ICV TOTAL CONTROL INSIDE BUILDINGS

HYDRAULIC CONTROL AND PLUMBING

Expect... AVK

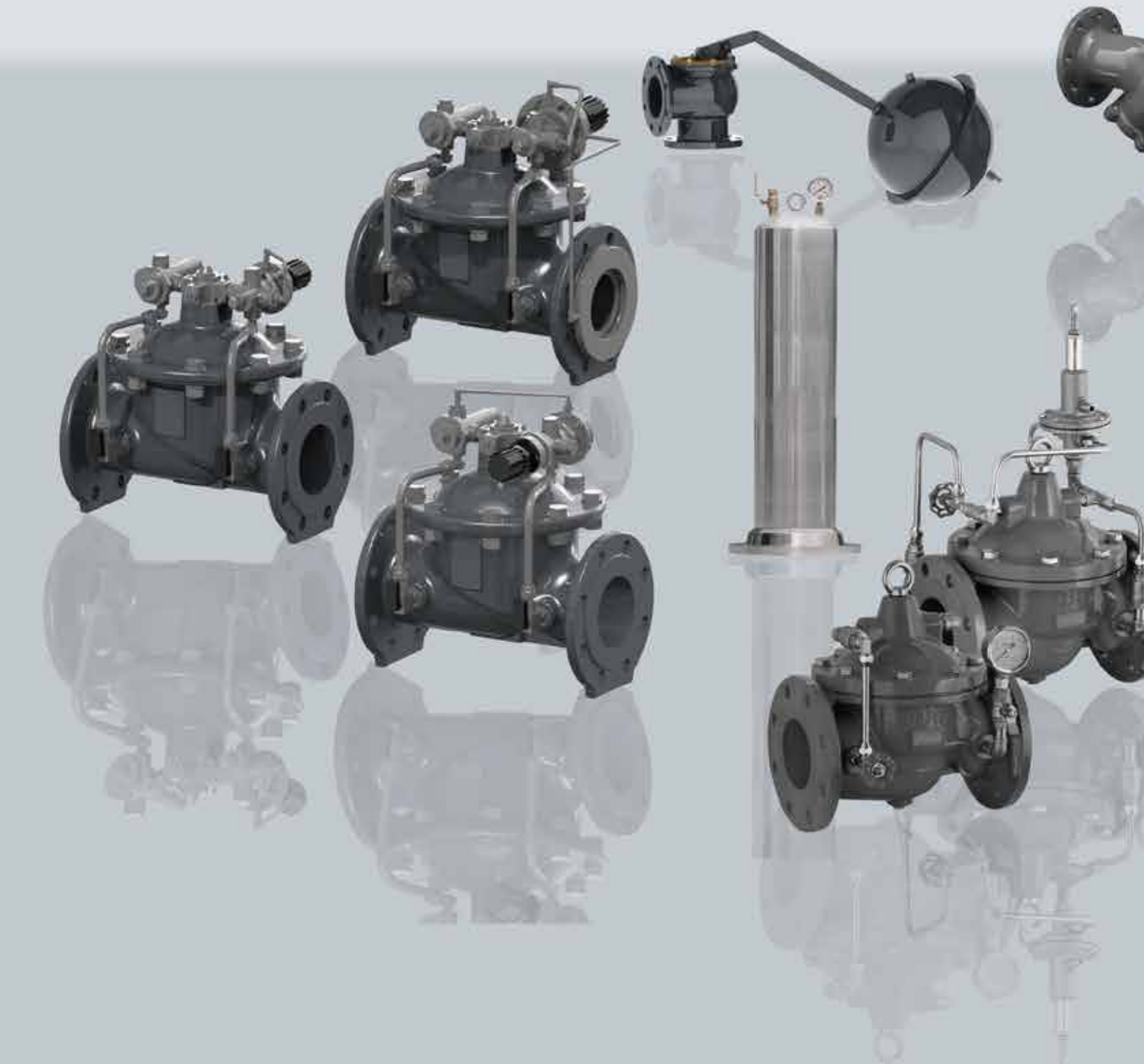
ICV® - a proud member of the AVK Group

ICV in the AVK Group

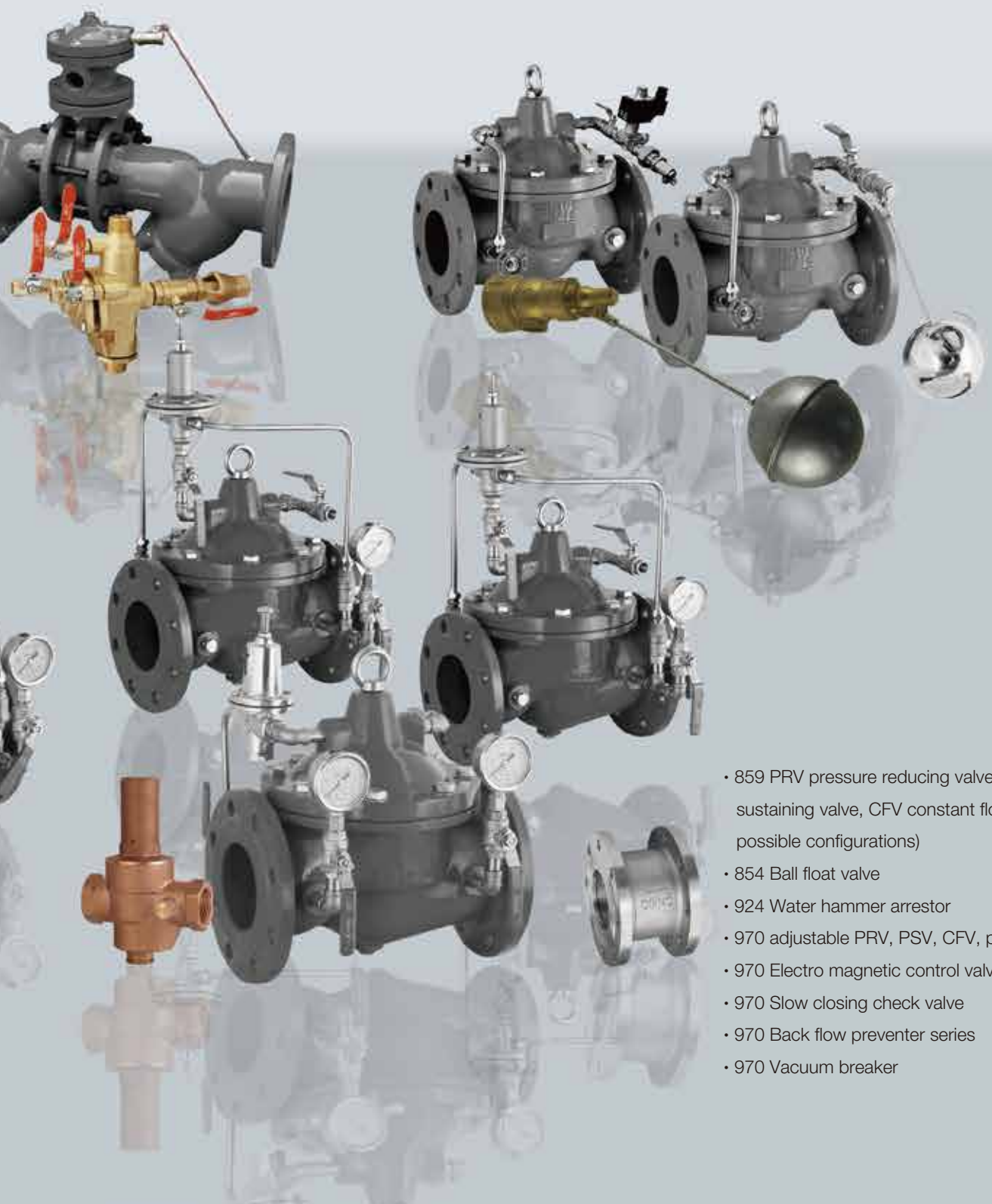
The AVK Group, a family business founded in 1941 and headquartered in Denmark, is one of the leading manufacturers of valves and fittings within the water, gas, waste water, industrial, HVAC and fire protection industries worldwide and has 85+ sales companies and 70+ factories globally within our core business. AVK Group owns it's own foundries and develops, machines, coats and produces in it's own valve factories. AVK Gummi produces high quality rubber and sealing used in AVK valves and in 3rd party machinery- and medical equipment in other industries.

ICV – IC Valves (Nanjing) Co., Ltd. is the building service and HVAC brand of the AVK Group in Denmark and is a fully owned subsidiary. ICV offers general valves, motorized valves, and balancing valves, and hydraulic balancing valves for use in buildings and HVAC system....for dedicated solutions in commercial buildings, for district cooling and heating, and for datacentres and other constructions...to solve all standard valve requirements for HVAC, plumbing and hydraulic balancing, manual fire & safety valves.


Expect... AVK



Expect... AVK



- 859 PRV pressure reducing valve, PSV pressure sustaining valve, CFV constant flow valve (36 possible configurations)
- 854 Ball float valve
- 924 Water hammer arrestor
- 970 adjustable PRV, PSV, CFV, proportional PRV
- 970 Electro magnetic control valve
- 970 Slow closing check valve
- 970 Back flow preventer series
- 970 Vacuum breaker

AVK 859

hydraulic control valve series

Water is as scarce resource that we need to protect. We need to secure water for the next generations, a growing population, and increased cost of water in the water supply systems as well as in buildings.

The safe choice
AVK diaphragm operated control valves are designed according to EN 1074-5 and to provide network stability, accurate regulation, easy maintenance and long durability.
AVK control valves are available in DN 50-300, with reduced and with full bore. Control valves with reduced bore are appropriate for most applications, as the smaller bore often offers more accurate regulation. Control valves with full bore are recommended, if high Kv values are needed, e.g. in front of hydrants.

High quality approved materials The body and bonnet are made of ductile iron with fusion bonded GSK approved epoxy coating.
The diaphragm is manufactured by AVK GUMMI and made of drinking water approved EPDM rubber with polyamide reinforcement.

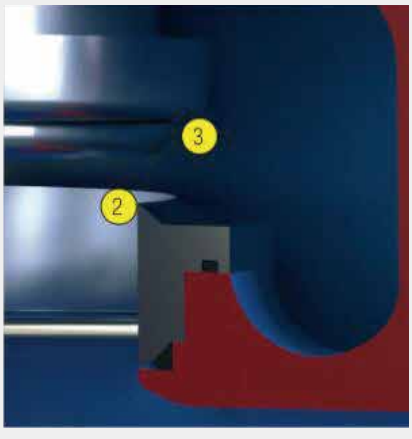
All non-coated internals are of stainless steel AISI 316 and all materials are approved.

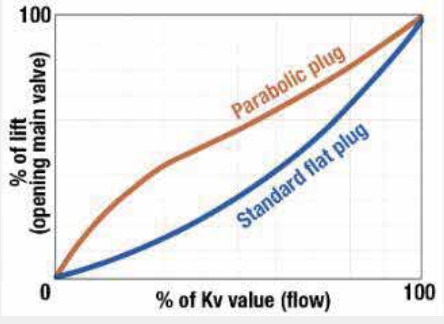
Design features of the valve
Large diaphragm design (1) secures fast reaction to changes in pressure. Its asymmetric axial position gives less stress near closed position.

Lifted seat design (2) prevents damage inside the valve body caused by cavitation.

Parabolic plug design (3) provides precise regulation and stability at low flow. Furthermore, it reduces noise and vibration. See below characteristics, illustrating the performance compared to a standard flat plug design.

AVK rubber membrane unique patented control system



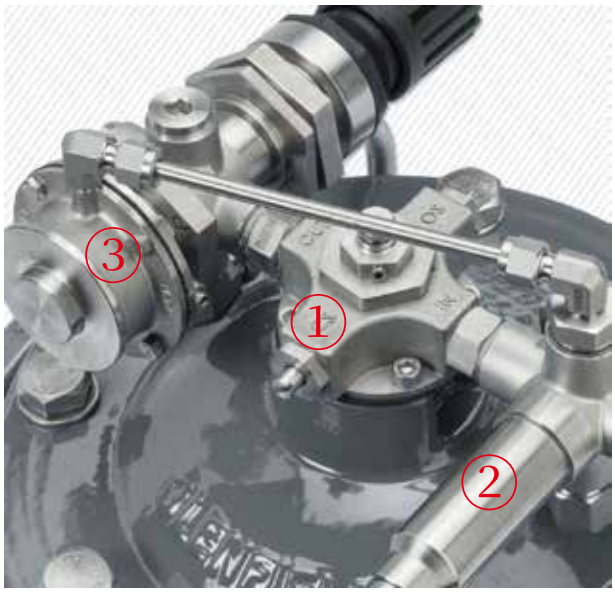


Modular pilot system

The modular design with interchangeable parts offers great flexibility as the pilot system is easily altered to fit other or multiple applications without replacing the valve. The pilot system consists of three main components:
The distribution block (1) connects the pilot system to the main valve. As a unique feature, it offers independent opening and closing speed, easily adjusted using standard tooling, and giving full control e.g. in situations, where water hammer may occur.

The filter (2) features high capacity and easy maintenance. When using the optional flush valve it also offers easy access to cleaning, while the valve is in operation.

The hydraulic control block (3) can be set up for different applications. It features easy hand adjustment of the balanced pilot valve which is capable of very precise settings.



AVK 859

hydraulic control valve series

Features and benefits

AVK diaphragm operated control valves are the safe choice. They are designed according to EN 1074-5 and to provide network stability, accurate regulation, easy maintenance and long durability.

Unique design features

- AVK control valves are the safe choice offering accurate regulation, easy maintenance and long durability:
- All non-coated metal parts of stainless steel AISI 316 as standard
- Fusion bonded GSK approved epoxy coating
- AVK's own drinking water approved rubber compounds
- Modular pilot system enables easy fitting to other applications without replacing the valve
- Independent adjustment of opening/closing speed for full control
- Parabolic plug design provides precise regulation and stability at low flow
- Large diaphragm secures fast reaction to minor changes in pressure
- Lifted seat prevents damage inside the valve body due to cavitation
- The external pipework takes up less space and is less vulnerable to damage during installation compared to many
- other control valves.
- AVK design and manufacture with 100% pressure test and 10-year warranty
- Very precise control accuracy

Full range of ICV 859 series hydraulic balancing control valve

CV01 - Pressure reducing control valve (standard)
CV02 - Low pressure reducing valve (standard)
CV03 - Pressure sustaining control valve (standard)
CV04 - Constant flow control valve (standard)
CV05 - One way altitude level control valve
CV06 - Tw wau altitude level control valve
CV07 - Modulating float level control valve
CV07A - Non modulating float level control valve
CV09 - Pressure relief valve (standard)
CV10 - Surge anticipating relief valve
CV11 - Hydraulic non return valve
CV12 - Booster pump control valve
CV13 - Deep well pump control valve
CV14 - Solenoid control valve
CV15 - Dual solenoid control valve
CV16 - Pressure reducing - check valve
CV17 - Pressure reducing - solenoid shut-off
CV18 - Pressure reducing - pressure sustaining
CV19 - Pressure reducing - pressure sustaining - solenoid shut-off
CV20 - Pressure sustaining - solenoid shut-off
CV21 - Constant flow - solenoid shut-off
CV22 - One way altitude level - pressure sustaining
CV23 - One way altitude level - pressure sustaining - solenoid shut-off
CV24 - One way altitude level - solenoid shut-off
CV25 - Modulating float level - pressure sustaining
CV26 - Modulating floeat level - pressure sustaining - solenoid shut-off
CV27 - Modulating float leve - solenoid shut-off
CV28 - Non modulating float level - pressure sustaining
CV29 - Non modulating float level - pressure sustaining - solenoid shut-off
CV30 - Non modulating float level - solenoid shut-off
CV31 - Dynamic pressure management control valve
CV32 - Dual stage pressure management control valve
CV33 - Pressure management control valve (orifice plate)
CV34 - Dual stage pressure management control valve (electric)
CV35 - Dual stage pressure management control valve with time-battery
CV36 - Motorized pressure management control valve

Pressure control Level control Flow control Pressure management Pump control Other

859 pressure reducing valve
Ductile iron
AVK EPDM rubber membrane
AISI 316 stainless steel internals and pilot system
Fusion bonded epoxy coated
DN50 - DN300
PN10 / PN16
Designed to EN 1074-5
Face to face to GB/T 12221-1-1
Flange standard GB/T 17241.6

859 sustaining valve
Ductile iron
AVK EPDM rubber membrane
AISI 316 stainless steel internals and pilot system
Fusion bonded epoxy coated
DN50 - DN300
PN10 / PN16
Designed to EN 1074-5
Face to face to GB/T 12221-1-1
Flange standard GB/T 17241.6

859 constant flow valve
Ductile iron
AVK EPDM rubber membrane
AISI 316 stainless steel internals and pilot system
Fusion bonded epoxy coated
DN50 - DN300
PN10 / PN16
Designed to EN 1074-5
Face to face to GB/T 12221-1-1
Flange standard GB/T 17241.6

ICV 970

hydraulic control valve series

Standard ranges include adjustable, proportional and electro-magnetic hydraulic balancing valves

Series 970/0502X
Adjustable pressure reducing valve
Body and main components:
bronze
Spring: steel alloy
Strainer AISI 304 stainless steel
Membrane: nylon reinforced NBR
Downstream pressure DN15-25
1-4 bar, DN15-50 1-5 bar
PN20

Series 970/0501X
Adjustable pressure reducing valve
Body: ductile iron
Pilot, seat and internals
AISI420/304 stainless steel
Membrane: nylon reinforced NBR
Epoxy coated
Downstream pressure PN16 2-10 bar PN25 2-16 bar
DN50 – DN300
PN16 / PN25

Series 970/0501X
Adjustable pressure sustaining valve
Body: ductile iron
Pilot, seat and internals:
AISI420/304 stainless steel
Membrane: nylon reinforced NBR
Epoxy coated
Upstream pressure:
PN16 1.5-13.3bar
PN25 2-17bar
DN50 – DN300
PN16 / PN25

Series 970/0501X
Adjustable constant flow valve
Body: ductile iron
Pilot, seat and internals:
AISI420/304 stainless steel
Membrane: nylon reinforced NBR
Epoxy coated
Upstream pressure:
PN16 1.5-13.3bar
PN25 2-17bar
DN50 – DN300
PN16 / PN25

Series 970/0502X
Proportional pressure reducing valve
Body and piston: brass
Threaded connection BSPT
DN20 – DN50
PN16

Series 970/0502X
Proportional pressure reducing valve
Body: carbon steel/ductile iron
Piston Stainless steel AISI304
Flange drilling to EN1092-2
DN50 – DN200
PN16 / DN25

Alternative: bronze/stainless steel

Series 970/0580
Electromagnetic control valve
Body/bonnet: Ductile iron
Seat/disc/stem/spring AISI 304
Diaphragm NBR
Flange to EN1092
Solenoid valve is normally closed
or normally open, standard
normally closed
Power supply 220V AC or 24V DC
DN50 – DN450 PN16
DN50 – DN250 PN25

ICV 854 equilibrium and pressure operated ball float valves

Series 854/00
Equilibrium ball float valve
Body ductile iron
Cylinder ductile iron
Fulcrum bracket ductile iron
Valve centre gunmetal
DN50-DN100
Ductile iron DN150 - DN300
Seat ring ductile iron
Lever Hot dipped galvanised
Float PP (spherical Polypropylene ball)
Inlet Flange Drilled PN16
Outlet Flange Undrilled
Fasteners Carbon steel
Fusion bonded epoxy coating
DN50 – DN300
PN16

Series 854/00
Equilibrium ball float valve
Body ductile iron
Cylinder ductile iron
Fulcrum bracket ductile iron
Valve centre gunmetal
DN50-DN100
Ductile iron DN150 - DN300
Seat ring ductile iron
Lever Hot dipped galvanised
Float PP (spherical Polypropylene ball)
Inlet Flange Drilled PN16
Outlet Flange Undrilled
Fasteners Carbon steel
Fusion bonded epoxy coating
DN350 – DN500
PN16 (max 2.5bar max operating pressure)

Series 854/20
Pressure operated ball float valve
Body ductile iron
Cylinder ductile iron
Fulcrum bracket ductile iron
Valve centre gunmetal
DN50-DN100
Ductile iron DN150 - DN300
Seat ring ductile iron
Lever Hot dipped galvanised
Float PP (spherical Polypropylene ball)
Inlet Flange Drilled PN16
Outlet Flange Undrilled
Fasteners Carbon steel
Fusion bonded epoxy coating
DN350 – DN500
PN16

ICV 970 ball float valves

Series 970/0503X
Brass ball float valve
Body: CW614N brass
Sealing PTFE
AISI 304 ball and lever
DN15 – DN50
PN16

Series 970/0530X
Ball float valve
Body: ductile iron
Stem: AISI420 SS
Seat, disc, ball and internals
AISI304 SS
Membrane and sealing: NBR
Epoxy coated
DN50 – DN400
PN16

Series 970/0530X
Electro magnetic ball float valve
Body: ductile iron
Stem: AISI420 SS
Seat, disc, ball and internals
AISI304 SS
Membrane and sealing: NBR
Epoxy coated
220V
DN50 – DN400
PN16

ICV 970 slow closing and flow limiting check valves

Series 970/0380X
Slow closing check valve
Body ductile iron
Stem AISI420
Seat and internals AISI304
Sealing NBR
Membrane nylon reinforced NBR
Epoxy coated
DN50 – DN500
PN16 / PN25

Series 970/0380X
Slow closing check valve
Body ductile iron
Stem AISI420
Seat and internals AISI304
Sealing NBR
Membrane nylon reinforced NBR
Epoxy coated
Adjustable working pressure range 1-8 bar
DN50 – DN500
PN16 / PN25

ICV970 vacuum breaker

Series 970/0780
Vacuum breaker
Brass body and internals
Seat PTFE
DN15 – DN50
PN16

ICV 970 back flow preventer

Series 970/0307X
Back flow preventer (stop valve)
Brass body
EPDM membrane
Outlet brass
Primary and secondary
stop/check brass
Brass air stop
DN15 – DN50
PN 16

Series 970/0307X
Back flow preventer (stop valve)
Body ductile iron
Stem AISI20
Internals AISI304
Epoxy coated
DN40 – DN300
PN16

ICV924 water hammer arrestor

Series 924/02
Water hammer arrestor
Union Brass H62 (DN15-20)
Stainless steel (DN25-50)
Spring Stainless steel AISI 304
Body Stainless steel AISI 316
Chamber Natural rubber
DN15 – DN50
PN16

Series 924/01
Piston type water hammer arrestor
Pressure gauge Stainless steel
AISI 304
Gas charge valve Brass H62
Body Stainless steel AISI 316
Piston Stainless steel/Brass H62
O-ring FKM
Flange Stainless steel AISI 316
Retaining ring Stainless steel
AISI 316
Flange and drilling ISO7005-1
Hydraulic test BS EN 12266
DN65 – DN400
PN16 / PN25

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