maintenance free**

Technical data

Product contact materials	Body: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, NBR, HNBR, VMQ (Silicone), FKM (Viton)
Sizes	From DN25 to DN250
Surface finishes Internal:	Internal: Ra $\mu\text{m} \leq 1.6$ External: Ra $\mu\text{m} \leq 3.2$
Temperature range	-40°C/+150°C (standard). Up to +220°C (optional)
Operating pressure	PN16 (standard). Further operating pressures on request
Media	Gas, Steam, Fluids
Certifications (on request)	Material (EN10204-3.1) / Seals (FDA) Surface roughness ATEX EC 1935/2004



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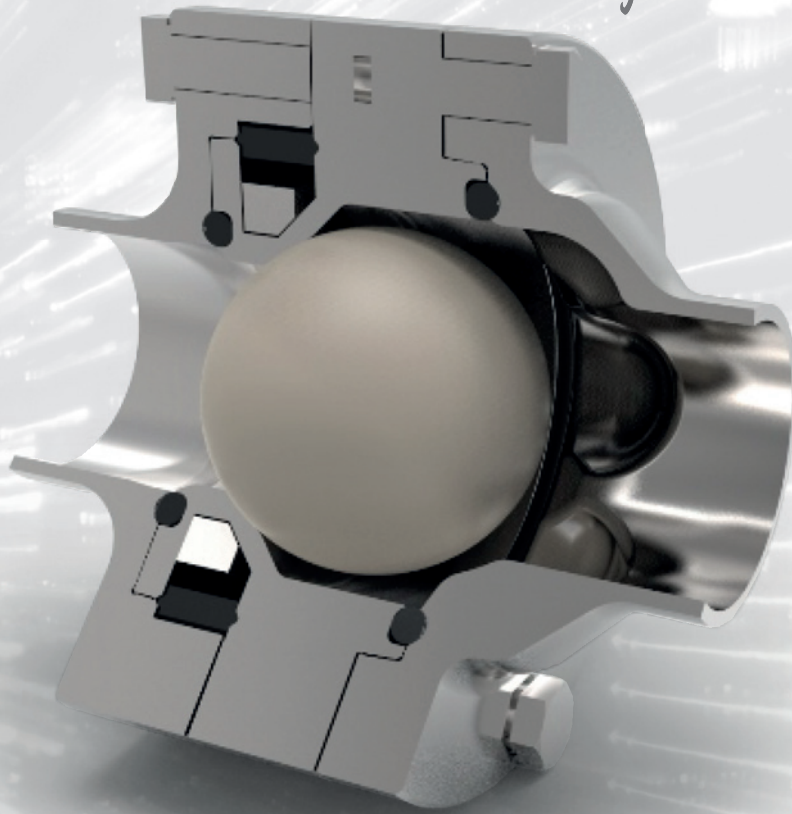
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Ygros AGGROBALL: The chemical evolution of Ygros

**Specially engineered for handling of aggressive media.
Extra strong chemical resistance. Springless. Maintenance free**

YGROS[®]
VALVES
Let it flow

AGGROBALL



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

Suitable for horizontal, vertical up and down installation (even in vertical pipes with flow down).

For fluids and steam. Up to +150°C.

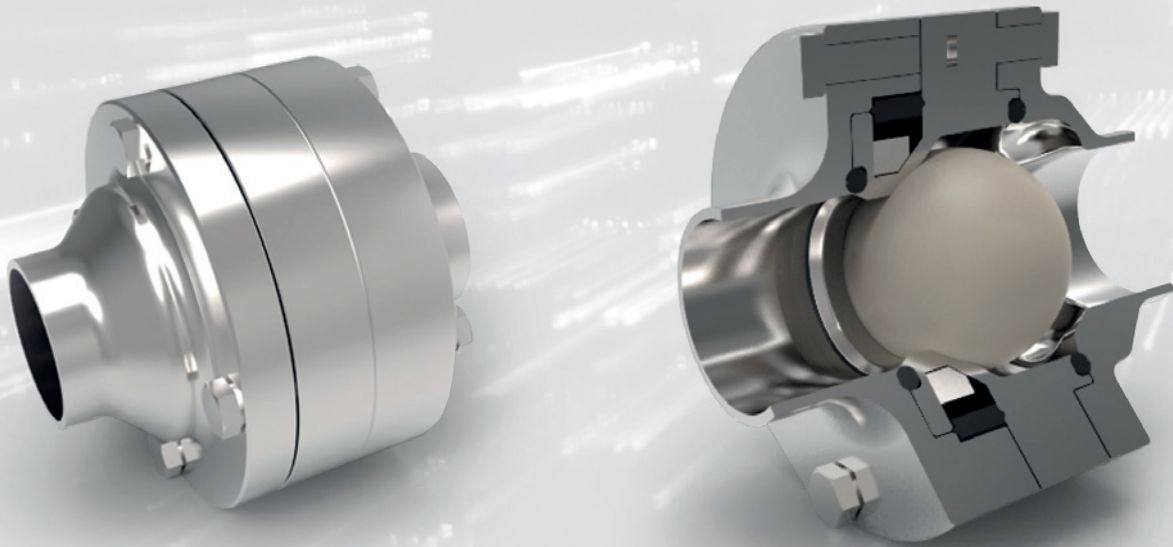
Finally a really smart solution for your aggressive applications!

BENEFITS AT A GLANCE

- _ **Extra high chemical resistance and longer valve life:** Through solid construction materials (1.4435 and PVDF)
- _ **Safe closing:** Provided by integral magnets
- _ **Any installation position possible:** Unlike other springless check valves, an YGROS Valve 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**

Technical data

Product contact materials	Body & Flanges: Stainless steel 1.4435 (AISI 316LM), max. <1% ferrite Ball: PVDF
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, NBR, HNBR, VMQ (Silicone), FKM (Viton), FEP, PTFE
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.8$ External: Ra $\mu\text{m} \leq 3.2$
End connection options	WELDING DIN 11850 (DIN 11866 Reihe A) WELDING ASME BPE (DIN 11866 Reihe C) TRI-CLAMP ASME-BPE
Temperature range	-40°C/+150°C
Operating pressure	PN16 (standard). Further operating pressures on request
Media	Fluids
Certifications (on request)	Materials: (EN10204-3.1)/seals and PVDF Ball (FDA – USP VI) Surface roughness EC 1935/2004



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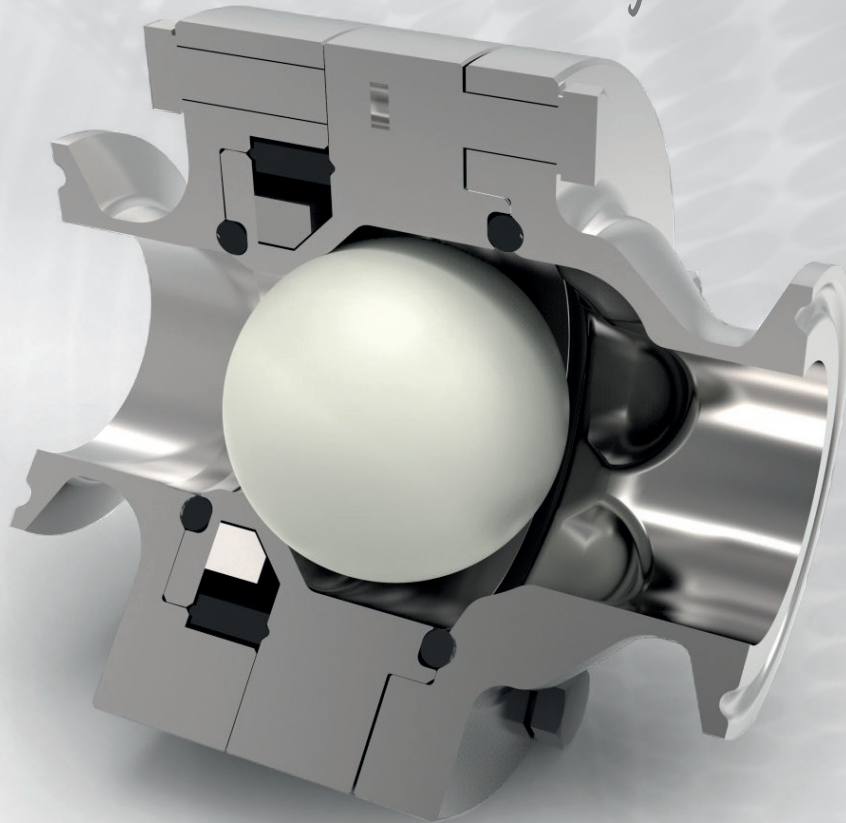
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Fully hygienic design, materials and surfaces. Maintenance free

YGROS®
VALVES
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PHARMABALL



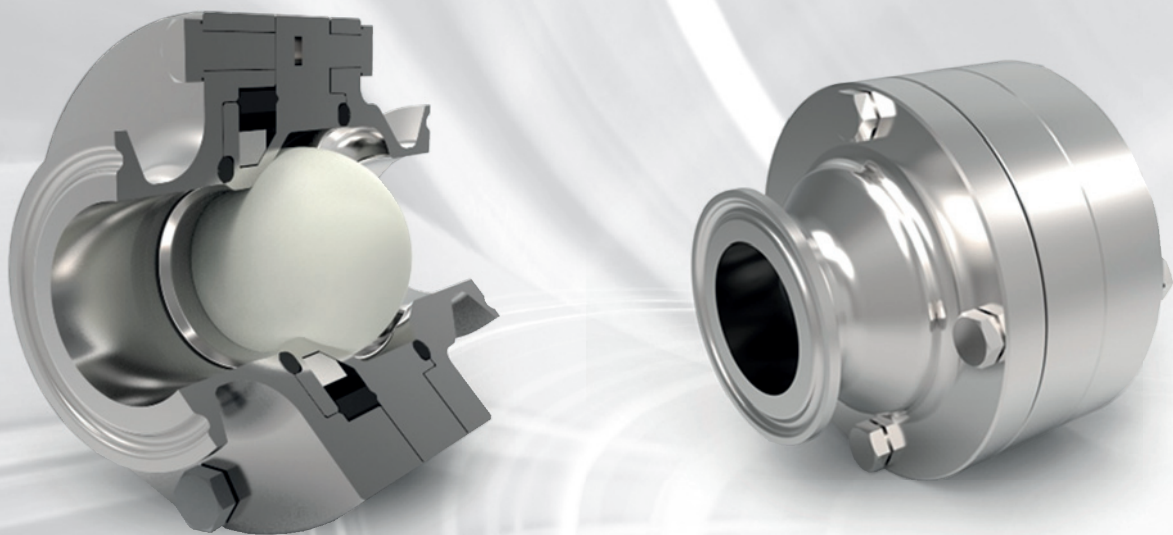
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BENEFITS AT A GLANCE

- _ **Maximum hygiene:** Only the shuttle comes into contact with the product. There are no springs, discs or other components, which means no contamination and no stagnation point. Top quality surface finishings and materials (PVDF and 1.4435 with <1% Ferrite)
- _ **Safe closing:** Provided by integral magnets
- _ **Any installation position possible:** Unlike other springless check valves, an YGROS Valve 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**
- _ **Extra high chemical resistance and longer valve life:** Through solid construction materials

Technical data

Product contact materials	Body & Flanges: Stainless steel 1.4435 (AISI 316LM), max. <1% ferrite Ball: PVDF
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, NBR, HNBR, VMQ (Silicone), FKM (Viton), FEP, PTFE
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.4$ electropolished External: Ra $\mu\text{m} \leq 1.2$ electropolished Passivation or request (optional)
End connection options	WELDING DIN 11850 (DIN 11866 Reihe A) WELDING DIN 11850 (DIN11866 Reihe C) TRI-CLAMP ASME-BPE
Temperature range	-40°C/+150°C
Operating pressure	PN16 (standard). Further operating pressures on request
Media	Fluids
Certifications (on request)	Materials: (EN10204-3.1)/seals and PVDF Ball (FDA – USP VI) Surface roughness EC 1935/2004



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