



Y GROS

VALVES

Via Pettinà Luigi, 24 - 36010 Zanè (VI) - Italy

Let it flow



GROS[®]
VALVES
Let it flow



COMPANY



It all began in 2004, when our engineering team was tasked with solving a specific plant application and developed a unique concept: a springless check valve.

This innovation led to the creation of a patented technology capable of delivering a **simple, maintenance-free one-way valve**, made possible by the complete absence of traditional internal components.

The company behind the invention, **Carollo Srl**, an engineering firm with **over 50 years of experience in the food, chemical, and pharmaceutical sectors**, continued to evolve the project following the success of the first prototypes.

This evolution led to the development of several product lines, including **YGROS EDF, 3-A, WAFER, PHARMABALL, AGGROBALL, YEV and YSV**.

Through this revolutionary concept, Carollo Srl has brought the future into the world of process engineering, setting new, unmatched standards of hygiene, durability, and efficiency.

With this clear vision, the company founded the **YGROS VALVES** division in 2010.

It quickly gained market recognition, standing out thanks to its **patented magnetic technology**, an innovation that has driven consistent growth, strong international demand, and industry awards. Motivated by these results and committed to continuous improvement, our engineering team continues to push the boundaries of research and development, delivering new solutions and expanding our range of applications.

That's why you'll keep hearing about us.

THE ADVANTAGES OF CHOOSING OUR VALVES

- *NO BREAKAGE*
- *NO MAINTENANCE*
- *NO PRESSURE LOSS*
- *NO CORROSION*
- *NO FLOW OBSTRUCTION*
- *NO STAGNATION POINTS*

*Innovation is
our strength*

**THE INNOVATIVE
PATENTED
MAGNETIC
TECHNOLOGY.**

OUR VALVES

01 EDF •

02 EDF - 3A •

03 YEV •

04 YSV •

05 YSV - 3A •

06 PHARMABALL •

07 AGGROBALL •

08 WAFER •

Valve EDF*

* Self-draining eccentric version available on request.
Suitable for horizontal installation.



EDF: Maximum hygiene with no periodic maintenance required. Tight sealing is guaranteed in all installation positions, including vertical downward flow.

The patented YGROS technology sets new standards in process engineering, thanks to its magnetic principle that replaces the function of the traditional spring.

Suitable for both fluids and gases.

Applications: Pharmaceutical | Chemical | Cosmetic | Food | Beverage



Resistant up to 220°C.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. There are no springs, discs or other components which could contaminate it, this means no contamination and no stagnation point.

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal, vertical up and down positions.

Energy saving:

Its innovative working principle and design allow for a smooth flow, minimising pressure drop.

Laminar flow:

No turbulence.

Maintenance:

Free.

Longer valve life:

Thanks to high chemical resistance of the materials.

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS EDF valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS EDF valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once opened, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

TECHNICAL DATA

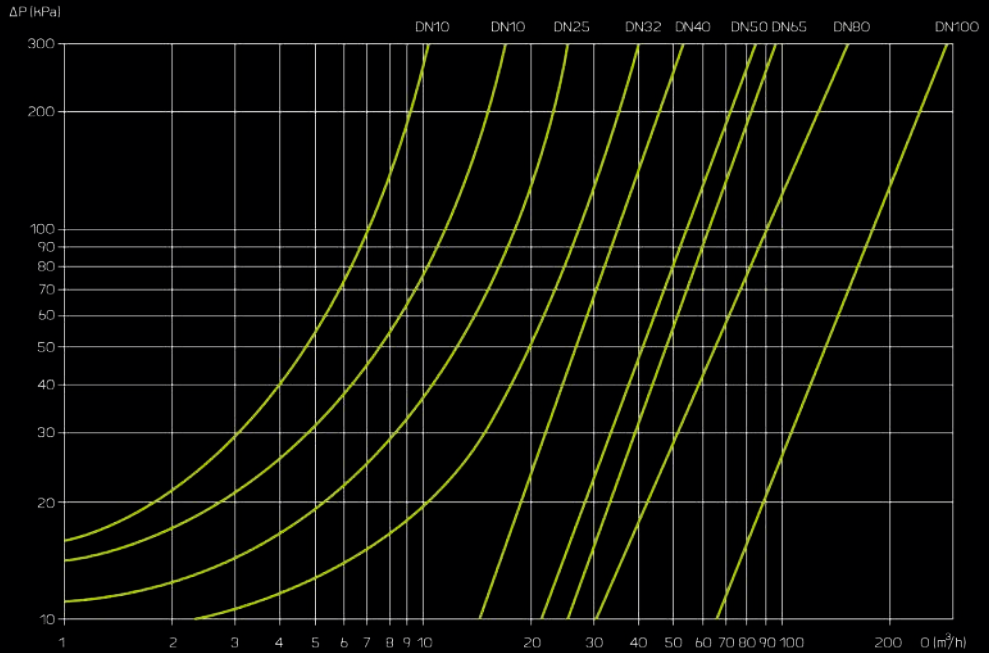
Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex) – 1.4410 (F53)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, NBR, HNBR, VMQ (Silicone), FKM (Viton) FEP, PTFE
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.8$ (standard) up to Ra $\mu\text{m} \leq 0.4$ electropolished and passivated (optional) External: Ra $\mu\text{m} \leq 3.2$ (standard) up to Ra $\mu\text{m} \leq 0.4$ electropolished and passivated (optional)
Dimensions	DN6 - DN 200 1/2" - 8"
End connection options	WELDING: DIN 11850 / DIN 11851 / ASME BPE / ISO 1127 / SMS TRI-CLAMP: ASME-BPE / ISO 1127-2852 / SMS-2852 / DIN 3267b THREADED: DIN 405 Female / BSP 60° Male / BSP 60° Female
Temperature range	-20°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: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / ATEX / PED / EC 1935/2004

All product contact materials and seals are fully traceable

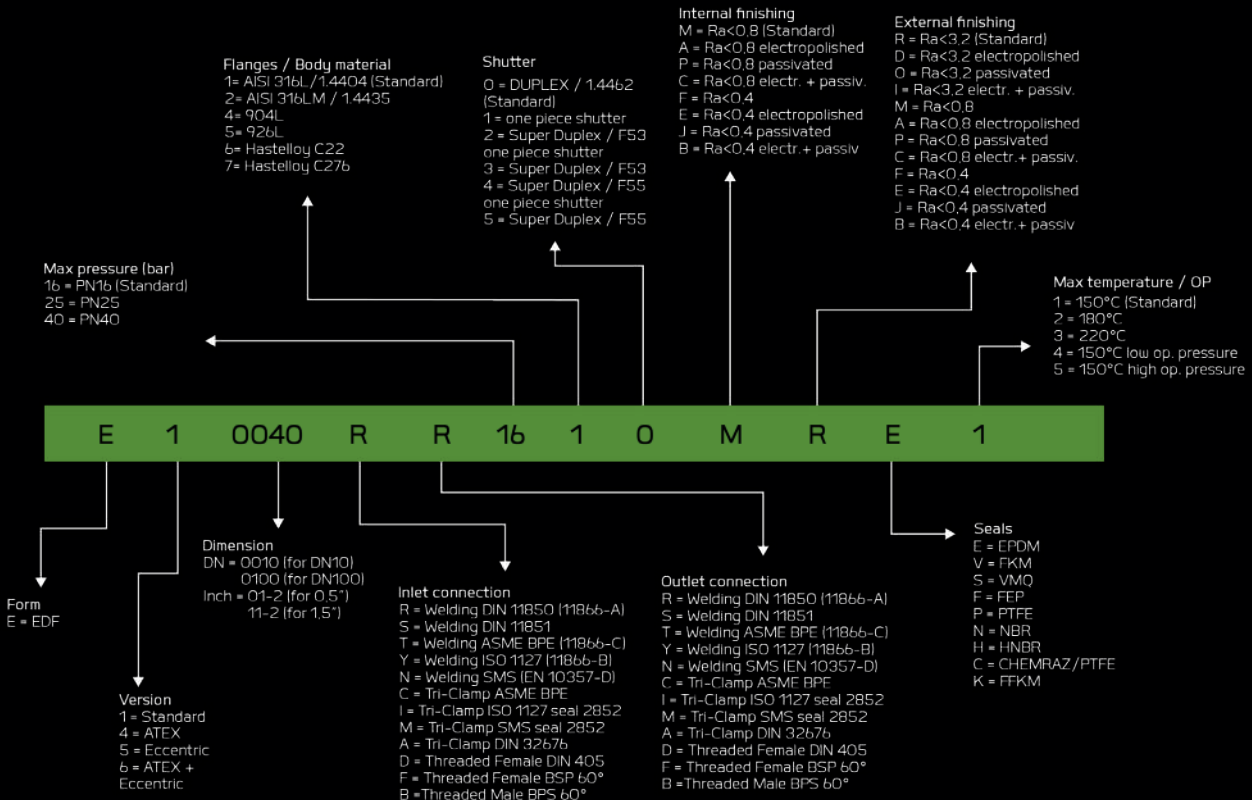
Once opened, the required pressure to keep the shutter fully open is about 10 mbar.

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

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



ORDERING INFO EDF



Customizable materials, finishings and further configurations available on request.

Valve

EDF 3-A



EDF 3A: Developed specifically for the U.S. market and certified by the 3-A Sanitary Standards Institute.

It guarantees maximum hygiene with no need of periodic maintenance, reliable sealing in all installation positions, including vertical flow downward.

Suitable for use with both liquids and steam.

Applications: Pharmaceutical | Chemical | Cosmetic | Food | Beverage



Resistant up to **220°C**.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. There are no springs, discs or other components which could contaminate it, this means no contamination and no stagnation point.

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal, vertical up and down positions.

Energy saving:

Its innovative working principle and design allow for a smooth flow, minimising pressure drop.

Laminar flow:

No turbulence.

Maintenance:

Free.

Longer valve life:

Thanks to high chemical resistance of the materials.

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS EDF 3-A valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS EDF 3-A valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

TECHNICAL DATA

Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex) – 1.4410 (F53)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, VMQ (Silicone), FKM (Viton)
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.8$ (standard) up to Ra $\mu\text{m} \leq 0.4$ electropolished and passivated (optional) External: Ra $\mu\text{m} \leq 3.2$ (standard) up to Ra $\mu\text{m} \leq 0.4$ electropolished and passivated (optional)
Dimensions	DN 10 - DN 200 1/2" - 8"
End connection options	WELDING: DIN 11850 / ASME BPE TRI-CLAMP: ASME BPE
Temperature range	-20°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: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / 3-A / ATEX / PED / EC 1935/2004

All product contact materials and seals are fully traceable

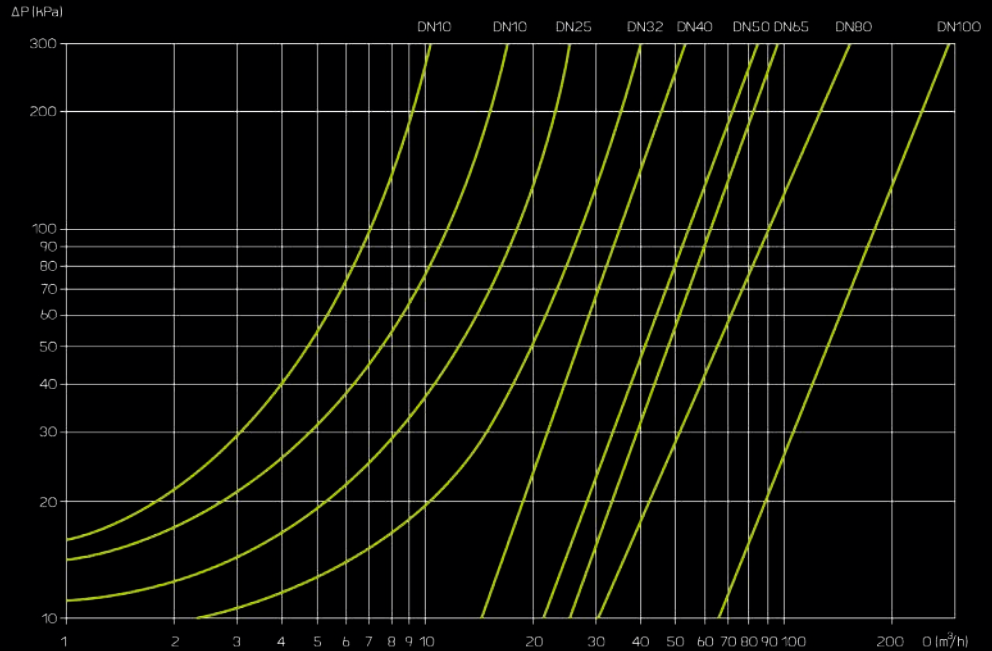
VALVE EDF 3-A

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

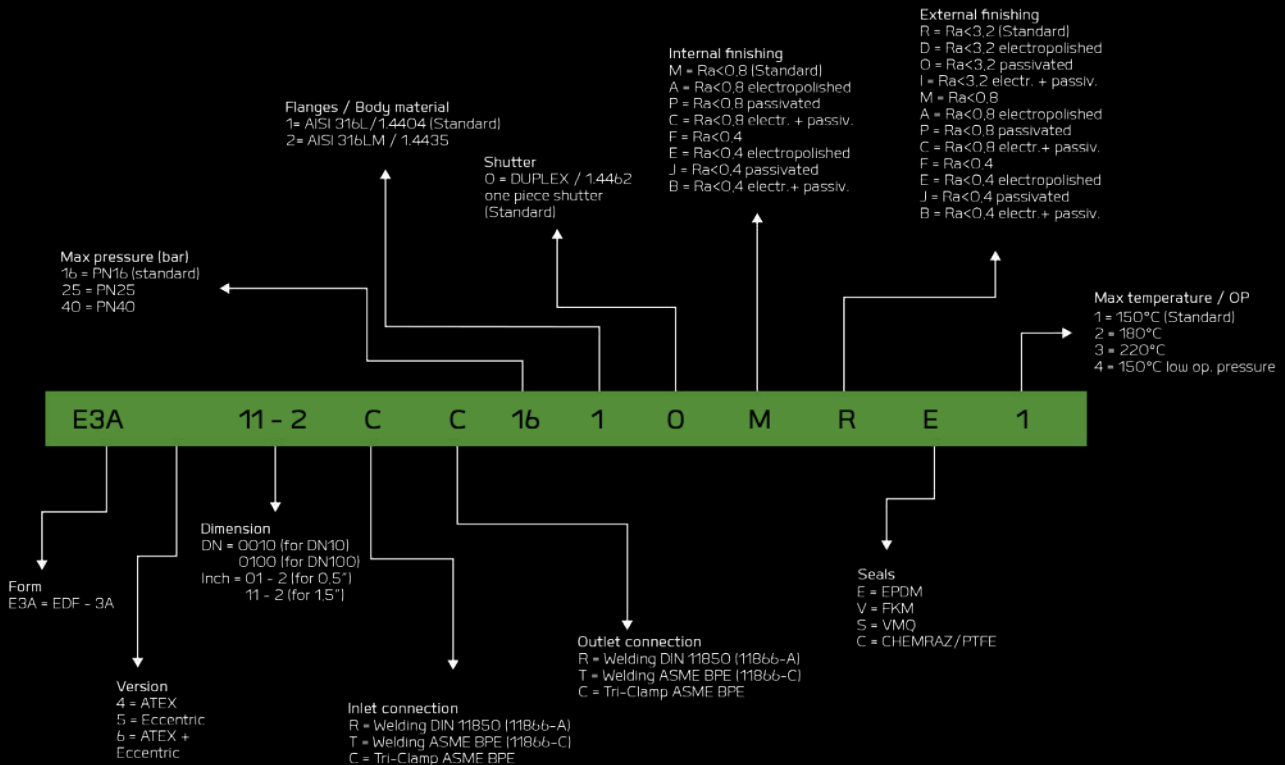
INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines		30/50 mbar
VERTICAL lines	Top to bottom	27/45 mbar
VERTICAL lines	Bottom to top	33/55 mbar

PRESSURE DROP CHART

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



ORDERING INFO EDF 3-A



Customizable materials, finishings and further configurations available on request.

Valve YEV

* 3A version available on request



YEV: The most essential non-return valve in the Ygros range: patented, hygienic, and reliable.

Despite its simplicity, YGROS YEV maintains all the key features required for hygienic applications, making it a smart and efficient choice for modern process systems.

Applications: Food | Beverage



Resistant up to **150°C**.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. There are no springs, discs or other components which could contaminate it.

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal, vertical up and down positions.

Energy saving:

Its innovative working principle and design allow for a smooth flow, minimising pressure drop.

Laminar flow:

No turbulence.

Maintenance:

Free.

Longer valve life:

Thanks to high chemical resistance of the materials.

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS YEV valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS YEV valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

TECHNICAL DATA

Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, VMQ (Silicone), FKM (Viton)
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.8$ External: Ra $\mu\text{m} \leq 3.2$
Dimensions	DN 15 - DN 100 3/4" - 4"
End connection options	WELDING: DIN 11850; ASME BPE TRI-CLAMP: ASME BPE
Temperature range	-20°C / +150°C
Operating pressure	PN16 (standard).
Media	Food & Beverage, Liquid
Certifications (on request)	MATERIAL: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / PED / EC 1935/ 2004 /3A

All product contact materials and seals are fully traceable

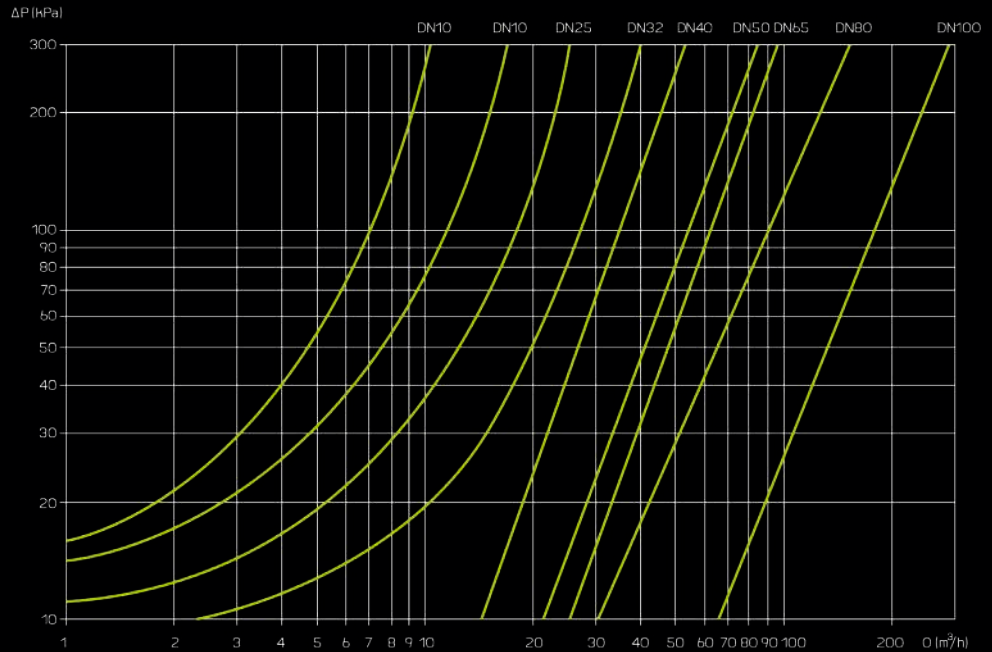
VALVE YEV

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

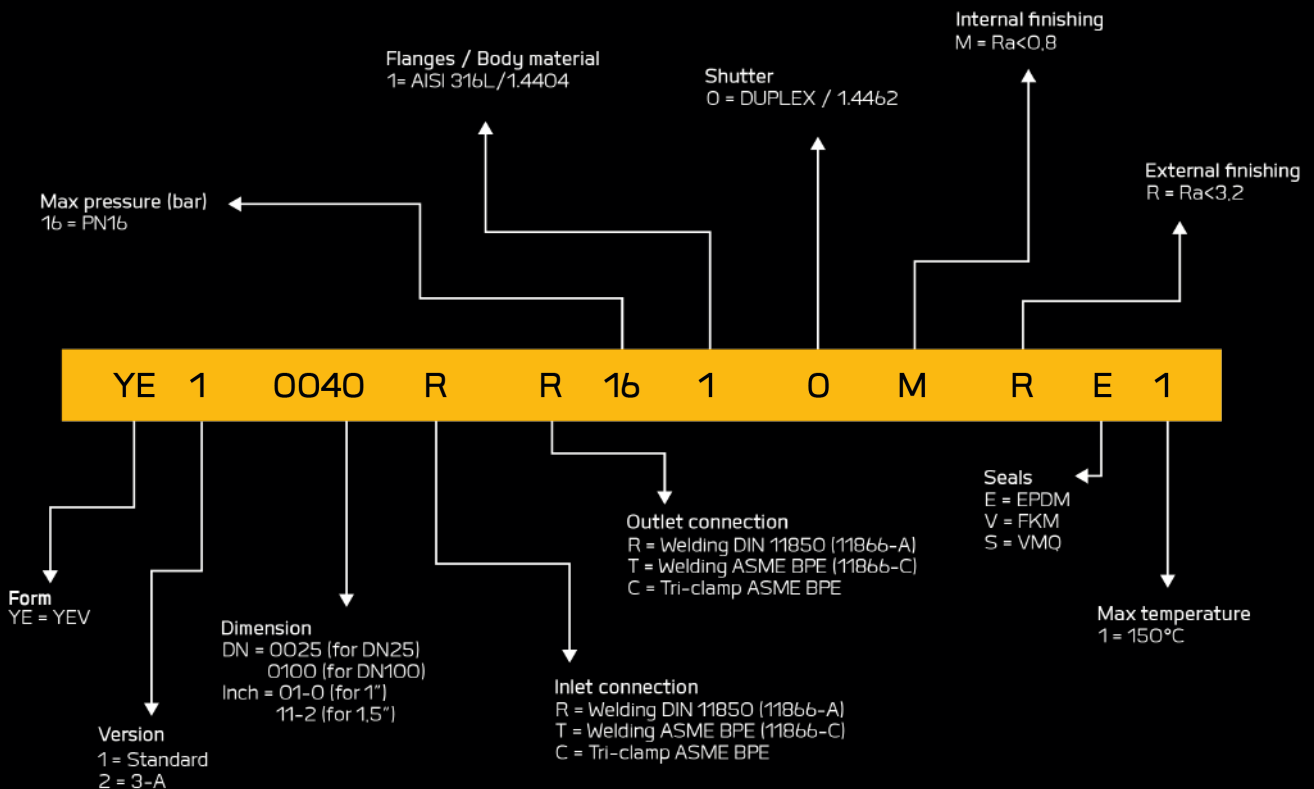
INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines	—————	30/50 mbar
VERTICAL lines	Top to bottom	27/45 mbar
VERTICAL lines	Bottom to top	33/55 mbar

PRESSURE DROP CHART

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



ORDERING INFO YEV



Valve YSV*

* Self-draining eccentric version available on request.
Suitable for horizontal installation.



YSV: The extractable check valve designed for easy maintenance.

With its specially engineered design, YGROS YSV is the ideal solution for systems that require frequent inspections and quick servicing.

Applications: Food | Beverage | Cosmetics | Dairy



Resistant up to 220°C.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. There are no springs, discs or other components which could contaminate it, this means no contamination and no stagnation point.

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal, vertical up and down positions.

Energy saving:

Its innovative working principle and design allow for a smooth flow, minimising pressure drop.

Laminar flow:

No turbulence.

Maintenance:

Free.

Longer valve life:

Thanks to high chemical resistance of the materials.

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS YSV valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS YSV valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

TECHNICAL DATA

Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex) – 1.4410 (F53)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, VMQ (Silicone), FKM (Viton), PTFE, FEP, HNBR, NBR
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.8$ up to Ra. $\mu\text{m} \leq 0.4$ electropolished and passivated (optional) External: Ra $\mu\text{m} \leq 3.2$ up to Ra. $\mu\text{m} \leq 0.4$ electropolished and passivated (optional)
Dimensions	DN 25 - DN 125 1" - 5"
End connection options	WELDING: DIN 11850; ASME BPE; SMS.
Temperature range	-20°C / +150°C (Standard). Up to +220°C (optional)
Operating pressure	PN16 (standard) - PN40
Media	Food & Beverage, Liquid
Certifications (on request)	MATERIAL: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / PED / EC 1935 / 2004 / ATEX

All product contact materials and seals are fully traceable

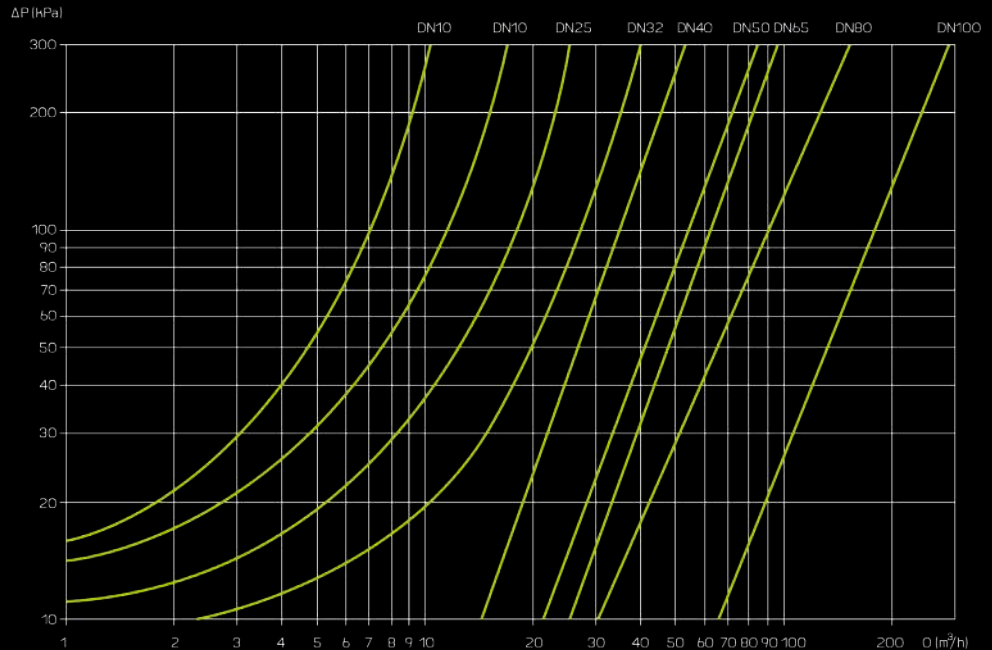
VALVE YSV

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

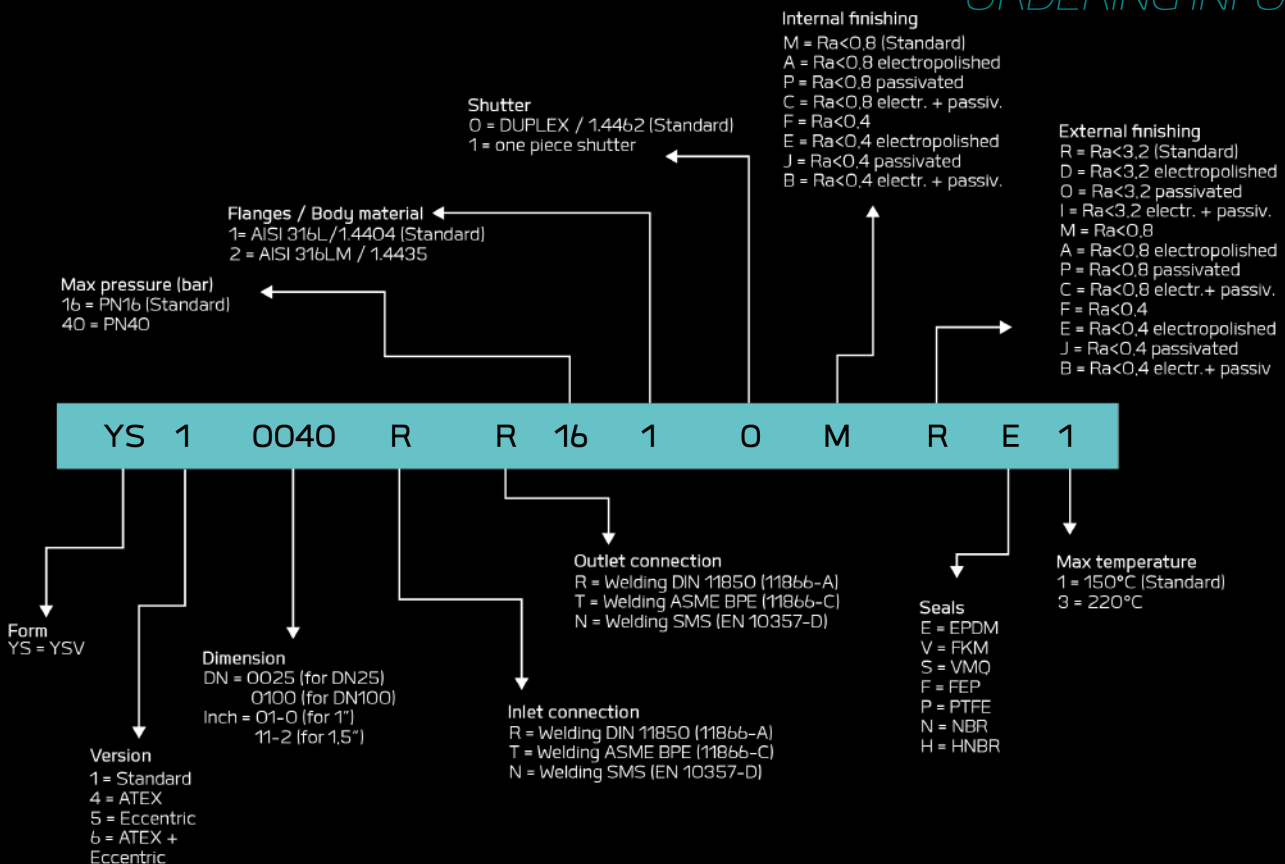
INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines	—————	30/50 mbar
VERTICAL lines	Top to bottom	27/45 mbar
VERTICAL lines	Bottom to top	33/55 mbar

PRESSURE DROP CHART

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



ORDERING INFO YSV



Customizable materials, finishings and further configurations available on request.

Valve

YSV 3-A



YSV 3-A: Developed specifically for the U.S. market and certified by the 3-A Sanitary Standards Institute, the YGROS YSV 3-A extractable check valve is engineered for effortless maintenance. Thanks to its specialized design, it is the ideal solution for systems requiring frequent inspections and quick, efficient servicing.

Applications: Food | Beverage | Cosmetics | Dairy



Resistant up to 220°C.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. There are no springs, discs or other components which could contaminate it, this means no contamination and no stagnation point.

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal, vertical up and down positions.

Energy saving:

Its innovative working principle and design allow for a smooth flow, minimising pressure drop.

Laminar flow:

No turbulence.

Maintenance:

Free.

Longer valve life:

Thanks to high chemical resistance of the materials.

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS YSV 3-A valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS YSV 3-A valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

TECHNICAL DATA

Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex) – 1.4410 (F53)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, VMQ (Silicone), FKM (Viton)
Surface finishes	Internal: Ra $\mu\text{m} \leq 0.8$ up to Ra. $\mu\text{m} \leq 0.4$ electropolished and passivated (optional) External: Ra $\mu\text{m} \leq 3.2$ up to Ra. $\mu\text{m} \leq 0.4$ electropolished and passivated (optional)
Dimensions	DN 25 - DN 125 1" - 5"
End connection options	WELDING: DIN 11850; ASME BPE;
Temperature range	-20°C / +150°C (Standard). Up to +220°C (optional)
Operating pressure	PN16 (standard) - PN40
Media	Food & Beverage, Liquid
Certifications (on request)	MATERIAL: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / PED / EC 1935 / 2004 / 3A / ATEX

All product contact materials and seals are fully traceable

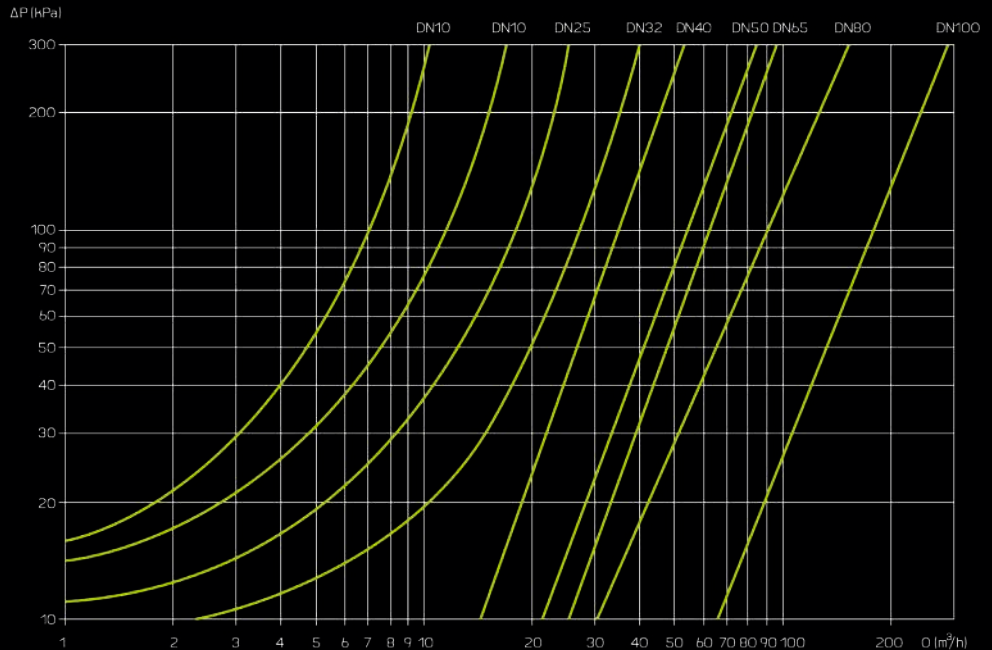
VALVE YSV 3-A

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

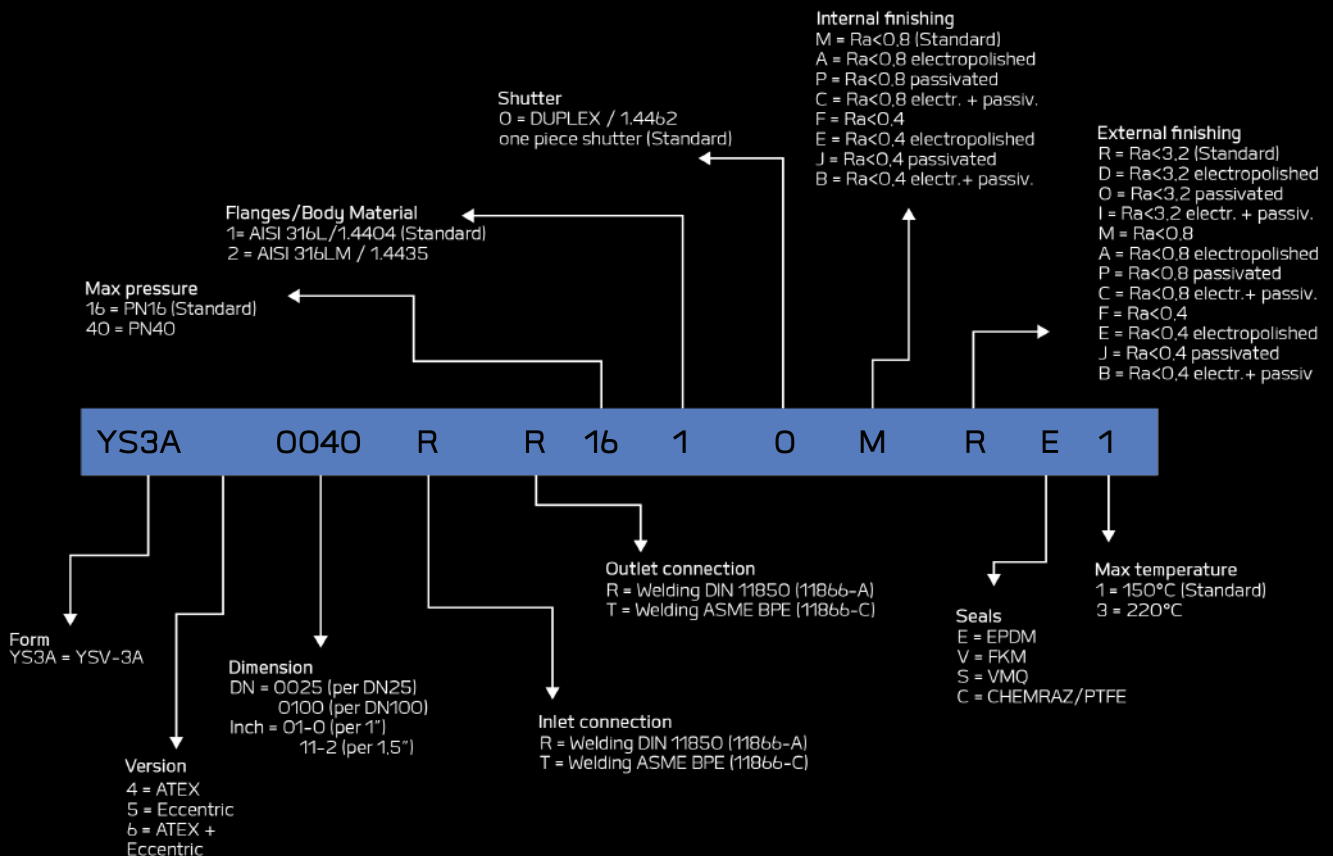
INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines	—————	30/50 mbar
VERTICAL lines	Top to bottom	27/45 mbar
VERTICAL lines	Bottom to top	33/55 mbar

PRESSURE DROP CHART

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



ORDERING INFO YSV 3-A



Customizable materials, finishings and further configurations available on request.

Valve

PHARMABALL



PHARMABALL: Engineered with a unique hygienic design, exceptional surface finishes, and high-quality materials, this valve performs reliably with high-viscosity products.

Applications: Pharmaceutical | Cosmetics



Resistant up to **150°C**.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. No stagnation points, no springs or other intermediate components which could contaminate it. High-quality surface finishes and materials such as 1.4435 (AISI 316 LM ferrite <1%).

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal and vertical up positions.

Energy saving:

Its 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:

Thanks to particularly resistant materials such as 1.4435 (body and flange) and PVDF (shutter).

VALVE PHARMABALL

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS PHARMABALL valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS PHARMABALL valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

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) Passivation on request (optional) External: Ra $\mu\text{m} \leq 1.2$ (electropolished) Passivation on request (optional)
Dimensions	DN 15 - DN 100 3/4" - 4"
End connection options	WELDING DIN 11850 (DIN 11866 Reihe A); ASME BPE (DIN 11866 Reihe C) TRI-CLAMP: ASME-BPE
Temperature range	-20°C/+150°C
Operating pressure	PN16 (standard).
Media	Fluids with high viscosity
Certifications (on request)	MATERIAL: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / ATEX / PED / EC 1935/2004

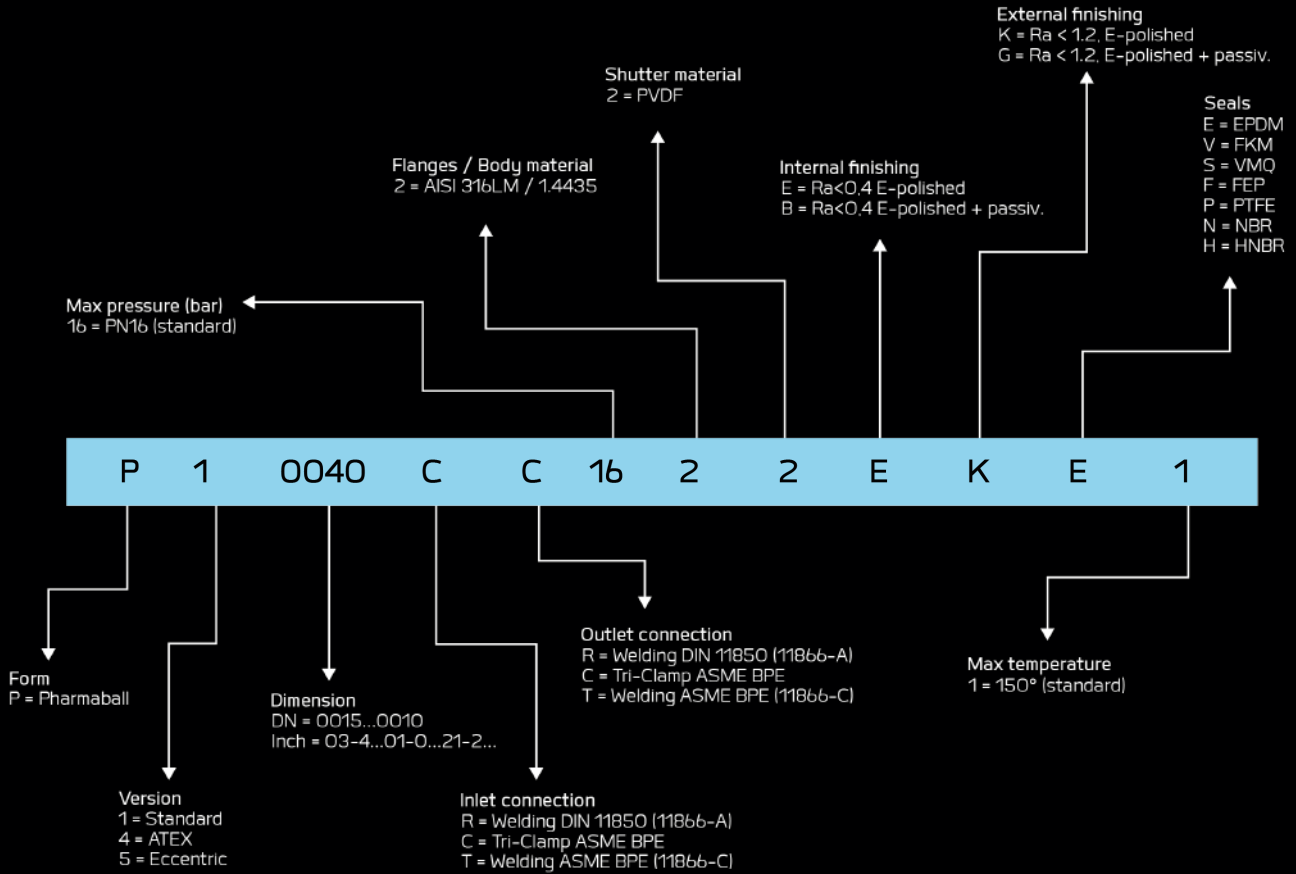
All product contact materials and seals are fully traceable

VALVE PHARMABALL

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

INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines	—————	20/40 mbar
VERTICAL lines	Bottom to top	30/50 mbar

ORDERING INFO PHARMABALL



Valve **AGGROBALL**



AGGROBALL: Engineered specifically for the safe handling of aggressive acids and fluids with high viscosity, YGROS AGGROBALL offers exceptional durability, making it ideal for the most demanding chemical and food industry applications.

Applications: Chemical | Food



Resistant up to **150°C**.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

Maximum hygiene:

Only the shutter comes into contact with the product. There are no springs, discs or other components which could contaminate it, this means no contamination and no stagnation point. High quality materials such as 1.4435 (AISI 316LM with ferrite content < 1%).

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal and vertical up positions.

Energy saving:

Its innovative working principle and design allow for a smooth flow, minimising pressure drop.

Laminar flow:

No turbulence.

Maintenance:

Free.

High chemical resistance and longer valve life:

Derived from the use of particularly resistant materials such as 1.4435 (body and flanges) and PVDF (shutter).

VALVE AGGROBALL

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS AGGROBALL valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS AGGROBALL valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

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 $\mu\text{m} \leq 3.2$
Dimensions	DN 15 - DN 100 3/4" - 4"
End connection options	WELDING: DIN 11850 (DIN 11866 Reihe A); ASME BPE (DIN 11866 Reihe C) TRI-CLAMP: ASME-BPE
Temperature range	-20°C / +150°C
Operating pressure	PN16 (standard).
Media	Aggressive acids and fluids with high viscosity
Certifications (on request)	MATERIAL: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / ATEX / PED / EC 1935/2004

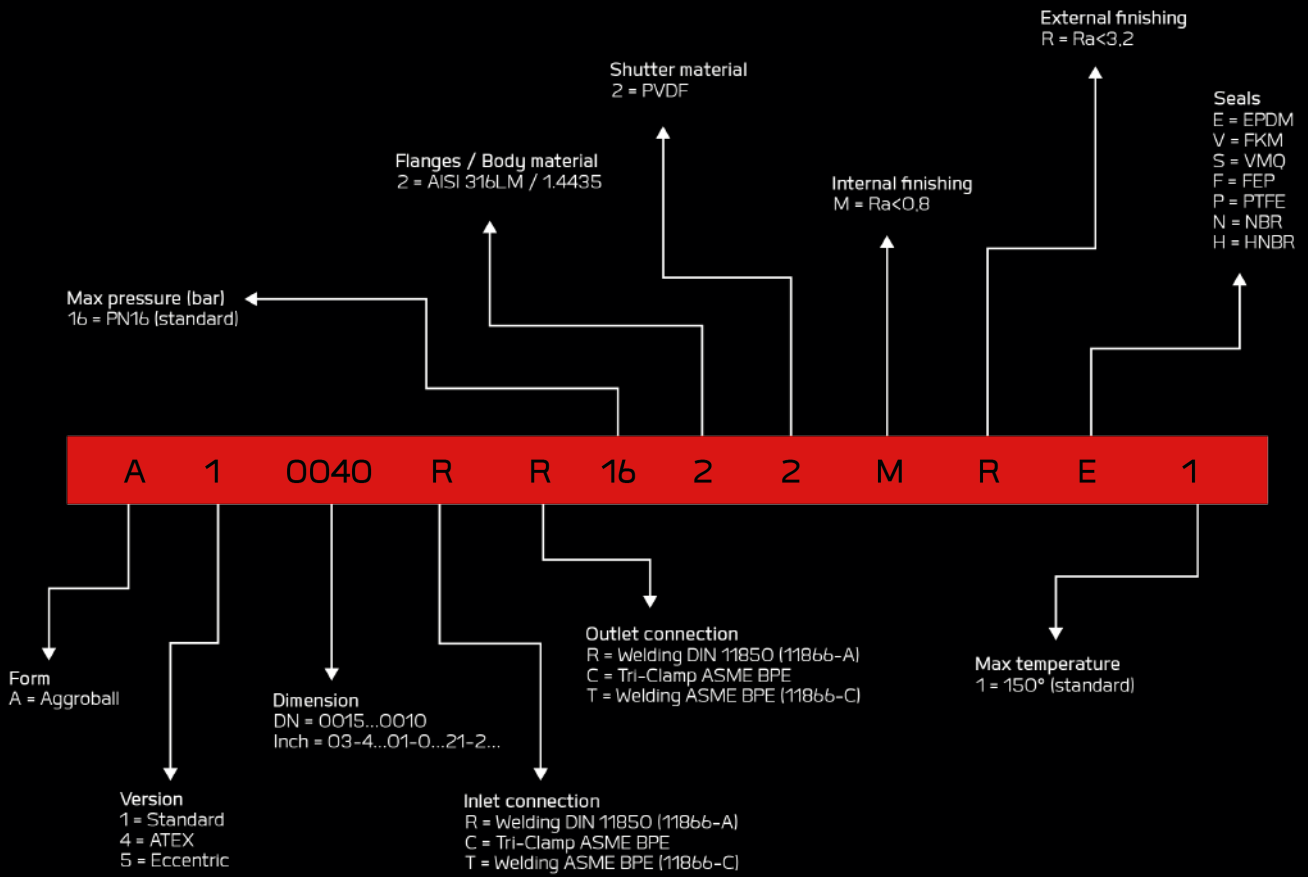
All product contact materials and seals are fully traceable

VALVE AGGROBALL

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

INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines	—————	20/40 mbar
VERTICAL lines	Bottom to top	30/50 mbar

ORDERING INFO AGGROBALL



Valve **WAFER**



WAFER: smart and versatile solution engineered for vacuum, gas, and water treatment systems. Suitable for installation in horizontal, vertical upward, and vertical downward positions. For fluids, gases and steam.



Resistant up to **220°C**.



No more springs that can break or misfire



No flow obstruction components



No stagnation points

BENEFITS AT A GLANCE

No chatter:

This innovative design principle is especially advantageous for systems handling compressible fluids (gases) or operating at low pressure. The YGROS WAFER remains open with a minimal pressure differential.

High chemical resistance /longer valve life:

Due to 1.4404 (AISI 316 L) and 1.4462 (Duplex).

Safe closing:

Ensured by patented magnetic principle.

Any installation position possible:

It can be installed in horizontal, vertical up and down positions.

Energy saving:

Its operating principle and innovative design allow a smooth and free flow (laminar flow), thus minimising turbulence and pressure losses.

Maintenance:

Free.

VALVE WAFER

YGROS MAGNETIC PRINCIPLE

The main operational difference between a spring-loaded check valve and the innovative YGROS WAFER valve lies in flow resistance. A conventional check valve, even when fully open, imposes significant resistance because the compressed spring continuously pushes the shutter against the flow with considerable force.

In YGROS WAFER valve, magnets integrated into the valve body keep the shutter in the closed position. The valve opens when the inlet pressure exceeds the magnetic force. Once open, the shutter moves away from the magnet, resulting in reduced attraction to the seat and significantly lower resistance to flow, which means minimal pressure drop.

When the forward flow stops, the magnetic force pulls the shutter back into its seat, effectively preventing any reverse flow.

TECHNICAL DATA

Product contact materials	Body & Flanges: Stainless steel 1.4404 (AISI 316L) Shutter: 1.4462 (Duplex)
Non product contact materials	Magnet: Neodymium
Seals material options	EPDM, VMQ (Silicone), FKM (Viton), NBR
Surface finishes	Internal: Ra $\mu\text{m} \leq 1.6$ (standard) External: Ra $\mu\text{m} \leq 3.2$ (standard)
Dimensions	DN 25 - DN 200
Temperature range	-20°C/+150°C (Standard). Up to +220°C (optional)
Operating pressure	PN 6, 10, 16, 25, 40
Media	Liquid, Gas, Steam
Certifications (on request)	MATERIAL: EN10204:2005 – 3.1 / O-RING: FDA - Declaration of conformity / Surface roughness / ATEX / EC 1935/2004

All product contact materials and seals are fully traceable

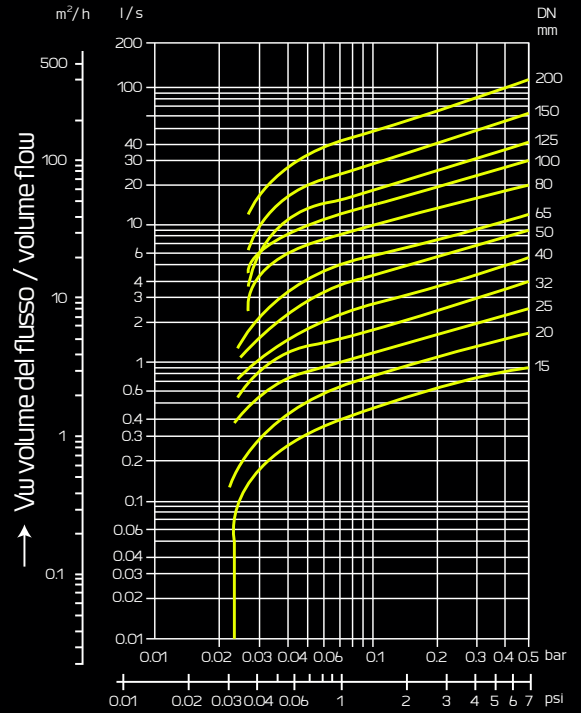
VALVE WAFER

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

INSTALLATION	FLOW DIRECTION	OPENING PRESSURE
HORIZONTAL lines	—————	10/30 mbar
VERTICAL lines	Top to bottom	7/27 mbar
VERTICAL lines	Bottom to top	13/33 mbar

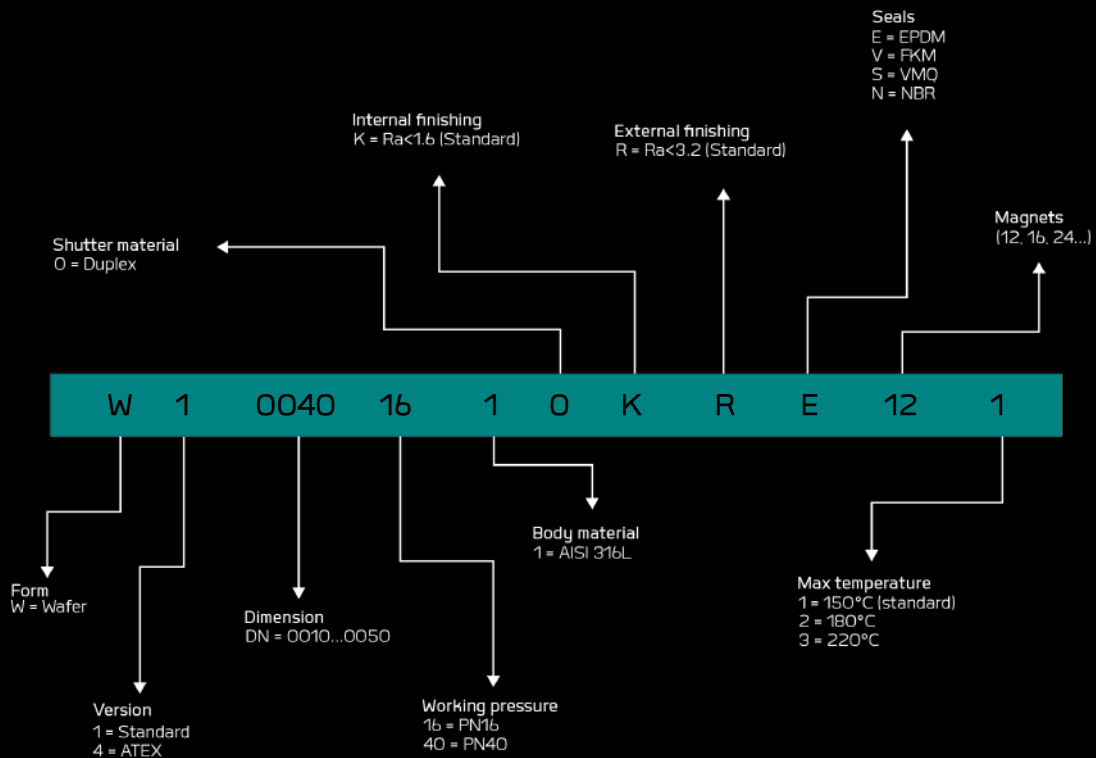
PRESSURE DROP CHART

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



→ Δp pressione differenziale
→ Δp pressure drop

ORDERING INFO WAFER



Customizable materials, finishings and further configurations available on request.

YGROS **CERTIFICATIONS**

Through certifications, we guarantee our customers the fundamental safety and quality requirements of our valves.





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YGROS®
VALVES