regom instruments

flow & process solutions

YGROS EDF

Springless check valves. Magnetic Technology

YGROS **EDF**

PATENTED

The latest sanitary SPRINGLESS check valve.
Fully hygienic design.
Suitable for horizontal, vertical up and down installation.

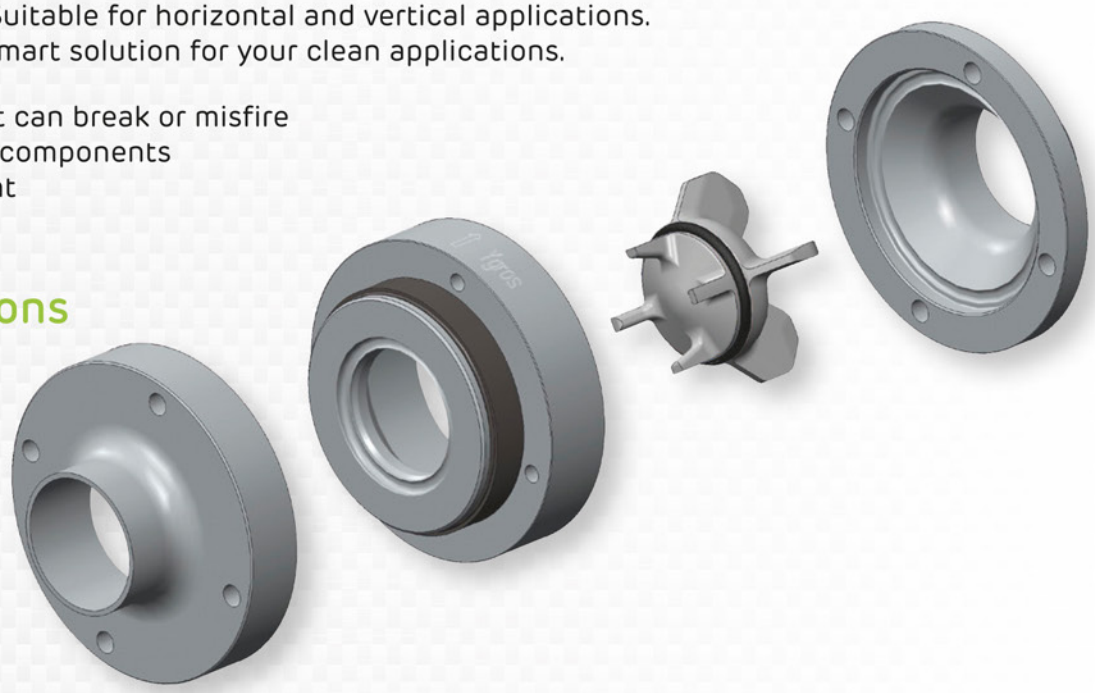
YGROS® VALVES
Let it flow

YGROS VALVES
Let it flow

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. Suitable for horizontal and vertical applications.
Up to 220°C. A really 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

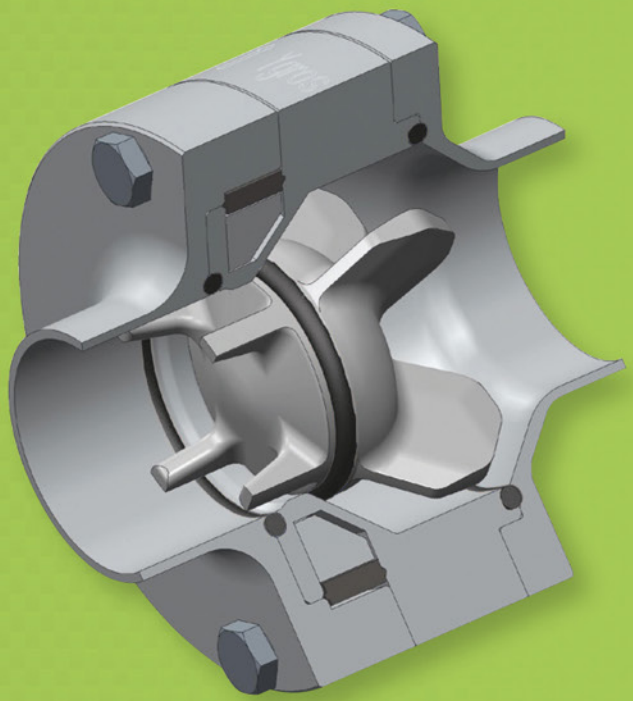
- Biotechnology
- Pharmaceutical
- Chemical Industry
- Dairy
- Food
- Cosmetic
- Beverage

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

Safe closing:
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

Longer valve life

Springless check valves. Magnetic Technology

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 keep 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)
End connection options	WELDING (DIN 11850 / DIN 11851 / ASME BPE / ISO 1127 / SMS) TRI-CLAMP (ASME-BPE / ISO 1127-2852 / SMS-2852 / DIN 32676) THREADED (Female DIN / Male Gas BSP 60° / Female Gas BSP 60°)
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)

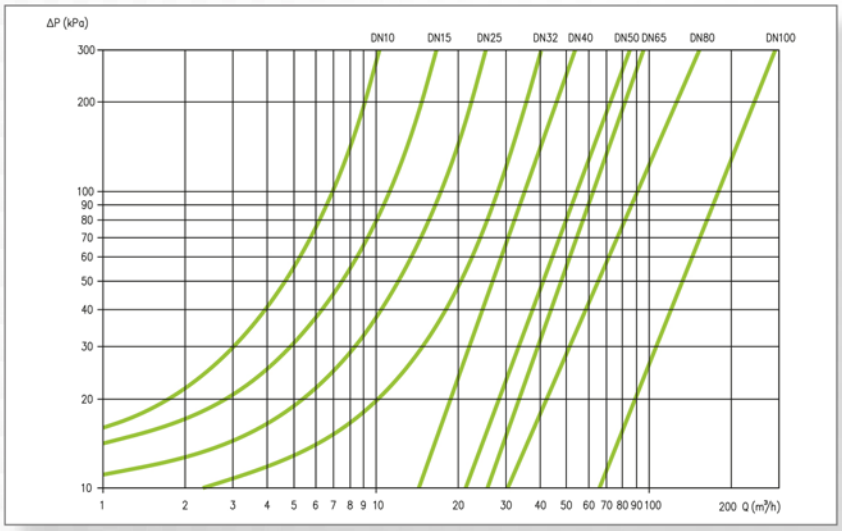
Once opened, the required pressure to keep the shutter fully open is about 10 mbar.

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

Body/Flanges Material
0 = AISI304
1 = AISI 316L / 1.4404 (Standard)
2 = AISI 316LM / 1.4435

Shutter Options
0 = DUPLEX / 1.4462 (Standard)
2 = PVDF
3 = Ring Form (1.4462)
4 = PEEK
5 = PTFE (Ra≤1,2)
6 = Special driven (only for DN10-DN15)

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 (Standard)
V = FKM/Viton
S = VMQ/Silicone
F = FEP
P = PTFE
H = HNBR

E	1	0040	S	S	16	1	O	M	R	E	1

Form
E = EDF

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

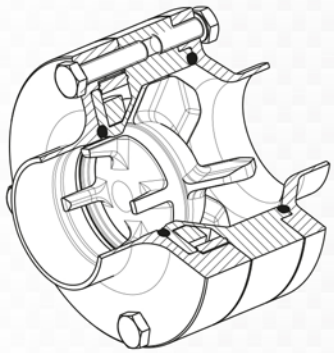
Dimension
DN = 0010 (for DN10)... 0100 (for DN100)
Inches = 01-2 (for ½")... 11-2(for 1-½")

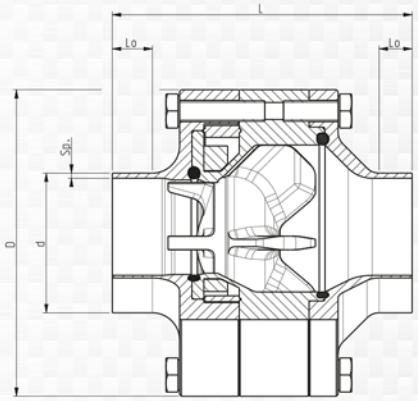
Inlet connection
D = FEMALE DIN
R = WELDING DIN 11850
S = WELDING DIN 11851
C = Tri-Clamp ASME BPE
T = WELDING ASME BPE
I = Tri-Clamp ISO1127
Y = WELDING ISO 1127
M = Tri-Clamp SMS
N = WELDING SMS
B = MALE GAS BSP
F = FEMALE GAS BSP
A = Tri-Clamp DIN 32676

Outlet connection
D = FEMALE DIN
R = WELDING DIN 11850
S = WELDING DIN 11851
C = Tri-Clamp ASME BPE
T = WELDING ASME BPE
I = Tri-Clamp ISO1127
Y = WELDING ISO 1127
M = Tri-Clamp SMS
N = WELDING SMS
B = MALE GAS BSP
F = FEMALE GAS BSP
A = Tri-Clamp DIN 32676

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

Custom materials, finishings and further modifications are available on request





> DIN 11850 (DIN 11866 Reihe A) - R

Dimensions	DN6	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
L (mm)	51	51	51	60	72	72	88	88	98	115	140	150
D (mm)	41	41	41	54	72	72	90	90	104	130	153	173
d (mm)	8	10	13	19	23	29	35	41	53	70	85	105
Sp (mm)	1	1	1,5	1,5	1,5	1,5	1,5	1,5	1,5	2	2	2,5
Lo (mm)	6	6	6	6	5	5	5	10	10	10	8	10
Weight (kg)	0,3	0,3	0,3	0,6	0,8	1	1,8	1,8	2,7	5,3	9	12

> DIN 11851 - S

Dimensions	DN6	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
L (mm)	51	51	51	60	72	72	88	88	98	115	140	150
D (mm)	41	41	41	54	72	72	90	90	104	130	153	173
d (mm)	8	10	12	18	22	28	34	40	52	70	85	105
Sp (mm)	1	1	1,5	1,5	1,5	1,5	1,5	1,5	1,5	2	2	2,5
Lo (mm)	6	6	6	6	5	5	5	10	10	10	8	10
Weight (kg)	0,3	0,3	0,3	0,6	0,8	1	1,8	1,8	2,7	5,3	9	12

> ASME BPE (DIN 11866 Reihe C) - T

Dimensions	½"	¾"	1"	1-½"	2"	2-½"	3"	4"
L (mm)	51	60	72	88	98	115	140	150
D (mm)	41	54	72	90	104	130	153	173
d (mm)	12,7	19,05	25,4	38,1	50,8	63,5	76,2	101,6
Sp (mm)	1,65	1,65	1,65	1,65	1,65	1,65	1,65	2,11
Lo (mm)	7	6	9	10	10	5	8	9
Weight (kg)	0,3	0,6	1,3	1,8	2,7	5,2	9	11,7

> ISO 1127 (DIN 11866 Reihe B) - Y

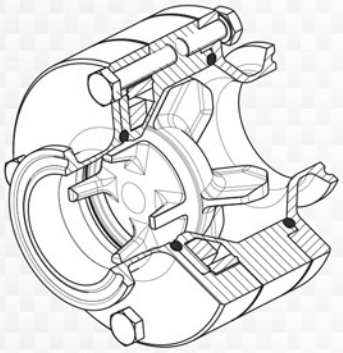
Dimensions	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
L (mm)	51	60	60	72	88	88	98	119	140	140	150
D (mm)	41	54	54	72	90	90	104	130	153	153	173
d (mm)	13,5	17,2	21,3	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3
Sp (mm)	1,6	1,6	1,6	1,6	2	2	2	2	2	2,3	2,3
Lo (mm)	7	6	6	10	7	8	8	5	7	8	13
Weight (kg)	0,3	0,6	0,8	1	1,8	2,3	2,7	5,4	9	9,5	12

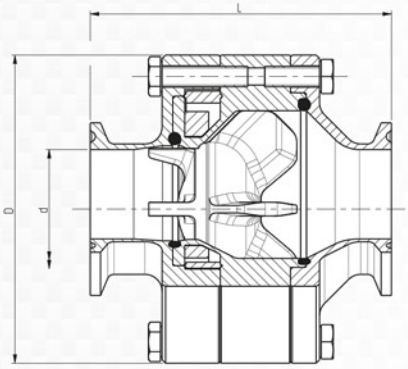
> SMS - N

Dimensions	DN25	DN38	DN51	DN63,5	DN76	DN104
L (mm)	72	88	98	115	140	150
D (mm)	72	90	104	130	153	173
d (mm)	25	38	51	63,5	76,1	101,6
Sp (mm)	1,2	1,2	1,2	1,65	1,6	2
Lo (mm)	6	12	10	5	8	10
Weight (kg)	1	1,8	2,7	5,4	9	12

We reserve the right to change specifications at any time without prior notice

> TRI-CLAMP ENDS





> ASME BPE - C

Dimensions	½"	¾"	1"	1-½"	2"	2-½"	3"	4"
L (mm)	61	70	77	88	98	118	145	155
D (mm)	41	54	72	90	104	130	153	173
d (mm)	9,4	15,7	22,1	34,8	47,5	60,2	72,9	97,4
Weight (kg)	0,3	0,6	1,2	1,8	3	5,2	9,5	12,2

> ISO 1127 seal 2852 - I

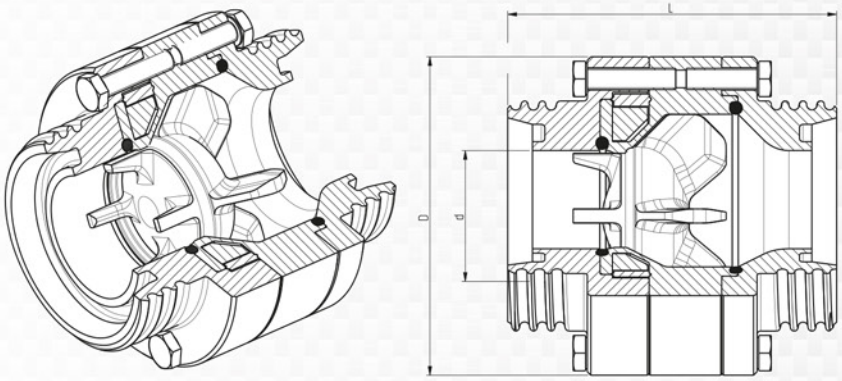
Dimensions	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
L (mm)	51	64	64	77	85,5	88	98	119	140	140	150
D (mm)	41	54	54	72	90	90	104	130	153	153	173
d (mm)	10,3	14	18,1	23,7	29,7	38,4	44,3	56,3	72,1	84,3	109,7
Weight (kg)	0,3	0,6	0,8	1	1,8	2,3	2,7	5,4	9	9,5	12

> SMS seal 2852 - M

Dimensions	DN25	DN38	DN51	DN63,5	DN76	DN104
L (mm)	77	88	98	118	145	155
D (mm)	72	90	104	130	153	173
d (mm)	22,5	35,6	48,6	60,5	72,8	100
Weight (kg)	1,2	1,8	3	5,2	9,5	12,2

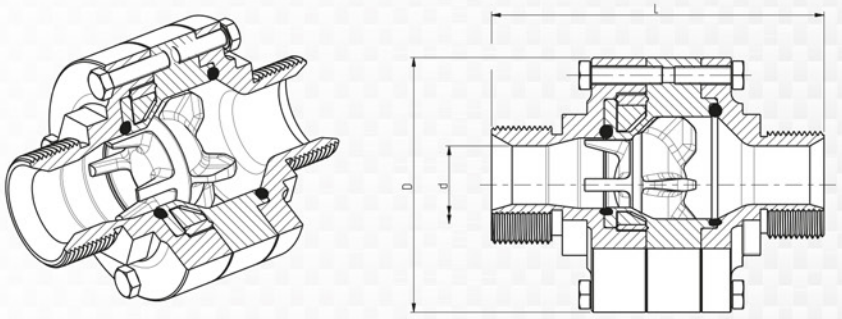
> DIN 32676 - A

Dimensions	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
L (mm)	64	64	77	77	85,5	88	98	118	145	155
D (mm)	54	54	72	72	90	90	104	130	153	173
d (mm)	10	16	20	26	32	38	50	66	81	100
Weight (kg)	0,6	0,6	1,1	1,2	1,6	1,8	3	5,2	9,5	12,2



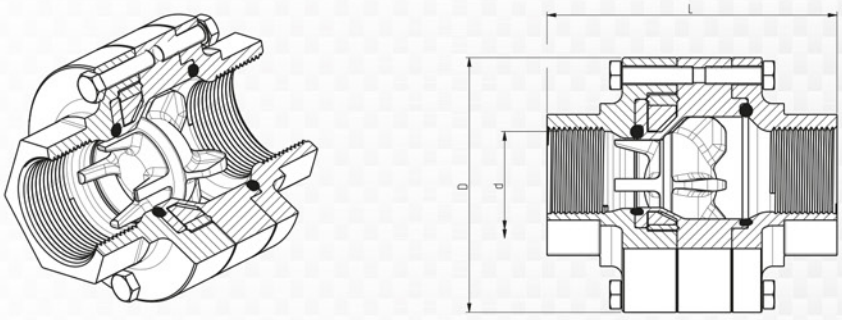
> FEMALE DIN - D

Dimensions	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
L (mm)	51	72	79,5	79,5	93	93	102	126,5	150	160
D (mm)	41	54	72	72	90	90	104	130	153	173
d (mm)	10	16	20,5	26,5	32	37	50,5	66	80	100
Weight (kg)	0,5	0,7	1,3	1,4	2	2,4	3,3	6	10	12,2



> MALE GAS BSP 60° - B

Dimensions	½"	¾"	1"	1-½"	2"	2-½"	3"	4"
L (mm)	61	70	77	88	98	118	145	155
D (mm)	41	54	72	90	105	130	153	173
d (mm)	9,4	15,7	22,1	34,8	47,5	60,2	72,9	97
Weight (kg)	0,3	0,6	1,4	2,3	3,3	6,3	9,5	12,2



> FEMALE GAS BSP 60° - F

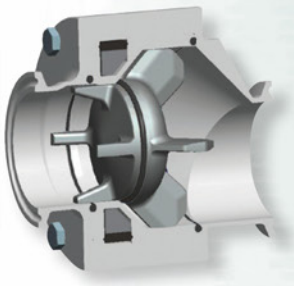
Dimensions	½"	¾"	1"	1-½"	2"	2-½"	3"	4"
L (mm)	70	82	82	88	98	118	145	155
D (mm)	54	72	72	90	105	130	153	173
Thread	½"	¾"	1"	1-½"	2"	2-½"	3"	4"
Weight (kg)	0,6	1	1,4	2,3	3,3	6,3	9,5	12,2

We reserve the right to change specifications at any time without prior notice

EDF is also available in the following standards

Self draining **ECCENTRIC FLANGED**

with **RING SHUTTER**
(for operating at very high cycle rates)



Check out all YGROS SPRINGLESS valve solutions!

3-A

The 3-A authorized
version of EDF

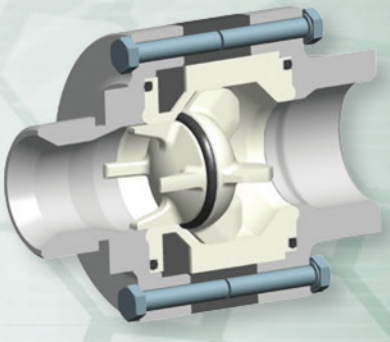
58-01

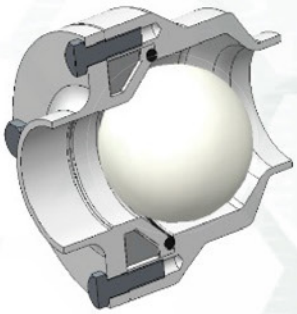
WAFER

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

CH

High resistance to acids
and corrosive chemicals, through full or partial
PVDF or PTFE construction





PH

Full or partial PEEK construction,
for high purity applications.
The pharma version of EDF

YGROS® VALVES *Let it flow*

Carollo® GRUPPI MECCANICI MACCHINE ALIMENTARI

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