



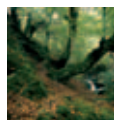
- Acces. presión NETVITC SYSTEM®.
- Acces. presión encolar, PVC
- Acces. presión mixtos PVC
- Bridas y enlaces NETVITC®
- Bridas y Portabridas
- Collarines toma
- Collarines bisagra. PPFV
- Accesorios roscados, P.P.
- Acc. para tubos de polietileno
- Acc. de latón.
- Electrofundición/ Soldadura a tope
- Válv. mariposa.
- Válv. mariposa
- Válvulas de bola
- Válv. de retención SYSTEM®
- Válv. aspiración NETWELL®
- Válv. de retención lineal.SYSTEM/NETVITC®
- Válvula antirretorno de enlace
- Ventosas NET®
- Válvulas de asiento inclinado
- Góteros
- Acces. microirrigación
- Filtros
- Visor de líquidos
- Adhesivo PVC
- Gran Evacuación

- NETVITC SYSTEM® PVC.Pres. fittings.
- PVC.Pres. glued fittings.
- PVC.Pres. glued-thread fittings.
- NETVITC® Flange-coupling.
- Flanges and Adaptors.
- Clamp saddles.
- GFRP. Hinged sleeves.
- P.P. Threaded fittings.
- P.P. Fittings.
- Brass pressure Fittings.
- Electrofusion fittings / Welding fittings
- Butterfly valves.
- Butterfly valves NETVITC SYSTEM®.
- Ball valves.
- SYSTEM® Check valves.
- NETWELL® Aspiration valves.
- Lineal check valve.
- Check (non return) valve with spring.
- NET® Air release valve.
- Angle seat valves.
- Drip irrigation.
- Micro-irrigat. fittings.
- Filter.
- Fluids display socket.
- PVC. Glue and cleaner.
- Drainage.

- Acc. Pression NETVITC SYSTEM®, PVC.
- Acc. Pression à coller, PVC.
- Acc. Pression mixtes PVC.
- Brides et unions NETVITC®.
- Brides et porte brides.
- Colliers de prise.
- Colliers charnière, PPFV.
- Accessoires filetés, P.P.
- Acces. pour tuyauteries P.E.
- Accessoires pression de laiton.
- Accessoires Electrofundición/ Racords à souder bout à bout
- Vanne de retenue lineal.
- Vannes de retenue SYSTEM®.
- Vannes de aspiration NETWELL®.
- Robinets spheriques.
- Vannes à papillon.
- Vannes à papillon NETVITC SYSTEM®.
- Goutte à goutte.
- Vannes de dégagement d'air NET®.
- Vannes à soupape à tête inclinée.
- Acc. Micro irrigation.
- Filtres.
- Voyant de controle.
- Colle et decapant PVC.
- Evacuation.



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HIDROTEN,S.A. EMPRESA COLABORADORA EN LA PROTECCION DEL MEDIO AMBIENTE.
 HIDROTEN,S.A. COLLABORATES IN THE PROTECTION OF THE ENVIRONMENT.



Sistemas y Tecnología del agua/Water System Technology



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2-M EDICIÓN 06-07

NETWELL SYSTEM
Hidroten®
 SISTEMAS Y TECNOLOGÍA DEL AGUA / WATER SYSTEM TECHNOLOGY / SYSTÈME ET TECHNOLOGIE DE L'EAU



- NETVITC SYSTEM® PVC Pres. fittings
- PVC Pres. glued fittings
- PVC Pres. glued-thread fittings
- NETVITC® Flange-coupling
- Flanges and Adaptors
- Clamp saddles
- GFRP Hinged sleeves
- P.P. Threaded fittings
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- Butterfly valves
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- Check (non return) valve with spring
- Vents NET®
- Angle seat valves
- Drip irrigation
- Micro-irrigat. fittings
- Filter
- Fluids display socket
- PVC Glue and cleaner
- Drainage



MANUFACTURED IN THE U.E. FOR HIDROTEN,S.A. UNDER LICENSES AND TECHNOLOGY OF NETWELL SYSTEM®

NET® Air Release Valves

Family 17

Kinetic, Single effect or automatic effect

With this family, Hidroten S.A. incorporates to the market a range of air release valves which offers new solutions in the installation management to the technicians.

and double effect or three-functional.

Range high pressure
Air Release Valves (25 bars)



P.P. PN 16 bar
P.A. PN 25 bar

1/2" - 2"





Generic applications:

-These Air release valves have been developed to be used in different sectors, mainly in agriculture, swimming-pools, public works, industries, etc. We have three types of Air release valves:

kinetic, single and double effect or three-functional; its purpose is to remove the air created by the proper piping, moreover it allows the air inlet to avoid breakdowns in the facilities.

Standard Regulations:

-Thread areas manufactured according to UNE 19009 -UNE EN 1074-4 “Valves for water provision. Suitability requirements for the use and checking tests. 4th Part: Drip cock and valves”.

Features:

-Within this product range we find different models of NET® air release valves, as: kinetic, single and double effect or three-functional. The NET® air release valves with its compact and light framework are manufactured in plastic materials in P.P. and P.A. which confer the air release valves with a high resistance to pressures and work environments.

-The NET® air release valves are designed to guarantee the maximum leaktightness in low pressures, being the only air release valve in the market which complies with the paragraph 5.2.2.2. “Seat leaktightness at low pressure” for the Standard Regulation UNE 1074-4”.

-In general the bigger is the air release valve diameter the bigger is the piping diameter in which it has to be fitted, whether it is necessary to take into account other aspects for the choice.

-Based on practical criteria, the following table links the piping diameter with the air release valve diameter to use.

Piping diameter (mm)	Vent diameter (")
0-100	3/4
100-150	1
150-200	1 1/4
200-250	2
250-450	3
450-1000	4

- Kinetic effect:

The kinetic NET® air release valve shall be used to evacuate high amounts of air from the pipe, mainly generated by proper causes of the system (start-up of the pump, filling of pipes, etc...) and to introduce air from the atmosphere in the pipe (draining of pipe). The kinetic effect remains completely closed as long as there is pressure inside the pipe, and it is not opened again until the system is drained or there is negative pressure.

-Its dynamic effect allows to purge the air at high speed.

-The NET® air release valve has a 3/4” outlet to channel the air and water extracted. With different connections from 1/2” to 1” in different materials. P.P., P.A. and brass.

- Single or automatic effect:

-The automatic effect NET® air release valves shall be used only to evacuate small amounts of air from the pipe, mainly produced automatically by proper causes of the fluid through the small hole of its upper part. This hole has been designed to remove a higher amount of air avoiding shut-offs and losses.

The NET® air release valves have a 1/8” outlet to channel the air and water extracted. With different connections from 1/2” to 1” in different materials: P.P., P.A. and brass.

- Double or three-functional effect:

-The double effect NET® air release valves combine the functions of the automatic effect with those of the kinetic effect. The double effect or three-functional valves have two holes for the air release and intake. During the filling of the pipes the water is pushing the air, which is being released to the atmosphere through the big hole of the valve. The small automatic-effect hole remains open during this process.

-When the air release valves is under pressure, the small hole opens automatically when detecting small air bags created by the fluid turbulence.

-The NET® air release valves have a 1 1/2” and 3/8” outlet to channel the air and water extracted. With different connections from 1/2” to 2” in different materials: P.P., P.A. and brass.

-P.P. range: Operating pressure from 0,2 to 16 atm
-P.A. range: Operating pressure from 0,2 to 25 atm



CERTIFICATES

UNE 1074-4 Certificate

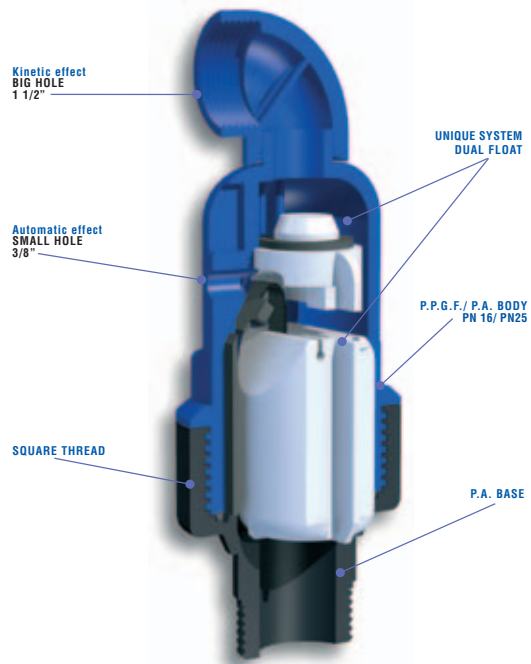


INSTITUTO TECNOLÓGICO DEL AGUA

Organismo perteneciente a la UNIVERSIDAD POLITÉCNICA DE VALÈNCIA

NET® AIR RELEASE VALVE FEATURES:

Double effect or trifunctional



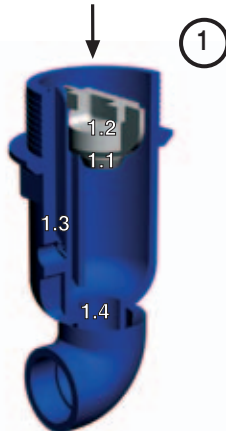
A unique system in the market

- Dual float system
- Independent holes
- Higher safety in the air -release process as it has two holes, because it permits the air expulsion through the small hole in case of premature shut-down of the float, as the fluid reaches high rate.

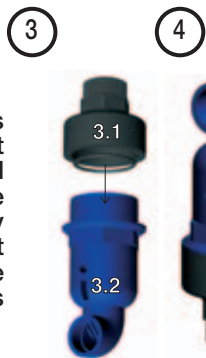
ASSEMBLY MANUAL:

INTRODUCTION

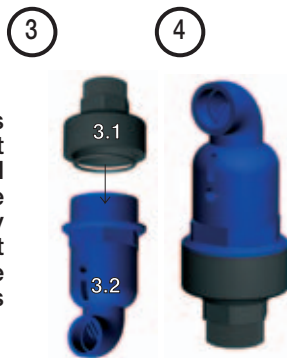
Hidroten S.A. with the aim to guarantee the highest durability in the functioning of the Net Air release valves, recommends to carry out the appropriate assembly, to make cleaning operations in the inner part of the air release valve and remove the possible foreign elements which could make difficult the normal operation thereof. Therefore Hidroten SA. presents the ASSEMBLY AND DISASSEMBLY MANUAL of the air release valve double effect 2" model D2, which makes easy to clean and reassembly properly the floats and seals.



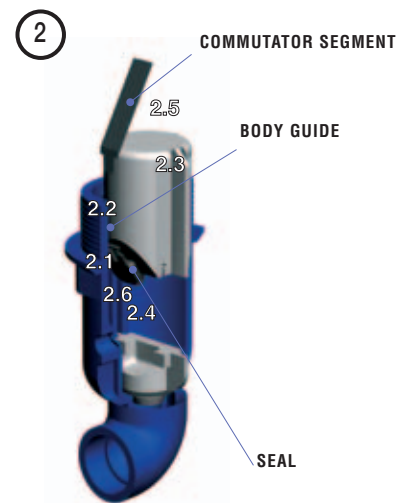
POINT 1.
We should always introduce the small float with its incorporated seal (1.1) through the body guide (1.3) so that we could verify it can block the lower part (1.4), the hollow part of the float (1.2) facing towards the body guide (1.5).



POINT 3.
Thread the base (3.1) with the body (3.2), with its O-ring.



POINT 4.
Once the process finishes, the Air release valve is ready to work at full capacity.



POINT 2.
Insert the seal (2.1) in the body guide (2.2). Insert the float (2.3) through the body guides (2.4) Supporting the entrance of this with the entrance of the commutator segment (2.5) through the body guide (2.2), avoiding that the seal (2.6) goes out of the guide (2.2).

APPLICATIONS AND SPECIFICATIONS FOR THE PROPER INSTALLATION:

Generic applications:

Within the inner hydraulic piping along with water we can find air forming pockets or bubbles, and its presence can seriously affect the installation performance.

The suitability to install air release valves in the piping minimizes the problems which frequently occur therein such as repetitive pipe breaks, excessive pump operation, unusual low flows, waste and destructive cavitation of material. With the air release valves we can exhaust and control the air in the pipes properly.

The air release valves are one of the most important protection elements to reduce and minimize the possible pressure fluctuations (positive or negative pressures) which happen in the pipe due to unexpected hydraulic transient operations.

Air release valve operation:

Depending on each function they allow the exhaustion of the air stored inside the pipe, the air intake when the pressure inside is lower than the atmospheric pressure and the exhaustion of the airborne-circulation in the pressurized fluid.

Air release valve classification:

- Depending on pressure operation.
 - Very low pressure (<1 atm)
 - Low pressure (1-6 atm)
 - Middle pressure (6-16 atm)
 - High pressure (16-25 atm)
 - Very high pressure (25-40 atm)
- Depending on its function.
 - Single-function.
 - Bifunctional.
 - Three-functional.
- Depending on the generated effect.
 - Kinetic effect. Air inlet during discharge or shut-off/Air release during filling or start-up.
 - Single effect/Automatic Air release under pressure.
 - Double effect.It develops the kinetic and single effect.

Applications:

- In high points of underground pipes when they protrude from the ground surface.
- Waters under a pressure reducer valve to free possible air pockets which are created by accumulated water-dissolved air.
- Before or after the conical reduction.
- In the pumping group outlet and before the check valve to remove the air accumulated in the pump body, above all in a deep well.
- Long pipe spools with uniform slopes each 500 m.
- Flyovers where the pipe is over the ground level.
- In the water meters entrance to avoid measuring errors and wear of internal mechanisms.
- In the filtration heads collectors to eliminate air pockets which accumulate in upper parts.
- Slope variances in the pipe.

Recommendations:

For the correct installation of the air release valves it is recommended the placing of the manual ball valve in the inlet thereof so as to be able to disassembly in case of cleaning or repairing. It is recommended a drain tube in the air release valve outlet to channel the air or water. The air release valves should be placed in upright position and in the upper part of the pipe. The air release valves operate automatically then it is recommended a scheduled maintenance which shall consist in the clearing of the inner parts and the checking of the correct status of the float valve and the gasket seals. Consult our cleaning manuals.



RANGE OF PRODUCTS:

Net® Kinetic Air release valve (C1)

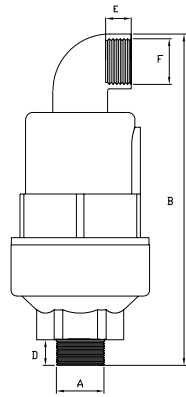
CODE P.P.	CODE P.A.	AØ	B	C	D	E	F
17001	17501	1/2"	184	75	14	16	3/4"
17002	17502	3/4"	186	75	16	16	3/4"
17003	17503	1"	189	75	19	16	3/4"

Optional VITON
Optional NPT Thread

Net® Kinetic Air release valve Brass base (C1)

CODE P.P.	CODE P.A.	AØ	B	C	D	E	F
17303	17703	1"	189	75	19	16	3/4"

Optional VITON
Optional NPT Thread



Net® Kinetic Air release valve (C2)

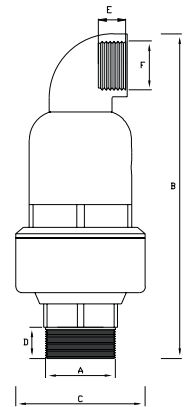
CODE P.P.	CODE P.A.	AØ	B	D	E	F
17006	17506	2"	275	30	19	1 1/2"

Optional VITON
Optional NPT Thread

Net® Kinetic Air release valve. Brass Base (C2)

CODE P.P.	CODE P.A.	AØ	B	D	E	F
17306	17706	2"	275	30	19	1 1/2"

Optional VITON
Optional NPT Thread



Net® Single effect 1/8" Air release valve (S1)

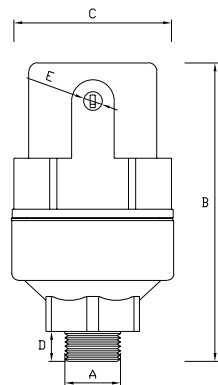
CODE P.P.	CODE P.A.	AØ	B	C	D	E
17021	17521	1/2"	137	75	14	1/8"
17022	17522	3/4"	139	75	16	1/8"
17023	17523	1"	142	75	19	1/8"

Optional VITON
Optional NPT Thread

Net® Single effect 1/8" Air release valve. Brass Base (S1)

CODE P.P.	CODE P.A.	AØ	B	C	D	E
17323	17723	1"	142	75	19	1/8"

Optional VITON
Optional NPT Thread



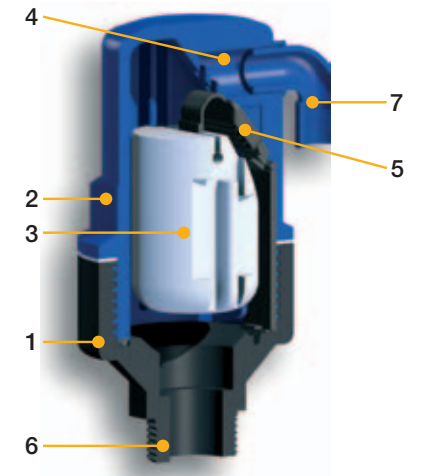
NET® DOUBLE EFFECT OR THREE-FUNCTIONAL AIR RELEASE VALVE (D1)

NET® Double effect or Three-functional Air release valve (1/2", 3/4", 1")

It is designed to guarantee the combination of the kinetic and automatic effects. It may be incorporated in the side of the body a 360° rotary elbow for the evacuation of draining water. (7).

- (1). Base Material: P.A./ Brass
- (2). Body Material: P.P./ P.A.
- (3). Float Material: expanded P.P.
- (4). Big hole section: 75 mm². Small hole: 3,83 mm². 491 cm².
- (5). Seal Gasket: EPDM or VITON.
- (6). Thread type: BSP/ NPT.

Operating pressure: P.P.: 0,2-16 Kg/cm². P.A.: 0,2-25 Kg/cm². All the small parts are protected against the ultraviolet radiation (UV).



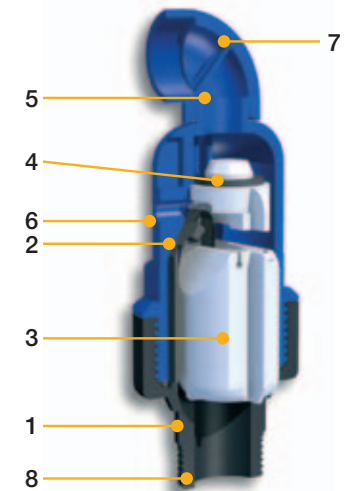
NET® DOUBLE EFFECT OR THREE-FUNCTIONAL AIR RELEASE VALVE (D2)

NET® Air release valve Double effect or Trifunctional.(2")

It is designed to guarantee the combination of the kinetic and automatic effects. It may be incorporated in the top of the body a 360° rotary elbow for the evacuation of draining water. (7).

- (1). Base Material: P.A./ Brass
- (2). Body Material: P.P./ P.A.
- (3). Float Material: expanded P.P.
- (4). Seal Gasket: EPDM or VITON.
- (5). Big hole section: 491 cm²
- (6). Small hole section: 47 mm²
- (7).Thread type: BSP/ NPT.

Operating pressure: P.P.: 0,2-16 Kg/cm². P.A.: 0,2-25 Kg/cm². All the small parts are protected against the ultraviolet radiation (UV).



Different applications of the Air Netvite System elbow * Family 01n.

A unique system in the market

The NET® Air release valves of the Family 17, offer the possibility of combination with the Air elbow, families 01 and 01n.

As it can be noted, the NET® Air release valve is attached to the Air Elbow, facilitating then the release of the generated air. This avoids, as in the traditional methods, to drill the accessories. Therefore, the risk of the pipe break is avoided.

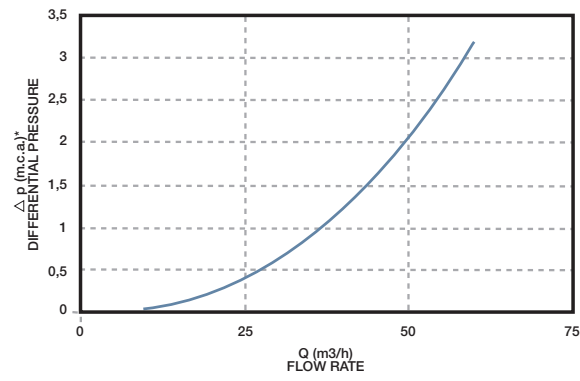


TECHNICAL FEATURES:

Air inlet and air release charts

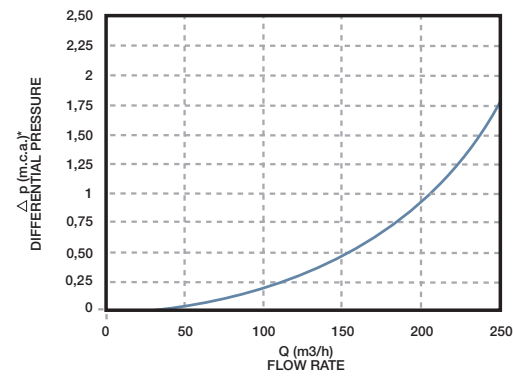
DOUBLE FLOW 1", 3/4", 1/2" (D1)

Air release



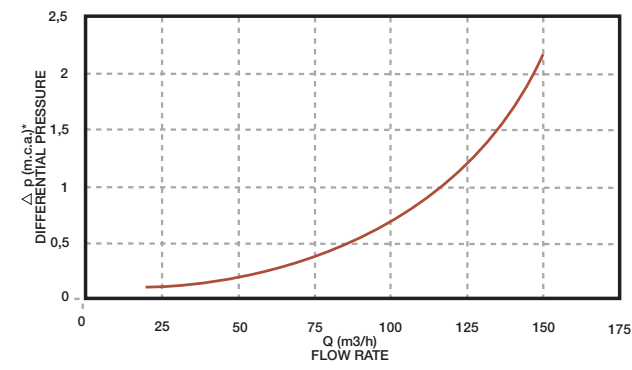
DOUBLE FLOW 2", D2

Air release



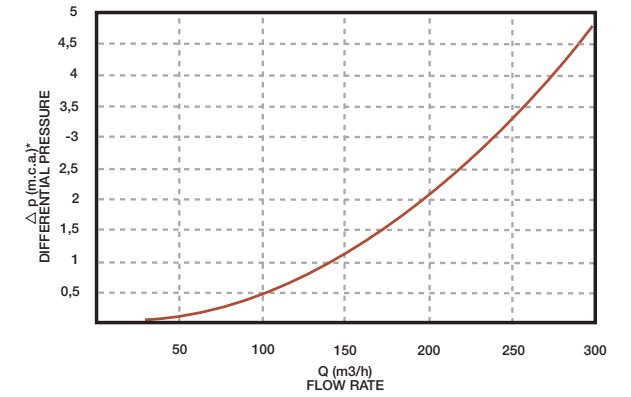
KINETIC EFFECT C1

Air release

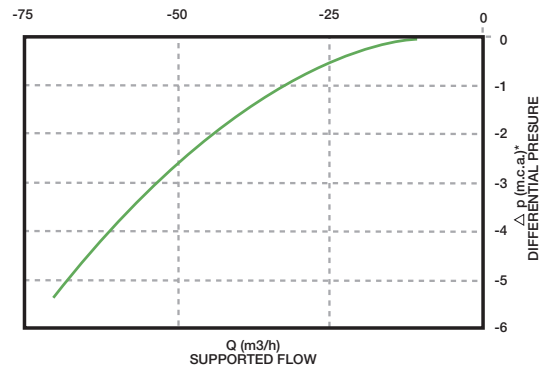


KINETIC EFFECT C2

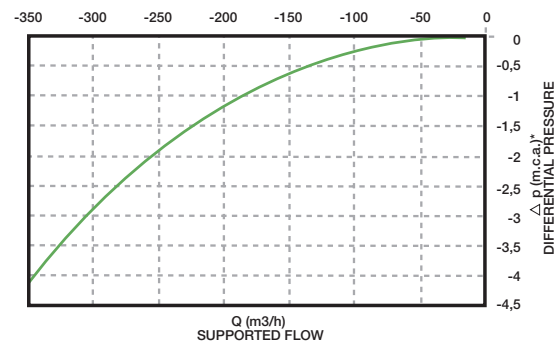
Air release



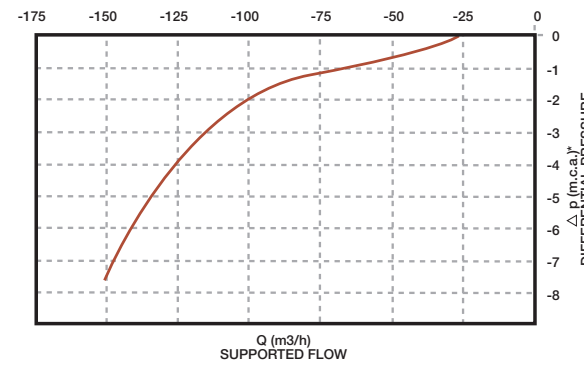
Air inlet



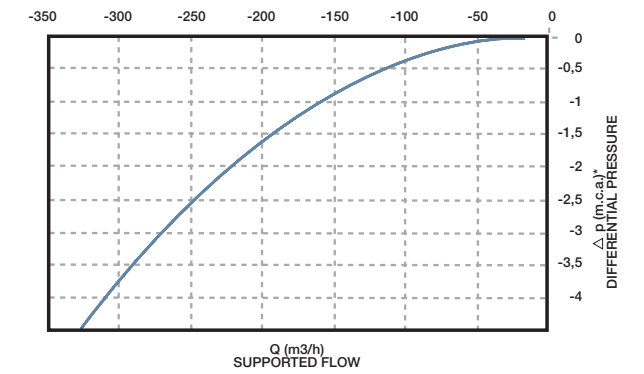
Air inlet



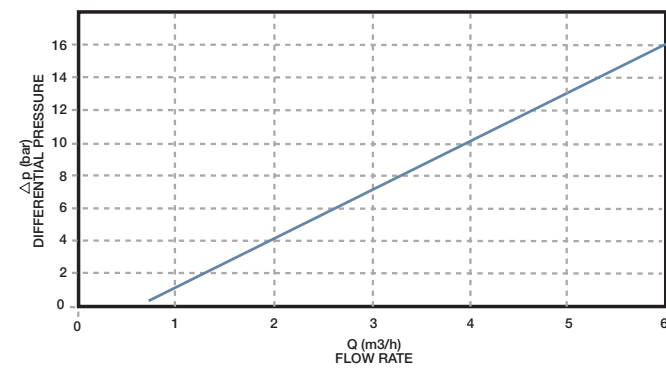
Air inlet



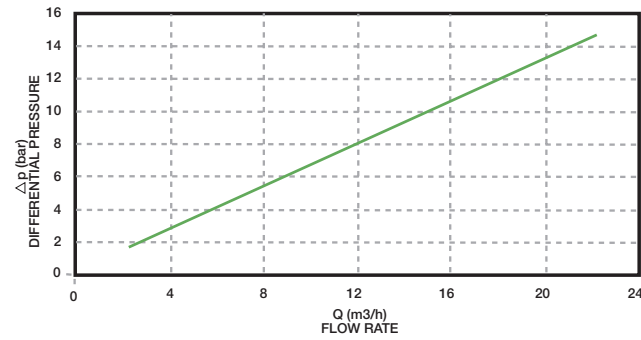
Air inlet



Degassing function

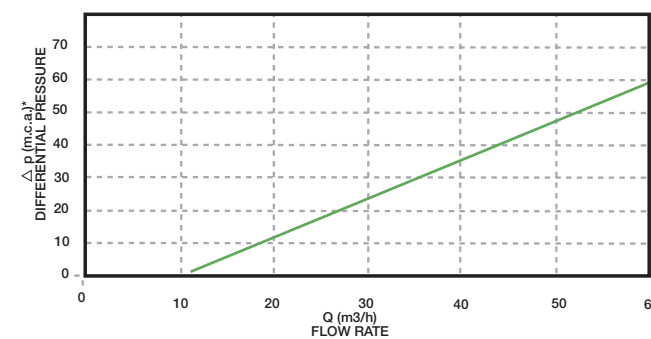


Degassing function



SINGLE EFFECT OR AUTOMATIC S1

Degassing function



* Equivalency pressure units: 1 bar = 10 m.c.a.

* Equivalency pressure units: 1 bar = 10 m.c.a.



SECTIONS AND MATERIALS

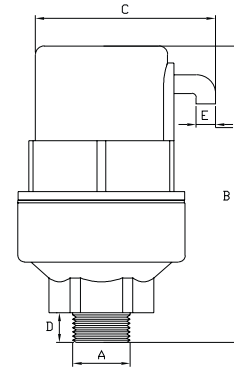
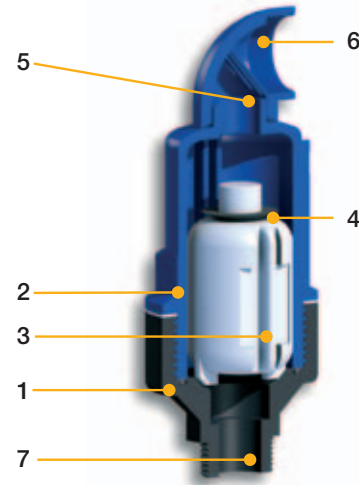
NET® KINETIC EFFECT AIR RELEASE VALVE (C1)

NET kinetic Air release valve.(1/2",3/4",1")

It is designed to be able to admit large quantities of air in the suction and expulsion processes. It may be incorporated in the upper part of the body a 360° pivoting elbow for the evacuation of draining water. (6).

- (1). Base Material: P.A./ Brass
- (2). Body Material: P.P./ P.A.
- (3). Buoy Material: expanded P.P.
- (4). Seal Gasket material: EPDM or VITON.
- (5). Big hole section: 314,15 mm2
- (7). Thread type: BSP/ NPT.

Operating pressure: P.P.: 0,2-16 Kg/cm2. P.A.: 0,2-25 Kg/cm2.
All the small parts are protected against the ultraviolet radiation (UV).



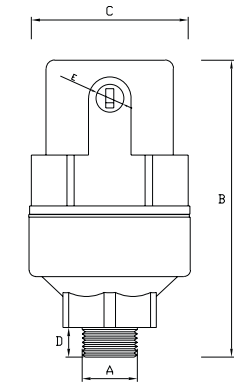
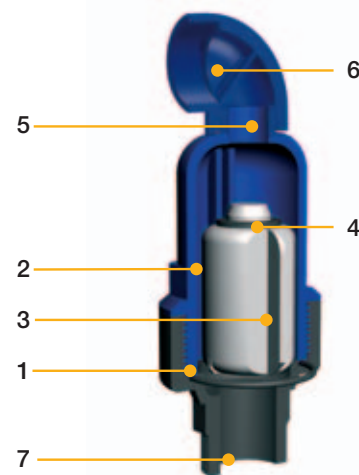
NET® KINETIC EFFECT AIR RELEASE VALVE (C2)

NET Kinetic Air release valve.(2")

It is designed to be able to admit large quantities of air in the suction and expulsion processes. It may be incorporated in the upper part of the body a 360° pivoting elbow for the evacuation of draining water. (6).

- (1). Base Material: P.A./ Brass
- (2). Body Material: P.P./ P.A.
- (3). Buoy Material: expanded P.P.
- (4). Seal Gasket material: EPDM or VITON.
- (5). Big hole section: 491 mm2
- (6). Thread type: BSP/ NPT.

Operating pressure: P.P.: 0,2-16 Kg/cm2. P.A.: 0,2-25 Kg/cm2.
All the small parts are protected against the ultraviolet radiation (UV).

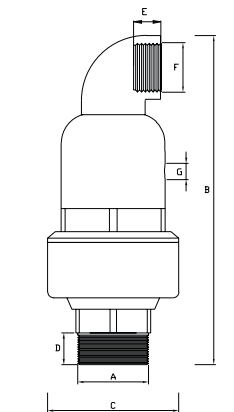
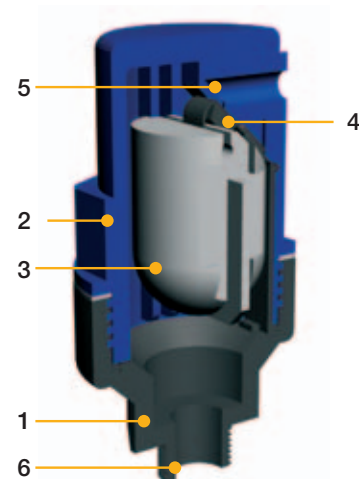


NET® SINGLE EFFECT AIR RELEASE VALVE (S1)

NET® Air release valve Single effect or automatic. (1/2", 3/4", 1")
It is designed to perform the automatic effect, expelling small quantities of air when there is pressure in the net.

- (1). Base Material: P.A./ Brass
- (2). Body Material: P.P./ P.A.
- (3). Float Material: expanded P.P.
- (4). Seal Gasket material: EPDM or VITON.
- (5). Small hole section: 18,64 mm2
- (6). Thread type: BSP/ NPT.

Operating pressure: P.P.: 0,2-16 Kg/cm2. P.A.: 0,2-25 Kg/cm2.
All the small parts are protected against the ultraviolet radiation (UV).



Net® Double effect elbow connection Air release valve (D1)

CODE P.P.	CODE P.A.	AØ	B	C	D	E
17051	17551	1/2"	137	78	14	3/8"
17052	17552	3/4"	139	78	16	3/8"
17053	17553	1"	142	78	19	3/8"

Optional VITON
Optional NPT Thread

Net® Double effect elbow connection Air release valve. Brass Base (D1)

CODE P.P.	CODE P.A.	AØ	B	C	D	E
17343	17753	1"	142	78	19	3/8"

Optional VITON
Optional NPT Thread



Net® Double effect 3/8" Air release valve (D1)

CODE P.P.	CODE P.A.	AØ	B	C	D	E
17041	17541	1/2"	137	75	14	3/8"
17042	17542	3/4"	139	75	16	3/8"
17043	17543	1"	142	75	19	3/8"

Optional VITON
Optional NPT Thread

Net® Double effect 3/8" Air release valve. Brass Base (D1)

CODE P.P.	CODE P.A.	AØ	B	C	D	E
17343	17743	1"	142	75	19	3/8"

Optional VITON
Optional NPT Thread



Net® Double effect Air release valve (D2)

CODE P.P.	CODE P.A.	AØ	B	C	D	E	F	G
17106	17606	2"	275	112	30	19	1 1/2"	3/8"

Optional VITON
Optional NPT Thread

Net® Double effect Air release valve. Brass Base (D2)

CODE P.P.	CODE P.A.	AØ	B	C	D	E	F	G
17206	17806	2"	275	112	30	19	1 1/2"	3/8"

Optional VITON
Optional NPT Thread