AYVAZ

FIRE FIGHTING PRODUCTS



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AYVAZ®

FIRE FIGHTING
PRODUCTS

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FLEXIBLE SPRINKLER HOSES



Sprinkler Systems are automatic fire sensing and extinguishing systems that splash the water comes through connected pipeline. Public places like shopping malls, theatres, concert halls, hotels where the intervention time is crucial are the places where these systems are commonly chosen and used. Ayvaz sprinkler hose and assembly kit can be effectively used in these systems and come over many connection difficulties caused by rigid piping.

Advantages

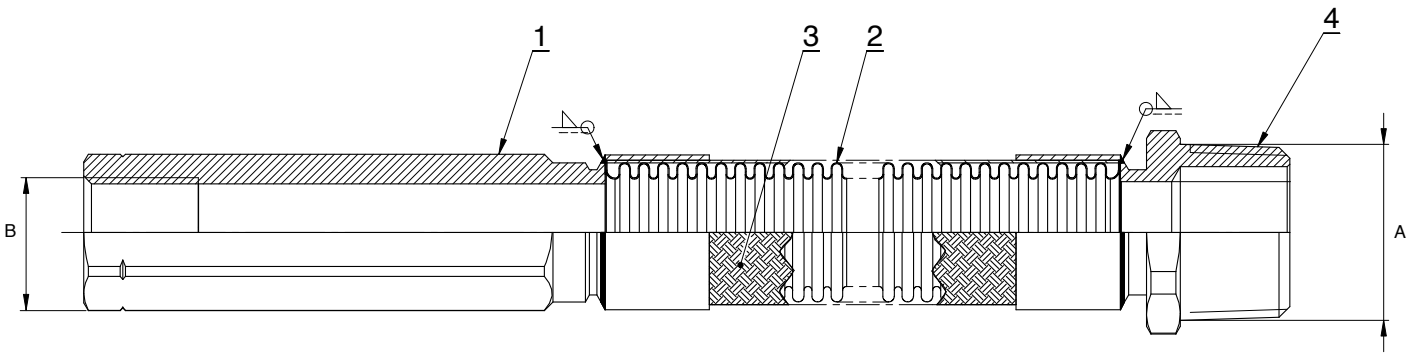
Flexible structure of stainless steel corrugated hose provides various advantages;

- Hose assembly is not affected by external movements and is able to suspend seismic motions.
- Flexibility of the hose provides required safety for all systems.
- Easy installation the hose and the sprinkler device into ceiling with assembly kit save on installation time and costs by eliminating pipe wastage and reducing the labour associated with cutting, threading, and sealing pipe threads.
- It is so easy to align and tighten sprinkler side of the hose with desired point of ceiling. Also, due to smart design of the fixing kit, sprinkler side of the hose can easily be moved and adjusted on vertical axis.
- It is not necessary to adjust sprinkler location if ceiling alignment and level are changed.
- Stainless steel hose and braiding provide high resistance against heat and temperature.
- The system is highly resistant against corrosive effect of the water that is kept in the hose for a long time.

Installation

Sprinkler systems are used for fire protection purposes which switch on automatically as soon as a fire starts up and splash water on to the flames to extinguish the fire. These systems are located very close to the roof and collect water by the connected pipelines. Sprinkler systems are especially preferred in the big buildings open to the public where access is difficult and with heavy fire interference.

FLEXIBLE SPRINKLER HOSES



PART LIST		
Item	**Material List**	**Part Name**
1	Galvanized Coated Carbon Steel	Raccord
2	Stainless Steel AISI 316	Hose
3	Stainless Steel AISI 304	Wire Braiding
4	Galvanized Coated Carbon Steel	Nipple

Hose Dimensions (UL Approved)			
DN	**Connection**		**Lenght (mm)**
	Main Pipeline	**Sprinkler**	
20 25	DN 20 (1") x 1/2 " DN 25 1" x 1/2"		500
			700
			1000
			1200
			1500
			2000

Hose Dimensions (FM and Vds Approved)			
DN	**Connection**		**Lenght (mm)**
	Main Pipeline	**Sprinkler**	
20	DN20 (3/4") x 1/2" DN20 (1") x 1/2"		500
			700
			1000
25	DN25 (3/4") x 1/2" DN25 (1") x 1/2"		1200
			1500
			2000

Product Material

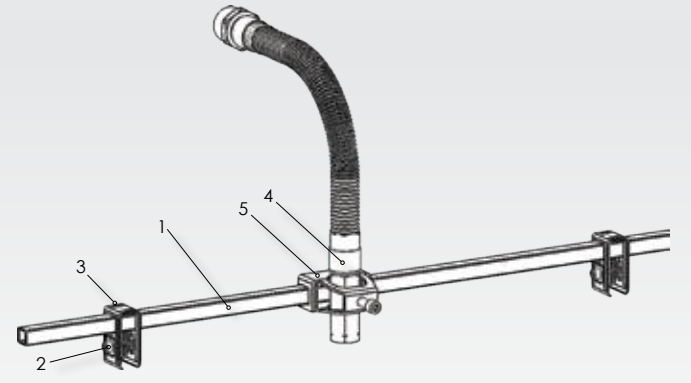
Min. Bending Radius: 200 mm
These products can be used accordance with NFPA 13, 13D and 13R standards.

Ceiling Specifications

These connections are designed for using in ceilings tile grids that meet ASTM C 635 and ASTM C 636 referenced by the IBC.

Light-Duty Systems, Intermediate-Duty Systems and Heavy-Duty Systems are structural classifications. These connections have been approved for using in all Intermediate-Duty and Heavy-Duty structural classifications.

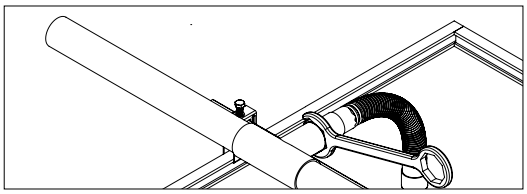
UL, FM and VdS APPROVED CONNECTION

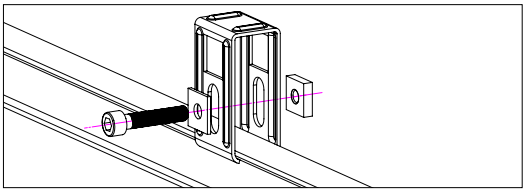


Material List		
Part Number	**Part Name**	**Material**
1	Assembly Bar	Galvanized coated St. 37.2
2	Fixing Bolt	Carbon Steel 8.8
3	Kit Fixing Part	Galvanized coated St. 37.2
4	Sprinkler Hose	Stainless Steel
5	Hose Fixing Part	Galvanized coated St. 37.2

STEP 1 (Connecting the hose to the water line)

The nipple side of the sprinkler hose is connected and tightened to the connection nut on the fire line. The conical nut thread provides proper sealing without using gasket.



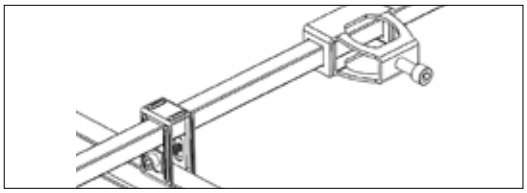


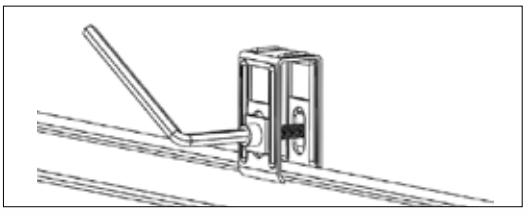
STEP 2 (Attaching the fixing parts to the metal grid)

Two fixing parts are attached on both sides of the metal grid as them to face each other and gently tightened. Do not tighten too much in case further adjustments may be required.

STEP 3 (Placing the assembly bar)

Slide the assembly bar through one of the fixing parts and push it to the opposite direction at the same plane until the unattended end of the bar goes through the hose fixing part and the opposite kit fixing part. Place the assembly bar as leaving equal distance at both sides and screw the bolt and gently tighten.





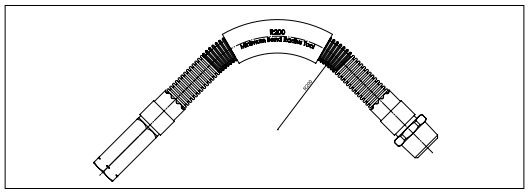
STEP 4 (Tightening the sprinkler connection set)

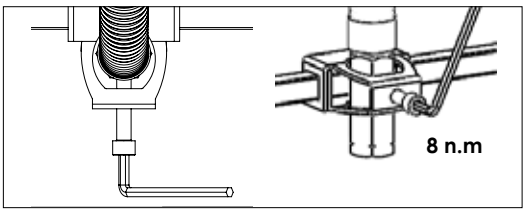
As the sprinkler connection set is complete and the sprinkler side is aligned with the hole on the ceiling. The bottom bolts of the fixing parts on both sides of the assembly bar are tightened.
Tightening torque: 8N

UL, FM and VdS APPROVED CONNECTION

STEP 5 (Connecting the hose to the water line)

After fixing the nipple part, use Minimum Bend Radius Tool to be sure to bend the hose according to minimum bending radius.



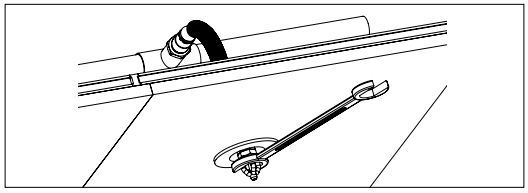


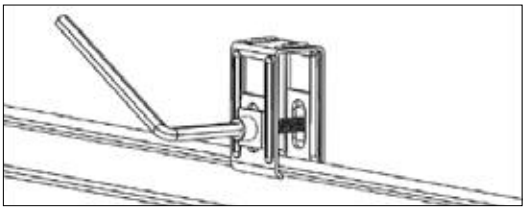
STEP 6 (Adjusting the sprinkler head's position)

The bolts of hose fixing part on the assembly bar are loosen a little bit and the position of the hose outlet is adjusted as it fixed at the desired level according to the ceiling surface. Tighten the bolts back and complete the assembly.
Tightening torque: 8N

STEP 7 (Connecting the sprinkler head)

The sprinkler head is connected to the sprinkler end of the hose and the escutcheon is tightened. The conical thread of the sprinkler head and the hose nut provide desired sealing with using no gaskets.





STEP 8

After completing the sprinkler hose assembly, the system must be tested in order to detect possible water leaks. Any leaks must be prevented immediately for maximum service life and protection against the hazards.

DOUBLE GIMBAL EXPANSION JOINTS & SEISMIC EXPANSION JOINTS



Gimbal type expansion joints are designed to permit angular rotation in any plane by the use of two pairs of hinges affixed to a common floating gimbal ring.

Simply, a double gimbal expansion joint is consisted of two single gimbal expansion joints and an intermediate pipe connects them each other. The advantage of this arrangement is the ability to absorb a large lateral movement in any plane at each end.

Restrained Expansion Joints

Thrust force caused by the internal pressure is needed to be absorbed in order to keep the achors free from this force is some cases.
Restraining parts like tie rods, higes or gimbals are designed (Number & dimensions etc…) according to the pressure thrust.
Expansion joints produced with these restraining parts are called restrained expansion joints.
Restrained lateral expansion joints must be free from axial movements and to be adjusted only for lateral movements.

Movement Absorption & Seismic Movement

Classical double gimbal expansion joints are used to absorb lateral & angular deflections in all planes.

The gimbals of this expansion joints are designed as to withstand against pressure thrust and they are called restained type expansion joints.
The amount of lateral deflection depends on the convolution number of the bellows on each side and the length of the intermediate pipe.

Standard range of Ayvaz double gimbal expansion joints are designed mostly for fire protection lines where the deflections are not caused by thermal movements but seismic movements.
In order to absorb the axial movements caused by the seismic movements, Ayvaz standard range expansion joints are finished with an axial movement capacity which is limited by the slot gap on the gimbals.

Advantages of Double Gimbal Seismic Expansion Joints

Protects the pipeline systems against collapse and breakages by compensating seismic motions (Earthquake) and large lateral and angular movements.
FM approval for the safety features to be used at fire protection pipelines.
Bellows design according to EJMA coding system.
Construction according to EN14917 standard.
Large lateral movements by single expansion joint.

Application Areas

Fire protection
HVAC piping lines
Exhaust systems
Vibration absorption
Industrial process & applications
Power generation & Energy plants

DESIGN (EN 14917)

Bellow Material : Stainless Steel AISI 321 (Opt.304,316L,316TI,309)
Connection Types : Fixed and Floating Flanged, Welded Ended & Grooved
Flange Material : PN 16, St.37.2 as standard, the material can be customised on request
Inner Sleeve : Available in stainless steel AISI 321 (Opt.304,316L,316TI,309) on request
Accessories : Inner sleeve, cover, counter flange, gaskets, insulation etc. are available on request.
Certificates : Material certificate 3.1 according to EN 10204 and /or ASME
: PED 2014/68/EU Cat.I Mod.A

Operation Conditions

Operating Temperature : -10 °C/+550 °C
Operating Pressure : Standard pressure rating is PN16
Can be produced with different pressure rates PN 2,5-63
PN corresponds to the allowable operating pressure at room temperature

Important : Standard models are produced as un-restrained, fixed points should be created as to withstand springing force as well as pressure thrust caused by the system pressure.
For detailed information, get in contact with Ayvaz's expert sales team.
We strongly advise against the use of expansion joints and bellows for misalignment.
Torsion on bellow parts are not desirable and should be eliminated.

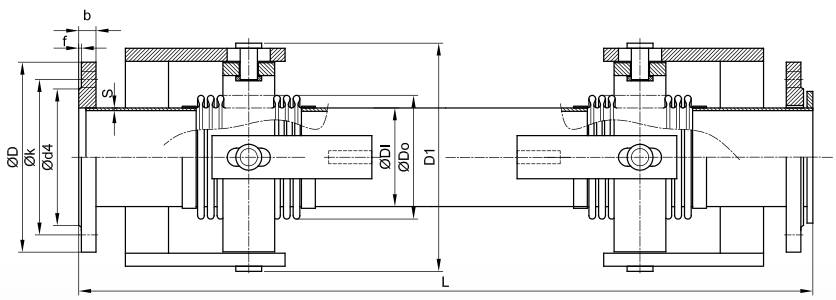
Double Gimbal Expansion Joints

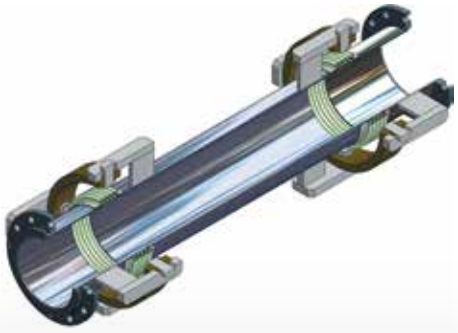
Double Gimbal Expansion Joints, Flanged

Available Types (Standard Versions)

Type	Lateral Movement	Axial Movement	Pressure Class (PN)	Available Size (DN)	Definition
SISKKF-50	±50mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with flange connection.
SISKKF-100	±100mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with flange connection.
SISKKF-150	±150mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with flange connection.
SISKKF-200	±200mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with flange connection.

* Special designed Double Gimbal type Expansion Joints with customized features are available on request.





Flange Dimensions (DIN EN 1092/1) PN 16					
DN	ØD	Øk	Ød4	f	b
DN25	115	85	68	2	16
DN32	140	100	78	2	18
DN40	150	110	88	3	18
DN50	165	125	102	3	20
DN65	185	145	122	3	20
DN80	200	160	138	3	20
DN100	220	180	158	3	22
DN125	250	210	188	3	22
DN150	285	240	212	3	24
DN200	340	295	268	3	26
DN250	405	355	320	3	29
DN300	460	410	378	4	32

Alternative flange dimensions are also possible e.g. according to US standards (ANSI), JIS etc.

Bellows Information			D1	s	SISKKF-50		SISKKF-100		SISKKF-150		SISKKF-200	
DN	Ødi	Ødo			L	Code	L	Code	L	Code	L	Code
DN25	38	48,2	90	2,3	720	702.070.301.002	920	702.070.302.002	1120	702.070.303.002	1320	702.070.304.002
DN32	42,4	55	105	2,6	720	702.070.301.004	920	702.070.302.004	1120	702.070.303.004	1320	702.070.304.004
DN40	48,3	61	115	2,6	720	702.070.301.006	920	702.070.302.006	1120	702.070.303.006	1320	702.070.304.006
DN50	60,3	76	140	2,9	800	702.070.301.008	1000	702.070.302.008	1200	702.070.303.008	1420	702.070.304.008
DN65	76,1	95	160	2,9	800	702.070.301.010	1000	702.070.302.010	1250	702.070.303.010	1500	702.070.304.010
DN80	88,9	111	190	3,2	830	702.070.301.012	1030	702.070.302.012	1270	702.070.303.012	1500	702.070.304.012
DN100	114,3	140	250	3,6	850	702.070.301.014	1050	702.070.302.014	1300	702.070.303.014	1550	702.070.304.014
DN125	139,7	164	285	4	980	702.070.301.016	1180	702.070.302.016	1480	702.070.303.016	1780	702.070.304.016
DN150	168,3	200	350	4,5	980	702.070.301.018	1180	702.070.302.018	1480	702.070.303.018	1780	702.070.304.018
DN200	219,1	250	420	6,3	1140	702.070.301.020	1340	702.070.302.020	1700	702.070.303.020	2050	702.070.304.020
DN250	273	323	480	6,3	1140	702.070.301.022	1340	702.070.302.022	1700	702.070.303.022	2100	702.070.304.022
DN300	323,9	380	540	7,1	1200	702.070.301.024	1400	702.070.302.024	1750	702.070.303.024	2150	702.070.304.024

*All dimensions given in the tables are in "mm".
**Subject to technical alterations and deviations resulting from production process without giving any notification.

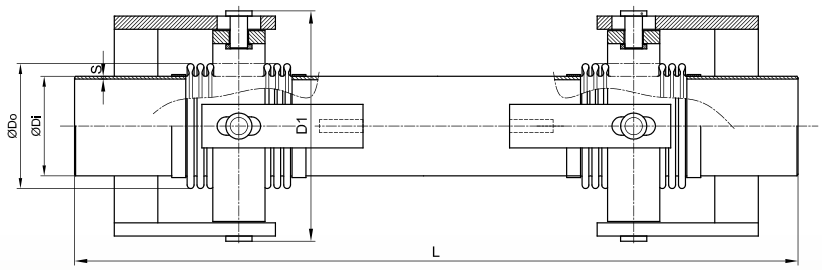
Double Gimbal Expansion Joints

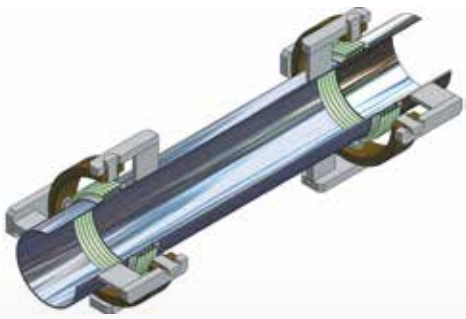
Double Gimbal Expansion Joints, Welded End

Available Types (Standard Versions)

Type	Lateral Movement	Axial Movement	Pressure Class (PN)	Available Size (DN)	Definition
SISKKB-50	±50mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with welded ends
SISKKB-100	±100mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with welded ends
SISKKB-150	±150mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with welded ends
SISKKB-200	±200mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with welded ends

* Special designed Double Gimbal type Expansion Joints with customized features are available on request.





Bellows Information			D1	s	SISKKB-50		SISKKB-100		SISKKB-150		SISKKB-200	
DN	Ødi	Ødo			L	Code	L	Code	L	Code	L	Code
DN25	38	48,2	90	2,3	707	702.070.401.002	907	702.070.402.002	1107	702.070.403.002	1307	702.070.404.002
DN32	42,4	55	105	2,6	707	702.070.401.004	907	702.070.402.004	1107	702.070.403.004	1307	702.070.404.004
DN40	48,3	61	115	2,6	707	702.070.401.006	907	702.070.402.006	1107	702.070.403.006	1307	702.070.404.006
DN50	60,3	76	140	2,9	785	702.070.401.008	985	702.070.402.008	1185	702.070.403.008	1405	702.070.404.008
DN65	76,1	95	160	2,9	785	702.070.401.010	985	702.070.402.010	1235	702.070.403.010	1485	702.070.404.010
DN80	88,9	111	190	3,2	815	702.070.401.012	1015	702.070.402.012	1255	702.070.403.012	1485	702.070.404.012
DN100	114,3	140	250	3,6	835	702.070.401.014	1035	702.070.402.014	1285	702.070.403.014	1535	702.070.404.014
DN125	139,7	164	285	4	963	702.070.401.016	1163	702.070.402.016	1463	702.070.403.016	1763	702.070.404.016
DN150	168,3	200	350	4,5	963	702.070.401.018	1163	702.070.402.018	1463	702.070.403.018	1763	702.070.404.018
DN200	219,1	250	420	6,3	1120	702.070.401.020	1320	702.070.402.020	1680	702.070.403.020	2030	702.070.404.020
DN250	273	323	480	6,3	1120	702.070.401.022	1320	702.070.402.022	1680	702.070.403.022	2080	702.070.404.022
DN300	323,9	380	540	7,1	1177	702.070.401.024	1377	702.070.402.024	1727	702.070.403.024	2127	702.070.404.024

*All dimensions given in the tables are in “mm”.
**Subject to technical alterations and deviations resulting from production process without giving any notification.

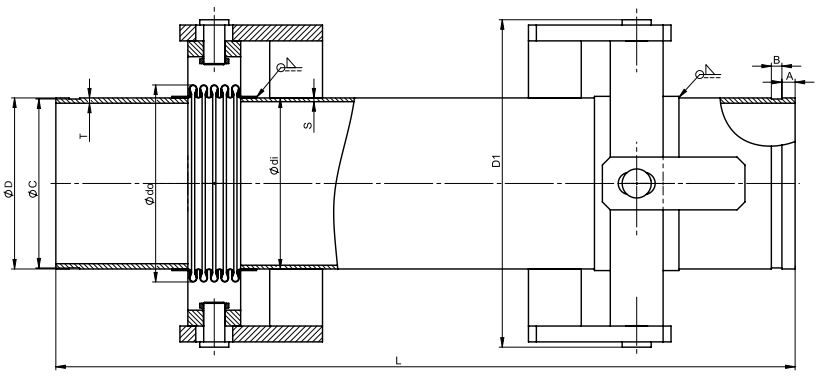
Double Gimbal Expansion Joints

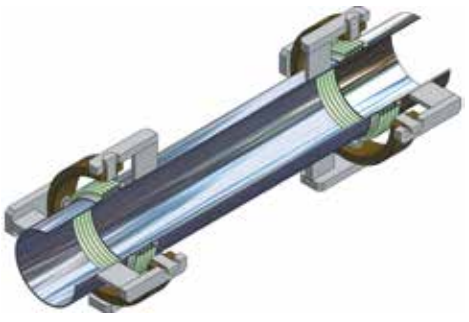
Double Gimbal Expansion Joints, Grooved End

Available Types (Standard Versions)

Type	Lateral Movement	Axial Movement	Pressure Class (PN)	Available Size (DN)	Definition
SISKBY-50	±50mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with grooved ends
SISKKBY-100	±100mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with grooved ends
SISKBY-150	±150mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with grooved ends
SISKBY-200	±200mm	±50mm	175 psi	DN25-DN5000	Seismic Expansion Joint with grooved ends

* Special designed Double Gimbal type Expansion Joints with customized features are available on request.





Grooved Dimensions (DIN EN 1092/1) PN 16					
DN	A ±0,76	B ±0,76	T (min)	ØD	ØC
DN25	15,88	7,95	3,38	33,4	30,23
DN32	15,88	7,95	3,56	42,2	38,99
DN40	15,88	7,95	3,68	48,3	45,09
DN50	15,88	7,95	3,91	60,3	57,15
DN65	15,88	7,95	4,78	76,1	72,26
DN80	15,88	7,95	4,78	88,9	84,94
DN100	15,88	9,53	5,16	114,3	110,08
DN125	15,88	9,53	5,16	139,7	135,48
DN150	15,88	9,53	5,56	165,1	160,78
DN200	19,05	11,13	6,05	219,1	214,4
DN250	19,05	12,7	6,35	273	268,28
DN300	19,05	12,7	7,09	323,9	318,29

Alternative groove dimensions are also possible...

Bellows Information			D1	s	SISKBY-50		SISKBY-100		SISKBY-150		SISKBY-200	
DN	Ødi	Ødo			L	Code	L	Code	L	Code	L	Code
DN25	38	48,2	90	2,3	707	702.070.431.002	907	702.070.432.002	1107	702.070.433.002	1307	702.070.434.002
DN32	42,4	55	105	2,6	707	702.070.431.004	907	702.070.432.004	1107	702.070.433.004	1307	702.070.434.004
DN40	48,3	61	115	2,6	707	702.070.431.006	907	702.070.432.006	1107	702.070.433.006	1307	702.070.434.006
DN50	60,3	76	140	2,9	785	702.070.431.008	985	702.070.432.008	1185	702.070.433.008	1405	702.070.434.008
DN65	76,1	95	160	2,9	785	702.070.431.010	985	702.070.432.010	1235	702.070.433.010	1485	702.070.434.010
DN80	88,9	111	190	3,2	815	702.070.431.012	1015	702.070.432.012	1255	702.070.433.012	1485	702.070.434.012
DN100	114,3	140	250	3,6	835	702.070.431.014	1035	702.070.432.014	1285	702.070.433.014	1535	702.070.434.014
DN125	139,7	164	285	4	963	702.070.431.016	1163	702.070.432.016	1463	702.070.433.016	1763	702.070.434.016
DN150	168,3	200	350	4,5	963	702.070.431.018	1163	702.070.432.018	1463	702.070.433.018	1763	702.070.434.018
DN200	219,1	250	420	6,3	1120	702.070.431.020	1320	702.070.432.020	1680	702.070.433.020	2030	702.070.434.020
DN250	273	323	480	6,3	1120	702.070.431.022	1320	702.070.432.022	1680	702.070.433.022	2080	702.070.434.022
DN300	323,9	380	540	7,1	1177	702.070.431.024	1377	702.070.432.024	1727	702.070.433.024	2127	702.070.434.024

*All dimensions given in the tables are in “mm”.
**Subject to technical alterations and deviations resulting from production process without giving any notification.

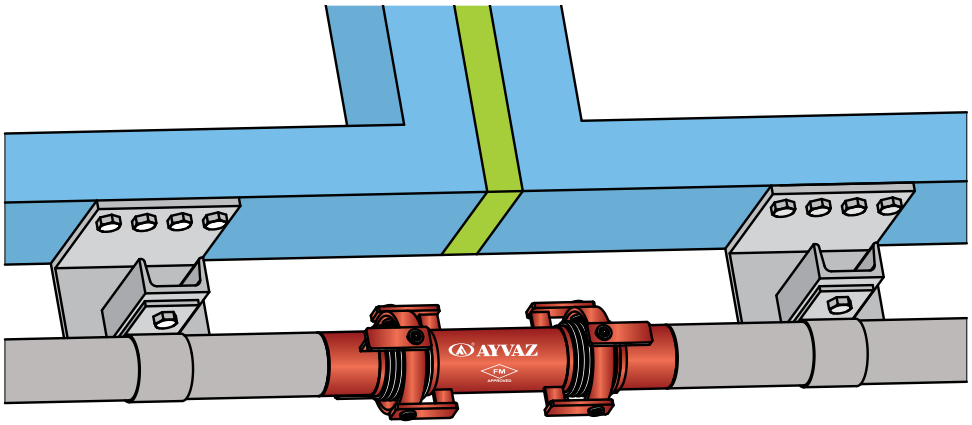
During a seismic motion, the pipelines are affected from the unforecasted movements just like the buildings.
The most important points to be protected during such an event is the dilatation points.

What is Dilatation Point?

Modern buildings are consisted of multiple independent sections the areas between two building is called dilatation point. The pipelines are goes through from one building to another should be protected with seismic motion absorption joints.

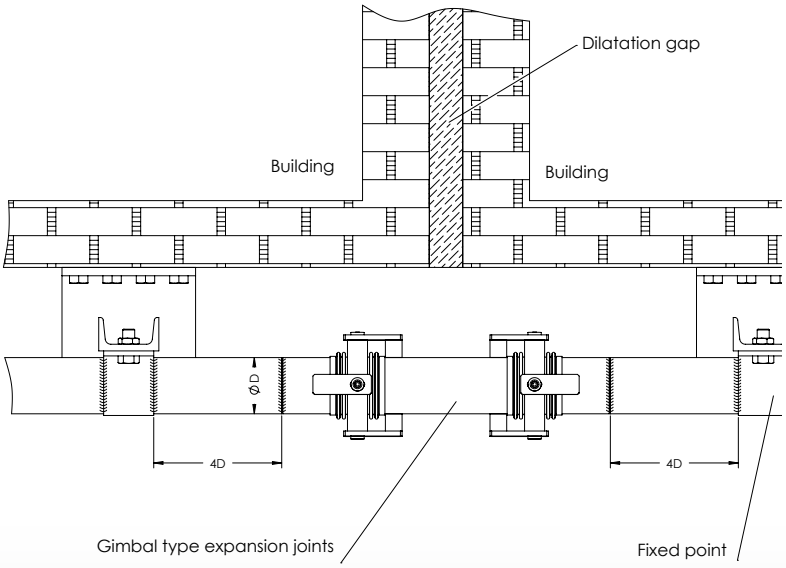
Why are the dilatation points so important?

Because of the different arcitectural and constructional features as well as the geological characteristics of the bases, the movements of buildings may differ. So, pipeline costructors should use 3D motion absorber at these areas. Appropriate expansion joints must be installed to the pipelines underneath the dilatation points.



Purpose of Dilatation Seismic Joints

This type of expansion are able to make movement in all three axis.
The movement amount must be selected according to building displacement amount.
Gimbals on the expansion joints are not used for making the joints restrained againts the pressure thrust, only for limiting the axial movement capacity.



A gap which is equal to the movement amount of the expansion joint should be left between the joint and the construction elements like walls and ceiling.
Both ends of the expansion joint should be fixed to each building with the distance of 4D.

Example

In case of a dilatation expansion joint with 100mm lateral deflection capacity to be installed at the dilatation point of 2 buildings, The expansion joint should be placed in minimum 100mm distance from the ceiling, each ends should be fixed within 400mm.

BRAIDED LOOP JOINTS (U-TYPE)



The loop joint is designed to move in any direction making it a simple, all-in-one joint for a variety of applications. There's no limit to the seismic applications that loop joints can handle. It can even be designed with lined hose for high velocity, double-braid for high pressures, and all stainless steel construction for media compatibility.

Loop Joint Use for Seismic Protection

Piping used in applications and locations subject to seismic conditions have their own set of unexpected random movements and greater costs to overcome. The random motion common to earthquakes requires that seismic expansion joints be capable of movement in any direction of the 6 possible directions. Ayvaz Loop joint's orientation can be changed relative to the piping, further minimizing the likelihood of compressive movement.

Advantages of Braided Loop, Seismic Expansion Joints

Loop joint offers significant cost and safety benefits not found in comparable seismic expansion joints.
FM approval for the safety features to be used at fire protection pipelines.
Bellows design according to EJMA coding system.
Construction according to EN14917 standard.
Large lateral movements by single expansion joint.

Application Areas

Fire protection
HVAC piping lines
Industrial process & applications
Power generation & Energy plants

DESIGN (EN 14917)

Bellow Material	: Stainless Steel AISI 304 (Opt. 321, 316L, 316TI, 309)
Braiding Material	: Stainless Steel AISI 304
Connection Types	: Folating Flanged, Welded Ended, Grooved & Threaded
Flange Material	: PN 16, St.37.2 as standard, the material can be customised on request
Certificates	: Material certificate 3.1 according to EN 10204 and /or ASME FM certificate

BRAIDED LOOP JOINTS (U-TYPE)

Operation Conditions

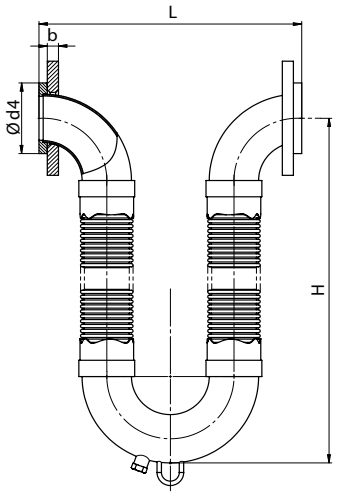
Operating Temperature : -10 °C/+550 °C
Operating Pressure : Standard pressure rating is 175psi and 250psi
Can be produced with different pressure rates PN 2,5-63
PN corresponds to the allowable operating pressure at room temperature

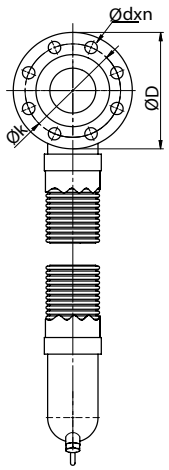
Important : Standard models are produced as un-restrained, fixed points should be created as to withstand springing force as well as pressure thrust caused by the system pressure. For detailed information, get in contact with Ayvaz's expert sales team.
We strongly advise against the use of expansion joints and bellows for misalignment.
Torsion on bellow parts are not desirable and should be eliminated.

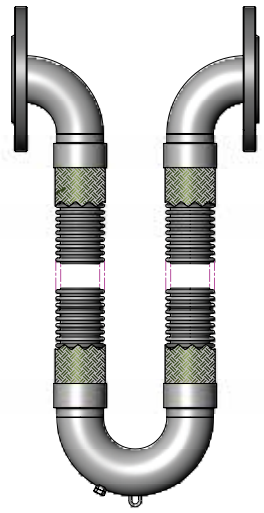
U-Flex, Braided Loop Joints

Flanged Connection, EN1092-1

Name	Movement in all planes	Design	Definition
U-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	U-type, Braided Loop-joint with Rotating Flanges







Grooved Dimensions (DIN EN 1092/1) PN 16					
DN	ØD	Øk	Ød4	f	b
DN25	115	85	68	2	16
DN32	140	100	78	2	18
DN40	150	110	88	3	18
DN50	165	125	102	3	20
DN65	185	145	122	3	20
DN80	200	160	138	3	20
DN100	220	180	158	3	22
DN125	250	210	188	3	22
DN150	285	240	212	3	24
DN200	340	295	268	3	26
DN250	405	355	320	3	29
DN300	460	410	378	4	32

Alternative flange dimensions are also possible e.g. according to US standards (ANSI), JIS etc.

BRAIDED LOOP JOINTS (U-TYPE)

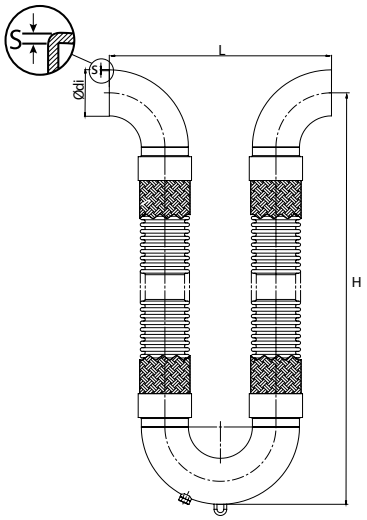
Size		s	R	1,5" movement (40mm)-175 PSI				4" movement (100mm)-175 PSI			
				B	H	Lh	Code	B	H	Lh	Code
DN25	1"	2,6	38	222	380	287	702.080.303.030	324	510	417	702.080.303.035
DN32	1¼"	2,6	47,5	260	410	294	702.080.303.040	343	535	419	702.080.303.045
DN40	1½"	2,6	57	300	435	297	702.080.303.050	362	585	447	702.080.303.055
DN50	2"	2,9	76	375	485	303	702.080.303.060	426	635	453	702.080.303.065
DN65	2½"	2,9	95	450	535	307	702.080.303.070	450	715	487	702.080.303.075
DN80	3"	3,2	114	536	585	313	702.080.303.080	536	765	490	702.080.303.085
DN100	4"	3,6	152	680	715	354	702.080.303.090	680	890	529	702.080.303.095
DN125	5"	4	190	832	815	365	702.080.303.100	832	1020	570	702.080.303.105
DN150	6"	4,5	229	988	940	398	702.080.303.110	988	1170	628	702.080.303.115
DN200	8"	6	305	1292	1220	500	702.080.303.120	1292	1475	756	702.080.303.125
DN250	10"	6,3	381	1600	1400	502	702.080.303.130	1600	1702	804	702.080.303.135

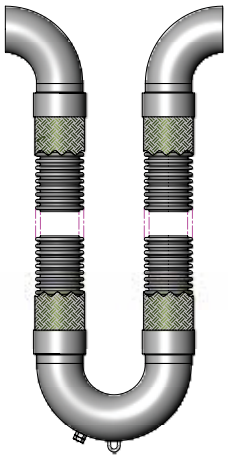
*All dimensions given in the tables are in "mm".
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

U-Flex, Braided Loop Joints

Welded End Connection

Name	Movement in all planes	Design	Definition
U-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	U-type, Braided Loop-joint with Welded Ends





*All dimensions given in the tables are in "mm"
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

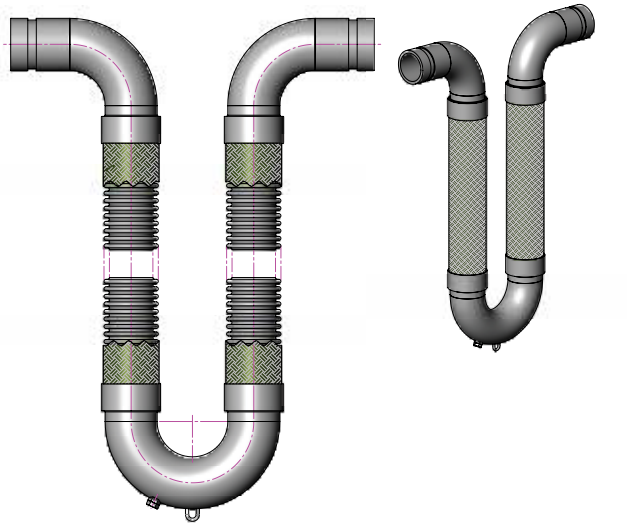
Size		Ødi	s	R	1,5" movement (40mm)-175 PSI				4" movement (100mm)-175 PSI			
					B	H	Lh	Code	B	H	Lh	Code
DN25	1"	33,7	2,6	38	152	380	287	702.080.301.030	254	510	417	702.080.301.035
DN32	1¼"	42,4	2,6	47,5	190	410	294	702.080.301.040	273	535	419	702.080.301.045
DN40	1½"	48,3	2,6	57	228	435	297	702.080.301.050	292	585	447	702.080.301.055
DN50	2"	60,3	2,9	76	304	485	303	702.080.301.060	356	635	453	702.080.301.065
DN65	2½"	76,1	2,9	95	380	535	307	702.080.301.070	380	715	487	702.080.301.075
DN80	3"	88,9	3,2	114	456	585	313	702.080.301.080	456	762	490	702.080.301.085
DN100	4"	114,3	3,6	152	608	715	354	702.080.301.090	608	890	529	702.080.301.095
DN125	5"	140	4	190	760	815	365	702.080.301.100	760	1020	570	702.080.301.105
DN150	6"	168,3	4,5	229	916	940	398	702.080.301.110	916	1170	628	702.080.301.115
DN200	8"	219	6	305	1220	1220	500	702.080.301.120	1220	1475	756	702.080.301.125
DN250	10"	273,0	6,3	381	1524	1400	502	702.080.301.130	1524	1702	804	702.080.301.135

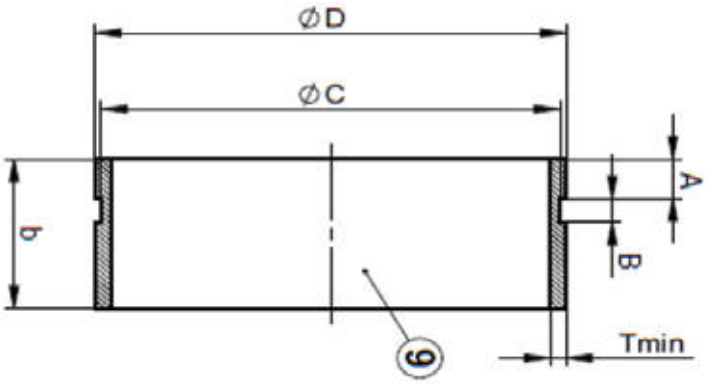
BRAIDED LOOP JOINTS (U-TYPE)

U-Flex, Braided Loop Joints

Grooved End Connection

Name	Movement in all planes	Design	Definition
U-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	U-type, braided Loop-joint with Grooved Ends





Flange Dimensions (DIN EN 1092/1) PN 16						
Size	A	B	Tmin.	ØD	ØC	b
DN25	15,88	7,95	3,38	33,4	30,23	55
DN32	15,88	7,95	3,56	42,2	38,99	55
DN40	15,88	7,95	3,68	48,3	45,09	55
DN50	15,88	7,95	3,91	60,3	57,15	55
DN65	15,88	7,95	4,78	76,1	72,26	55
DN80	15,88	7,95	4,78	88,9	84,94	55
DN100	15,88	9,53	5,16	114,3	110,08	55
DN125	15,88	9,53	5,16	139,7	135,48	60
DN150	15,88	9,53	5,56	165,1	160,78	60
DN200	19,05	11,13	6,05	219,1	214,4	65
DN250	19,05	12,7	6,35	273	268,28	65

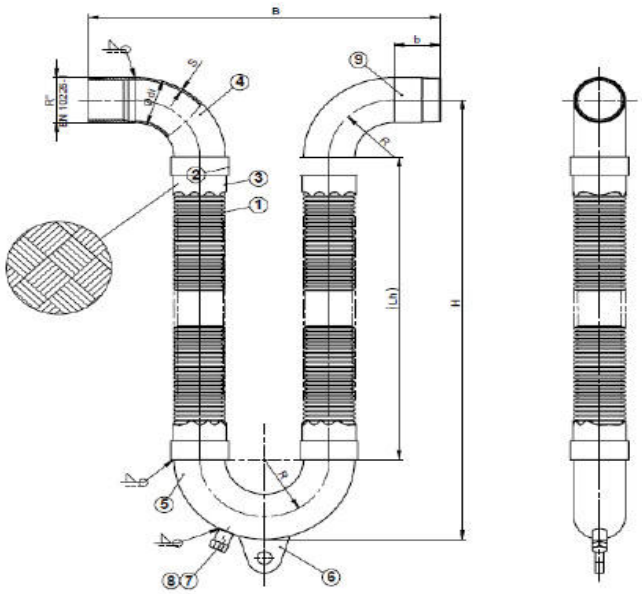
Size		Ødi	s	R	1,5" movement (40mm)-175 PSI				4" movement (100mm)-175 PSI			
					B	H	Lh	Code	B	H	Lh	Code
DN25	1"	33,7	2,6	38	262	380	287	702.080.307.000	364	510	417	702.080.307.005
DN32	1¼"	42,4	2,6	47,5	300	410	294	702.080.307.010	383	535	419	702.080.307.015
DN40	1½"	48,3	2,6	57	338	435	297	702.080.307.020	402	585	447	702.080.307.025
DN50	2"	60,3	2,9	76	414	485	303	702.080.307.030	466	635	453	702.080.307.035
DN65	2½"	76,1	2,9	95	491	535	307	702.080.307.040	490	715	487	702.080.307.045
DN80	3"	88,9	3,2	114	568	585	313	702.080.307.060	566	762	490	702.080.307.065
DN100	4"	114,3	3,6	152	720	715	354	702.080.307.070	718	890	529	702.080.307.075
DN125	5"	140	4	190	882	815	365	702.080.307.080	880	1020	570	702.080.307.085
DN150	6"	168,3	4,5	229	1036	940	398	702.080.307.090	1036	1170	628	702.080.307.095
DN200	8"	219	6	305	1350	1220	500	702.080.307.100	1350	1475	756	702.080.307.105
DN250	10"	273,0	6,3	381	1654	1400	502	702.080.307.110	1654	1702	804	702.080.307.115

*All dimensions given in the tables are in "mm".
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

U-Flex, Braided Loop Joints

Threaded Connection (R/EN-10226-1)

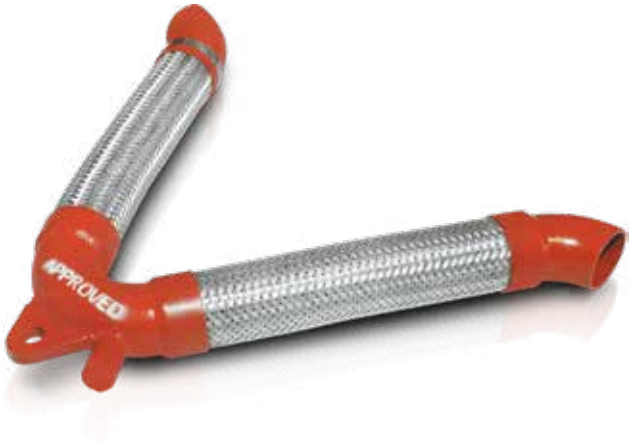
Name	Movement in all planes	Design	Definition
U-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	U-type, Braided Loop-joint with Threaded Ends



Size		Ødi	s	R	b	1,5" movement (40mm)-175 PSI			4" movement (100mm)-175 PSI		
						B	H	Lh	B	H	Lh
DN25	1"	33,7	2,6	38	55	262	380	287	364	510	417
DN32	1¼"	42,4	2,6	47,5	55	300	410	294	383	535	419
DN40	1½"	48,3	2,6	57	55	338	435	297	402	585	447
DN50	2"	60,3	2,9	76	55	414	485	303	466	635	453
DN65	2½"	76,1	2,9	95	55	491	535	307	490	715	487
DN80	3"	88,9	3,2	114	55	568	585	313	566	762	490
DN100	4"	114,3	3,6	152	55	720	715	354	718	890	529
DN125	5"	140	4	190	60	882	815	365	880	1020	570
DN150	6"	168,3	4,5	229	60	1034	940	398	1040	1170	628

*All dimensions given in the tables are in "mm"
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed Braided Loop Joints with customized features are available on request.

BRAIDED LOOP JOINTS (V-TYPE)





The loop joint is designed to move in any direction making it a simple, all-in-one joint for a variety of applications. There's no limit to the seismic applications that loop joints can handle. It can even be designed with lined hose for high velocity, double-braid for high pressures, and all stainless steel construction for media compatibility.

Loop Joint Use for Seismic Protection

Piping used in applications and locations subject to seismic conditions have their own set of unexpected random movements and greater costs to overcome. The random motion common to earthquakes requires that seismic expansion joints be capable of movement in any direction of the 6 possible directions. Ayvaz Loop joint's orientation can be changed relative to the piping, further minimizing the likelihood of compressive movement.

Advantages of Braided Loop, Seismic Expansion Joints

Loop joint offers significant cost and safety benefits not found in comparable seismic expansion joints.
FM approval for the safety features to be used at fire protection pipelines.
Bellows design according to EJMA coding system.
Construction according to EN14917 standard.
Large lateral movements by single expansion joint.

Application Areas

Fire protection
HVAC piping lines
Industrial process & applications
Power generation & Energy plants

DESIGN (EN 14917)

Bellow Material	: Stainless Steel AISI 304 (Opt. 321, 316L, 316TI, 309)
Braiding Material	: Stainless Steel AISI 304
Connection Types	: Floating Flanged, Welded Ended, Grooved & Threaded
Flange Material	: PN 16, St.37.2 as standard, the material can be customised on request
Certificates	: Material certificate 3.1 according to EN 10204 and /or ASME FM certificate

Operation Conditions

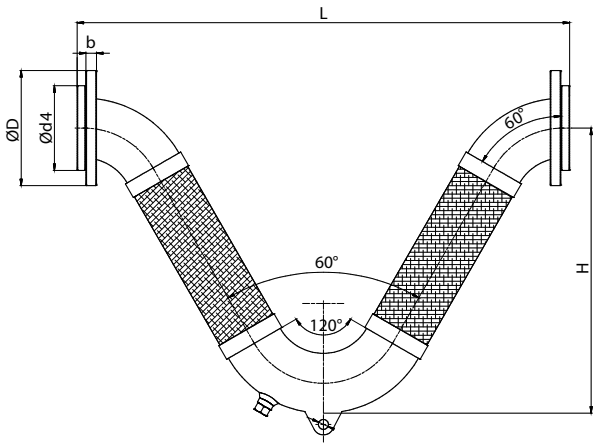
Operating Temperature : -10 °C/+550 °C
Operating Pressure : Standard pressure rating is 175psi and 250psi
Can be produced with different pressure rates PN 2,5-63
PN corresponds to the allowable operating pressure at room temperature

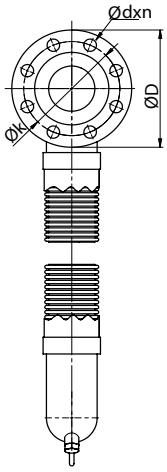
Important : Standard models are produced as un-restrained, fixed points should be created as to with stand springing force as well as pressure thrust caused by the system pressure. For detailed information, get in contact with Ayvaz's expert sales team.
We strongly advise against the use of expansion joints and bellows for misalignment.
Torsion on bellow parts are not desirable and should be eliminated.

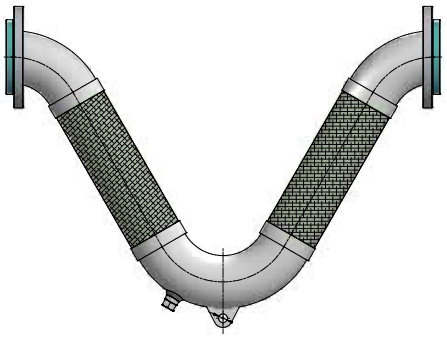
U-Flex, Braided Loop Joints

Flaged Connection, EN1092-1

Name	Movement in all planes	Design	Definition
V-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	V-type, Braided Loop-joint with Rotating Flanges







Flange Dimensions (DIN EN 1092/1) PN 16					
DN	ØD	Øk	Ød4	f	b
DN25	115	85	68	2	16
DN32	140	100	78	2	18
DN40	150	110	88	3	18
DN50	165	125	102	3	20
DN65	185	145	122	3	20
DN80	200	160	138	3	20
DN100	220	180	158	3	22
DN125	250	210	188	3	22
DN150	285	240	212	3	24
DN200	340	295	268	3	26
DN250	405	355	320	3	29
DN300	460	410	378	4	32

Alternative flange dimensions are also possible e.g. according to US standards (ANSI), JIS etc.

BRAIDED LOOP JOINTS (V-TYPE)

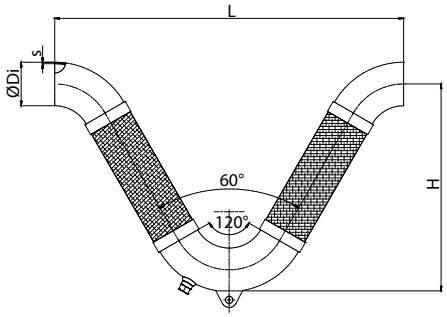
Size		s	R	1,5" movement (40mm)-175 PSI				4" movement (100mm)-175 PSI			
				B	H	Lh	Code	B	H	Lh	Code
DN25	1"	2,6	38	520	330	318	702.090.303.030	707	492	455	702.090.303.035
DN32	1¼"	2,6	47,5	537	330	302	702.090.303.040	750	515	465	702.090.303.045
DN40	1½"	2,6	57	554	330	287	702.090.303.050	807	549	490	702.090.303.055
DN50	2"	2,9	76	638	370	305	702.090.303.060	885	584	500	702.090.303.065
DN65	2½"	2,9	95	749	436	350	702.090.303.070	1020	670	550	702.090.303.075
DN80	3"	3,2	114	838	480	373	702.090.303.080	1135	739	600	702.090.303.085
DN100	4"	3,6	152	1005	560	405	702.090.303.090	1320	834	650	702.090.303.095
DN125	5"	4	190	1182	650	450	702.090.303.100	1552	972	750	702.090.303.105
DN150	6"	4,5	229	1369	750	505	702.090.303.110	1759	1088	825	702.090.303.115
DN200	8"	6	305	1689	900	560	702.090.303.120	2102	1255	900	702.090.303.125
DN250	10"	6,3	381	2045	1080	650	702.090.303.130	2515	1487	1050	702.090.303.135

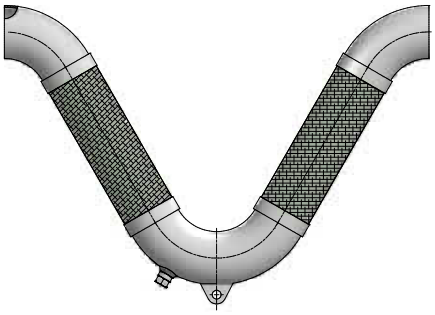
*All dimensions given in the tables are in "mm"
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

V-Flex, Braided Loop Joints

Welded End Connection

Name	Movement in all planes	Design	Definition
V-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	V-type, braided Loop-joint with Welded Ends





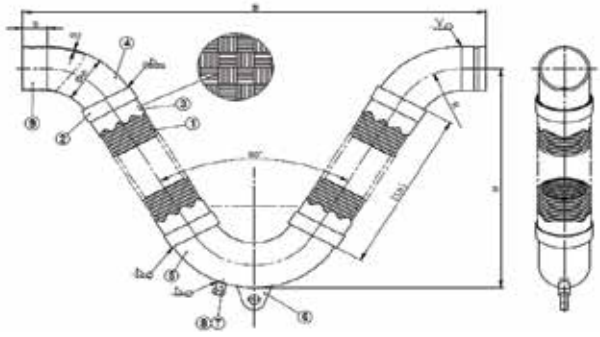
Size		Ødi	s	R	1,5" movement (40mm)-175 PSI				4" movement (100mm)-175 PSI			
					B	H	Lh	Code	B	H	Lh	Code
DN25	1"	33,7	2,6	38	450	330	318	702.090.301.030	637	492	455	702.090.301.035
DN32	1¼"	42,4	2,6	47,5	467	330	302	702.090.301.040	680	515	465	702.090.301.045
DN40	1½"	48,3	2,6	57	484	330	287	702.090.301.050	737	549	490	702.090.301.055
DN50	2"	60,3	2,9	76	568	370	305	702.090.301.060	815	584	500	702.090.301.065
DN65	2½"	76,1	2,9	95	679	436	350	702.090.301.070	950	670	550	702.090.301.075
DN80	3"	88,9	3,2	114	768	480	373	702.090.301.080	1065	739	600	702.090.301.085
DN100	4"	114,3	3,6	152	933	560	405	702.090.301.090	1248	834	650	702.090.301.095
DN125	5"	140	4	190	1110	650	450	702.090.301.100	1480	872	750	702.090.301.105
DN150	6"	168,3	4,5	229	1297	750	505	702.090.301.110	1687	1088	825	702.090.301.115
DN200	8"	219	6	305	1617	900	560	702.090.301.120	2027	1255	900	702.090.301.125
DN250	10"	273,0	6,3	381	1970	1080	650	702.090.301.130	2440	1488	1050	702.090.301.135

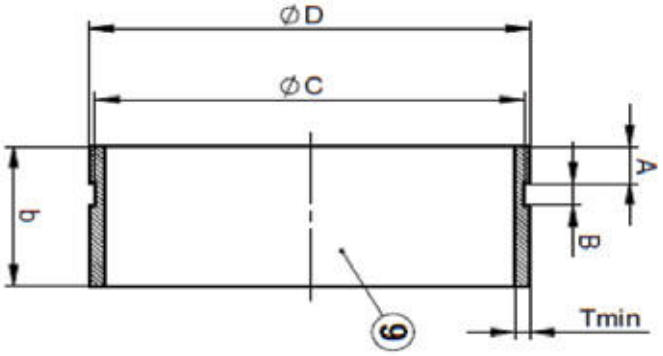
*All dimensions given in the tables are in "mm"
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

U-Flex, Braided Loop Joints

Grooved End Connection

Name	Movement in all planes	Design	Definition
V-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	V-type, braided Loop-joint with Grooved Ends





Flange Dimensions (DIN EN 1092/1) PN 16						
Size	A	B	T min.	ØD	ØC	b
DN25	15,88	7,95	3,38	33,4	30,23	55
DN32	15,88	7,95	3,56	42,2	38,99	55
DN40	15,88	7,95	3,68	48,3	45,09	55
DN50	15,88	7,95	3,91	60,3	57,15	55
DN65	15,88	7,95	4,78	76,1	72,26	55
DN80	15,88	7,95	4,78	88,9	84,94	55
DN100	15,88	9,53	5,16	114,3	110,08	55
DN125	15,88	9,53	5,16	139,7	135,48	60
DN150	15,88	9,53	5,56	165,1	160,78	60
DN200	19,05	11,13	6,05	219,1	214,4	65
DN250	19,05	12,7	6,35	273	268,28	65

Size		Ødi	s	R	1,5" movement (40mm)-175 PSI				4" movement (100mm)-175 PSI			
					B	H	Lh	Code	B	H	Lh	Code
DN25	1"	33,7	2,6	38	560	330	318	702.090.304.030	747	492	455	702.090.304.035
DN32	1¼"	42,4	2,6	47,5	577	330	302	702.090.304.040	790	515	465	702.090.304.045
DN40	1½"	48,3	2,6	57	594	330	287	702.090.304.050	847	549	490	702.090.304.055
DN50	2"	60,3	2,9	76	678	370	305	702.090.304.060	925	582	500	702.090.304.065
DN65	2½"	76,1	2,9	95	789	436	350	702.090.304.070	1060	670	550	702.090.304.075
DN80	3"	88,9	3,2	114	878	480	373	702.090.304.080	1175	739	600	702.090.304.085
DN100	4"	114,3	3,6	152	1043	560	405	702.090.304.090	1358	833	650	702.090.304.095
DN125	5"	140	4	190	1230	650	450	702.090.304.100	1600	970	750	702.090.304.105
DN150	6"	168,3	4,5	229	1417	750	505	702.090.304.110	1807	1088	825	702.090.304.115
DN200	8"	219	6	305	1747	900	560	702.090.304.120	2157	1255	900	702.090.304.125
DN250	10"	273,0	6,3	381	2100	1080	650	702.090.304.130	2570	1487	1050	702.090.304.135

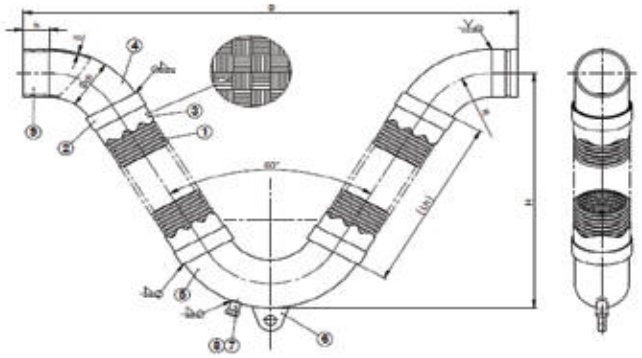
*All dimensions given in the tables are in "mm"
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

BRAIDED LOOP JOINTS (V-TYPE)

U-Flex, Braided Loop Joints

Threaded Connection (R/EN-10226-1)

Name	Movement in all planes	Design	Definition
V-Flex	±40mm (1,5") / ±100mm (4")	175/250psi	V-type, braided Loop-joint with Threaded Ends

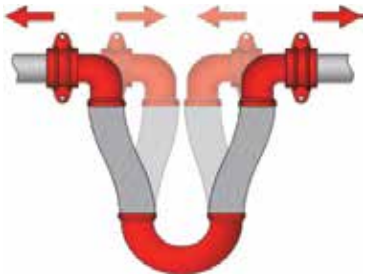


Size		Ødi	s	R		1,5" movement (40mm)-175 PSI			4" movement (100mm)-175 PSI		
						B	H	Lh	B	H	Lh
DN25	1"	33,7	2,6	38	55	560	330	318	747	492	455
DN32	1¼"	42,4	2,6	47,5	55	577	330	302	790	515	465
DN40	1½"	48,3	2,6	57	55	594	330	287	847	549	490
DN50	2"	60,3	2,9	76	55	678	370	305	925	582	500
DN65	2½"	76,1	2,9	95	55	789	436	350	1060	670	550
DN80	3"	88,9	3,2	114	55	878	480	373	1175	739	600
DN100	4"	114,3	3,6	152	55	1043	560	405	1358	833	650
DN125	5"	140	4	190	60	1230	650	450	1600	970	750
DN150	6"	168,3	4,5	229	60	1417	750	505	1807	1088	825

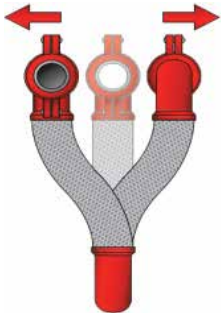
*All dimensions given in the tables are in "mm"
**Subject to technical alterations and deviations resulting from production process without giving any notification.
***Get in touch with our sales team for the ordering codes of 250 PSI version.
****Special designed, Braided Loop Joints with customized features are available on request.

MOTION OF BRAIDED LOOP JOINTS

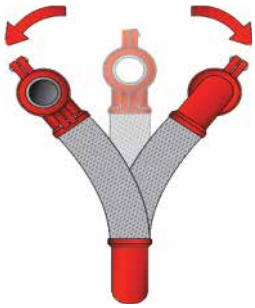
The loop joint is designed to move in any direction making it a simple, all-in-one joint for a variety of applications. There's no limit to the seismic applications that loop joints can handle. It can even be designed with lined hose for high velocity, double-braid for high pressures, and all stainless steel construction for media compatibility.



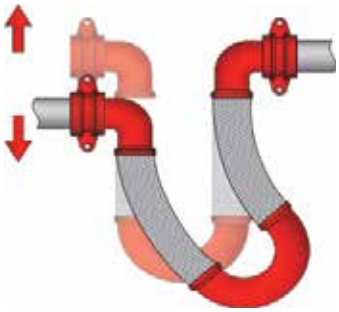
Axial compression and extension



Parallel offset "Z" axis



Parallel offset with "X" axis rotation

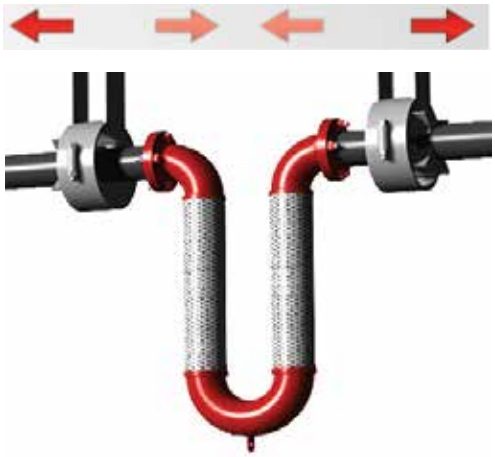


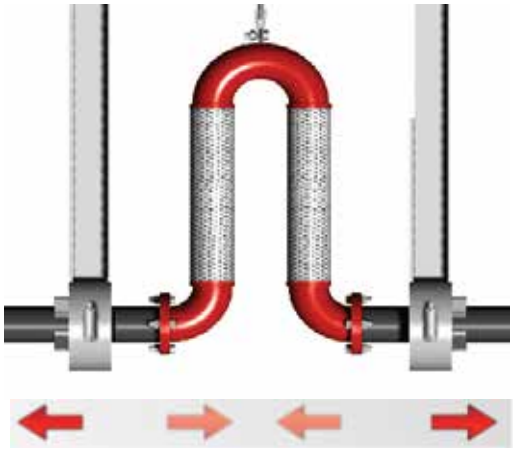
Non-parallel offset "Y" axis

CONNECTION TYPES OF LOOP JOINTS

Horizontal Connection (Hanging Down)

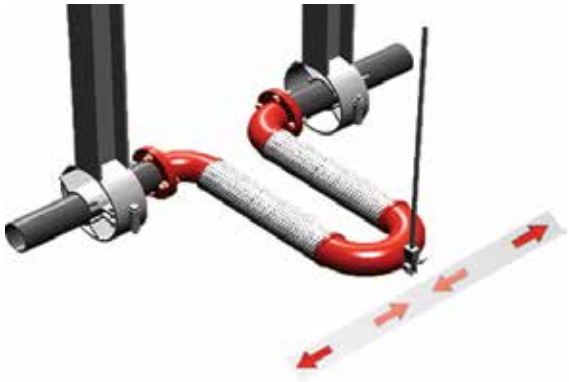
Loop should hang straight down and be free to flex. Guides are required to direct movement axially.





Horizontal Connection (Straight Up)

Support must be provided to prevent the loop from leaning. Pipe hanger rod should be loose enough to allow the 180° return to move up or down 1/4" as the loop flexes. Guides are required to direct movement of pipe axially.



Horizontal Connection

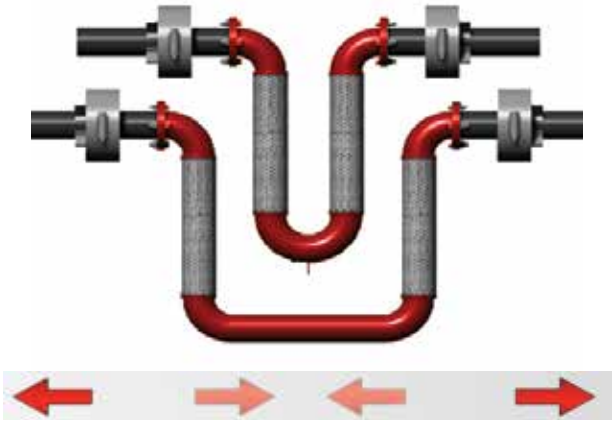
This installation is recommended for steam. Support must be provided to prevent the loop from drooping or torquing pipe. Support must allow the 180° return, to move horizontally back and forth 1/4", as the loop flexes. Guides are required to direct movement of pipe axially.

MOTION OF BRAIDED LOOP JOINTS



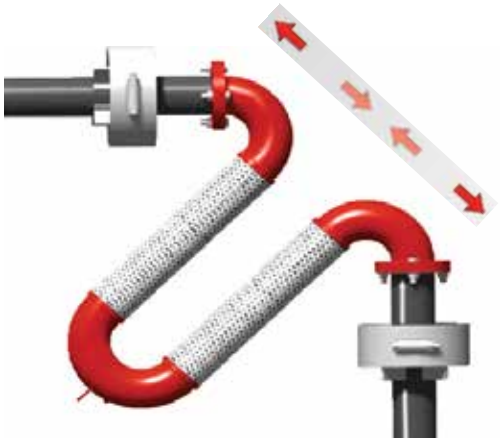
Vertical Connection

Loop must be supported to allow the 180° return to move horizontally back and for 1/4" as the loop flexes. Guides are required to direct movement of pipe axially.



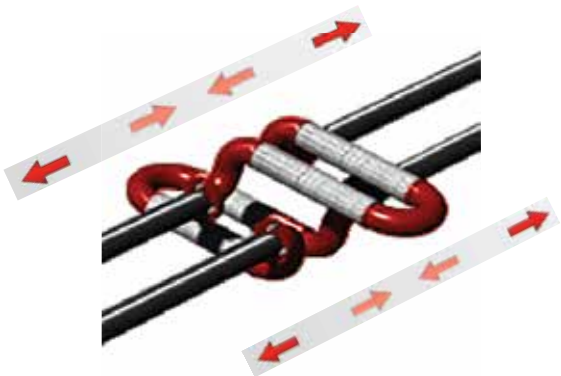
Nested Connection

For tight pipe runs, any size or number of loops can be designed to nest inside of one another.



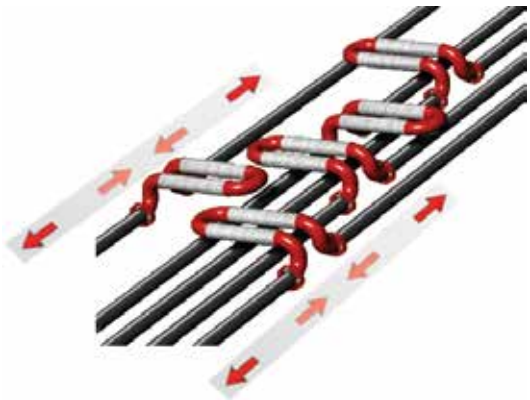
Inside Corner Connection

Single loop joint simultaneously absorbs the thermal expansion of two pipe runs.
Space-saving inside corner joint connection eliminates the need for an anchor at the corner.
Guides are required to direct movement of pipe axially.
Support must be provided to prevent loop joint from drooping or torquing pipe and must allow for sufficient movement.



Over-Under Connection

The loop joints expansion loop can be manufactured in a variety of configurations.



Over-Over Connection

The loop joints expansion loop can be manufactured in a variety of configurations.

AYVAZ LOOP JOINTS INSTALLATION INSTRUCTIONS

1. Ayvaz loop joints can be connected to pipeline with welding ends, flanges or grooved connection mounts through rigid or flexible couplings.

2. Loop joints can be installed in any position with maximum efficiency.

3. For the Loop joint assemblies smaller than 2" (DN50), no support is required.

4. For the loop joint assemblies bigger than 2" (DN50). If the assembly is hanged down vertically, no support is required. For other type of connections, supporting operation may be done in two different ways.
For the +/- 4" (100mm) movement of loop joints, a hanger rod which is 12" (300mm) or greater will allow the loop to swing properly in order to maintain the security of the assembly.
In case that the loop joint is forced to be installed with hanging rod that is shorter than recommended distance above, it is suggested to use a spring hanger. Spring type of hangers may provide the required flexibility to the assembly during seismic motions.

5. Loop joint assemblies are supplied with spreader bars to prevent misalignments during installation. This bar should be removed after installation.

6. Loop joint assembly must be cleared 4" (100mm) from all around the assembly.

7. If the loop joint assembly can't meet the building's seismic separation, it is suggested to install it with the closest elbow less than 24" (600mm) from seismic separation.

8. If the loop joint assembly is to be installed in vertically upright position (180° elbow, over the pipeline), the entrapped air should be removed.

WET ALARM VALVES

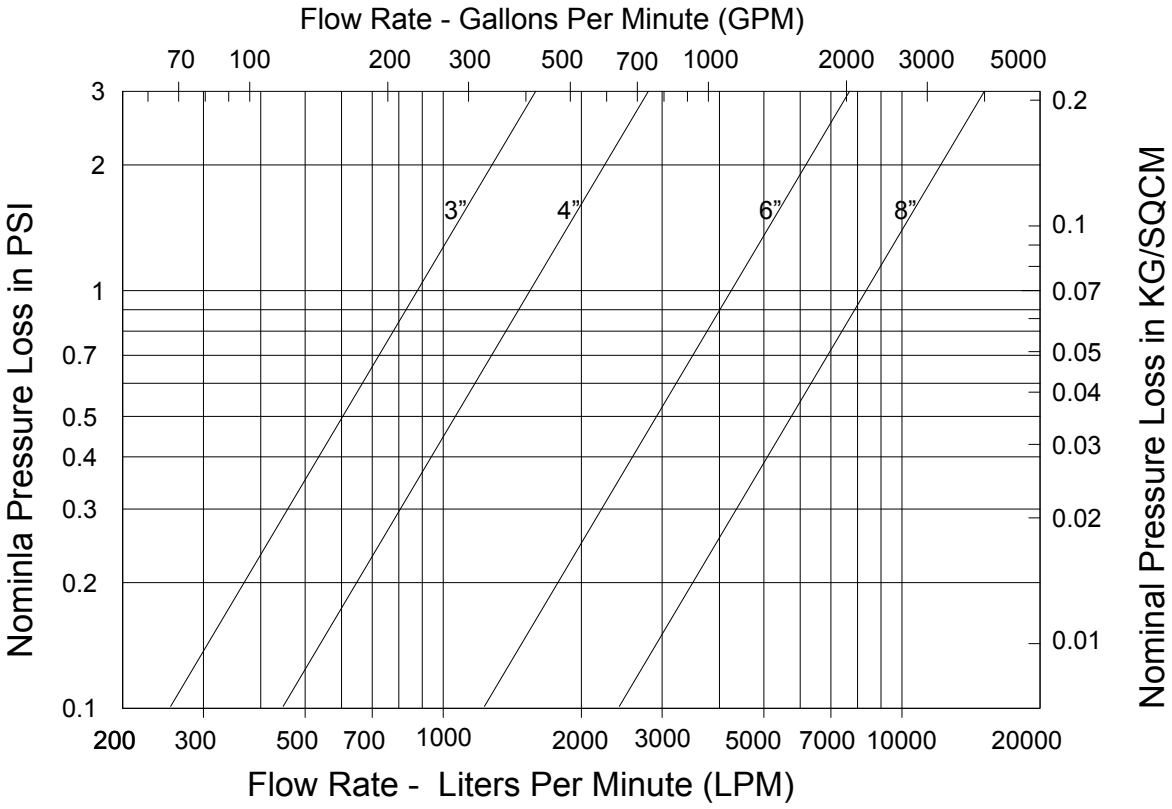


Size : 3", 4", 6" & 8"
Max. Working Pressure : 17.5 bar (250 PSI)*
Mounting : Vertical
Flange Connection : ANSI B16.42 #150
Trim : Galvanised
Coating : Red Paint
Factory Hydrostatic Test Pressure : 35 bar (500PSI)

End Connection : Flange X Flange
Flange X Groove
Groove X Groove

*For 8", UL 17,2 bar (250 Psi), FM 13,8 bar (200 Psi)

Nominal Pressure Loss vs Flow - Alarm Valve AIAV



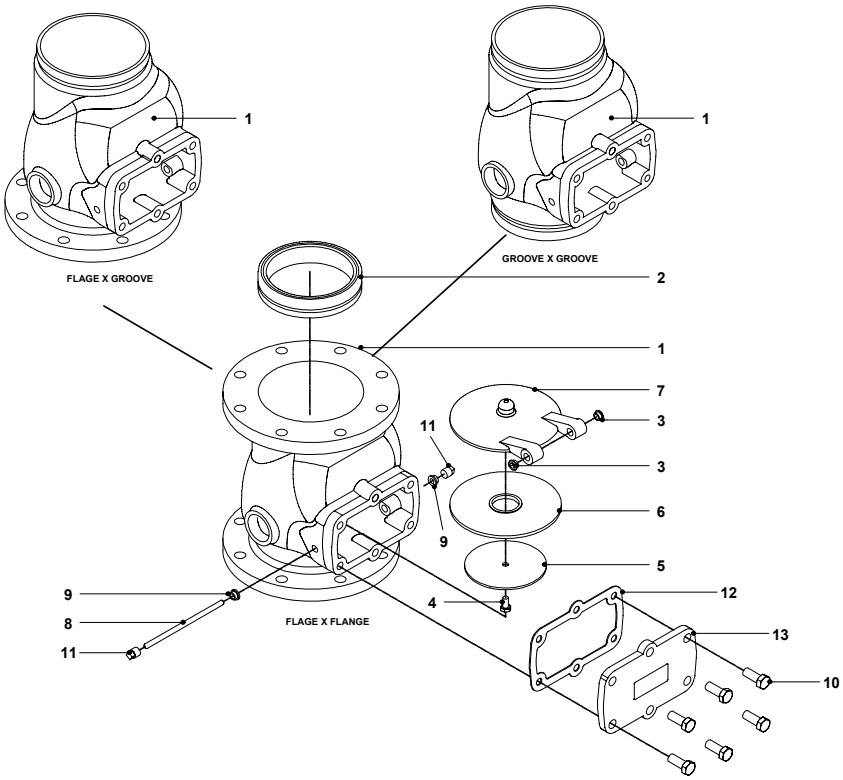
Weight (kg)

Valve Size	Flange X Flange	Flange X Groove	Groove X Groove
3"	18	15	12,1
4"	27	22,1	17,3
6"	42	35,8	28
8"	65	54	44

Groove Pipe Size

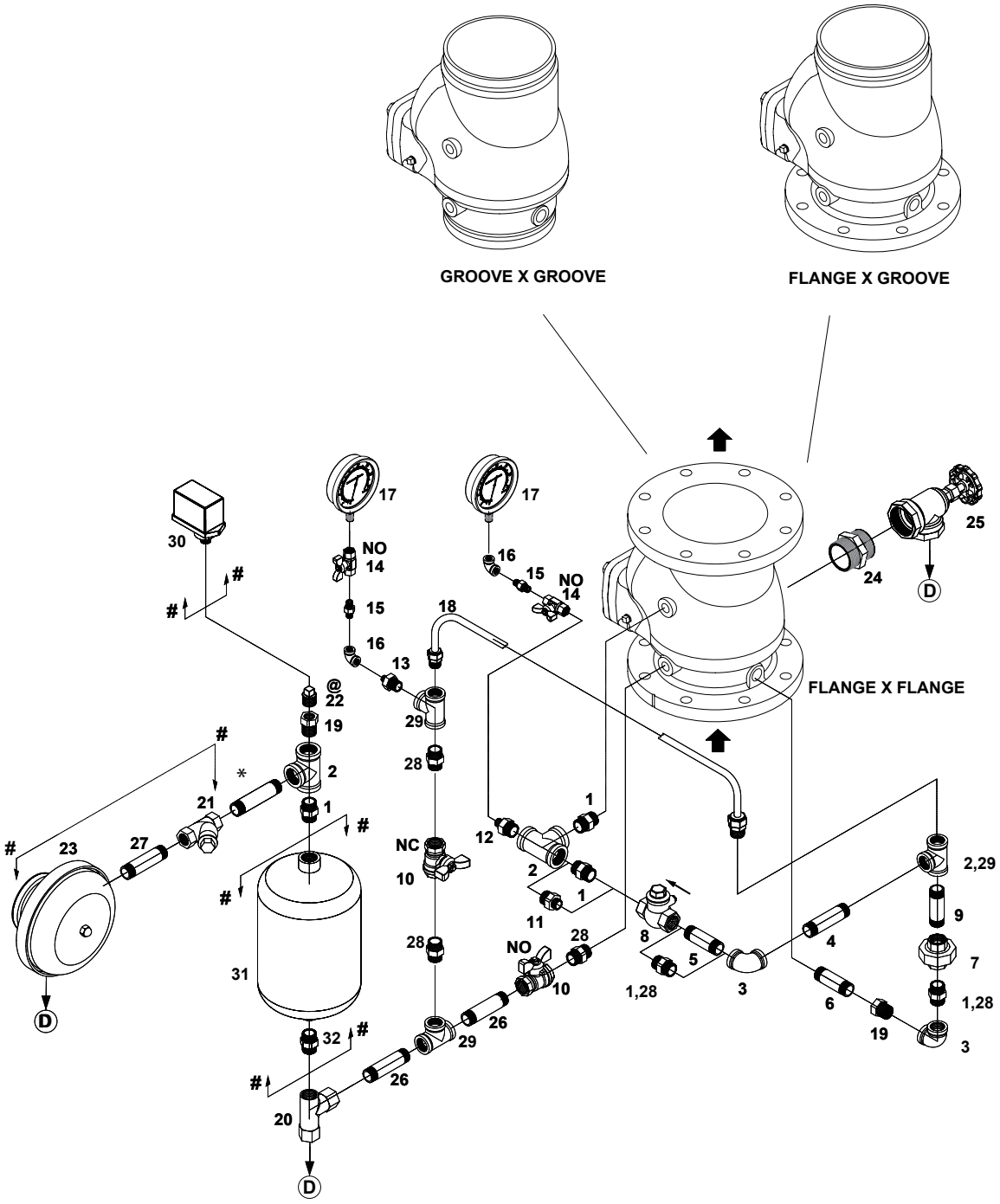
Size	Pipe OD (mm)
3"	89
4"	114,3
6"	165,1
6"	168,3
8"	219,1

Alarm Valve AIAV



Item	Description	Material Specification	Size			
			3"	4"	6"	8"
1	Housing (Flange X Flange)	Ductile Iron	1	1	1	1
1	Housing (Flange X Groove)	Ductile Iron	1	1	1	1
1	Housing (Groove X Groove)	Ductile Iron	1	1	1	1
2	Seat	Bronze	1	1	1	1
3	Clapper Bush	Brass	2	2	2	2
4	Hex. Head Bolt	Stainless Steel	1	1	1	4
5	Rubber Clamp	Stainless Steel	1	1	1	1
6	Rubber Seat	Neoprene Rubber	1	1	1	1
7	Clapper	Ductile Iron	1	1	1	1
8	Hinge Pin	Stainless Steel	1	1	1	1
9	Body Bush	Brass	2	2	2	2
10	Hex. Head Bolt	Steel	4	4	6	6
11	Sq. Head Plug	Forged Steel	2	2	2	2
12	Cover Gasket	Neoprene Rubber	1	1	1	1
13	Cover	Ductile Iron	1	1	1	1

Assemblies with FM Trim

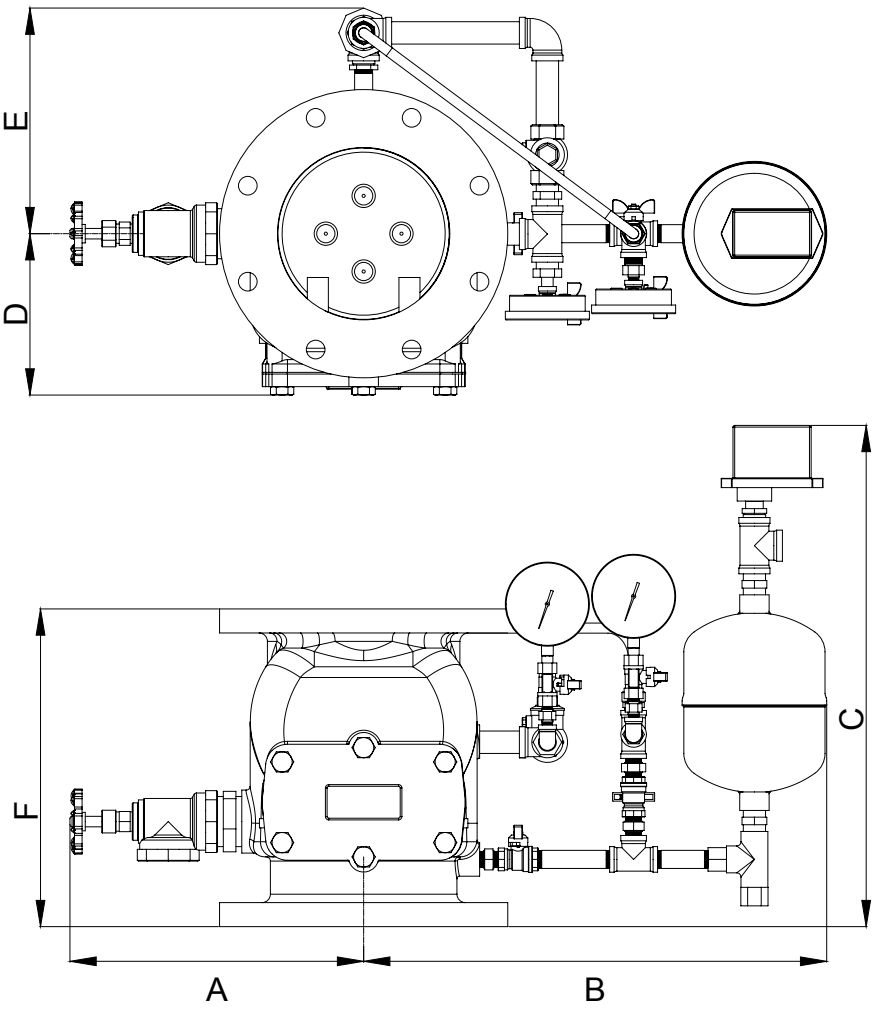


#	Optional Trim Ordered Seperately
Ⓓ	Drain
*	To Suit at Site by Installer
NO	Normally Open
NC	Normally Closed
@	WHEN PRESSURE SWITCH IS SUPPLIED THEN SL.NO.22 PLUG NOT REQUIRED.

Assemblies with FM Trim

Item No.	Description	Size	Quantity Per Alarm Valve Size			
			8"	6"	4"	3"
1	Hex Nipple	3/4"	4	4	5	2
2	Tee	3/4"	3	3	3	2
3	Elbow	3/4"	2	2	2	-
3	Elbow	1/2"	-	-	-	2
4	Pipe Nipple	3/4" X 150 mm Long	1	-	-	-
4	Pipe Nipple	3/4" X 130 mm Long	-	1	-	-
4	Pipe Nipple	3/4" X 100 mm Long	-	-	1	-
4	Pipe Nipple	1/2" X 100 mm Long	-	-	-	1
5	Pipe Nipple	3/4" X 100 mm Long	1	-	-	-
5	Pipe Nipple	3/4" X 80 mm Long	-	1	-	-
6	Pipe Nipple	1/2" X 100 mm Long	1	-	-	1
6	Pipe Nipple	1/2" X 80 mm Long	-	1	1	-
7	Union	3/4"	1	1	1	-
7	Union	1/2"	-	-	-	1
8	Swing Check Valve	3/4"	1	1	1	
8	Swing Check Valve	1/2"	-	-	-	1
9	Pipe Nipple	3/4" X 70 mm Long	1	1	-	-
9	Pipe Nipple	3/4" X 60 mm Long	-	-	1	-
9	Pipe Nipple	1/2" X 70 mm Long	-	-	-	1
10	Ball Valve	1/2"	2	2	2	2
11	Reducing Hex Nipple	3/4" X 1/2"	-	-	-	1
12	Reducing Hex Nipple	3/4" X 1/4"	1	1	1	1
13	Reducing Hex Nipple	1/2" X 1/4"	1	1	1	1
14	Ball Valve	1/4"	2	2	2	2
15	Hex Nipple	1/4"	2	2	2	2
16	Elbow	1/4"	2	2	2	2
17	Pressure Guage	1/4"	2	2	2	2
18	Alarm Test Line Assembly	1/2"	-	-	-	1
18	Alarm Test Line Assembly	1/2"	-	-	1	-
18	Alarm Test Line Assembly	1/2"	-	1	-	-
18	Alarm Test Line Assembly	1/2"	1	-	-	-
19	Reducing Bush	3/4" X 1/2"	2	2	2	1
20	Restriction Nozzle Assembly	'Ayvaz' Make	1	1	1	1
21	'Y' Type Strainer	3/4"	1	1	1	1
22	Plug	1/2"	1	1	1	1
23	Sprinkler Alarm	'Ayvaz' Make Type 'A'	1	1	1	1
23	Sprinkler Alarm	'Ayvaz' Make Type 'B'	1	1	1	1
24	Hex Nipple	2"	1	1	1	-
24	Hex Nipple	1-1/4"	-	-	-	1
25	Angle Valve	2"	1	1	1	-
25	Angle Valve	1-1/4"	-	-	-	1
26	Pipe Nipple	1/2" X 60 mm Long	2	2	2	2
27	Pipe Nipple	3/4" X 80 mm Long	1	1	1	1
28	Hex Nipple	1/2"	3	3	3	5
29	Tee	1/2"	2	2	2	3
30	Pressure Switch (Optional)	1/2" End Connection	1	1	1	1
31	Retard Chamber, Model - Rc9	'Ayvaz' Make	1	1	1	1
32	Hex Nipple	3/4"	1	1	1	1

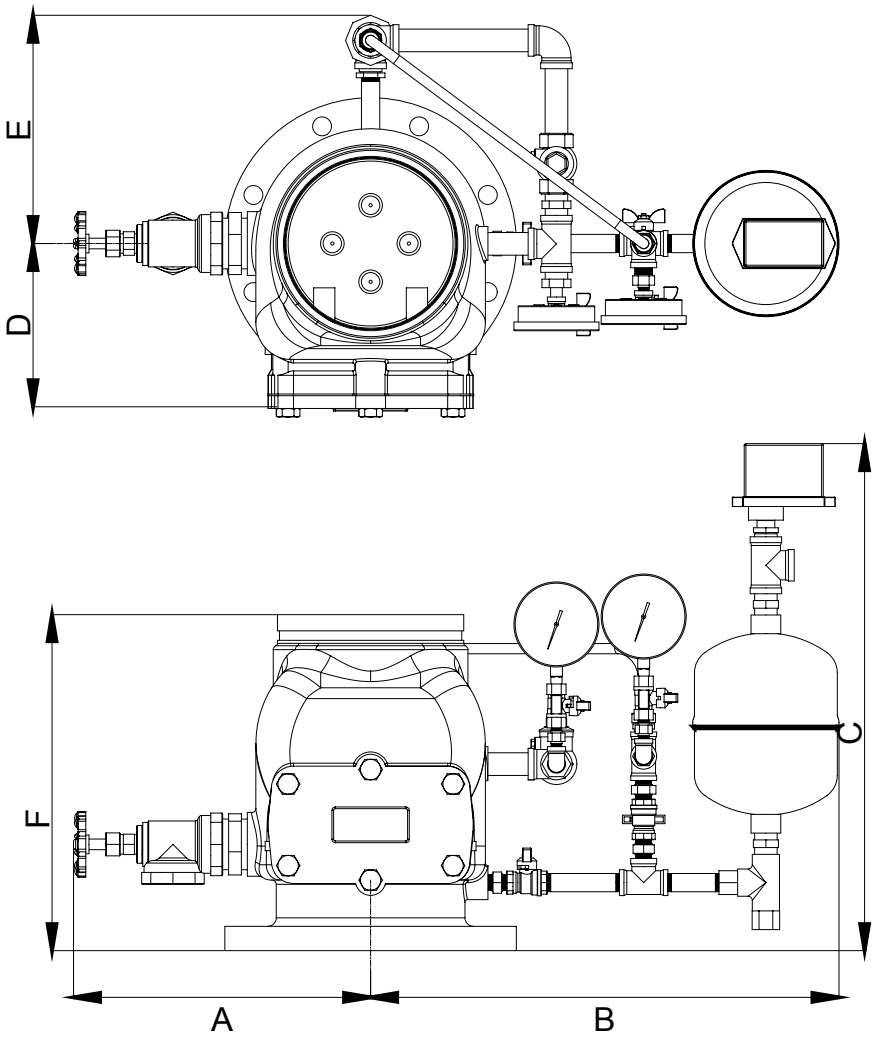
Flange X Flange



Size	3"	4"	6"	8"
A	279	312	331	350
B	482	488	510	551
C	588	588	588	597
D	127	140	173	192
E	201	219	234	269
F	262	274	315	378

Dimensions are approx. and in millimeters.

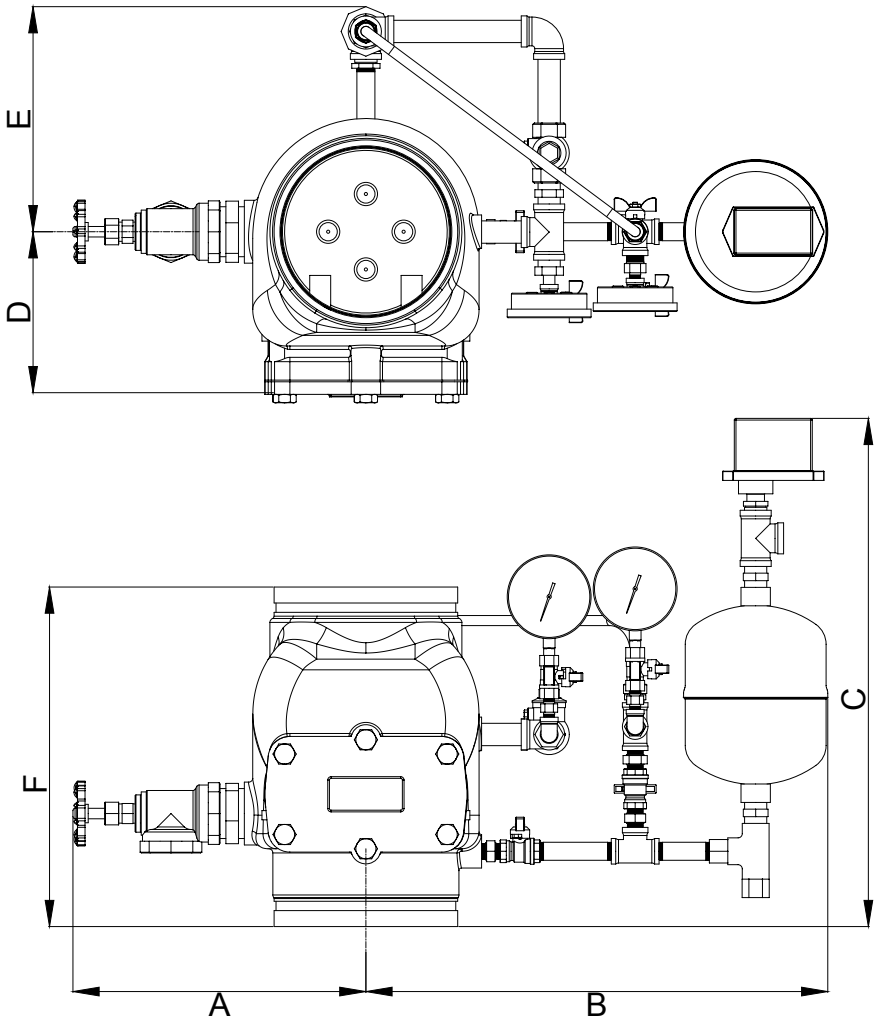
Flange X Groove



Size	3"	4"	6"	8"
A	279	312	331	350
B	482	488	510	551
C	588	588	588	597
D	127	140	173	204
E	201	219	234	269
F	275	291.3	316.8	395.2

Dimensions are approx. and in millimeters.

Groove X Groove



Size	3"	4"	6"	8"
A	279	312	331	350
B	482	488	510	551
C	593	596	596	607
D	127	140	173	204
E	201	219	234	269
F	280	300	324	405

Dimensions are approx. and in millimeters.

Water Motor Gong / Model AG



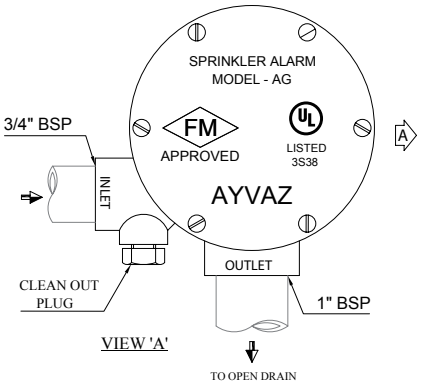
Water Working Pressure : 17.5 bar (250 PSI)

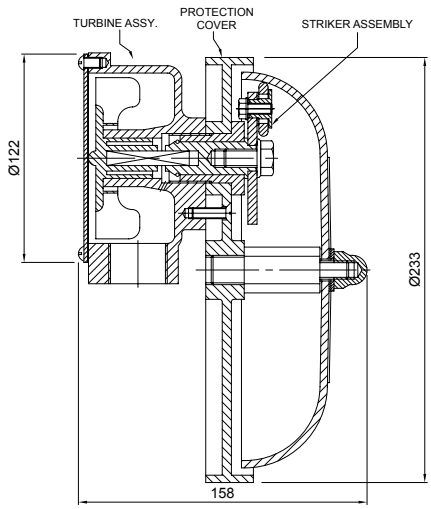
CONNECTION

Inlet	: 3/4" BSPT (3/4" NPT)
Drain	: 1" BSPT (1" NPT)
Gong Diameter	: 205mm (8")
Gong Depth	: 50mm (2")
Coating	: Red Paint
Weight	: 3.0 kg

SPRINKLER WATER MOTOR GONG MODEL - AG

AYVAZ Sprinkler Alarm is a hydraulically driven mechanical bell. It does sound a continuous alarm when the sprinkler system operates. The impeller and drive shaft are energy efficient, made from light weight nonmetallic material and do not require any external lubrication. The gong, protection cover and motor housing are made of corrosion resistant aluminium alloy.





Retarding Chamber / Model RC9



Water Working Pressure : 17.5 bar (250 PSI)

Material	: Stainless Steel
Connection	: 3/4" BSPT (F)
Weight	: 2.6 kg

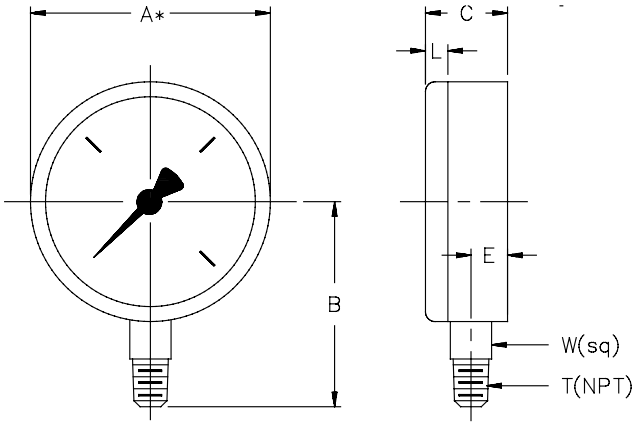
For use with AYVAZ Alarm Valve Model AIAV

RETARDING CHAMBER AYVAZ-RC9

Retarding Chamber is used with Alarm Valve Trim in the system. It is a holding tank to prevent activation of the Sprinkler Alarm during water pressure surge, but permits the activation of alarm on sustained flow. The Retarding Chamber is part of UL Listed and FM Approved Alarm Valve Trim. The Retarding Chamber is made of stainless steel material and rated for 17.5 bar pressure.

Bourdon Tube Pressure Gauges | Model 111.10SP





Applications

- Fire sprinkler systems
- Suitable for all media that will not obstruct the pressure system or attack copper alloy parts

Product Features

- UL-listed (UL-393), United States and Canada
- Factory Mutual (FM) approved
- Reliable and economical

Specifications

Design
EN 837-1 & ASME B40.100

Sizes
4" (100 mm)

Accuracy class
± 3/2/3% of span (ASME B40.100 Grade B)

Ranges
0/80 psi (5,5 bar), retard to 250 psi (17 bar), air | 0/300 psi (20 bar), water

Working pressure
Steady: 3/4 of full scale value
Fluctuating: 2/3 of full scale value
Short time: full scale value

Operating temperature
Ambient: -40°F to 140°F (-40 °C to 60 °C)
Media: 140°F (+60 °C) maximum

Temperature error
Additional error when temperature changes from reference temperature of 68°F (20 °C)±0.4% of span for every 18°F (10°K) rising or falling.

Bourdon tube
Material: Copper alloy
C-shape

Pressure connection
Material: Copper alloy
1/4" NPT lower mount (LM)

Movement
Copper alloy

Dial
White aluminum with stop pin; black and red lettering

Pointer
Black aluminum

Case
Black polycarbonate

Window
Snap-in clear polycarbonate

Approvals
UL listed (UL-393)
Factory Mutual

Dimensions

A mm (inch)	B mm (inch)	C mm (inch)	E mm (inch)	L mm (inch)	T mm (inch)	W mm (inch)	Weight kg (lbs.)
100	71	30	11.5	3.75	0.64	14	0.16
(4")	(2.79")	(1.18")	(0.45")	(0,15")	(0.25")	(0,55")	0.35lbs.

Water Flow Detector / Model AWFD

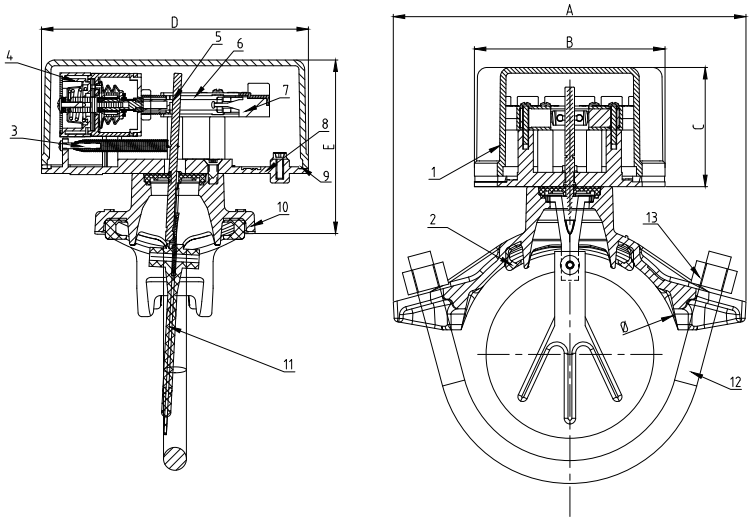


AWFD water flow detectors installed in sprinkler systems provide an electrical alarm when a flow of water from the system equals or exceeds that of a single sprinkler. They can be used with either open or closed signaling circuits.

AWFD water flow detectors are suitable for **only wet pipe system.**

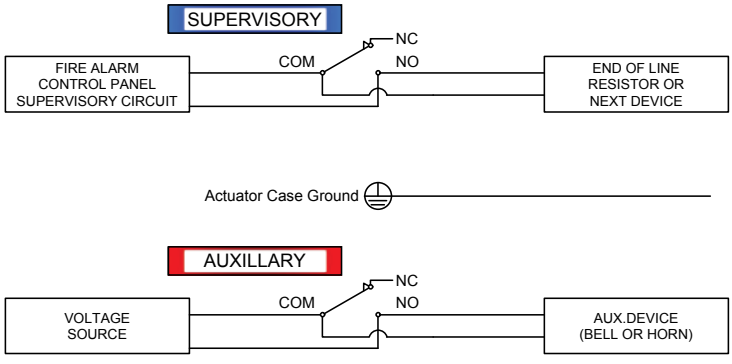
Specifications

Connection Ends : AWWA C606
Temperature Range : 0 °C - 68 °C (32° F- 155° F)
Coating : "Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550"
Electrical Ratings : 125/250VAC @ 5A or 24/30VDC @ 3A
Minimum Flow Rate : 4-10 gpm (15 - 38 lpm)
Max Working Pressure : 363 psi (2500kPa)



Material List		
No.	Part	Material
1	Cover	ASTM B85-96 383.0E
2	Body Gasket	EPDM
3	Spring	SS304
4	Air Delay Device	PC GV3410R
5	Stem Seal Assembly	SS304+NBR
6	Connecting Rod	POM 500P
7	Switch Assembly	PC GV3410R
8	Connection Plate	ASTM B85-96 383.0E
9	Connection Plate Seal	NBR
10	Body	ASTM A536,65-45-12
11	Vane Assembly	PE
12	U-Bolts	Carbon Steel Zinc Plated
13	Nuts	Carbon Steel Zinc Plated

Typical Electrical Connection



Size		Dimensions (mm)						
Inch	mm	Ø	A	B	C	D	E	Hole Dia
2"	50	60,3	116	100	59,5	140	79,5	32
2.5"	65	73	120	100	59,5	140	79,5	32
2.5"	65	76,1	120	100	59,5	140	79,5	32
3"	80	88,9	145	100	59,5	140	80,9	51
4"	100	114,3	185	100	59,5	140	98,5	51
5"	125	139,7	212	100	59,5	140	82,6	51
6"	150	165,1	254	100	59,5	140	90,4	51
6"	150	168,3	254	100	59,5	140	90,4	51
8"	200	219,1	298	100	59,5	140	90,5	51

Do NOT use any of the WFDN models on copper pipe. The clamping forces of the mounting bolts may collapse the pipe sufficiently to prevent the detector from functioning properly. The model AWFD is a vane-type waterflow detector for use in wet-pipe fire sprinkler systems only. Vane-type waterflow detectors shall not be used as the sole in both initiating device deluge and preaction systems; waterflow detectors used in these types of systems may result in an unintended discharge caused by a surge, trapped air or a short retard time.

Waterflow Detector U Bolted / Model WFD



Features

- UL-listed models are NEMA 4 rated
- The WFD series is compatible with schedule 10 through 40 steel pipe, sizes 2˝ through 8˝, and can be mounted in a vertical or horizontal position.
- Sealed retard mechanism immune to dust and other contaminants
- Visual switch activation
- Field-replaceable retard mechanism and SPDT switches
- Rugged, dual SPDT switches enclosed in a durable terminal block
- Accommodates up to 12 AWG wire
- Designed for both indoor and outdoor use
- 100 percent synchronization activates both alarm panel and local bell
- Tamper-resistant cover screws

Robust Construction. The WFD series consists of a rugged, NEMA 4-rated enclosure. Designed for both indoor and outdoor use, the WFD series operates across a wide temperature range, from 32°F to 120°F.

Reliable Performance. UL-listed models are equipped with tamper-resistant cover screws to prevent unauthorized entry. Inside, two sets of SPDT (Form C) synchronized switches are enclosed in a durable terminal block to assure reliable performance.

False Alarm Immunity. The WFD series inchorporates a mechanical retard feature, which minimizes the risk of false alarm due to pressure surges or air trapped in the sprinkler system. In addition, the mechanical retard's unique sealed design is immune to dust and other contaminants.

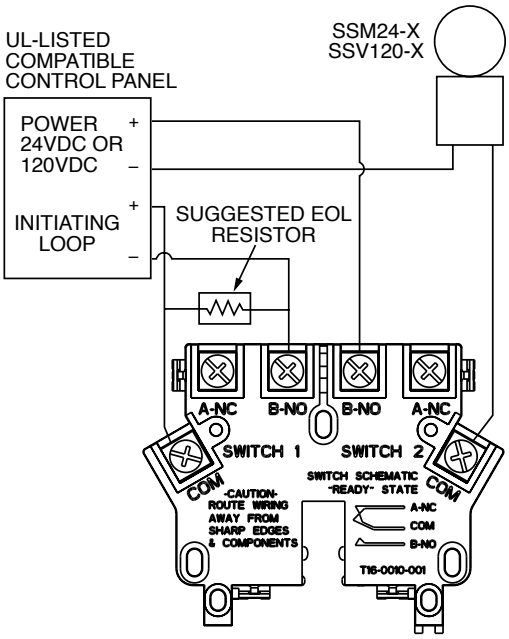
Simplified Operation. The WFD series is designed to simplify installation. Two conduit openings permit easy attachment to the local alarm system. The retard mechanism and dual SPDT switches are field-replaceable.

Specifications

Static Pressure Rating	: 450 PSI*
Maximum Surge	: 18 FPS
Triggering Threshold Bandwidth (Flow Rate)	: 4–10 GPM
Conduit Entrances	: Two openings for ½˝ conduit. One open, one knock-out type
Contact Ratings	: Two sets of SPDT (Form C) — 10.0 A @ 125/250 VAC — 2.5 A @ 24 VDC
Compatible Pipe	: Steel water pipe, schedule 10 through 40
Operating Temperature Range	: 32°F to 120°F (0 °C to 49 °C)
Enclosure Rating*	: NEMA4 - Suitable for indoor/outdoor use
Cover Tamper Switch	: Standart with ULC models, optional for UL models, part no. 546-7000
Service Use	: Automatic Sprinkler: NFPA 13 One or Two Family Dwelling: NFPA 13D Residential Occupancies up to 4 Stories: NFPA 13R National Fire Alarm Code: NFPA 72

Manufactured by System Sensor who have the FM Approval and UL Listing

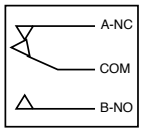
Wiring Diagram



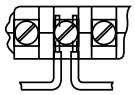
NOTE: COMMON AND B-NO CONNECTIONS WILL CLOSE WHEN VANE IS DEFLECTED, I.E., WHEN WATER IS FLOWING. DUAL SWITCHES PERMIT APPLICATIONS TO BE COMBINED ON A SINGLE DETECTOR.

CONTACT RATINGS	
125/250 VAC	10 AMPS
24 VDC	2.5 AMPS

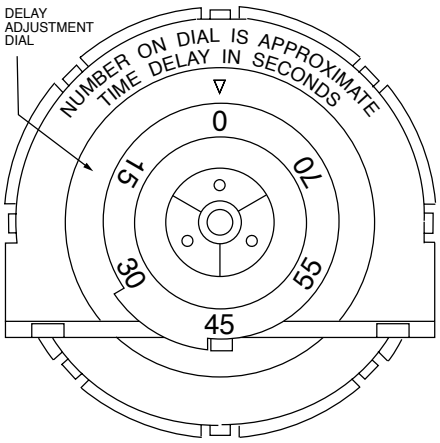
SCHEMATIC OF INDIVIDUAL SWITCH IN "NO WATERFLOW" CONDITION



BREAK WIRE AS SHOWN FOR SUPERVISION OF CONNECTION. DO NOT ALLOW STRIPPED WIRE LEADS TO EXTEND BEYOND SWITCH HOUSING. DO NOT LOOP WIRES.

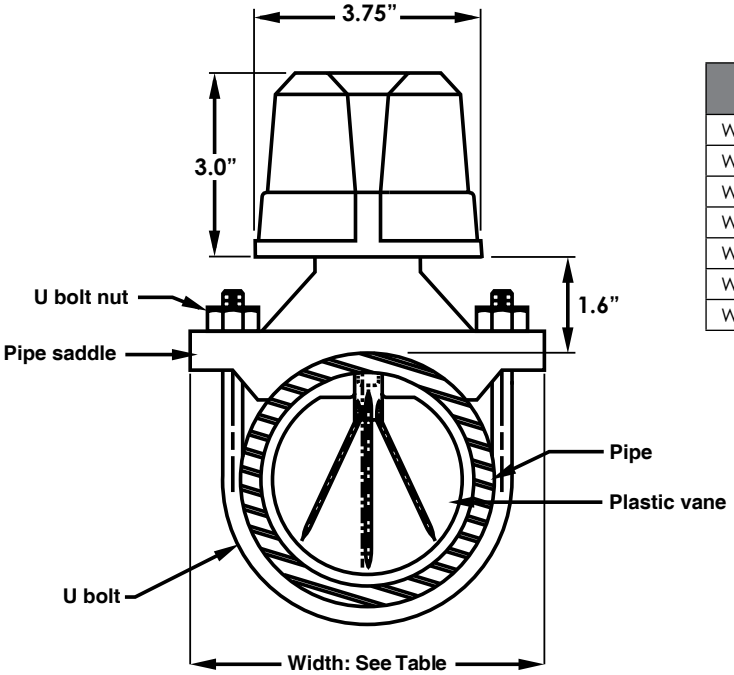


Delay Adjustment Deal



NOTE: RETARD TIME MAY EXCEED 90 SECONDS. ADJUST AND VERIFY THAT TIME DOES NOT EXCEED 90 SECONDS. NUMBER ON DIAL IS APPROXIMATE TIME DELAY IN SECONDS WITH AN ACCURACY OF +/– 50%.

Dimensions



Model	Pipe Size (inch)	Hole Size (inch)	Width (inch)	Weight (kg)
WFD20	2"	1 1/4"	4,6"	1,9
WFD25	2 1/2"	1 1/4"	4,6"	1,95
WFD30-2	3"	2"	5,2"	2,04
WFD40	4"	2"	5,7"	2,36
WFD50	5"	2"	6,8"	2,86
WFD60	6"	2"	9,0"	3,08
WFD80	8"	2"	10,8"	3,4

Waterflow Detector Threaded / Model WFDTN



Features

- Residential sprinkler systems
- Sealed retard mechanism
- Visual switch activation
- Rugged, dual SPDT switches enclosed in a durable terminal block
- Easy to install and maintain design
- Vertical or horizontal mount
- Field replaceable retard mechanism and switch assembly
- Twelve different flexible paddles
- Durable, tamper resistant enclosure
- Two conduit openings
- Handy depth gauge
- Accommodates up to 12 AWG wire
- 100% synchronization fires alarm panel and local bell simultaneously

Design. The design of the WFDTH makes it easy to install and simple to maintain. It can be mounted in the vertical or horizontal position. Two conduit openings permit easy attachment to the local alarm system. The retard mechanism and switch assembly are field replaceable.

Features. Twelve different flexible paddles fit 1″, 1.″, 1.″, and 2″ tees. Sizes are marked clearly on the paddle for ease of installation. Plastic paddles slip over the actuating lever and are securely fastened with one screw. The handy depth gauge insures the proper installation depth and clearance of the detector to the tee.

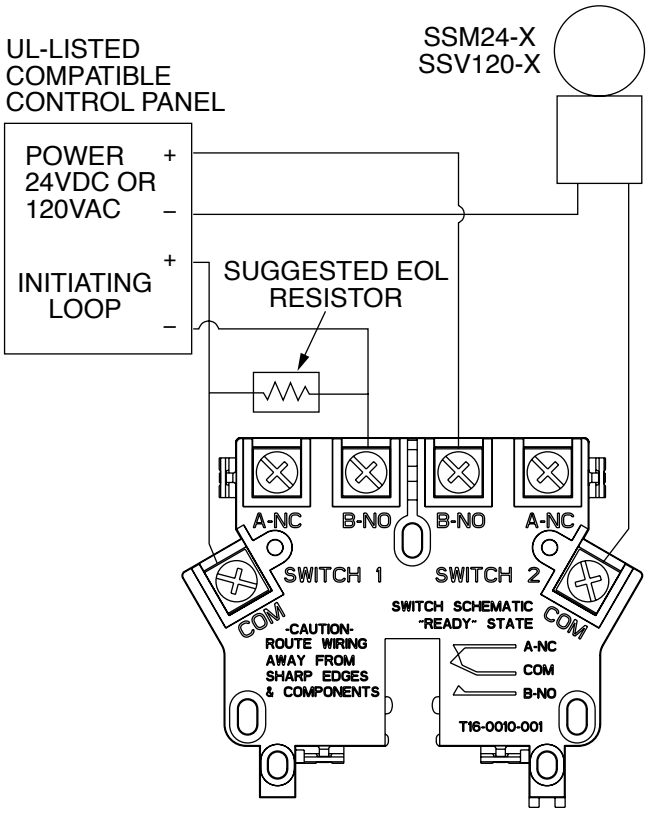
Construction. The WFDTH inchludes a durable and tamper resistant enclosure. Its sealed retard assures that the delay mechanism is not contaminated by dust and dirt when the cover is removed. The long lasting cover completely encloses the electrical components to further keep out dust and dirt. Improved self-guiding security screws and removal tools make detectors resistant to tampering and simplify field maintenance.

Specifications

Static Pressure Rating	: 250 PSI (max.)
Maximum Surge	: 18 FPS
Triggering Threshold Bandwidth (Flow Rate)	: 4–10 GPM
Overall Dimensions, Installed	: 11.4cm H × 9cm W × 17cm L
Contact Ratings	: Two sets of SPDT (Form C) — 10.0 A @ 125/250 VAC — 2.5 A @ 24 VDC
Compatible Tee Fittings	: Threaded ferrous and brass tees, copper Sweat tees, CPVC tees, and polybutylene tees
Conduit Entrances	: Two openings for ½″ conduit
Operating Temperature Range	: 32°F to 120°F (0 °C to 49 °C)
Enclosure Rating	: UL listed for indoor use
Cover Tamper Switch	: Canadian models only, factory installed
Service Use	: Automatic Sprinkler: NFPA 13 One or Two Family Dwelling: NFPA 13D Residential Occupancies up to 4 Stories: NFPA 13R National Fire Alarm Code: NFPA 72
Shipping Weight	: 1.2 kg

Manufactured by System Sensor who have the FM Approval and UL Listing

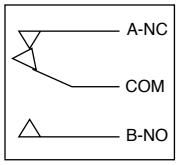
Wiring Diagram



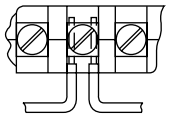
NOTE: COMMON AND B-NO CONNECTIONS WILL CLOSE WHEN VANE IS DEFLECTED, I.E., WHEN WATER IS FLOWING. DUAL SWITCHES PERMIT APPLICATIONS TO BE COMBINED ON A SINGLE DETECTOR.

CONTACT RATINGS	
125/250 VAC	10 AMPS
24 VDC	2.5 AMPS

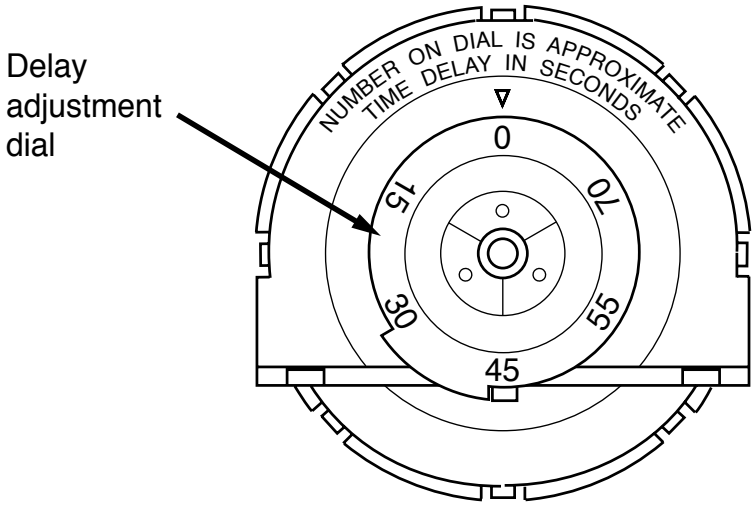
SCHEMATIC OF INDIVIDUAL SWITCH IN "NO WATERFLOW" CONDITION



BREAK WIRE AS SHOWN FOR SUPERVISION OF CONNECTION. DO NOT ALLOW STRIPPED WIRE LEADS TO EXTEND BEYOND SWITCH HOUSING. DO NOT LOOP WIRES.



Delay Adjustment Deal



NOTE: Retard time may exceed 90 seconds.
Adjust and verify that time does not exceed 90 seconds.

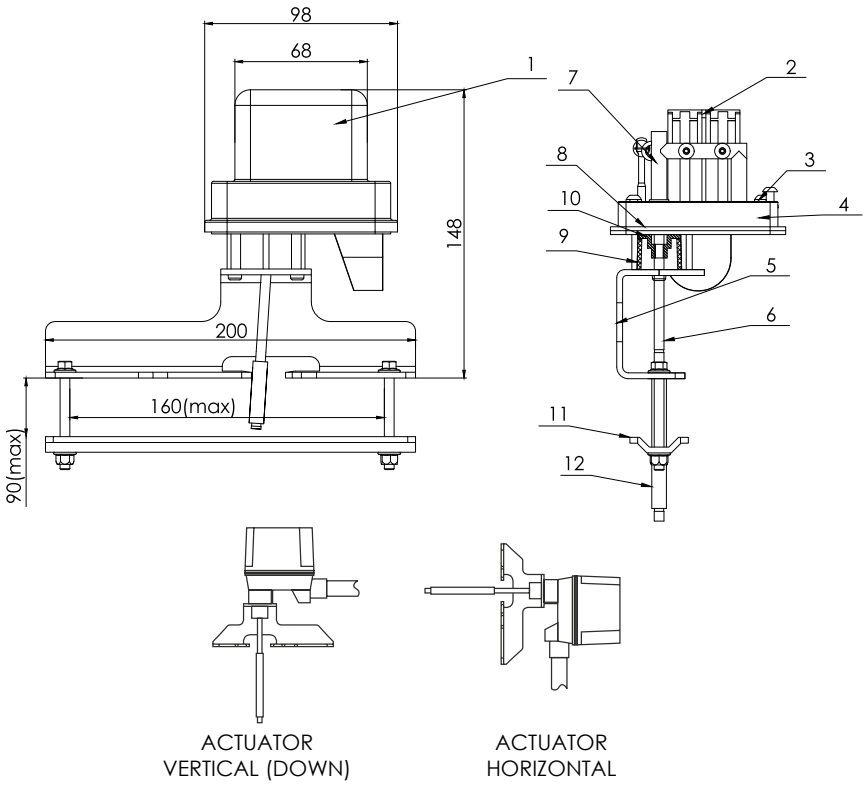
Supervisory Switch for OS&Y Gate Valve / Model OSY-SS



OSY-SS is used to monitor the open position of an Outside Screw and Yoke (OS&Y) type gate valve.
The model OSY-SS serves the OS&Y Gate valves ranging in size from 2"-16" (50mm - 400mm).

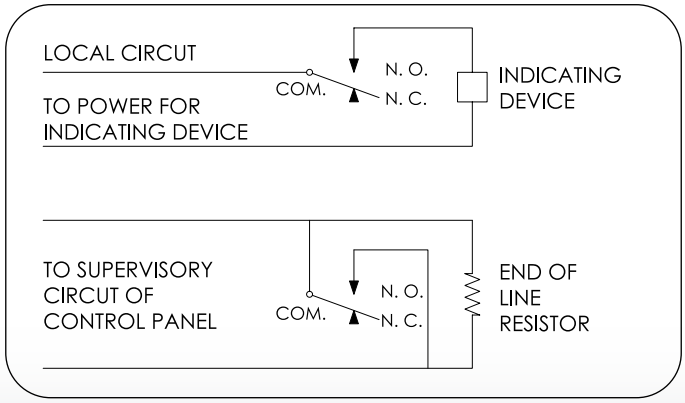
Specifications

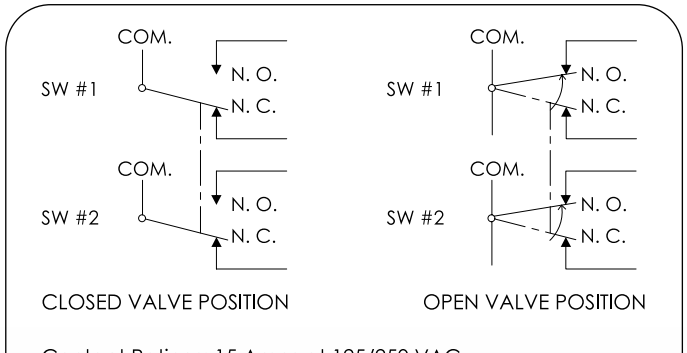
Service Environment	Indoor or Outdoor use, all parts have corrosion resistant finishes
Temperature Range	-10°C - 80°C (14° F- 176° F)
Cover Tamper	Tamper Resistant Screws (Optional cover tamper switch available)
Electrical Ratings	15 Amps at 125/250VA
Appliance Standards	NFPA-13, NFPA-13D, NFPA-13R, NFPA-72



Material List		
No	**Part**	**Standard Specification**
1	Outer Shell	ADC12
2	Brace	Carbon Steel Q235
3	Washer	Carbon Steel Q235
4	Base	ADC12
5	Connection Plate	Carbon Steel Q235
6	Driving Lever	AISI 304
7	Axis	Nylon
8	Sealing Gasket	CR Foam Cotton
9	Pressing Sleeve	PTFE
10	Rubber Ring	EPDM
11	Clamp Plate	Carbon Steel Q235
12	Dial Rod Bushing	AISI 304

Typical Electrical Connection





Contact Ratings: 15 Amps at 125/250 VAC

OS&Y Supervisory Switch / Model OSY2



The Ayvaz OSY2 is used to monitor the open position of an Outside Screw and Yoke (OS&Y) type gate valve.

Features

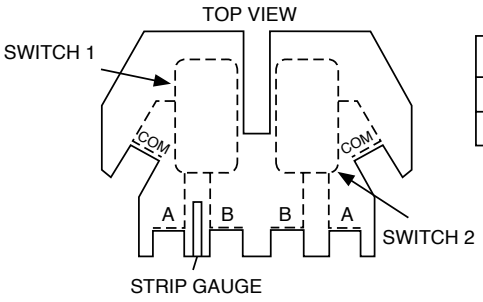
- NEMA 3R-rated enclosure
- User-friendly mounting bracket fits newer valve yokes
- Single side conduit entry does not require right angle fittings
- Adjustable length actuator eliminates the need for cutting the shaft
- Accommodates up to 12 AWG wire
- Three position switch monitors vandal and valve close signals
- Two SPDT contacts are enclosed in a durable terminal block for added strength
- 100 percent synchronization activates both alarm panel and local bell simultaneously

Specifications

Maximum Operating Pressure	: 300 psi
Maximum Adjustment Pressure Range	: 4 to 20 psi
Differential	: Approximately 3 psi throughout range
Factory Setting	: Operates at rising pressure 4 to 8 psi
Switch Contact Ratings	: EPS10-1: One set SPDT (Form C) EPS10-2: Two sets SPDT (Form C)1 0.0 A, ½ H P @ 125/250 VAC 2.5 A @ 6/12/24 VDC
Pressure Connection	: ½″ NPT male glass reinforced nylon
Operating Temperature Range	: Indoor or outdoor use:–40°F to 160°F (–40 °C to 71 °C)
Cover Tamper Switch	: UL Models: Optional P/N 546-8000 ULC Models: Factory Installed
Enclosure	: Rated UL 4x, NEMA 4 for indoor or outdoor use
Shipping Weight	: 1.2 lbs. (.54 kg)
Service Use	: Automatic Sprinkler: NFPA 13 One or Two Family Dwelling: NFPA 13D Residential Occupancies up to 4 Stories: NFPA 13R National Fire Alarm Code: NFPA 72
Warranty	: 3 years
Dimensions	: 5.12″ H × 3.325″ W × 4.250″ L (13.0 cm × 8.4 cm × 10.8 cm)

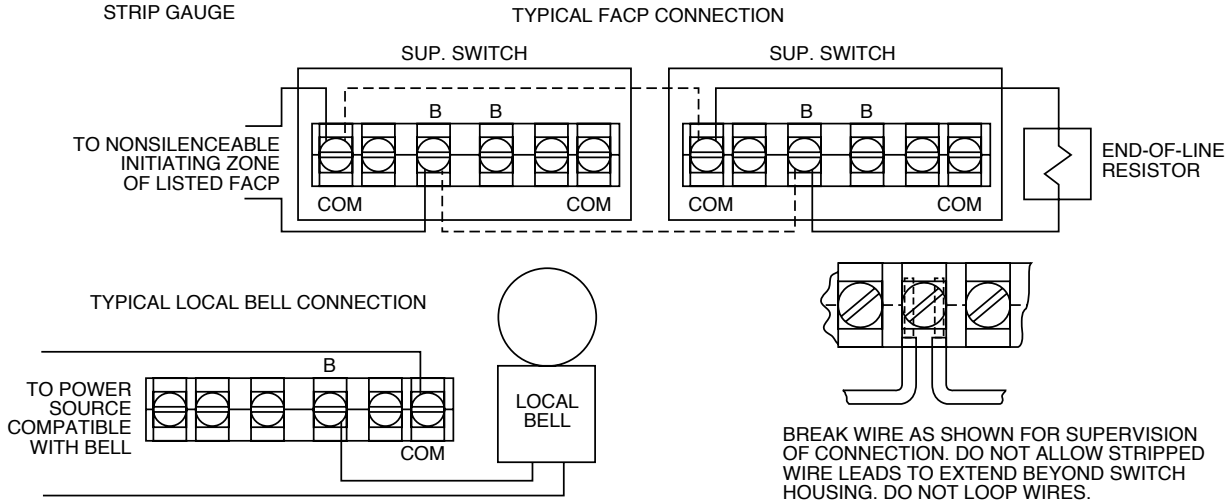
Manufactured by System Sensor who have the FM Approval and UL Listing

Electrical Connections for OSY2



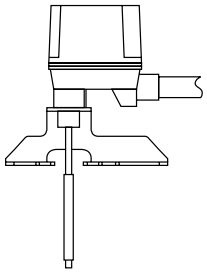
CONTACT RATINGS	
125/250 VAC	10 AMPS
24 VDC	2.5 AMPS

NOTE: COMMON AND B CONNECTIONS WILL CLOSE WHEN VALVE MOVES 1/5 OF ITS TOTAL TRAVEL DISTANCE.

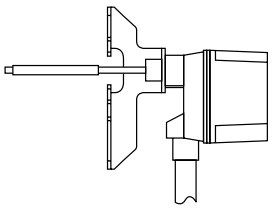


OSY2 Mounting

The following are examples of acceptable mounting positions:

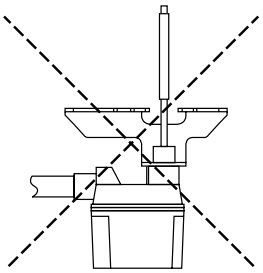


Actuator Vertical (Down)



Actuator Horizontal

The following mounting position is **not acceptable:**



Actuator Vertical (Pointing Up)

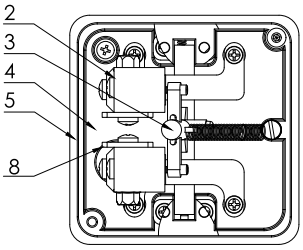
Supervisory Switch for OS&Y Gate Valve / Model NRS-SS

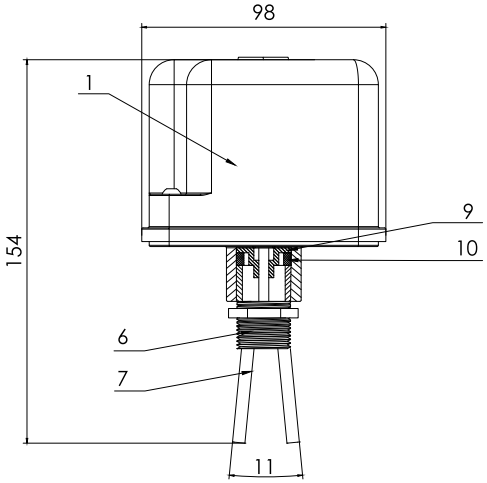


NRS-SS is is a weather proof switch for monitoring the open position of control valves of the post indicator.
The model NRS-SS serves the NRS Gate valves ranging in size from 4"-24" (100mm - 600mm).

Specifications

Service Environment	Indoor or Outdoor use, all parts have corrosion resistant finishes (IP65)
Temperature Range	-10°C - 80°C (14° F- 176° F)
Cover Tamper	Tamper Resistant Screws (Optional cover tamper switch available)
Electrical Ratings	15 Amps at 125/250VA
Appliance Standards	NFPA-13, NFPA-13D, NFPA-13R, NFPA-72

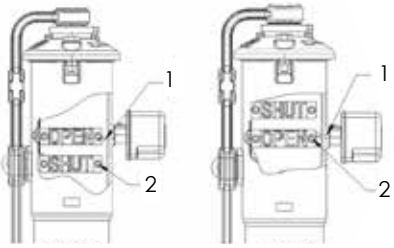




Material List		
No	**Part**	**Standard Specification**
1	Outer Shell	ADC12
2	Micro Switch	
3	The Rotating Shaft	PA66+GF30
4	Base	ADC12
5	Sealing Gasket	CR Foam Cotton
6	Connecting Pipe	AISI 304
7	Stem	AISI 304
8	Micro Stents	Q235
9	Rubber Ring	EPDM
10	Pressing Sleeve	PTFE

DN		Dimensions (mm)		
Inch	**mm**	**Length**	**Width**	**Height**
1/2"	15	98	98	154

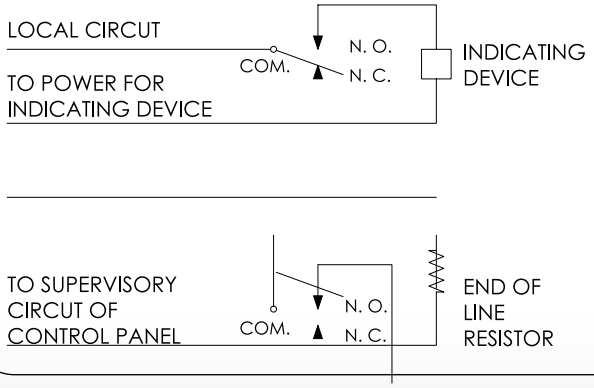
Typical Post Indicator Supervisory Switch Connection

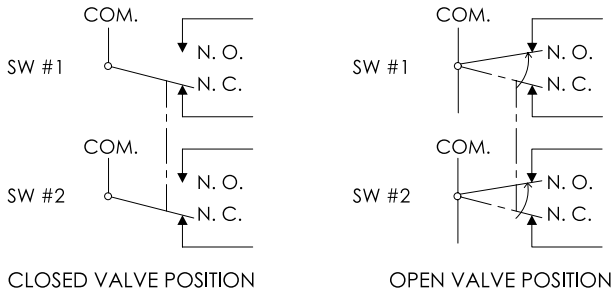


1- Stem
2- Bolts

Position 1 Position 2

Typical Electrical Connection





Contact Ratings: 15 Amps at 125/250 VAC

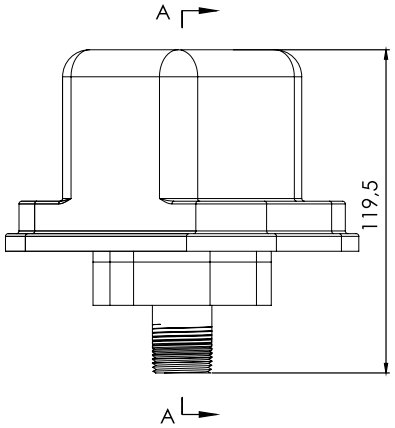
Pressure Switch / Model APS-10

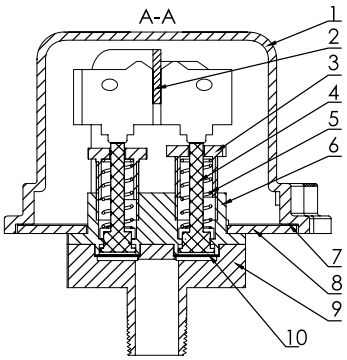


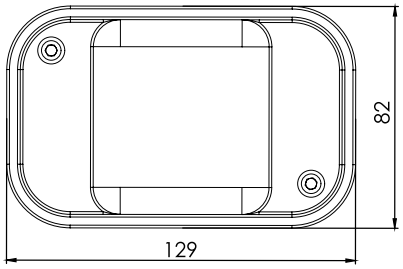
APS-10 switches are designed for use in wet, dry, deluge, and pre-action automatic sprinkler systems to indicate a discharge from a sprinkler.

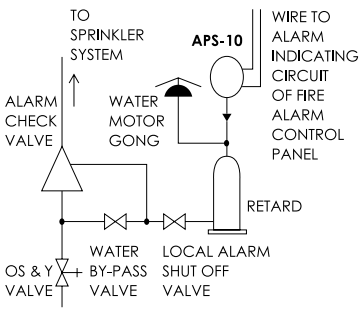
Specifications

Service Environment : Indoor or outdoor use, all parts have corrosion resistant finishes (IP65)
Temperature Range : -10°C - 80°C (14° F- 176° F)
Cover Tamper : Tamper Resistant Screws (Optional cover tamper switch available)
Electrical Ratings : 15 Amps at 125/250VA
Connection : 1/2" NPT Threaded
Pressure Adjusment Range : 4 - 20 PSI
Max. Working Pressure : 175 psi (1200kPa)

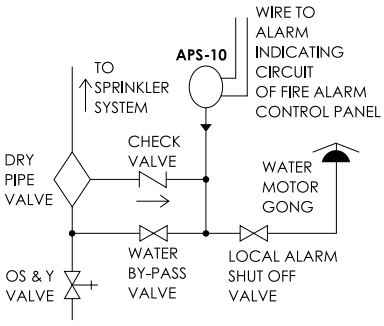








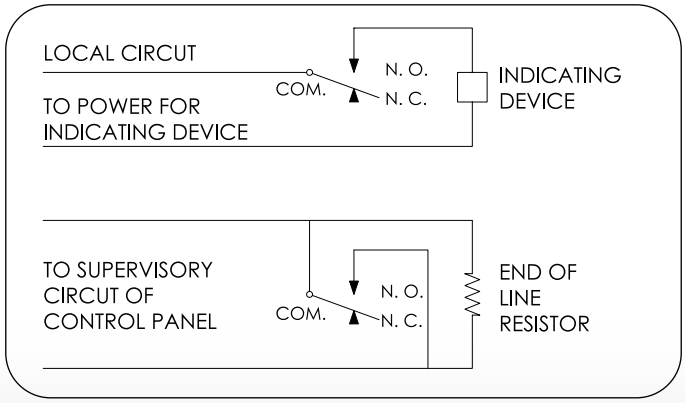
WET SYSTEM

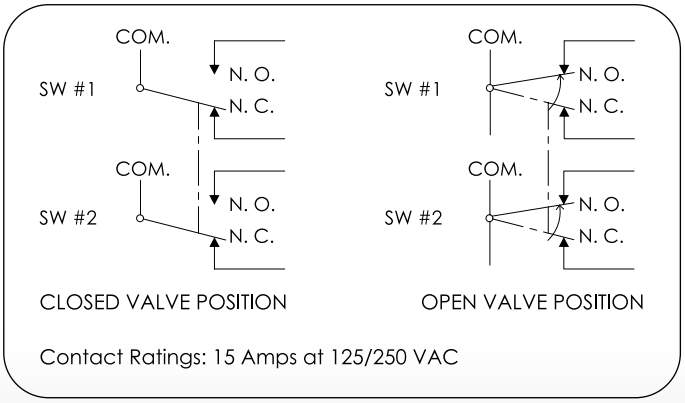


DRY SYSTEM

Material List		
No	**Part**	**Standard Specification**
1	Outer Shell	ADC12
2	Micro Stents	Q235
3	Regulating Accessories	PA66+GF30
4	Stem	PA66+GF30
5	Compression Spring	65#
6	Connecting Base	PA66+GF30
7	Sealing Washer	CR Foam Cotton
8	Back Shell	ADC12
9	Pedestal	PA66+GF30
10	Pressure Diaphragm	EPDM

Typical Electrical Connection



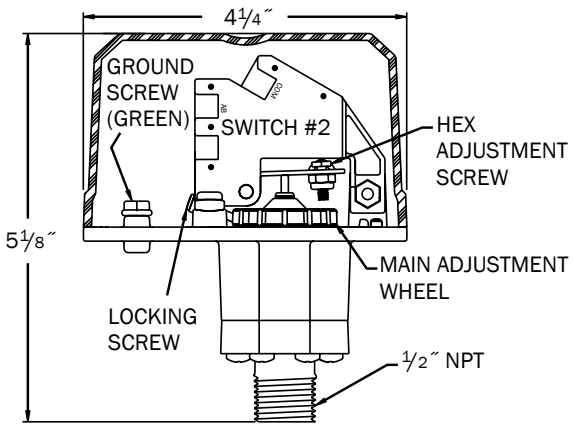


Contact Ratings: 15 Amps at 125/250 VAC

Model EPS10



EPS10 Series switches are designed for use in wet, dry, deluge and pre-action automatic sprinkler systems to indicate a discharge from a sprinkler.

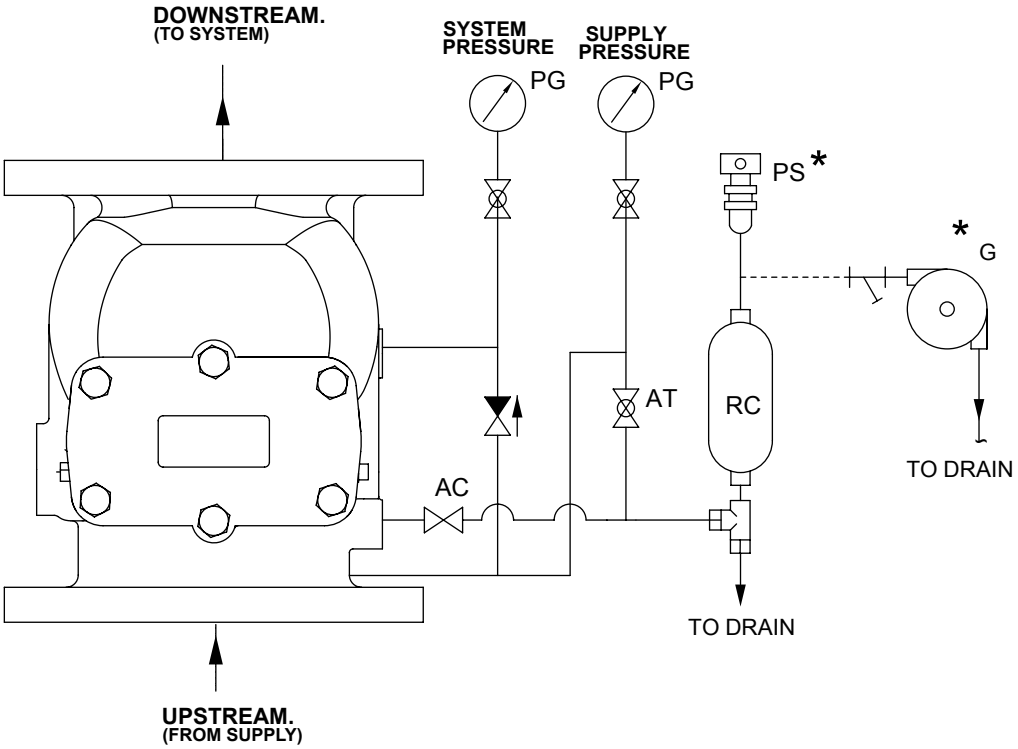


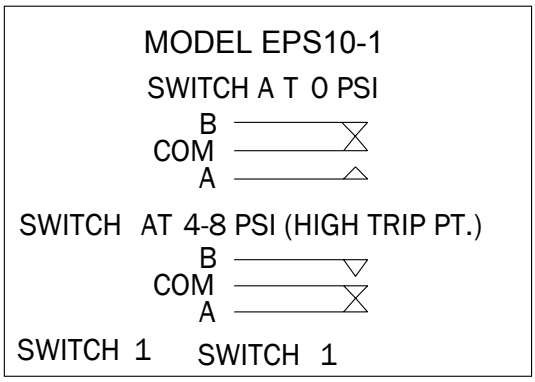
Specifications

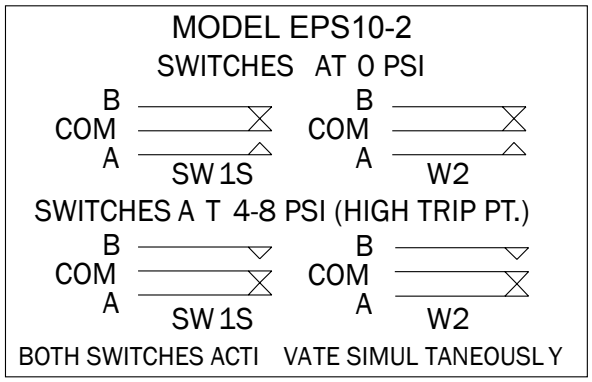
Maximum Operating Pressure	: 300 psi
Maximum Adjustment Pressure Range	: 4 to 20 psi
Differential	: Approximately 3 psi throughout range
Factory Setting	: Operates at rising pressure 4 to 8 psi
Switch Contact Ratings	: EPS10-1: One set SPDT (Form C) EPS10-2: Two sets SPDT (Form C)1 0.0 A, ½ H P @ 125/250 VAC 2.5 A @ 6/12/24 VDC
Pressure Connection	: ½″ NPT male glass reinforced nylon
Operating Temperature Range	: Indoor or outdoor use: –40°F to 160°F (–40 °C to 71 °C)
Cover Tamper Switch	: UL Models: Optional P/N 546-8000 ULCModels: Factory Installed
Enclosure	: Rated UL 4x, NEMA 4 for indoor or outdoor use
Shipping Weight	: 1.2 lbs. (0,54 kg)
Service Use	: Automatic Sprinkler: NFPA 13 One or Two Family Dwelling: NFPA 13D Residential Occupancies up to 4 Stories: NFPA 13R National Fire Alarm Code: NFPA 72
Warranty	: 3 years
Dimensions	: 5.12″ H × 3.325″ W × 4.250″ L (13.0 cm × 8.4 cm × 10.8 cm)

Manufactured by System Sensor who have the FM Approval and UL Listing

Typical Sprinkler Applications





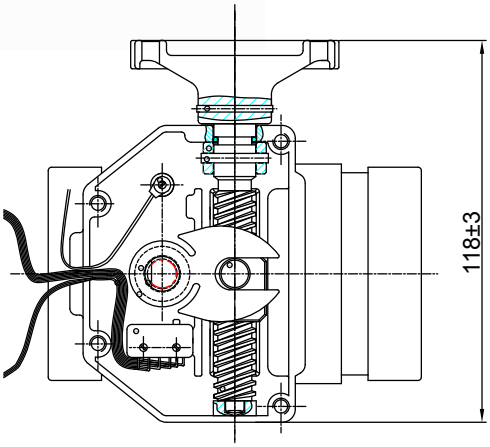


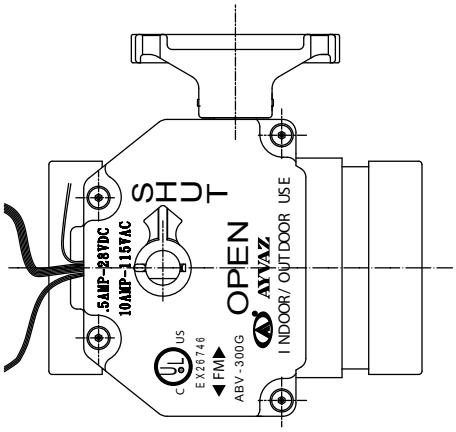
Bronze Grooved Butterfly Valve / Model ABV-300G

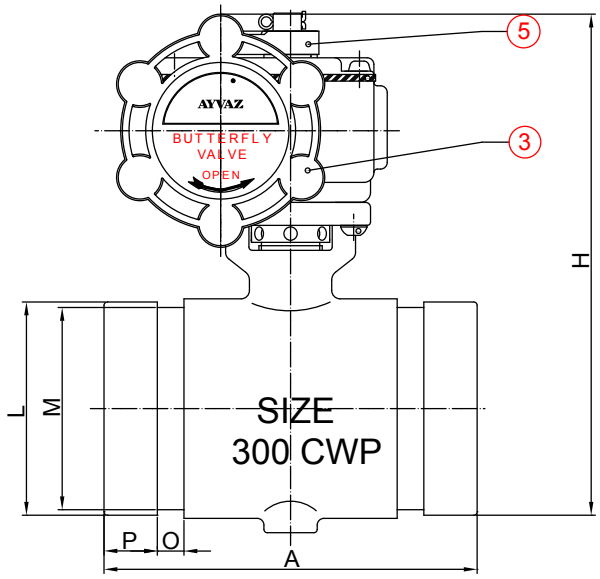


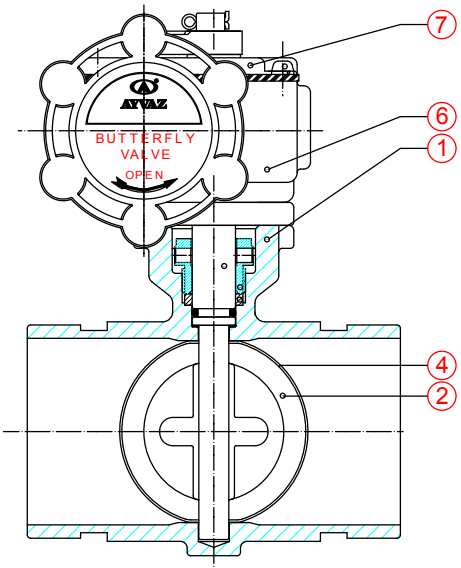
Size	: 1 1/4" - 2 1/2"
Working Pressure	: 20.7 bar (300psi)
Max. Test Pressure	: 41.2 bar (600psi)
Working Temperature	: 0-80 °C (32-176°F)

FM Approved & UL Listed for indoor and outdoor service.









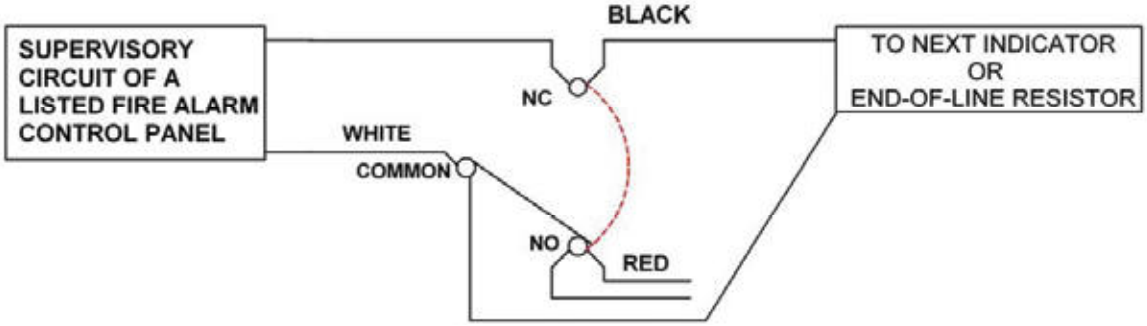
Material List		
No.	Part	Material
1	Body	Bronze ASTM 584 C83600
2	Disc	SS304 Sheet Stamping
3	Handwheel	ASTM A216 WCB/ Ductile Iron ASTM A536
4	Seat	ASTM D2000 VITON
5	Indicator	Powder Metal FD0205 95HT
6	Housing	Forged Brass JIS C3771 (REF. ASTM C37700)
7	Cover	Forged Brass JIS C3771 (REF. ASTM C37700)

Dimensions (mm)				
Size	1-1/4"	1-1/2"	2"	2-1/2"
A	98	102	104	114
H	132.2	138.9	154.2	167.2
P	15.88	15.88	15.88	15.88
O	7.95	7.95	7.95	7.95
M	38.99	45.09	57.15	69.09
L	42.4	48.3	60.3	73
Weight (kg)	1,8	1,9	2,2	2,8

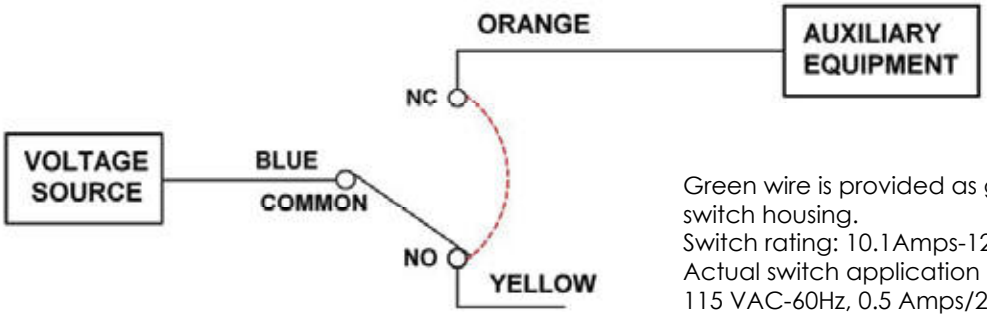
Grooved ends to AWWA C606 for steel pipe.

WIRING DIAGRAM
SWITCH SHOWN POSITION WITH VALVE IN FULL OPEN

SWITCH 1 : DUAL LEADS SOLDERED TO SWITCH TABS



SWITCH 2 : SINGLE LEADS SOLDERED TO SWITCH TABS



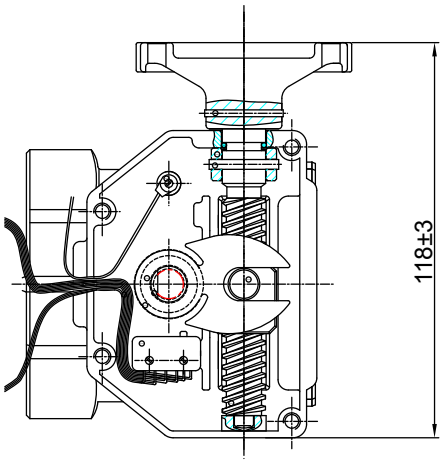
Green wire is provided as ground for the switch housing.
Switch rating: 10.1Amps-125/250VAC-60Hz
Actual switch application rating: 10 Amps/ 115 VAC-60Hz, 0.5 Amps/28 VDC

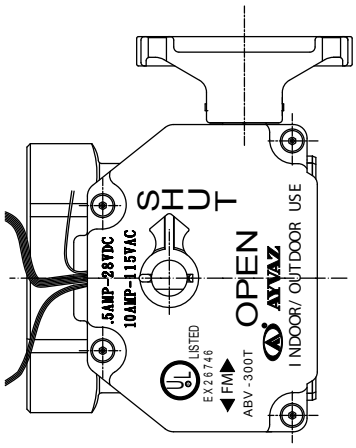
Bronze Threaded Butterfly Valve / Model ABV-300T

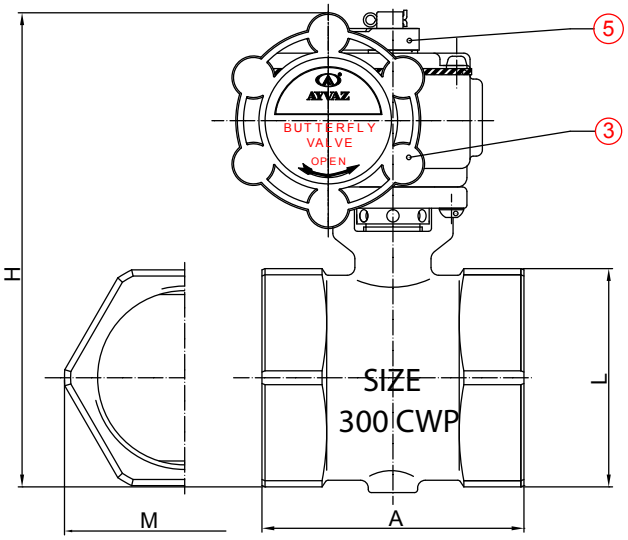


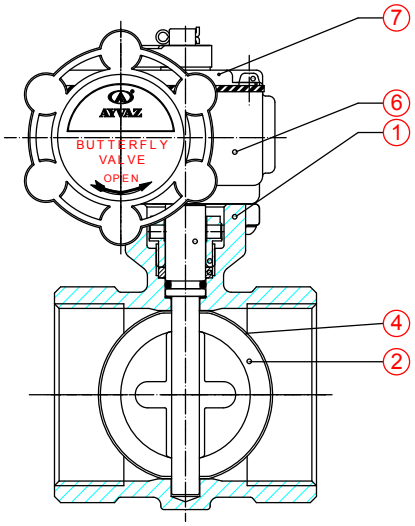
Size	: 1" - 2 1/2"
Working Pressure	: 20.7 bar (300psi)
Max. Test Pressure	: 41.2 bar (600psi)
Working Temperature	: 0-80 °C (32-176°F)

FM Approved & UL Listed for indoor and outdoor service.









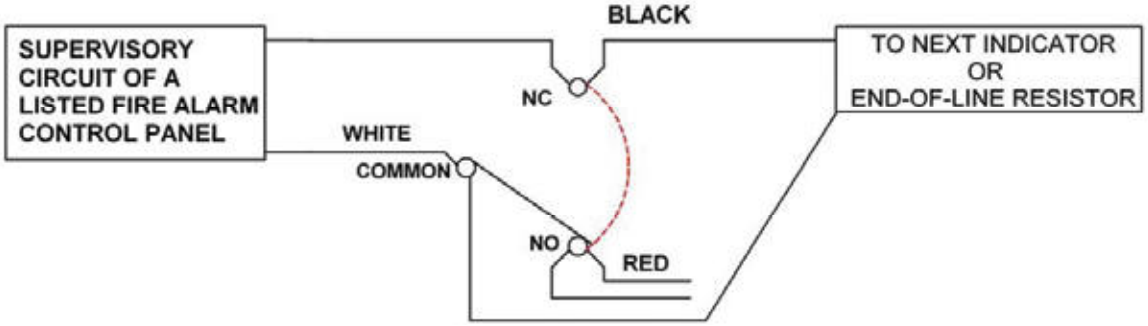
Material List		
No.	Part	Material
1	Body	Bronze ASTM 584 C83600
2	Disc	SS304 Sheet Stamping
3	Handwheel	ASTM A216 WCB/ Ductile Iron ASTM A536
4	Seat	ASTM D2000 VITON
5	Indicator	Powder Metal FD0205 95HT
6	Housing	Forged Brass JIS C3771 (REF. ASTM C37700)
7	Cover	Forged Brass JIS C3771 (REF. ASTM C37700)

Grooved ends to AWWA C606 for steel pipe.

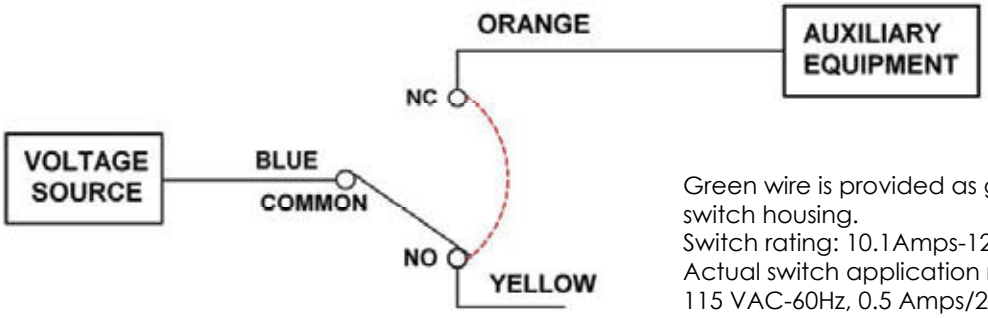
Dimensions (mm)					
Size	1"	1-1/4"	1-1/2"	2"	2-1/2"
A	54	66.7	73	82.6	114
H	125.4	130.2	142.1	155.6	167.2
L	39.7	49.2	55.6	70	86.5
M	44.5	55	60.3	79	96
Weight (kg)	1,6	1,7	1,8	2,4	3,4

WIRING DIAGRAM
SWITCH SHOWN POSITION WITH VALVE IN FULL OPEN

SWITCH 1 : DUAL LEADS SOLDERED TO SWITCH TABS



SWITCH 2 : SINGLE LEADS SOLDERED TO SWITCH TABS

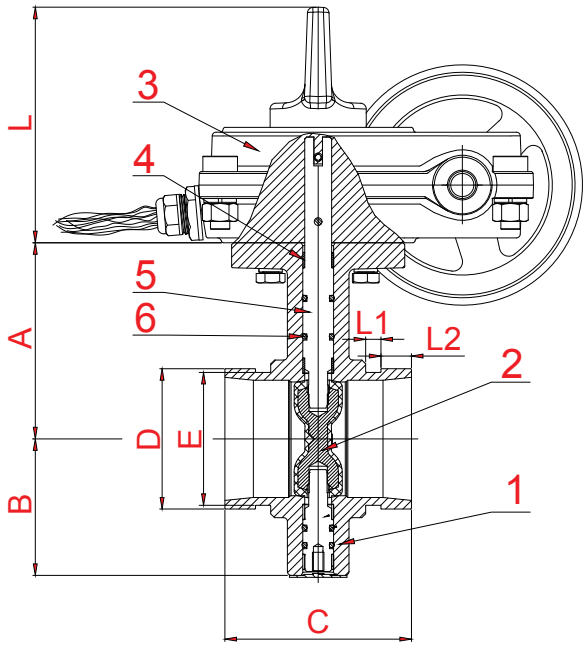


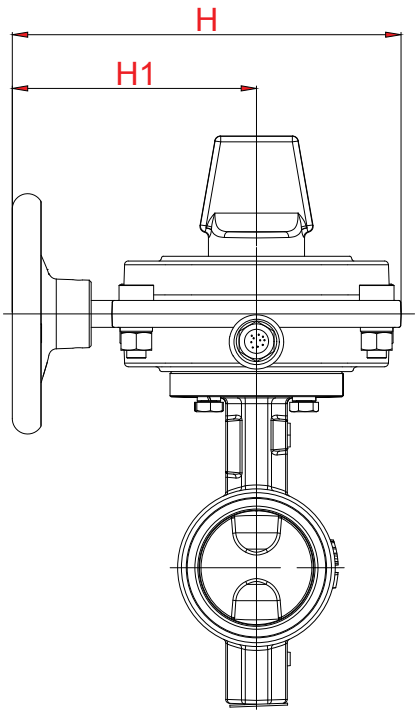
Green wire is provided as ground for the switch housing.
Switch rating: 10.1Amps-125/250VAC-60Hz
Actual switch application rating: 10 Amps/ 115 VAC-60Hz, 0.5 Amps/28 VDC

Grooved Butterfly Valve / Model ABV-G300



Size	: 2", 2 ½", 76.1mm, 3", 4", 5", 165.1mm, 6", 8", 10", 12"
Working Pressure	: 20.7 bar (300psi)
Max. Test Pressure	: 41.3 bar (600psi)
Max. Working Temperature	: 0-80 °C (32-176°F)
Connection	: Grooved ISO 6182
Specifications	: Fusion bonded epoxy coating complies with ANSI/AWWA C550
Features	: Suitable for indoor and outdoor use





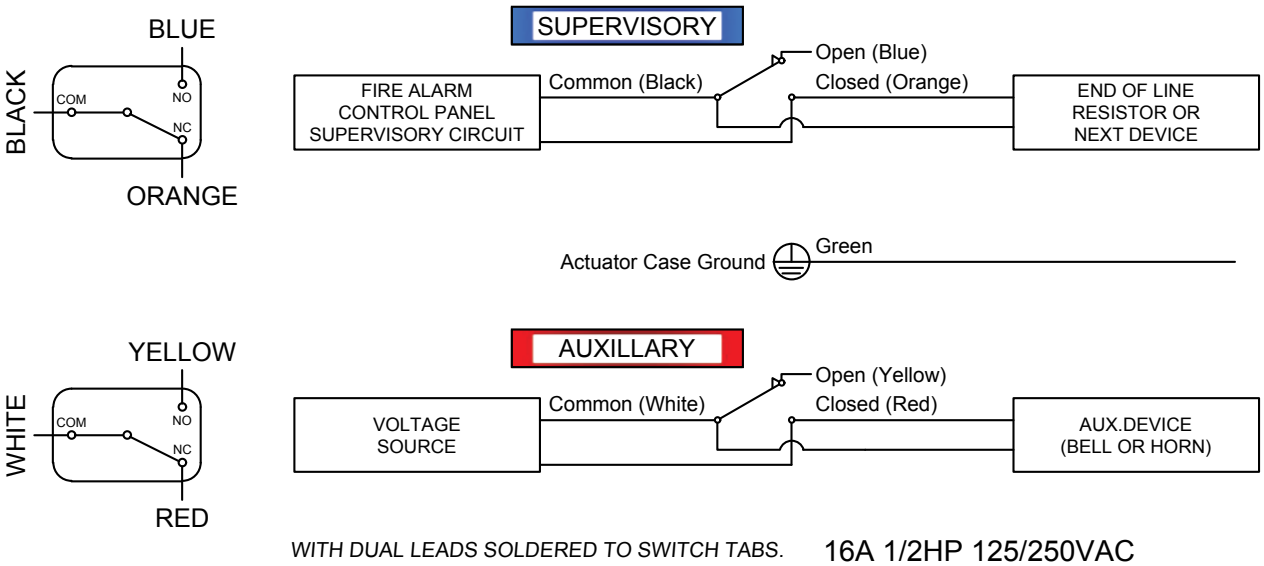
Material List

No	Part	Material	ASTM Specification
1	Body	Ductile Iron	ASTM A536,65-45-12
2	Disc	Ductile Iron	ASTM A536,65-45-12+EPDM
3	Signal Gear Box	Ductile Iron	ASTM A536,65-45-12
4	Bushing	Stainless Steel + Teflon	SS304+PTFE
5	Stem	Stainless Steel	SS431
6	O-Ring	NBR	Commercial
7	Signal Gear Box	Ductile Iron	ASTM A536, 65-45-12

Dimensions

Size		Dimensions (mm)										Weight (kg)
inch	mm	A	B	C	D	E	L	L1	L2	H1	H	
2"	50	89	65	83	60.3	57.2	123	8	16	128	203	8.6
2 ½"	65	102	71	99	73.0	69.1	123	8	16	128	203	8.7
76.1	65	102	71	99	76.1	72.2	123	8	16	128	203	8.8
3"	80	109	81	99	88.9	84.9	123	8	16	128	203	9
4"	100	128	95	117	114.3	110.1	123	10	16	128	203	11
5"	125	141	111	149	141.3	137.1	123	10	16	128	203	14
165.1	150	153	133	149	165.1	106.8	123	10	16	128	203	17.5
6"	150	153	133	149	168.3	164.0	123	10	16	128	203	18
8"	200	184	164	134	219.1	214.4	123	11	19	185	261	23
10"	250	216	196	160	273.0	268.3	123	13	19	185	261	32
12"	300	254	226	167	323.9	318.3	133	13	19	203	298	36

Wiring Diagram



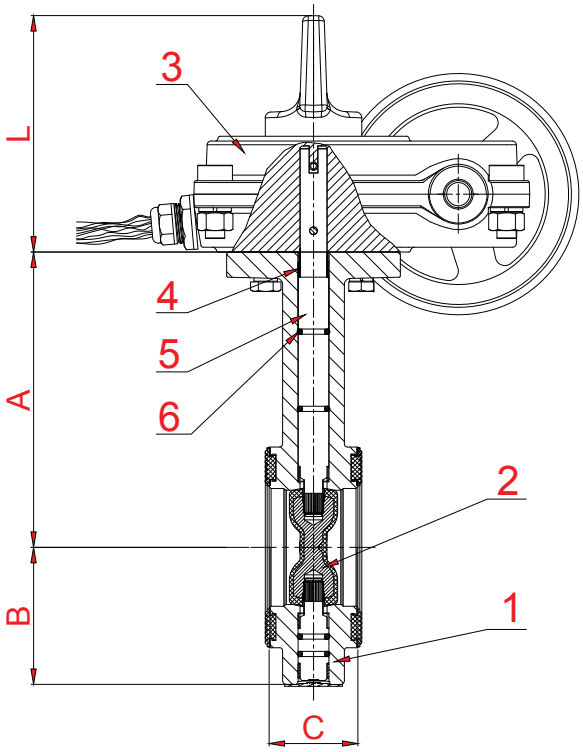
WITH DUAL LEADS SOLDERED TO SWITCH TABS.
(SWITCH SHOWN IN FULL-OPEN POSITION)

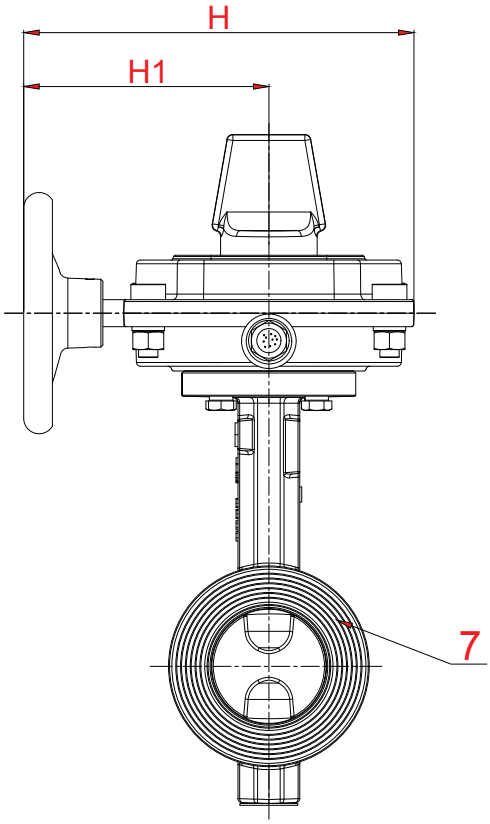
16A 1/2HP 125/250VAC
16(4)A 250V

Wafer Butterfly Valve / Model ABV-W300



Size	: 2", 2 ½", 3", 4", 5", 6", 8", 10", 12"
Working Pressure	: 20.7 bar (300 psi)
Max. Test Pressure	: 41.3 bar (600 psi)
Max. Working Temp.	: 0-80 °C (32-176°F)
Connection	: Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092-2 PN10 or EN1092-2 PN16
Specifications	: Fusion bonded epoxy coating complies with ANSI/AWWA C550
Features	: Suitable for indoor and outdoor use





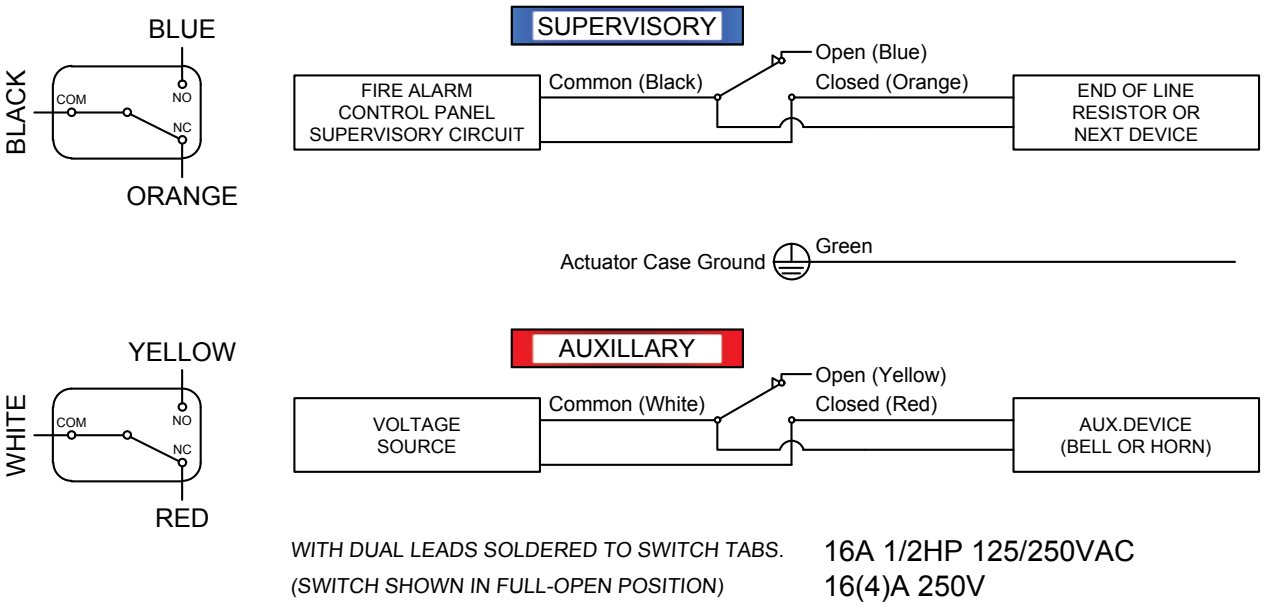
Material List

No	Part	Material	ASTM Specification
1	Body	Ductile Iron	ASTM A536,65-45-12
2	Disc	Ductile Iron	ASTM A536,65-45-12+EPDM
3	Signal Gear Box	Ductile Iron	ASTM A536,65-45-12
4	Bushing	Stainless Steel + Teflon	SS304+PTFE
5	Stem	Stainless Steel	SS431
6	O-Ring	NBR	Commercial
7	Gasket	EPDM	Commercial

Dimensions

Size		Dimensions (mm)						Weight (kg)
inch	mm	A	B	C	L	H1	H	
2"	50	141	65	44	123	128	203	8
2 ½"	65	154	71	47	123	128	203	8.8
3"	80	158	81	47	123	128	203	9.2
4"	100	177	95	53	123	128	203	11
5"	125	192	111	57	123	128	203	12
6"	150	203	133	57	123	128	203	16
8"	200	244	164	61	123	186	261	21
10"	250	274	196	69	123	186	261	30
12"	300	312	226	79	133	203	298	34

Wiring Diagram



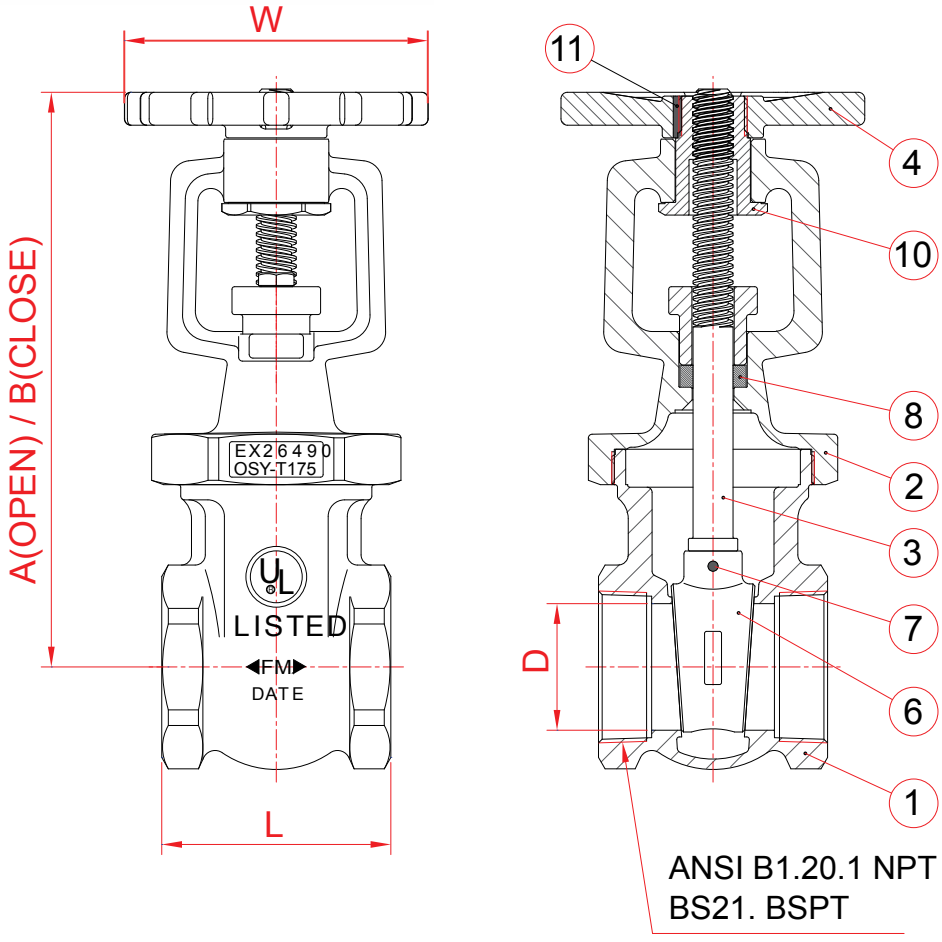
WITH DUAL LEADS SOLDERED TO SWITCH TABS.
(SWITCH SHOWN IN FULL-OPEN POSITION)

16A 1/2HP 125/250VAC
16(4)A 250V

Bronze Threaded OS&Y Gate Valve / Model OSY-T175



Size	: ¾", 1", 1 ¼", 1 ½", 2"
Working Pressure	: 12 bar (175psi)
Max. Test Pressure	: 24 bar (350psi)
Working Temperature	: 0 - 80 °C



OUTSIDE SCREW & YOKE BRONZE GATE VALVES

Material List

No	Part	Specification
1	Body	Bronze ASTM C83600
2	Bonnet	Bronze ASTM C83600
3	Stem	Brass
4	Handwheel	Cast Iron
5	Packing Gland	Bronze ASTM C83600
6	Disc	Bronze ASTM C83600
7	Disc Pin	Stainless Steel AISI 304
8	Gland Packing	Graphite
9	Stud	Steel
10	Yoke Bushing	Brass
11	Set Screw	Steel

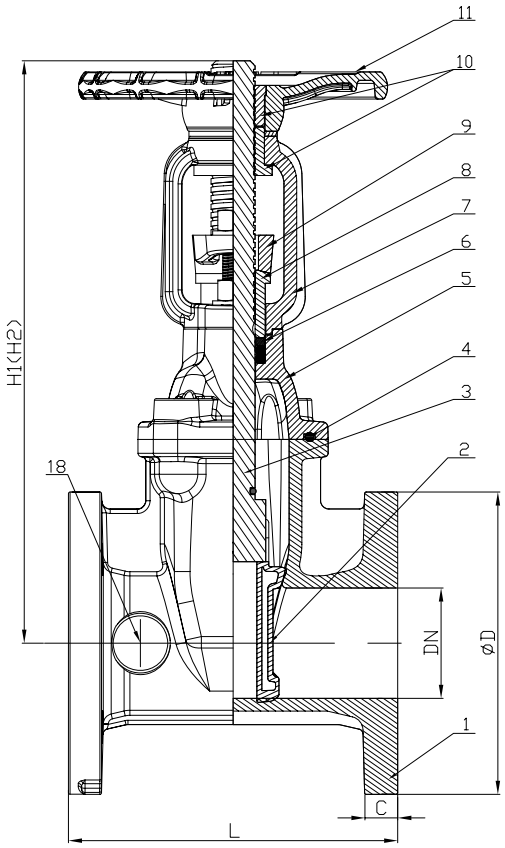
Dimensions - Weights

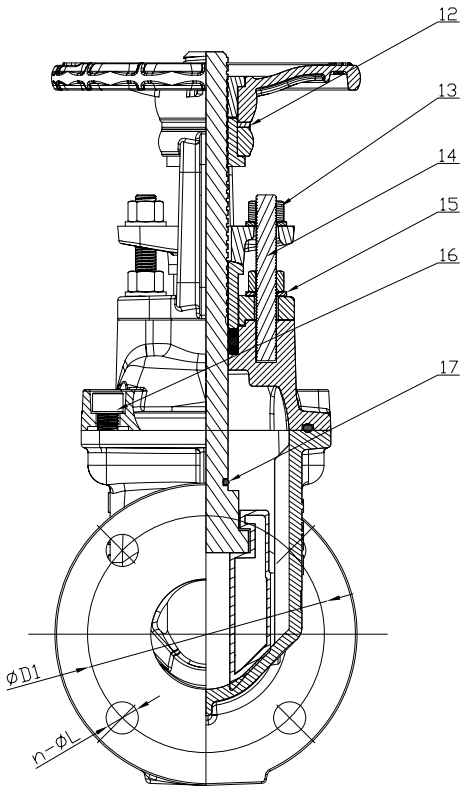
Size		Dimensions (mm)				Weight (kg)
		A (Open)	B (Closed)	L	W	
DN20	3/4"	173	145.5	59	80	1,4
DN25	1"	196,5	163	69	80	1,8
DN32	1 1/4"	220,5	181,5	75	80	2,5
DN40	1 1/2"	243	197	82	100	3,24
DN50	2"	276	227	90,5	120	4.74

Resilient Wedge OS&Y Gate Valve / Model OSY-300FF



Size	: 2", 2 ½", 3", 4", 5", 6", 8", 10", 12"
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection	: Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092-2 PN10 or EN1092-2 PN16
Specifications	: Design and dimensions conform to AWWA C515
Corrosion Protection	: Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface.
Features	: Pre-notched, stainless steel stem for easy attachment of supervisory switch





Material List

No	Part	Material	ASTM Specification
1	Valve Body	Ductile Iron	ASTM A536, 65-45-12
2	Wedge Disc	Ductile Iron	ASTM A536, 65-45-12 & EPDM
3	Stem	Stainless Steel	AISI 420
4	Bonnet Gasket	EPDM	Commercial
5	Bonnet	Ductile Iron	ASTM A536, 65-45-12
6	Stem Packing	EPDM	Commercial
7	Yoke	Ductile Iron	ASTM A536, 65-45-12
8	Stem Bushing	Brass	HPb59-1
9	Gland	Ductile Iron	ASTM A536, 65-45-12
10	Stem Nut	Brass	HPb59-1
11	Handwheel	Ductile Iron	ASTM A536, 65-45-12
12	Washer	Brass	HPb59-1
13	Gland Nut	Carbon Steel	Zinch Plated
14	Stud	Carbon Steel	Zinch Plated
15	Flat Washer	Carbon Steel	Zinch Plated
16	Nut	Carbon Steel	Zinch Plated
17	O-Ring	EPDM	Commercial
18	Plug	Bronze	ASTM B583 C89833

Dimensions - Weights

Size		Dimensions (mm)					L	
		A	B	C	N-M	ØD1	PN10/16	ANSI
DN50	2"	178	348	400	152	16	150	178
DN65	2 1/2"	190	373	440	175	17,5	170	190
DN80	3"	203	408	490	191	19,1	180	203
DN100	4"	229	471	573	229	19,1	190	229
DN125	5"	254	541	665	254	19,1	200	254
DN150	6"	267	601	755	279	19,1	210	267
DN200	8"	292	774	975	343	22,2	230	292
DN250	10"	330	939	1193	406	23,8	250	330
DN300	12"	356	1065	1370	483	25,4	270	356

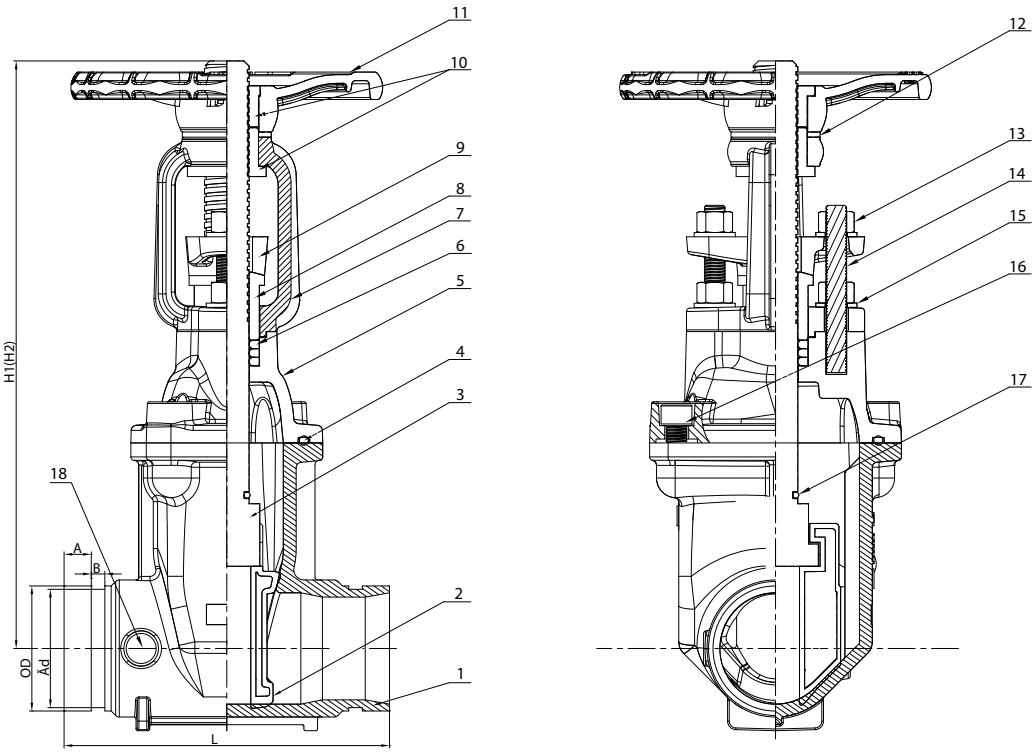
Size		Dimensions (mm)						Weight (kg)
		D1			N-ØI			
		ANSI	PN16	PN10	ANSI	PN16	PN10	
DN50	2"	120,7	125		4-Ø19,1			14,7
DN65	2 1/2"	139,7	145		4-Ø19,1			17,7
DN80	3"	152,4	160		4-Ø19,1	8-Ø19,1		23,1
DN100	4"	190,5	180		8-Ø19,1	8-Ø19,1		31,6
DN125	5"	215,9	210		8-Ø22.2	8-Ø19,1		42,2
DN150	6"	241,3	240		8-Ø22.2	8-Ø23		53,2
DN200	8"	298,5	295		8-Ø22.2	12-Ø23	8-Ø23	91,3
DN250	10"	362	355	350	12-Ø25,4	12-Ø28	12-Ø23	134,6
DN300	12"	431,8	410	400	12-Ø25,4	12-Ø28	12-Ø23	200

Note: Size 5" is only UL listed
Valve flange drilling (Size and location of holes) allows mating with the following flange types:
ANSI= ANSI B16.1 Class 125
PN16=DIN 2501, EN 1092 - PN16, BS 4504
PN10=DIN 2501, EN 1092 - PN10, BS 4504

Resilient Wedge OS&Y Gate Valve / Model OSY-300GG



Size	: 2", 2 ½", 3", 4", 5", 6", 8", 10", 12"
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection	: Grooved metric or AWWA C606 standard
Specifications	: Design and dimensions conform to AWWA C515
Corrosion Protection	: Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface.
Features	: Pre-notched, stainless steel stem for easy attachment of supervisory switch



Material List

No	Part	Material	ASTM Specification
1	Valve Body	Ductile Iron	ASTM A536, 65-45-12
2	Wedge Disc	Ductile Iron	ASTM A536, 65-45-12 & EPDM
3	Stem	Stainless Steel	AISI 420
4	Bonnet Gasket	EPDM	Commercial
5	Bonnet	Ductile Iron	ASTM A536, 65-45-12
6	Stem Packing	EPDM	Commercial
7	Yoke	Ductile Iron	ASTM A536, 65-45-12
8	Stem Bushing	Brass	HPb59-1
9	Gland	Ductile Iron	ASTM A536, 65-45-12
10	Stem Nut	Brass	HPb59-1
11	Handwheel	Ductile Iron	ASTM A536, 65-45-12
12	Washer	Brass	HPb59-1
13	Gland Nut	Carbon Steel	Zinch Plated
14	Stud	Carbon Steel	Zinch Plated
15	Flat Washer	Carbon Steel	Zinch Plated
16	Nut	Carbon Steel	Zinch Plated
17	O-Ring	NBR	Commercial
18	Plug	Bronze	ASTM B583 C89833

Dimensions - Weights

Size		Pipe Od (mm)	Dimensions (mm)						Weight (kg)
			L	H1 (Close)	H1 (Open)	D	A	B	
DN50	2"	60.3	178	348	400	57,2	15,9	7,9	11,4
DN65	2 1/2"	73.0	190	373	440	69,1	15,9	7,9	12,5
		76.1				72,3			
DN80	3"	88.9	203	408	490	84,9	15,9	7,9	16,9
DN100	4"	114.3	229	471	573	110,1	15,9	9,5	24,2
DN125	5"	139.7	254	541	665	135,5	15,9	9,5	33,5
		141.3				137			
DN150	6"	165.1	267	601	755	160,9	15,9	9,5	41,3
		168.3				164			
DN200	8"	219.1	292	774	975	214,4	19,1	11,1	73,7
DN250	10"	273.0	330	939	1193	268,3	19,1	12,7	124,3
DN300	12"	323.9	356	1065	1370	318,3	19,1	12,7	174,5

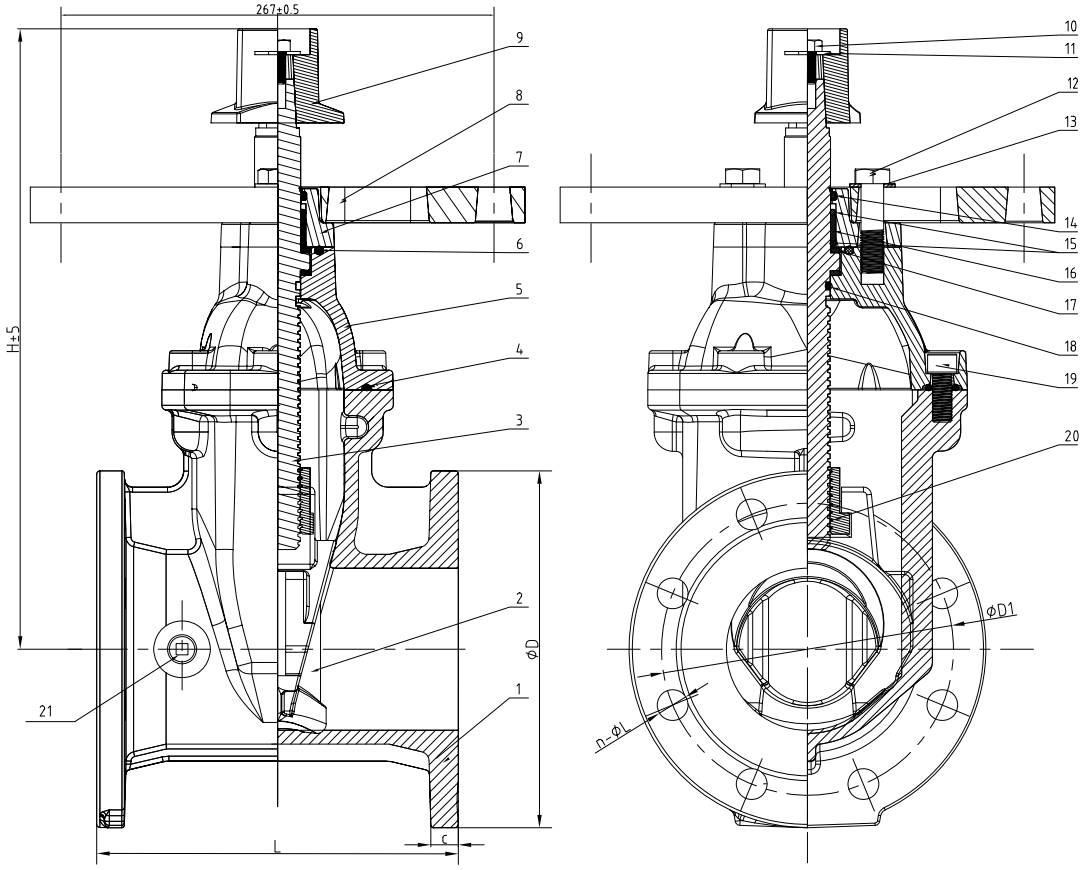
Note : Size 5" is only UL listed

Resilient Wedge NRS Gate Valve / Model NRS-300FF



Size	: 2", 2 ½", 3", 4", 5", 6", 8", 10", 12"
Operation	: For use with A-VPI or A-WPI indicator posts
Remark	: No post flange supplied with 2", 2½" & 3", and size 2" is FM approved only and size 5" is UL listed only
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection	: Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092-2 PN10 or EN1092-2 PN16
Specifications	: Design and dimensions conform to AWWA C515
Corrosion Protection	: Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface.

Size 4"~5" with 1pc of 1/2" bronze NPT tapping plug, size 6"~12 with 1pc of 3/4" bronze NPT tapping plug.



Material List

No	Part	Material	ASTM Specification
1	Valve Body	Ductile Iron	ASTM A536, 65-45-12
2	Wedge Disc	Ductile Iron	ASTM A536, 65-45-12 & EPDM
3	Stem	Stainless Steel	AISI 431
4	Bonnet Gasket	EPDM	Commercial
5	Bonnet	Ductile Iron	ASTM A536, 65-45-12
6	O-Ring	NBR	Commercial
7	Gland	Ductile Iron	ASTM A536, 65-45-12
8	Post Flange	Ductile Iron	ASTM A536, 65-45-12
9	Square Operating Nut	Ductile Iron	ASTM A536, 65-45-12
10	Bolt	Carbon Steel	Zinch Plated
11	Flat Washer	Carbon Steel	Zinch Plated
12	Bolt	Carbon Steel	Zinch Plated
13	Flat Washer	Carbon Steel	Zinch Plated
14	Ring Wiper	EPDM	Commercial
15	O-Ring	NBR	Commercial
16	Axis Guide	Brass	HPb59-1
17	Washer	Brass	HPb59-1
18	O-Ring	NBR	Commercial
19	Bolt	Carbon Steel	Zinch Plated
20	Wedge Nut	Brass	HPb59-1
18	Plug	Bronze	ASTM B584 C89833

Dimensions - Weight

Size		Dimensions (mm)				L	
		A	B	C	N-M	PN10/16	ANSI
DN50 [1]	2" [3]	178	278	152	16	150	178
DN65	2 1/2" [3]	190	300	178	17,5	170	190
DN80	3" [3]	203	321	191	19,1	180	203
DN100	4"	229	395	229	19,1	190	229
DN125 [2]	5"	254	432	254	19,1	200	254
DN150	6"	267	475	279	19,1	210	267
DN200	8"	292	585	343	22,2	230	292
DN250	10"	330	656	406	23,8	250	330
DN300	12"	356	751	483	25,4	270	356

Size		Dimensions (mm)						Weight (kg)
		D1			N-ØL			
		ANSI	PN16	PN10	ANSI	PN16	PN10	
DN50	2"	120,7	125		4-Ø19,1			12,9
DN65	2 1/2"	139,7	145		4-Ø19,1			15,9
DN80	3"	152,4	160		4-Ø19,1	8-Ø19,1		20,9
DN100	4"	190,5	180		8-Ø19,1	8-Ø19,1		35,7
DN125	5"	215,9	210		8-Ø22.2	8-Ø19,1		44,6
DN150	6"	241,3	240		8-Ø22.2	8-Ø23		54,2
DN200	8"	298,5	295		8-Ø22.2	12-Ø23	8-Ø23	86,1
DN250	10"	362	355	350	12-Ø25,4	12-Ø28	12-Ø23	117,2
DN300	12"	431,8	410	400	12-Ø25,4	12-Ø28	12-Ø23	180

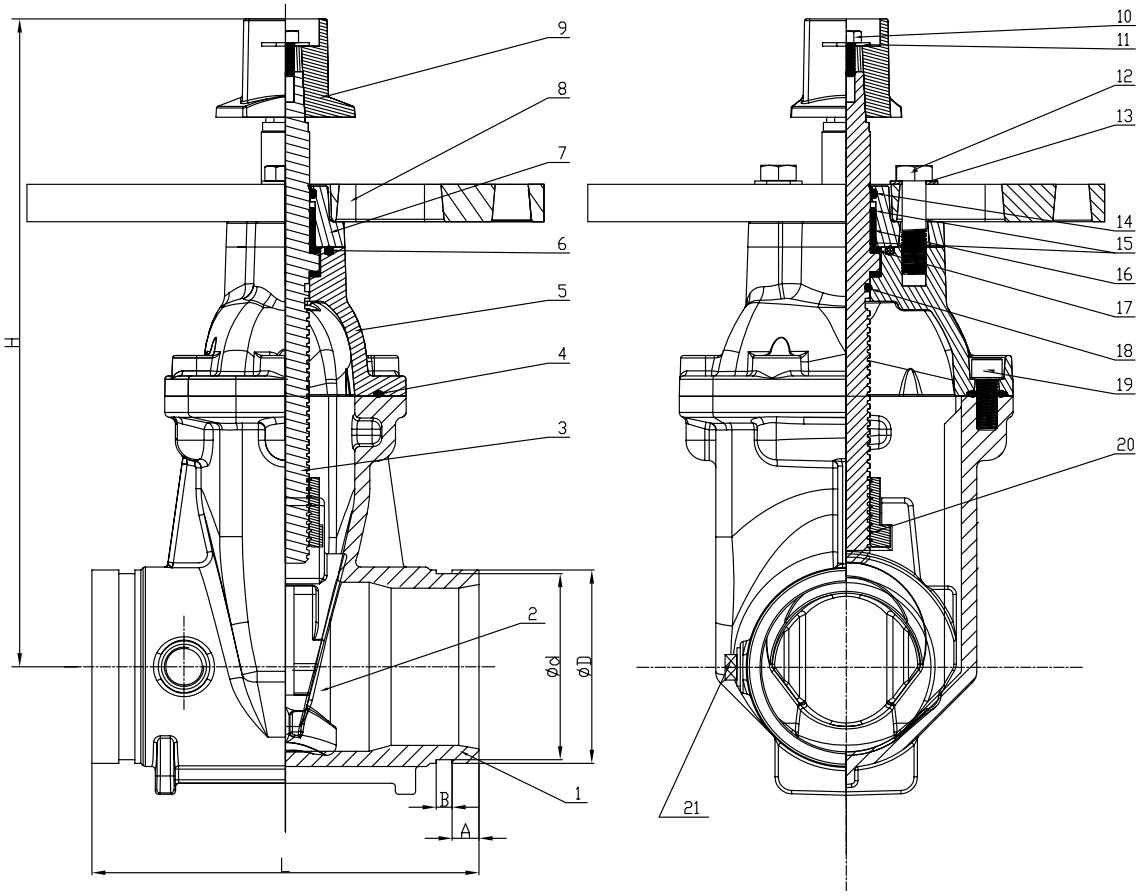
Note-1: FM Approved only
Note-2: UL Listed only
Note-3: No post plate - flange supplied, UL Listed as NRS-232300FF
Valve flange drilling (size and location of holes) allows mating with the following flange types:
ANSI= ANSI B16.1 Class 125
PN16=DIN 2501, EN 1092 - PN16, BS 4504
PN10=DIN 2501, EN 1092 - PN10, BS 4504

Resilient Wedge NRS Gate Valve / Model NRS-300GG



Size	: 2", 2 ½", 3", 4", 5", 6", 8", 10", 12"
Operation	: For use with A-VPI or A-WPI indicator posts
Remark	: No post flange supplied with 2", 2½" & 3", and size 2" is FM approved only and size 5" is UL listed only
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection standard	: Grooved metric or AWWA C606
Specifications	: Design and dimensions conform to AWWA C515
Corrosion Protection	: Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface.

Size 2"~3" with 1pc of 3/8" bronze NPT tapping plug, size 4"~5" with 1pc of 1/2" bronze NPT tapping plug, size 6"~12 with 1pc of 3/4" bronze NPT tapping plug.



Material List

No	Part	Material	ASTM Specification
1	Valve Body	Ductile Iron	ASTM A536, 65-45-12
2	Wedge Disc	Ductile Iron	ASTM A536, 65-45-12 & EPDM
3	Stem	Stainless Steel	1Cr17Ni2
4	Bonnet Gasket	EPDM	Commercial
5	Bonnet	Ductile Iron	ASTM A536, 65-45-12
6	O-Ring	NBR	Commercial
7	Gland	Ductile Iron	ASTM A536, 65-45-12
8	Post Flange	Ductile Iron	ASTM A536, 65-45-12
9	Square Operating Nut	Ductile Iron	ASTM A536, 65-45-12
10	Bolt	Carbon Steel	Zinch Plated
11	Flat Washer	Carbon Steel	Zinch Plated
12	Bolt	Carbon Steel	Zinch Plated
13	Flat Washer	Carbon Steel	Zinch Plated
14	Ring Wiper	EPDM	Commercial
15	O-Ring	NBR	Commercial
16	Axis Guide	Brass	HPb59-1
17	Washer	Brass	HPb59-1
18	O-Ring	NBR	Commercial
19	Bolt	Carbon Steel	Zinch Plated
20	Wedge Nut	Brass	HPb59-1
21	Plug	Bronze	ASTM B584 C89833

Dimensions - Weights

Size		Dimensions (mm)						Weight
		L	H	D	D	A	B	kg
DN50 [1]	2"	178	278	60,3	57,2	15,9	7,9	9,9
DN65 [1]	2 1/2"	190	296	73	69,1	15,9	7,9	10,9
				76,1	72,3			
DN80 [1]	3"	203	322	88,9	84,9	15,9	7,9	15,4
DN100	4"	229	395	114,3	110,1	15,9	9,5	28,1
DN125 [2]	5"	254	432	139,7	135,5	15,9	9,5	35,9
				141,3	137			
DN150	6"	267	475	165,1	160,9	15,9	9,5	42,4
				168,3	164			
DN200	8"	295	585	219,1	214,4	19	11,1	68,4
DN250	10"	330	656	273	268,3	19	12,7	105,4
DN300	12"	356	751	323,9	318,3	19	12,7	156,1

Note-1: No post plate - flange supplied
Note-2: UL Listed only (with post flange)

Vertical Type Post Indicator / Model A-VPI



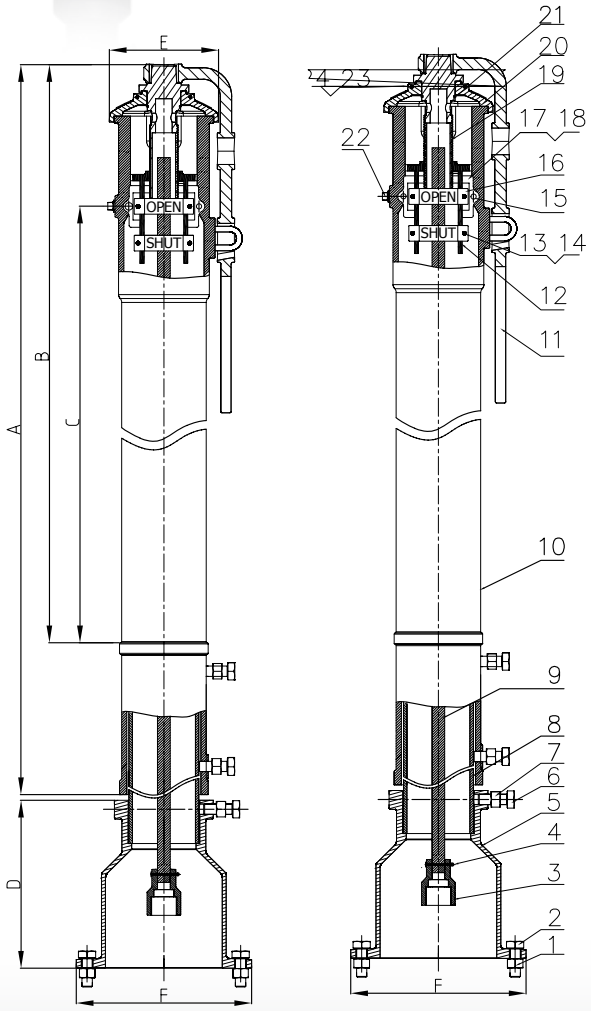
Vertical indicator post provides a means to operate a buried or otherwise inaccessible valve and able to indicate the open or shut position of the valve.

For use with 4" to 12" NRS indicating post gate valve

Weight: 90 kg (198,36lbs.)

Field Adjustment:

1- Remove the Top Section from the top of the Indicator Post assembly;
2- Cut the required stem length
3- Set the "OPEN" and "SHUT" targets for the appropriate valve size;
4- Reattach the Top Section to the top of the Indicator Post assembly.



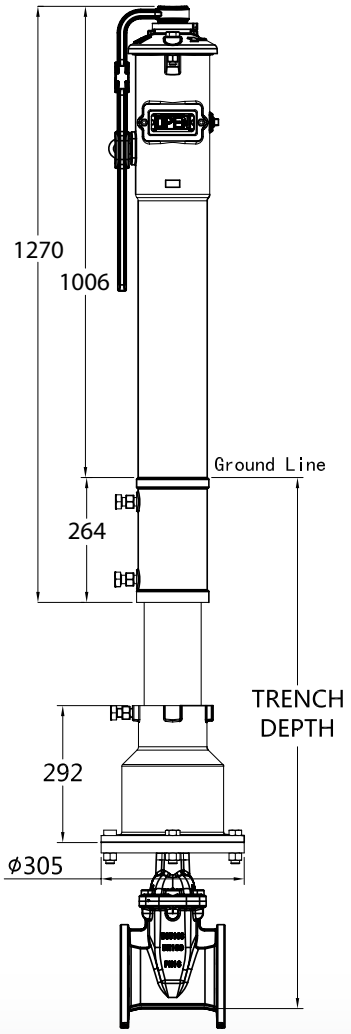
Dimensions (mm)					
A	B	C	D	E	F
1270	1006	759,5	292	190	305

Material List

No	Part	Material	ASTM Specification
1	Hex Nut	Carbon Steel Zinch Plated	
2	Hex Bolt	Carbon Steel Zinch Plated	
3	Socket	Ductile Iron	ASTM A536 65-45-12
4	Cotter Pin	Stainless Steel	AISI 304
5	Base Flange	Cast Iron	ASTM A126 Class B
6	Hex Bolt	Carbon Steel Zinch Plated	
7	Hex Nut	Carbon Steel Zinch Plated	
8	Stand Pipe	Carbon Steel	ASTM A53
9	Stem 1" Square	Carbon Steel	AISI 1045
10	Body	Cast Iron	ASTM A126 Class B
11	Locking Wrench	Ductile Iron	ASTM A536 65-45-12
12	Target Carrier Nut	Stainless Steel	AISI 304

No	Part	Material	ASTM Specification
13	Hex Bolt	Carbon Steel Zinch Plated	
14	Hex Nut	Carbon Steel Zinch Plated	
15	Hex Bolt	Carbon Steel Zinch Plated	
16	Target	Cast Aluminium	
17	Window Glass	Plexiglass	
18	Gasket	EPDM	
19	Operating Nut	Stainless Steel	AISI 304
20	Top Section	Cast Iron	ASTM A126 Class B
21	Snap Ring	Carbon Steel	AISI 1066
22	Plug	Malleable Iron-Galvanised	
23	Square Nut	Carbon Steel Zinch Plated	
24	Hex Bolt	Carbon Steel Zinch Plated	

Trench Depth



Size		Trench Depth (mm)
4"	Min	958
	Max	1808
6"	Min	1073
	Max	1923
8"	Min	1200
	Max	2050
10"	Min	1314
	Max	2164
12"	Min	1448
	Max	2298

Wall Type Post Indicator / Model A-WPI



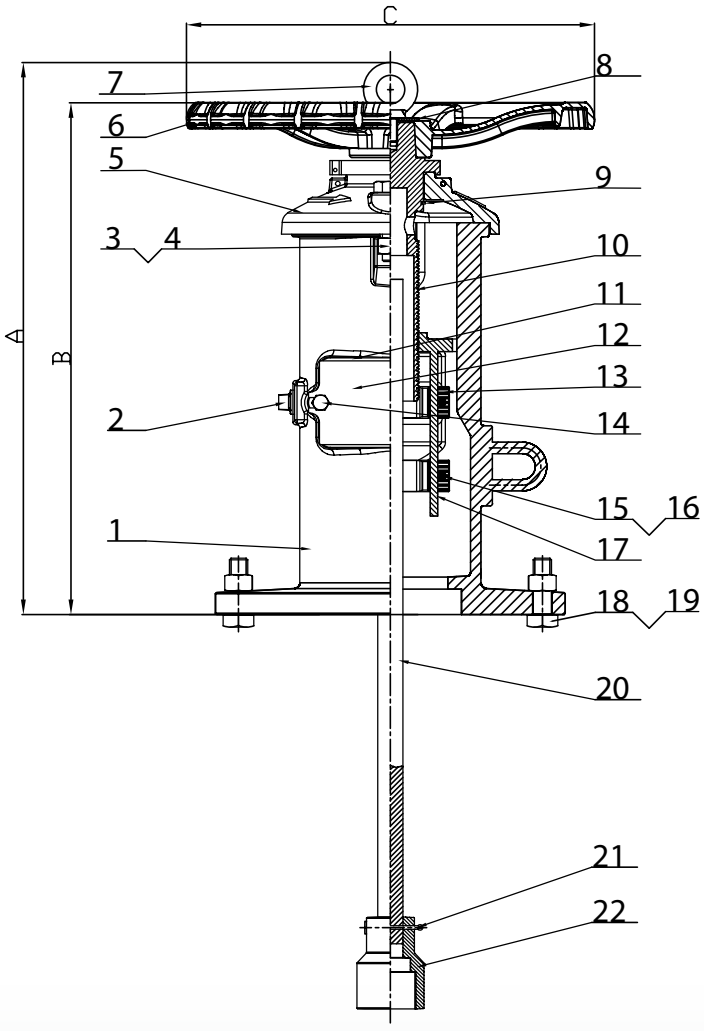
Wall indicator post provides a means to operate a valve installed behind a wall and able to indicate the open or shut position of the valve.
NOTE: Ensure that the non-rising stem gate valve is in the fully open position before installing the Wall Post Indicator.

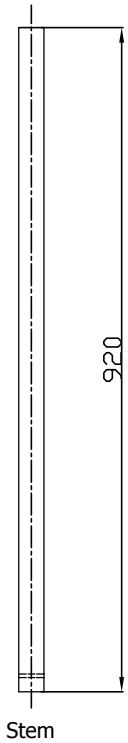
For use with 4" to 12" NRS indicating post gate valve

Weight: 40,8kg.(90lbs.)

Field Adjustment:

1- Remove the Top Section from the top of the Indicator Post assembly;
2- Cut the required stem length
3- Set the "OPEN" and "SHUT" targets for the appropriate valve size;
4- Reattach the Top Section to the top of the Indicator Post assembly.





Stem

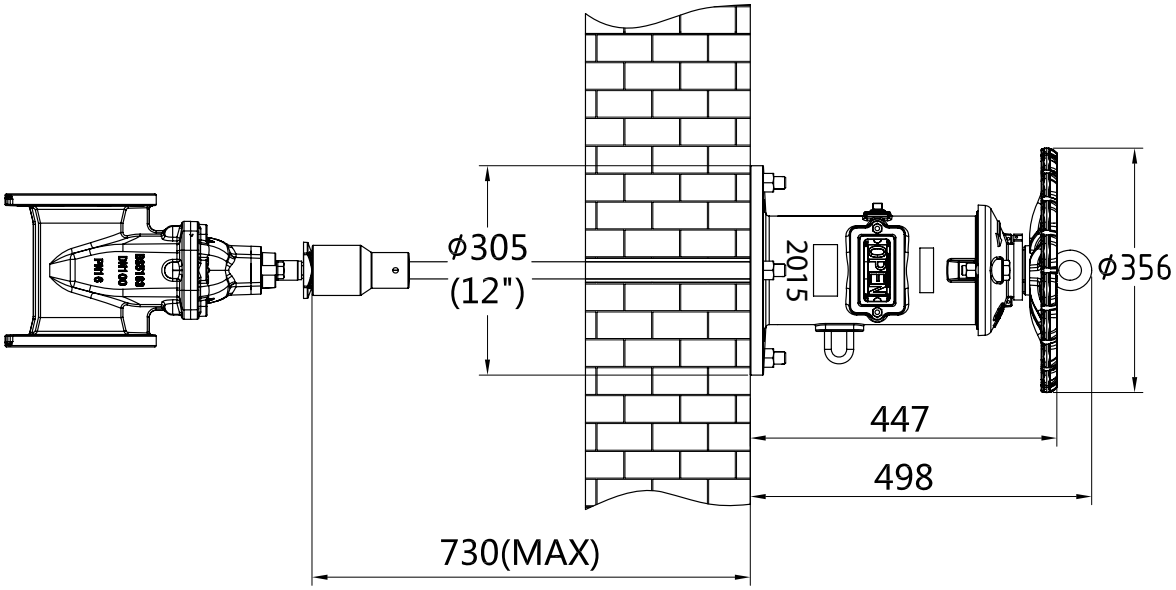
Dimensions (mm)		
A	B	C
497	447	356

Material List

No	Part	Material	ASTM Specification
1	Body	Cast Iron	ASTM A126 Class B
2	Plug	Malleable Iron-Galvanised	
3	Square Nut	Carbon Steel Zinch Plated	
4	Hex Bolt	Carbon Steel Zinch Plated	
5	Cover	Cast Iron	EN-GJL-200
6	Hand Wheel	Ductile Iron	ASTM A536 65-45-12
7	Eye Bolt	Carbon Steel Zinch Plated	
8	Gasket	Carbon Steel Zinch Plated	
9	Snap Ring	Spring Steel	
10	Operating Nut	Stainless Steel	AISI 304
11	Gasket	EPDM	

No	Part	Material	ASTM Specification
12	Window Class	Plexiglass	
13	Target	Cast Aluminium	
14	Hex Bolt	Carbon Steel Zinch Plated	
15	Hex Bolt	Carbon Steel Zinch Plated	
16	Hex Nut	Carbon Steel Zinch Plated	
17	Target Carrier Nut	Stainless Steel	AISI 304
18	Hex Nut	Carbon Steel Zinch Plated	
19	Hex Bolt	Carbon Steel Zinch Plated	
20	Stem 1" Square	Carbon Steel	
21	Cotter Pin	Stainless Steel	AISI 304
22	Socket	Cast Iron	ASTM A536 65-45-12

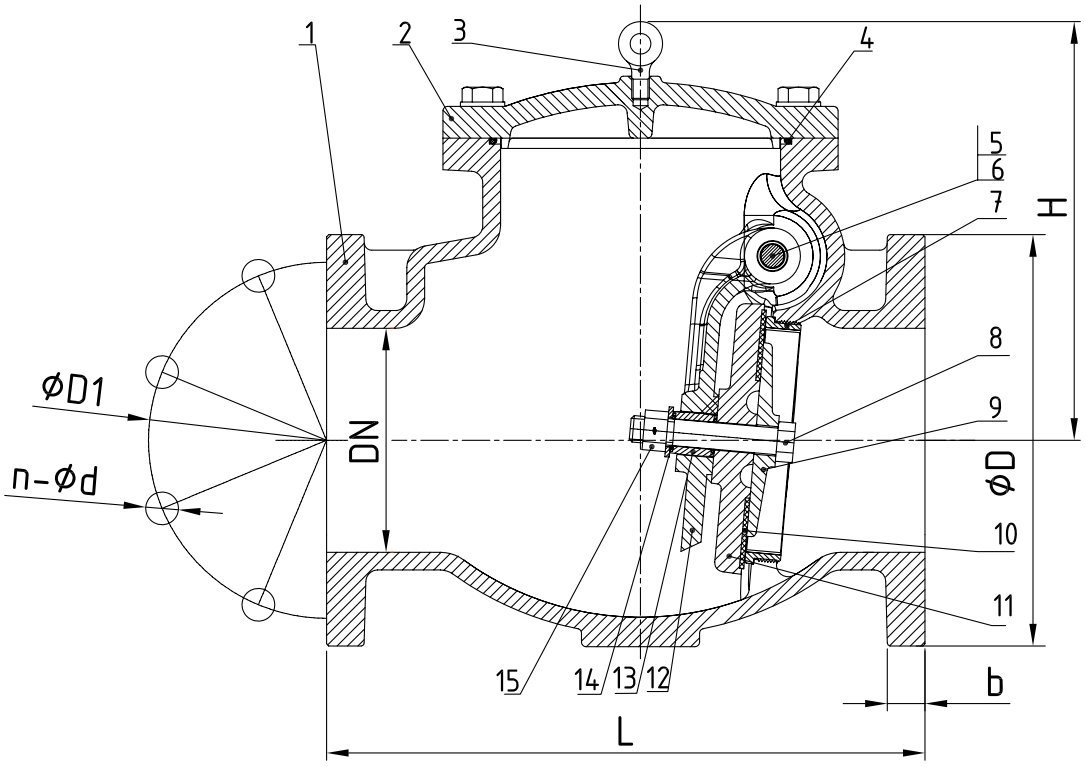
Typical Installation



Swing Check Valve Flanged / Model AFCV



Size	: 2", 2 ½", 3", 4", 6", 8", 10", 12"
Installation	: Horizontal or vertical
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection	: Flange diameter and thickness according to ANSI B16.1 Class 125, EN1092-2 PN10 or EN1092-2 PN16
Specifications	: Complys with AWWA C508, clear waterway design.
Seat Type	: Bronze clapper face ring and valve body seat
Finish	: Fusion bonded epoxy coated interior & exterior



Material List

No	Part	Material	ASTM Specification
1	Valve Body	Ductile Iron	ASTM A536 65-45-12
2	Bonnet	Ductile Iron	ASTM A536 65-45-12
3	Eye Bolt	Zinch Plated Carbon Steel	
4	O-Ring	NBR	Commercial
5	Hinge Pin	Stainless Steel	AISI 304
6	Hinge Bushing	Brass	ASTM B36
7	Seat Ring	Bronze	ASTM B62
8	Disc Seat Bolt	Stainless Steel	AISI 304
9	Retainer Washer	Bronze	ASTM B62
10	Disc Sealing Ring	EPDM	Commercial
11	Disc	Ductile Iron	ASTM A536 65-45-12
12	Clapper Arm	Ductile Iron	ASTM A536 65-45-12
13	Stud Bushing	Brass	ASTM B36
14	O-Ring	NBR	Commercial
15	Nuts	Stainless Steel	AISI 304

Dimensions - Weights

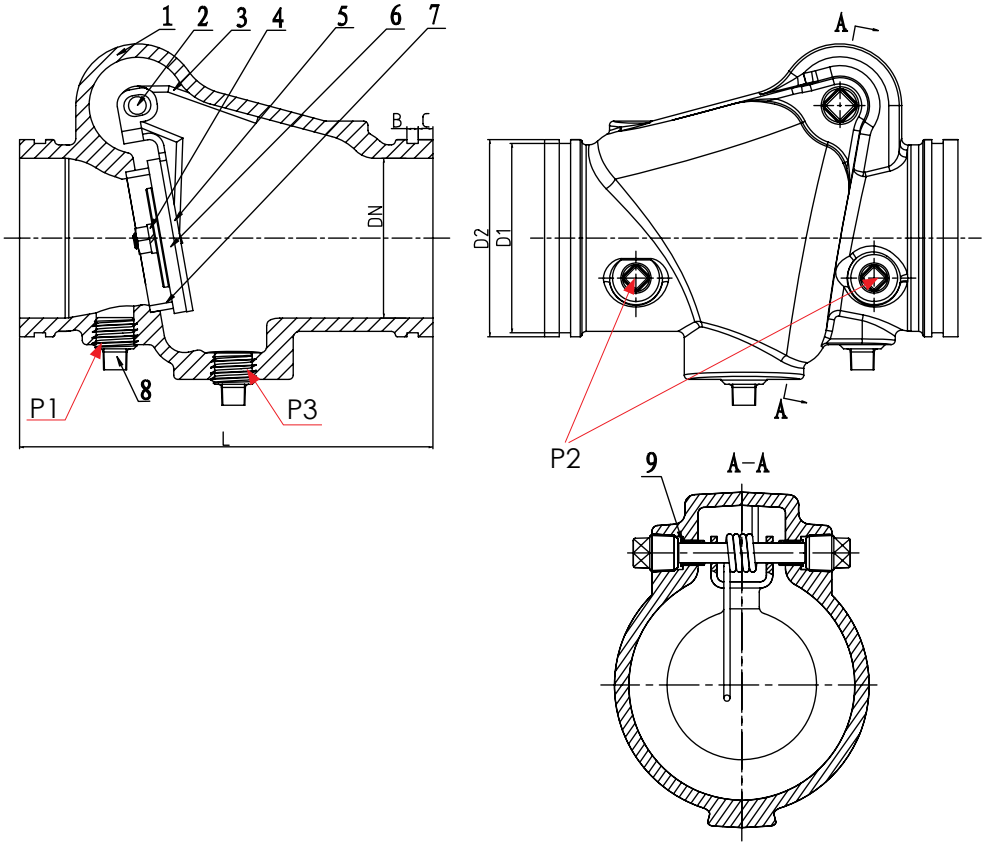
Size		L	D	b	H	Dimensions (mm)						Weight (kg)
						D1			n-ØL			
						ANSI	PN16	PN10	ANSI	PN16	PN10	
DN50	2"	203	152	16	133	120,5	125		4-Ø19.1			11,2
DN65	2 1/2"	254	178	17,5	150	139,5	145		4-Ø19.1			16,7
DN80	3"	279	191	19	150	152,5	160		4-Ø19.1	8-Ø19.1		22,5
DN100	4"	330	229	24	218	190,5	180		8-Ø19.1	8-Ø19.1		34,9
DN150	6"	406	279	25,5	290	241,5	240		8-Ø22.2	8-Ø23		65,2
DN200	8"	495	343	28,5	330	298,5	295		8-Ø22.2	12-Ø23	8-Ø23	120,7
DN250	10"	559	406	30,5	350	362	355	350	12-Ø25.4	12-Ø28	12-Ø23	180,9
DN300	12"	660	483	32	375	432	410	400	12-Ø25.4	12-Ø28	12-Ø23	242,3

Valve flange drilling (size and location of holes) allows mating with the following flange types:
ANSI= ANSI B16.1 Class 125
PN16=DIN 2501, EN 1092 - PN16
PN10=DIN 2501, EN 1092 - PN10

Swing Check Valve Grooved / Model AGCV



Size	: 2", 2 ½", 3", 4", 6", 8", 10", 12"
Installation	: Horizontal or vertical
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection	: Grooved joint dimensions are made in accordance with metric or AWWA C606
Seat	: Bronze
Clapper	: EPDM coated ductile iron
Finish	: Fusion bonded epoxy coated interior & exterior



Material List

No	Part	Material	ASTM Specification
1	Valve Body	Ductile Iron	ASTM A 536 GR. 65-45-12
2	Hinge Pin	Stainless Steel	AISI 420
3	Spring	Stainless Steel	AISI 304
4	Spring Weasher	Stainless Steel	AISI 304
5	Disc	DN50-DN100 Stainless Steel	AISI 304
		DN150-DN300 Ductile Iron	ASTM A 536 GR. 65-45-12
6	Disc Sealing Ring	EPDM	Commercial
7	Seat Ring	Bronze	ASTM B62 C83600
8	Plug	Malleable Iron-Galvanised	-
9	Bushing	Bronze	ASTM B62 C83600

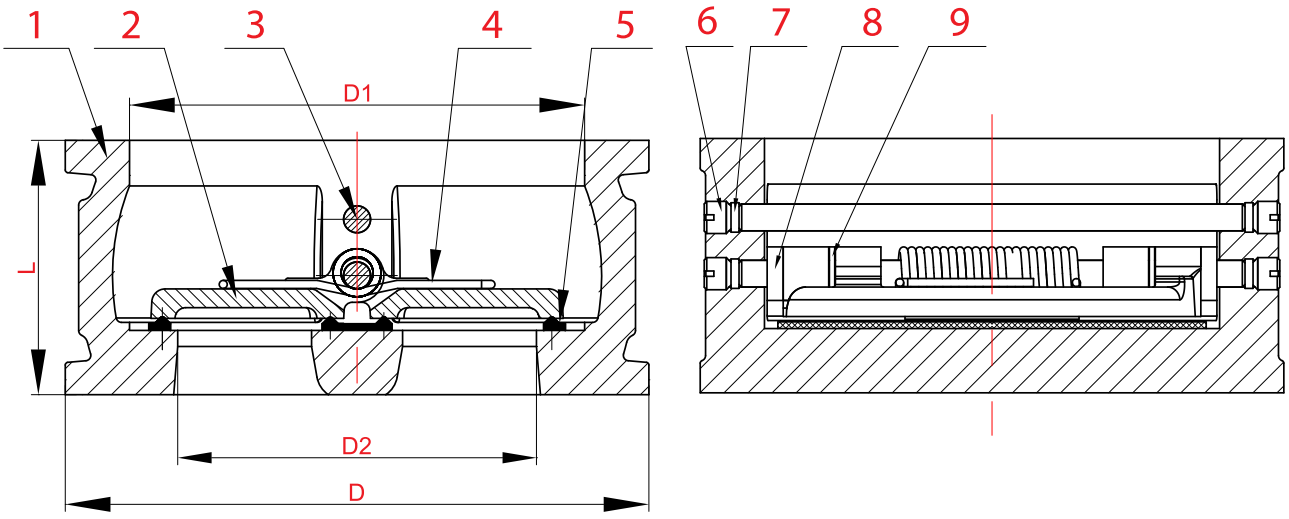
Dimensions - Weights

Size		Dimensions (mm)								Weight (kg)
		L	D1	D2	B	C	P1	P2	P3	
DN50	2"	172	57,2	60,3	7,9	15,9	1/2"	1/4"	1/2"	3,3
DN65	2 1/2"	184	69,1	73						3,6
			72,3	76,1						
DN80	3"	197	84,9	88,9						4,6
DN100	4"	209	110,1	114,3	9,5					7,44
DN150	6"	325	160,9	165,1						16,2
			164	168,3						
DN200	8"	372	214,4	219,1	11,1	19,1				26,9
DN250	10"	457	268,3	273	12,7					51,9
DN300	12"	535	318,3	323,9						75,6

Wafer Type Double Door Check Valve / Model AWCV-300



Size	: 2", 2 ½", 3", 4", 6", 8", 10", 12", 14", 16"
Installation	: Horizontal or vertical
Working Pressure	: 20,7 bar (300psi)
Max. Test Pressure	: 41,4 bar (600psi)
Working Temperature	: 0 - 80 °C
Connection	: Flange diameter according to ANSI B16.1 Class 125 / 150 EN1092-2 PN 10 / 16
Clapper	: AISI 316 Stainless Steel
Finish	: Fusion bonded epoxy coated interior & exterior



Material List

No	Part	Material	Specification
1	Body	Ductile Iron	ASTM A536 65-45-12
2	Disc	Stainless Steel	AISI 316
3	Stem	Stainless Steel	AISI 420
4	Spring	Stainless Steel	AISI 304
5	Rubbet Seat	EPDM	Commercial
6	Retainer Screw	Carbon Steel	-
7	Shaft Seal	EPDM	Commercial
8	Washer	PTFE	Commercial
9	Washer	PTFE	Commercial

Dimensions - Weights

Size		Dimensions (mm)				Weights (kg)
		L	D	D1	D2	
DN50	2"	54	106	68	46	1,71
DN65	2 1/2"	60	127	78	60	2,50
DN80	3"	57	134	102	70	2,87
DN100	4"	67	162	117	84	4,92
DN125	5"	83	193.5	145	115	7,35
DN150	6"	95	218	170	134	10,61
DN200	8"	127	275	226	184	18,82
DN250	10"	140	335.5	265	220	31,58
DN300	12"	181	405.5	310	260	51,05
DN350	14"	184	447.4	360	302	68,76
DN400	16"	191	505	410	350	91,68

Venturi Flow Test Meter / Model AYV



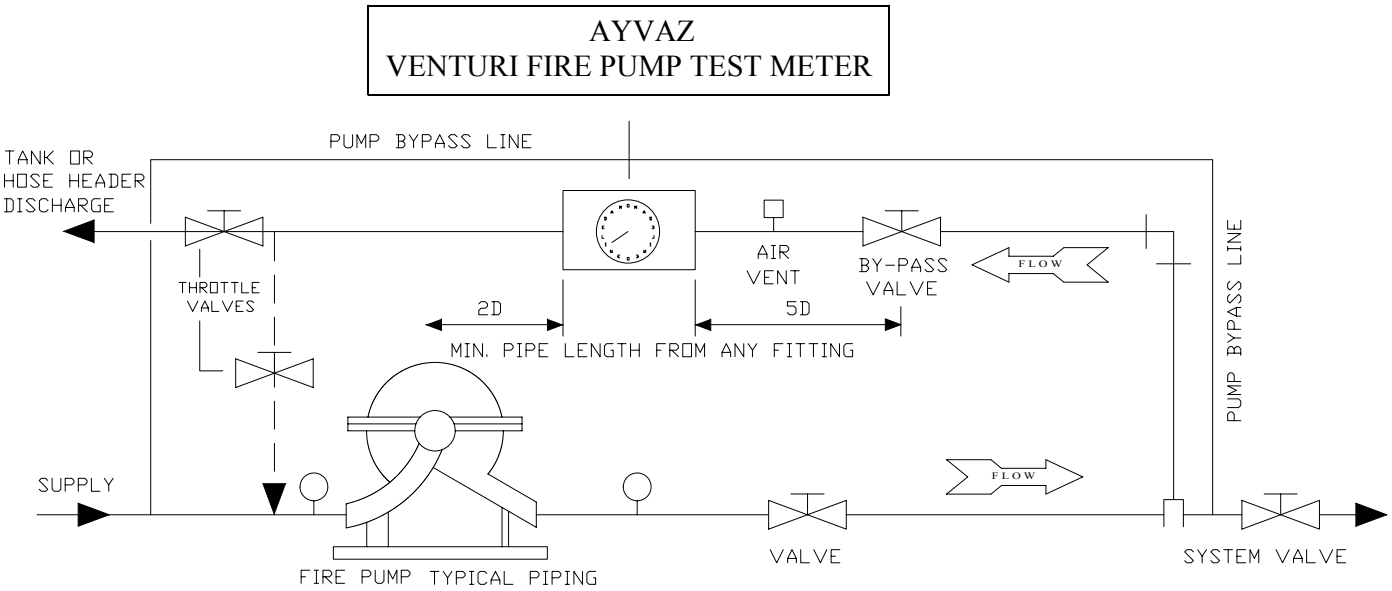
Construction & Specifications

Materials	: Carbon steel	
Valves	: Brass	
Connection & Rated Pressure	: Welded	-500PSI
	: Grooved	-500PSI
	Flanged #150	-275PSI
	Flanged #300	-500PSI
Hose	: Rubber with brass fittings	
ID Tag	: Polycarbonate	

Meter Device

Body	: Aluminium
Operation	: Diaphragm
Accuracy	: +%2 Full Scale
Temperature	: 80 °C
Pressure	: 500PSI
Weight	: 1.7kg
Size	: 4" Dial

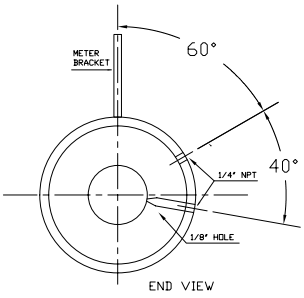
Installation



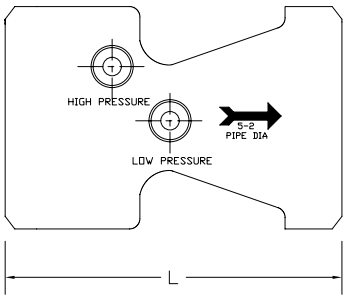
Operating instructions

1- Close system valve
2- Open system by-pass valve and throttle valve
3- Purge meter located on venturi as follows:
   - Open shut-off valves & vent valves.
   - When a steady stream of water is passing through Each plastic hose, the meter is purged of air.
   - Close vent valve after purging.
4- Start fire pump, read meter in gpm/lpm
5- Refer to pump gpm/lpm requirement and adjust Throttle valve for this requirement.
6- After test open system valve and close system By-pass and throttle valves.

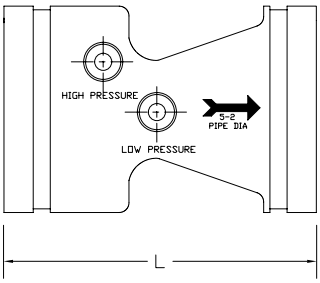
FIRE PUMP FLOWMETER SYSTEM



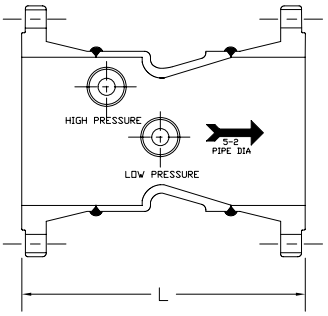
BUTT WELD / GROOVED



BUTT WELD



GROOVED



FLANGED

Size	Pump Capacity	Flow Range		Min. Straight Pipe Length (mm)		Butweld		Grooved		Flanged (Rf) # 150lb	
		Min	Max			L (mm)	Weight (kg)	L (mm)	Weight (KG)	L (mm)	Weight (kg)
	GPM	GPM		Before	After						
2 1/2"	100	50	200	365	146	101,6	4,9	101,6	4,5	241,3	13,6
3"	150	75	300	445	178	88,9	5,4	88,9	5,8	228,6	17,6
	200	100	400								
4"	200	100	400	570	228	95,25	6,3	95,25	6,3	241,3	23,1
	250	125	500								
	300	150	600								
	450	225	900								
5"	500	250	1000	695	278	127	6,8	127	6,8	304,8	24,9
	750	375	1500								
6"	500	250	1000	840	336	152,4	7,7	152,4	7,7	330,2	32,2
	750	375	1500								
	1000	500	2000								
	1250	625	2500								
8"	1000	500	2000	1095	438	177,8	9	177,8	9	381	56,2
	1250	625	2500								
	1500	750	3000								
	2000	1000	4000								
	2500	1250	5000								
	3000	1500	6000								
10"	1500	750	3000	1365	546	203,2	10,4	203,2	10,4	406,4	78,9
	2000	1000	4000								
	2500	1250	5000								
	3000	1500	6000								
	3500	1750	7000								
	4000	2000	8000								
	4500	2250	9000								
	5000	2500	10000								
12"	3500	1750	7000	1620	648	304,8	28	304,8	28	533,4	121,5
	4000	2000	8000								
	4500	2250	9000								
	5000	2500	10000								

Globe Type / Model 90G-21
Angle Type / Model 90A-21

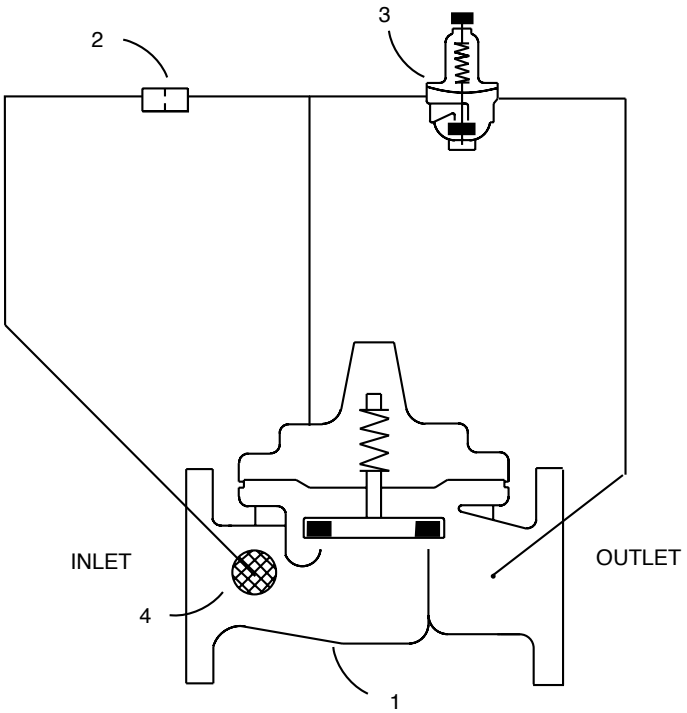


Features

- Globe or Angle Pattern
- Proven Reliable Design
- Available in Cast Bronze and Ductile Iron
- Accurate Pressure Control
- In Line Service
- Flanged and Grooved Ends

The Model 90G-21 (globe) and 90A-21 (angle) Pressure Reducing Valves are indispensable in any fire protection system. The diaphragm actuated design is proven highly reliable and easy to maintain. Available are globe or angle pattern with a full range of adjustments. A variety of material options are also available. Epoxy coating is strongly recommended for all fire system valves (excluding bronze valves).
The 90G-21 and 90A-21 can be supplied with optional internal and external epoxy coating of the main valve wetted surfaces.

The 90G-21 (globe) and 90A-21 (angle) Pressure Reducing Valves automatically reduce a higher inlet pressure to a steady lower outlet pressure regardless of changing flow rate and/or varying inlet pressure. The valves pilot control system is very sensitive to slight downstream pressure fluctuations, and will automatically open or close to maintain the desired pressure setting. The downstream pressure can be set over a wide range by turning the adjustment screw on the CRD pilot control. The adjustment screw is protected by a screw-on cover, which can be sealed to discourage tampering.



Schematic Diagram

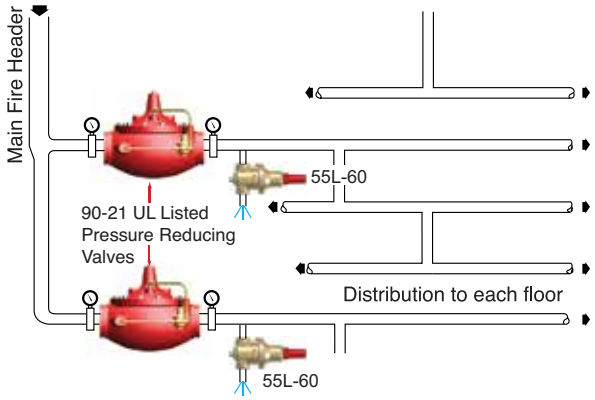
Item Description
1 Model 100-01 Hytrol
(Globe or Angle)
2 X58C Restriction Tube Fitting
3 CRD Pressure Reducing Control
4 X46A Flow Clean

Manufactured by CLA-VAL who have the ULC and UL Listing

PRESSURE REDUCING VALVE

Typical Application

Underwriters Laboratories requires the installation of pressure gauges upstream and downstream of the Pressure Reducing Valve. Also, a relief valve of not less than 1/2 inch in size must be installed on the downstream side of the pressure control valve. Adequate drainage for the relief valve discharge must be provided.



Size	Ductile Iron 150#F	Ductile Iron 300#F	Globe Pattern Ductile Iron Grooved End	Bronze 150#F	Angle Pattern Ductile Iron Grooved End	Ductile Iron 300#F
1 1/2"	UL / ULC	UL / ULC	UL / ULC			
2"	UL / ULC	UL / ULC	UL / ULC	ULC	UL / ULC	ULC
2 1/2"	UL / ULC	UL / ULC	UL	ULC		ULC
3"	UL / ULC	UL / ULC	UL / ULC	ULC	UL / ULC	ULC
4"	UL / ULC	UL / ULC	UL / ULC	ULC	UL / ULC	ULC
6"	UL / ULC	UL / ULC	UL / ULC		ULC	
8"	UL / ULC	UL / ULC	UL / ULC			
10"	ULC	ULC				

Specifications

Size : Class 175 lb. — Class 300 lb.
40 mm - 200 mm (Globe) — 40 mm - 200 mm (Globe)
50 mm - 150 mm (Angle) — 50 mm - 150 mm (Angle)

End Details : 150 ANSI B16.42 (Ductile Iron)
(Bronze)
300# (Ductile Iron)
300# (Ductile Grooved End).

Temperature Range : Water to 82 °C (180°F) Max.

Pressure Differential : 10 PSI Min.

Pressure Adjustment Range : Class 175 lb. — Class 300 lb.
30 - 165PSI — 30 - 165PSI

Materials

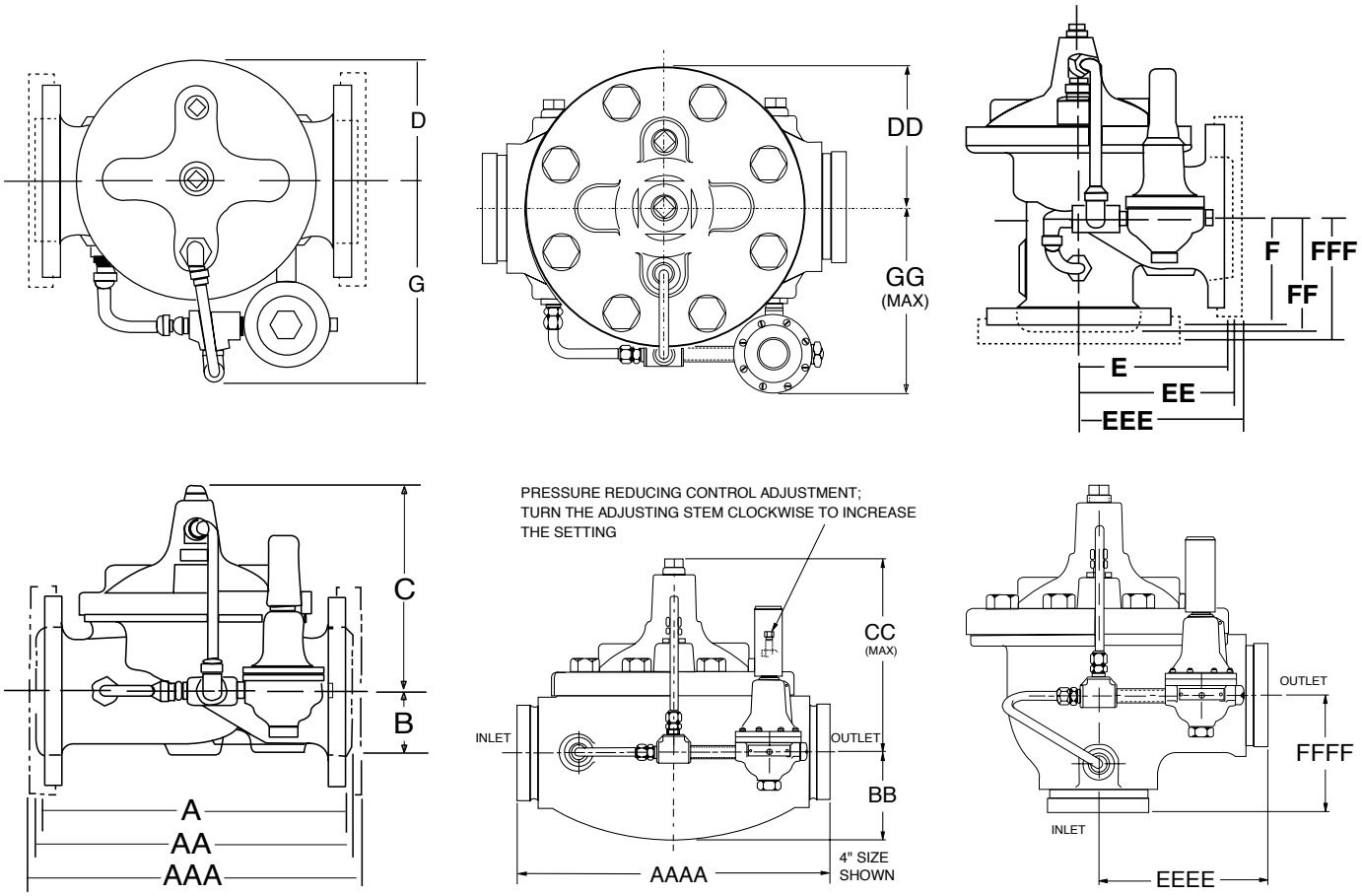
Main Valve Body & Cover : Ductile Iron - ASTM A536

Main Valve Internal Trim : Bronze ASTM B61

Pilot Control System & Pilot Control Valve : Bronze ASTM B62 with Stainless ü
Steel 303 internal trim
Copper tubing with brass fittings

Main Valve and Pilot Valve Diaphragm and Disc : Buna-N synthetic rubber

Dimensions



Valve Size	(mm) (inch)	40	50	65	80	100	150	200	250
		1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"
Max. Flow Rate	LPM	606	992	1412	2180	3755	8521	14763	23280
	GPM	160	262	373	576	992	2251	3900	6150

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Dimensions

Size (inch)	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"
A Threaded	7,25	9,38	11,00	12,50	-	-	-	-
AA 150 ANSI	8,50	9,38	11,00	12,00	15,00	20,00	25,38	29,75
AAA 300 ANSI	9,00	10,00	11,62	13,25	15,62	21,00	26,38	31,12
AAAA Grooved End	8,50	9,00	11,00	12,50	15,00	20,00	25,38	-
B	1,12	1,50	1,69	2,56	3,19	4,31	5,31	9,25
BB Grooved End	2,00	2,50	2,88	3,12	4,25	6,00	7,56	-
C Max	5,50	6,50	7,56	8,19	10,62	13,38	16,00	17,12
CC Max. Grooved End	4,10	5,00	6,88	6,50	8,80	11,10	14,50	-
D	2,81	3,31	4,40	4,56	5,75	7,88	10,00	11,81
DD Grooved End	2,81	3,31	4,40	4,56	5,75	7,88	10,00	-
E Threaded	3,25	4,75	5,50	6,25	-	-	-	-
EE 150 ANSI	4,00	4,75	5,50	6,00	7,50	10,00	12,75	14,88
EEE 300 ANSI	4,25	5,00	5,88	6,38	7,88	10,50	13,25	15,56
EEEE Grooved End	-	4,75	-	6,00	7,50	-	-	-
F Threaded	1,88	3,25	4,00	4,50	-	-	-	-
FF 150 ANSI	4,00	3,25	4,00	4,00	5,00	6,00	8,00	8,62
FFF 300 ANSI	4,25	3,50	4,31	4,38	5,31	6,50	8,50	9,31
FFFF Grooved End	-	3,25	-	4,50	5,00	-	-	-
G (Max)	7,50	7,75	7,75	8,00	9,00	9,50	10,50	11,50
GG (Max)	8,10	8,00	-	8,13	9,31	10,50	11,50	-

Size (mm)	40	50	65	80	100	150	200	250
A Threaded	184	238	279	318	-	-	-	-
AA 150 ANSI	216	238	279	305	381	508	645	756
AAA 300 ANSI	229	254	295	337	397	533	670	790
AAAA Grooved End	216	229	279	318	381	508	645	-
B	28	38	43	65	81	109	135	235
BB Grooved End	51	64	73	79	108	152	192	-
C Max	140	165	192	208	270	340	406	435
CC Max. Grooved End	104	127	175	165	224	282	368	-
D	71	84	112	116	146	200	254	300
DD Grooved End	71	84	112	116	146	200	254	-
E Threaded	83	121	140	159	-	-	-	-
EE 150 ANSI	102	121	140	152	191	254	324	378
EEE 300 ANSI	108	127	149	162	200	267	337	395
EEEE Grooved End	-	121	-	152	191	-	-	-
F Threaded	48	83	102	114	-	-	-	-
FF 150 ANSI	102	83	102	102	127	152	203	219
FFF 300 ANSI	108	89	109	111	135	165	216	236
FFFF Grooved End	-	83	-	114	127	-	-	-
G (Max)	191	197	197	203	229	241	267	292
GG (Max)	206	203	-	207	236	267	292	-

Globe Type / Model 50B-4KG1
Angle Type / Model 2050B-4KG1



U.L. Listed.....Sizes 3" thru 8"
F.M. Approved.....Sizes 3" thru 8"
U.L.C. Listed.....Sizes 2" thru 10"

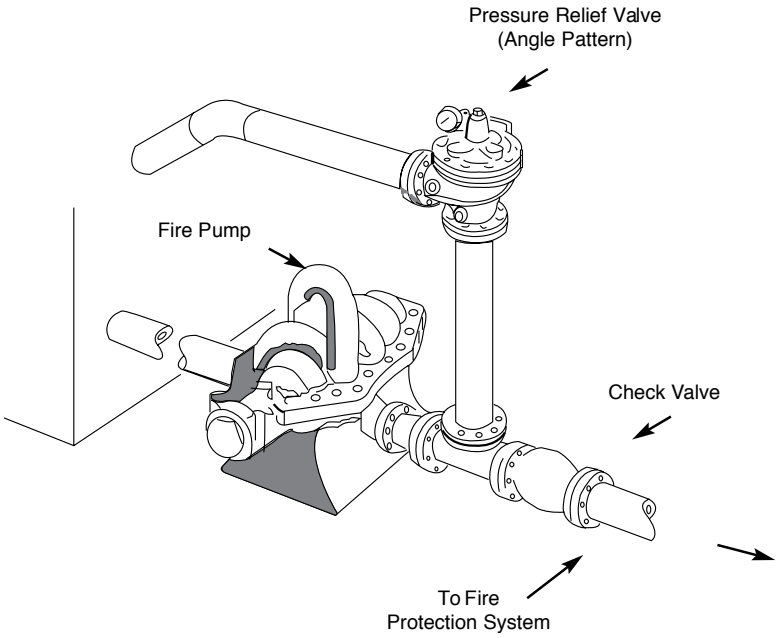
Features

- Fast Opening to Maintain Steady Line Pressure
- Accommodates Wide Range of Flow Rates
- Closes Gradually for Surge-Free Operation
- Adjustable Pressure Settings, Not Affected by Pressure At Valve Discharge

The Model 50B-4KG1 Globe / 2050B-4KG1 Angle Pressure Relief Valve is designed specifically to automatically relieve excess pressure in fire protection pumping systems. Pilot controlled, it maintains constant system pressure at the pump discharge within very close limits as demands change. The 50B-4KG1 and 2050B-4KG1 can be supplied with optional internal and external epoxy coating of the main valve wetted surfaces.

Typical Application

At pump start, Relief Valve modulates to relieve excess pump capacity, maintaining positive system pressure at the pump discharge. When fire demand slows or ceases, Model 50B-4KG1 opens, diverting entire pump output to discharge, allowing fire pump to be stopped without causing surging in the lines. (Please note that if the Model 50B-4KG1 is to be used on a continuous duty basis to maintain fire-system pressure, suitable back pressure must be provided on the valve to prevent cavitation damage. Consult the factory for details.)



Specifications

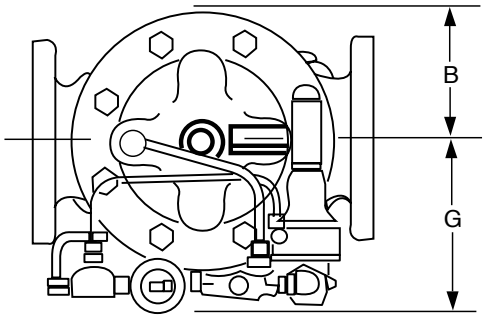
Size	: Globe: 2" - 10" flanged Angle: 2" - 10" flanged
End Details & Pressure Raitings	: Class150 ANSI B16.42 (175PSI) and Class 300 ANSI B16.42 (300PSI)
Temperature Range	: Water to 82 °C (180°F) Max.
Pressure Adjustment Range	: 20-200 psi (150 Class) - 100-300 psi (300 Class)

Manufactured by CLA-VAL who have the ULC and UL Listing

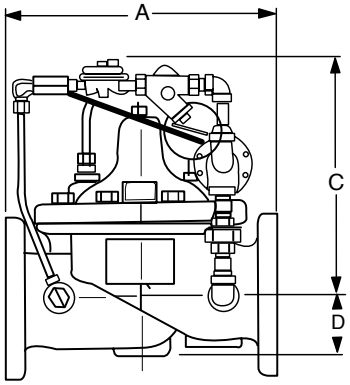
Materials

Main Valve Body & Cover : Ductile Iron ASTM A-536 — Naval Bronze ASTM B61
Standard Main Valve Trim : Bronze Seat, Teflon Coated — Stainless Steel Stem, Dura-Kleen Stem
Standard Pilot Control System : Cast Bronze with Stainless Steel trim

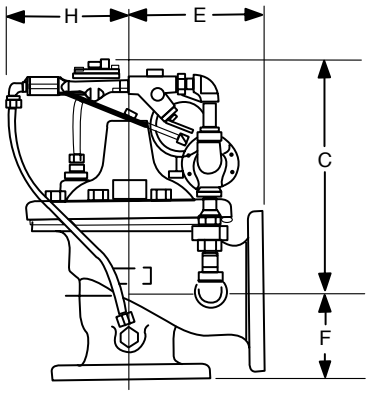
Dimensions



Model 50B-4KG1 Globe



Model 2050B-4KG1 Angle



Size (inch)	2"	2 1/2"	3"	4"	6"	8"	10"
Threaded Ends	9,38	11,00	12,50	-	-	-	-
A 150 Flanged	9,38	11,00	12,00	15,00	20,00	25,38	29,75
300 Flanged	10,00	11,62	13,25	15,62	21,00	26,38	31,12
300 X 150	-	-	12,88	15,31	20,56	25,88	30,44
B	3,31	4,00	4,56	5,75	7,88	10,00	11,81
C	12,00	12,25	12,50	13,00	14,31	16,31	18,00
D	1,50	1,69	2,66	3,19	4,31	5,31	9,25
Threaded Ends	4,75	5,50	6,25	-	-	-	-
E 150 Flanged	4,75	5,50	6,00	7,50	10,00	12,75	14,88
300 Flanged	5,00	5,88	6,38	7,88	10,50	13,25	15,56
Threaded Ends	3,25	4,00	4,50	-	-	-	-
F 150 Flanged	3,25	4,00	4,00	5,00	6,00	8,00	8,62
300 Flanged	3,50	4,31	4,38	5,31	6,50	8,50	9,31
G & H	6,00	6,69	7,75	7,88	8,50	9,75	13,25

Size (mm)	50	65	80	100	150	200	250
Threaded Ends	238	279	318	-	-	-	-
A 150 Flanged	238	279	305	381	508	645	756
300 Flanged	254	295	337	397	533	670	790
300 X 150	-	-	327	389	522	657	773
B	84	102	116	146	200	254	300
C	305	311	318	330	363	414	457
D	38	43	68	81	109	135	235
Threaded Ends	121	140	159	-	-	-	-
E 150 Flanged	121	140	152	191	254	324	378
300 Flanged	127	149	162	200	267	337	395
Threaded Ends	83	102	114	-	-	-	-
F 150 Flanged	83	102	102	127	152	203	219
300 Flanged	89	109	111	135	165	216	236
G & H	152	170	197	200	216	248	337

Threaded Pressure Relief Valve / Model 55L-60



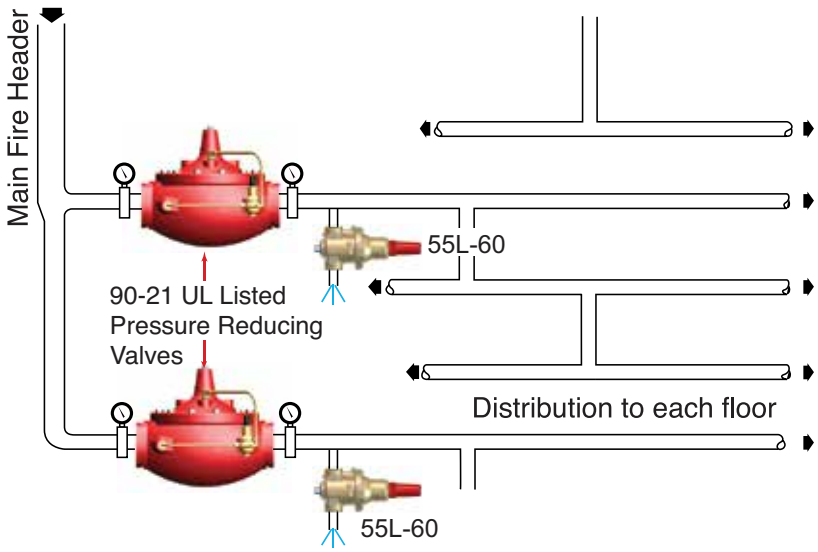
Features

- Direct Acting - Precise Pressure Control
- Positive Dependable Opening
- Drip Tight Closure
- No Packing Glands or Stuffing Boxes
- Sensitive to Small Pressure Variations

The Model 55L-60 (UL Listed FM approved) Pressure Relief Valve is a direct-acting, spring loaded, diaphragm type relief valve. The valve may be installed in any position and will open and close within very close pressure limits. The Model 55L-60 is normally held closed by the force of the compression spring above the diaphragm. When the controlling pressure applied under the diaphragm exceeds the spring setting, the disc is lifted off its seat, permitting flow through the control. When control pressure drops below the spring setting, the spring forces the control back to its normally closed position. The controlling pressure is applied to the chamber beneath the diaphragm through an external tube on the 55L-60. Pressure adjustment is simply a matter of turning the adjusting screw to vary the spring load on the diaphragm. The 55L-60 is available in three pressure ranges; 0 to 75 psi, 20 to 175 psi, 100 to 300 psi. To prevent tampering, the adjustment cap can be wire sealed by using the lock wire holes provided in the cap and cover.

Typical Application

Fire Protection System Service
Using the Model 55L-60 in a fire protection system or other closed type system, prevents pressure build-up whenever line pressure exceeds the setting of the spring. The valve will relieve excess pressure to atmosphere preventing damage to the distribution network.



Manufactured by CLA-VAL who have the ULC and UL Listing

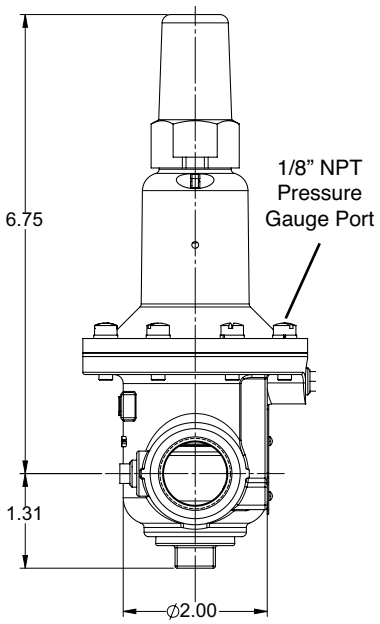
Specifications

Size : 1/2", 3/4" and 1" Threaded
Temperature Range : Water to 82 °C (180°F) Max.

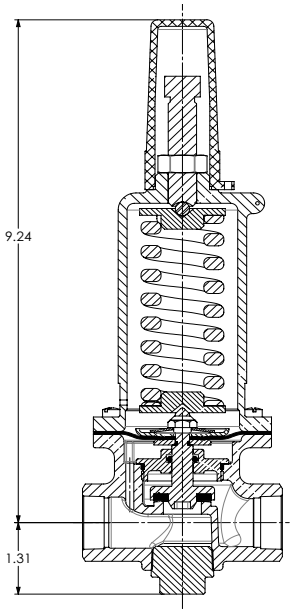
Materials

Body & Cover : Cast Bronze ASTM B62 — Stainless Steel ASTM A743-CF-16Fa
Trim : Brass & Stainless Steel 303
Rubber : Buna-N® Synthetic Rubber
Pressure Ratings : Cast Bronze 400 psi Max.
Adjustment Ranges : 0 to 75 psi — 20 to 200 psi — 100 to 300 psi

Dimensions (1/2" and 3/4")

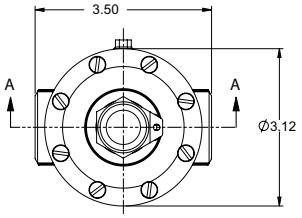


0 to 75 psi
20 to 200 psi



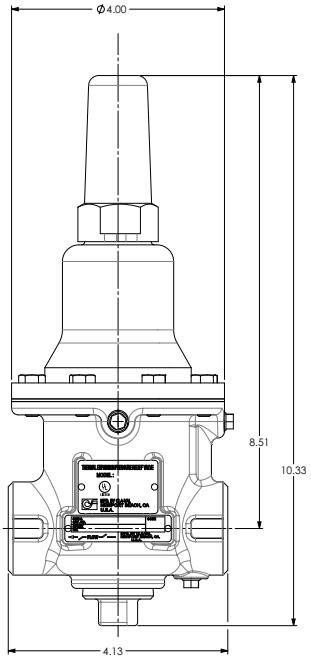
100 to 300 psi

(applies to both configurations)



dimensions shown in inches

Dimensions (1")



Spring Range:
20-75
40-200
100-300

Test And Drain Valve / Model STDV



Features

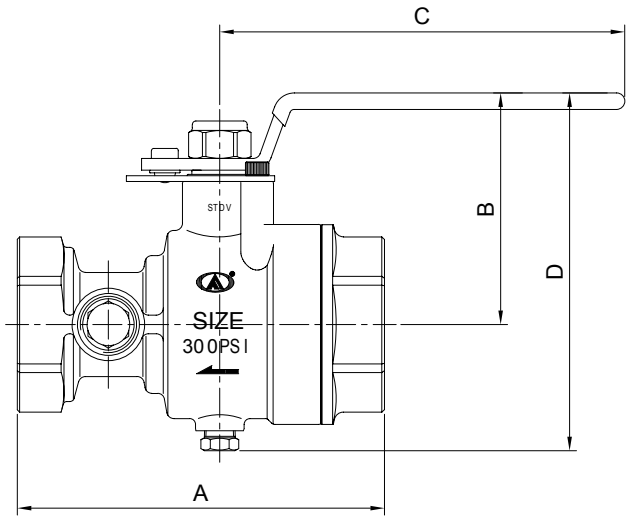
- Used to test & drain water flow through sprinkler systems
- OFF-TEST-DRAIN position
- Integral sight glass
- Complies with the requirements of NFPA-13, NFPA-13R, and NFPA-13D

Dimensions

Size (inch)	1"		1 1/4"		1 1/2"				2"			
Connection	Threaded (F x F)											
Approvals & Listings	FM, UL, ULC											
Rated Pressure	300PSI											
Orifice Size	7/16"	1/2"	7/16"	1/2"	7/16"	1/2"	3/4"	19/64"	7/16"	1/2"	3/4"	19/64"
K-Factor	4,2	5,6	4,2	5,6	4,2	5,6	14	25,2	4,2	5,6	14	25,2
A (mm)	128,2				157,2							
B (mm)	68,5				99,1							
C (mm)	130,5				174							
D (mm)	112				154							
Weights (kg)	1,3				2,7				2,78			

Materials

Part	Material
Body	Brass
Ball	Brass
Ball Seat	TFM
Indicator Plate	Stainless Steel
Handle	Steel Vinyl Coated
Stem	Stainless Steel
Stem Seal	PTFE
O-Ring Seal	EPDM



Test And Drain Valve / Model GTDV



Features

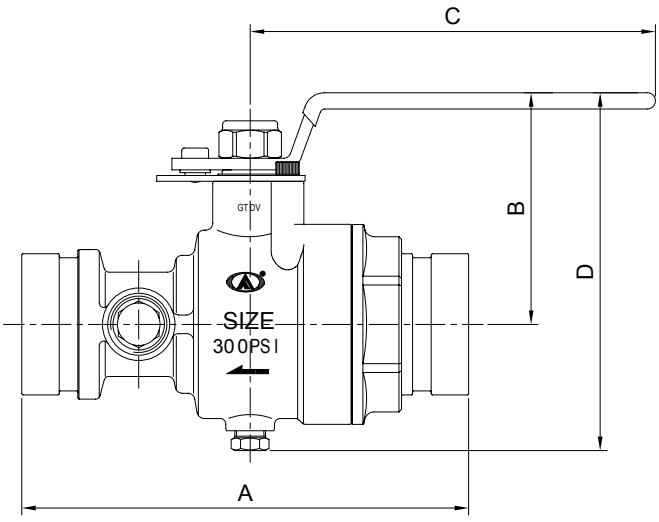
- Used to test & drain water flow through sprinkler systems
- OFF-TEST-DRAIN position
- Integral sight glass
- Complies with the requirements of NFPA-13, NFPA-13R, and NFPA-13D

Dimensions

Size (inch)	1 1/4"		1 1/2"				2"			
Connection	Grooved									
Approvals & Listings	FM, UL, ULC									
Rated Pressure	300PSI									
Orifice Size	7/16"	1/2"	7/16"	1/2"	3/4"	19/64"	7/16"	1/2"	3/4"	19/64"
K-Factor	4,2	5,6	4,2	5,6	14	25,2	4,2	5,6	14	25,2
A (mm)	161,6		190,9							
B (mm)	68,5		99,1							
C (mm)	130,5		174							
D (mm)	112		154							
Weights (kg)	1,4		2,8				3			

Materials

Part	Material
Body	Brass
Ball	Brass
Ball Seat	TFM
Indicator Plate	Stainless Steel
Handle	Steel Vinyl Coated
Stem	Stainless Steel
Stem Seal	PTFE
O-Ring Seal	EPDM



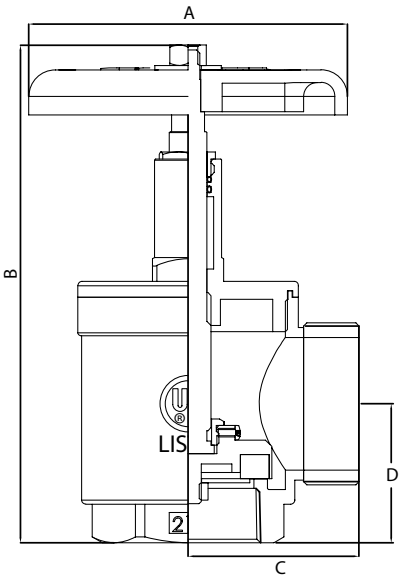
Angle Hose Valve / Model AHV – 100 & 200

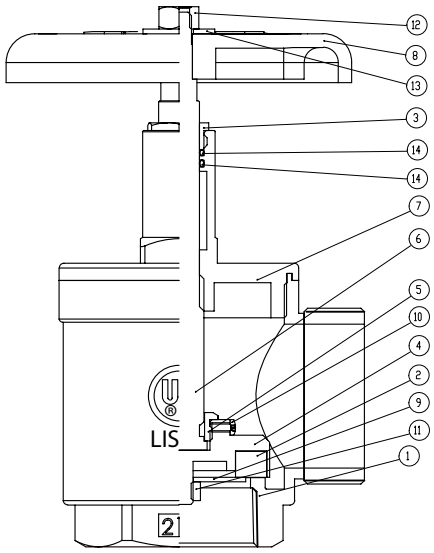


Sizes available (Nominal) : 1 1/2"- 2 1/2"
Working pressure : 20.6 bar (300 psi)
Finish : Polished Brass
Connections : Female threaded NPT inlet and male threaded NST outlet
Specifications : Used with fire hoserack assembly or fire department outlet connection

Materials List

No	Description	Material
1	Body	ASTM B584 C85700
2	Seat Seal	NBR
3	Gland	ASTM B16 C36000
4	Holder	ASTM B584 C85700
5	Set Screw	ASTM B16 C36000
6	Bonnet	ASTM B584 C85700
7	Stem	ASTM B16 C36000
8	Hand Wheel	Ductile Iron
9	Clamping Ring	AISI304 SS
10	Screw	ASTM B16 C36000
11	Clamping Nut	AISI304 SS
12	Wheel Nut	AISI304 SS
13	Wheel Washer	AISI304 SS
14	O-Ring	NBR





Dimensions

Model	Size	Connection		Dimension (mm)				Weight (kg)
		Female	Male	A	B	C	D	
AHV-200	2 1/2"	NPT	NST	152	238	82	67	4,7
AHV-100	1 1/2"	NPT	NST	130	175	58	48	4,3

Pressure Restricting Hose Valve / Model AHV – 100 & 200



Sizes available (Nominal) : 1 1/2"- 2 1/2"
Working pressure : 20.6 bar (300 psi)
Finish : Polished Brass
Connections : Female threaded NPT inlet and male threaded NST outlet
Specifications : Used with fire hose rack assembly or fire department outlet connection

How to use the valves?

The valves are capable of adjustment to provide range of the outlet pressure under flowing condition only.

Determining the proper outlet pressure

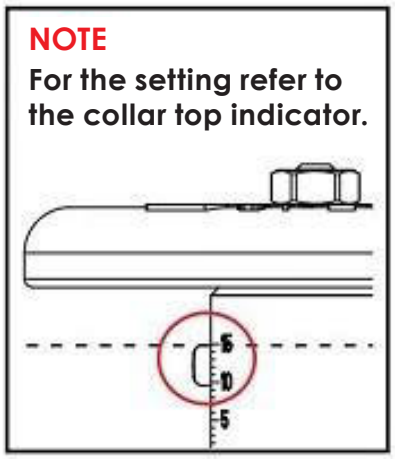
1-The valves are reducing the downstream water pressure under flowing (residual) condition only.
The valve should not be set to provide less than minimum pressure required by NFPA14 while flowing 250gpm for 2 1/2" size and 100gpm for 1 1/2" size.
NFPA 14-2016 Edition requires that standpipe systems shall be hydraulically designed to provide the required water flow rate at minimum residual pressure of 100psi at the outlet of hydraulically most remote 2 1/2" hose connection and 65psi at the outlet of hydraulically most remote 1 1/2" hose station.
Outlet pressures which do not correspond to NFPA 14 requirements must be authorized by local fire department.
There will be a pressure drop due to friction between the outlet and the nozzle.
The amount of this loss should be calculated by qualified personnel, to assure that the nozzle receives water pressure sufficient to design needs.
Note that some fire hose nozzles may not operate properly when valve outlet pressure is set at the 100psi minimum authorized in the 2016 Edition of NFPA 14.
The installer should consult with the fire authorities concerning pressure needed by their equipment.
The outlet pressure indicated in the tables are at the outlet of valve.

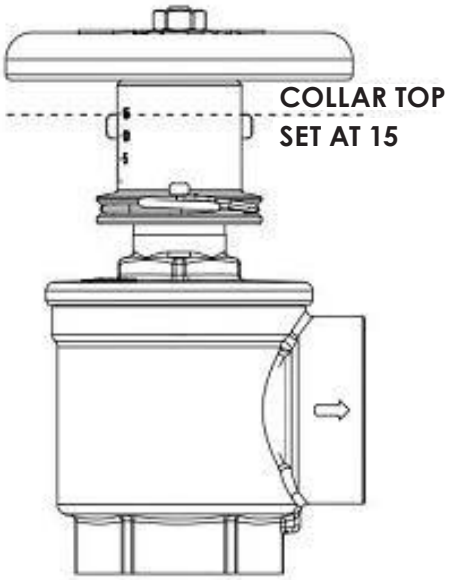
2-To determine the pressures at the hose nozzle, the hydraulic calculation information provided in NFPA Fire Protection Handbook should be followed.

3-The valves are designed and listed to reduce inlet pressures under flowing conditions; see the enclosed graphs.
Authorities having jurisdiction should be consulted to confirm that the outlet pressures and flowrates are acceptable.

Installation

1-Pipe unions or rubber gasket fittings are to be installed immediately upstream and downstream of valve to permit easy replacement.
2-Connect the valve to the piping.
3-Select setting number from proper graph.
4-Close valve hand-tight.
5-Loosen set screw in collar.
6-Rotate indicator cap until top collar reaches selected setting number.
7-Tighten set screw in collar. Valve is now set
8-To override pressure restriction, pull spring clip.





Nominal Valve Size, Inch	Valve Setting	Inlet Pressure psi (kPa)	Flow Rate gpm (lpm)	Outlet Pressure psi (kPa)	Nominal Valve Size, Inch	Valve Setting	Inlet Pressure psi (kPa)	Flow Rate gpm (lpm)	Outlet Pressure psi (kPa)
1 1/2"	5	50 (345)	105 (397)	8.8 (61)	2 1/2"	5	50 (345)	155 (587)	8.4 (55)
		100 (690)	161 (609)	13.8 (95)			100 (690)	236 (893)	13.0 (90)
		150 (1035)	204 (772)	17.3 (119)			150 (1035)	305 (1155)	17.3 (119)
		200 (1380)	242 (916)	20.1 (139)			200 (1380)	360 (1363)	20.9 (144)
		250 (1725)	276 (1045)	22.9 (158)			250 (1725)	407 (1541)	24.4 (168)
	10	50 (345)	192 (727)	14.5 (100)		10	50 (345)	225 (852)	12.2 (84)
		100 (690)	285 (1079)	22.4 (154)			100 (690)	335 (1268)	19.2 (132)
		150 (1035)	358 (1355)	29.8 (205)			150 (1035)	418 (1582)	25.3 (174)
		200 (1380)	420 (1590)	34.8 (240)			200 (1380)	524 (1984)	33.8 (233)
		250 (1725)	475 (1798)	41.5 (286)			250 (1725)	592 (2241)	40.9 (282)
	15	50 (345)	209 (791)	12.4 (85)		15	50 (345)	385 (1457)	22.7 (157)
		100 (690)	307 (1162)	19.7 (136)			100 (690)	584 (2211)	39.4 (272)
		150 (1035)	383 (1450)	26.4 (182)			150 (1035)	715 (2707)	54.5 (376)
		200 (1380)	440 (1666)	33.5 (231)			200 (1380)	817 (3093)	68.0 (469)
		250 (1725)	496 (1878)	41.3 (285)		20	50 (345)	399 (1510)	31.6 (218)
							100 (690)	611 (2313)	58.6 (404)
							150 (1035)	791 (2994)	81.5 (562)
							200 (1380)	963 (3645)	100 (689)

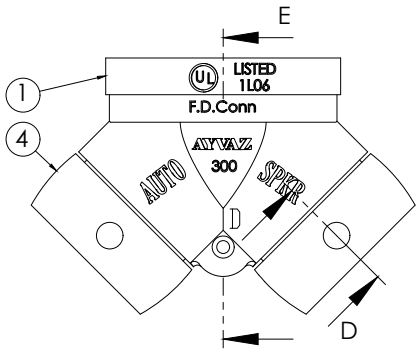
Fire Department Connection / Model AFDC-100

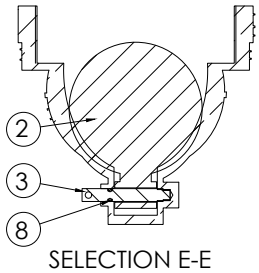


Model AFDC-100 is used as auxiliary connections through which the fi re department can pump water to supplement the fire protection water supply. Provides minimum 250 gpm (950 lpm) flow per 21/2" inlet.

Specifications

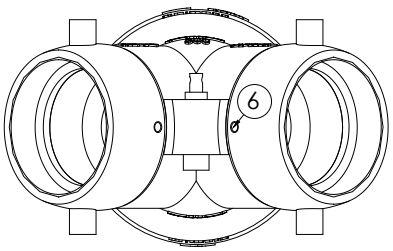
Body : Cast Brass
Size : 4" F NPT x 21/2" F NST x 21/2" F NST
Description : Straightway Single Clapper
Max Working Pressure : 300 psi (2070kPa)

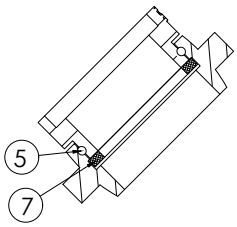




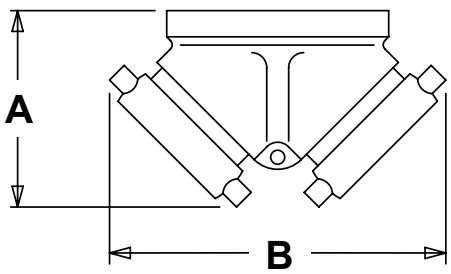
SELECTION E-E

Material List		
No.	Part	Material
1	Body	ASTM C85700
2	Clapper	ASTM C85700
3	Hinge Pin	ASTM C85700
4	Swivel	ASTM C85700
5	Stainless Ball Bearing	AISI 304
6	Set Screw	ASTM C36000
7	Rubber Facing	Valcanized Rubber
8	O-ring	NBR





SELECTION D-D



Size	
A	140
B	206

Upright / Standart Response – Quick Response



Description

AZ003 /AZ004 Standard / Quick Response Upright sprinklers are designed for use in light and ordinary hazards. The temperature response is standard response (5 mm glass bulb) and quick response (3mm glass bulb). The sprinklers come with compact design, glass bulb type, available in several different finishes and temperature ratings. The upright sprinklers are to be installed in the upright position.

Sprinkler Operation

During a fire conditions, the thermal-sensitive liquid in the glass bulb expands, causing the bulb to shatter, releasing the button and spring seal assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

Care and Handing

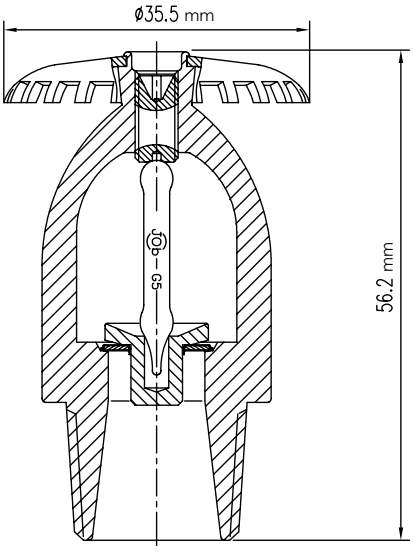
Sprinklers must be handled with due care, they must be stored at ambient temprature for best results. Storage as well as any onward shipment is to be made in original packing only. Sprinklers must be visually inspected carefully before installation. Sprinklers visibly damaged, dropped or exposed to temperature in excess of the maximum ambient temperature permitted, should never be installed. Never install any glass blub sprinkler if the bulb is cracked or if there is a loss of liquid from the bulb. Sprinkler must be installed after the piping is in place to prevent mechanical damage. Use Teflon Tape or soft thread sealent on male thread of the Sprinkler for the leak tight Sprinkler joint. Use proper wrench and appropriate torque. Excessive tightening torque may distort the Sprinkler inlet and cause leakage. Sprinkler must never be painted, plated or coated after they leave factory.

The Ayvaz Sprinkler described herein must be installed and maintained in accordance with the latest edition of Ayvaz technical data, the latest standard of National Fire protection Association (NFPA) and UL Listings standard of any other authorities having jurisdiction. The owner is solely responsible for maintaining their fire protection system and device in proper operating condition.

Inspection Testing and Maintenance

Refer to NFPA 25 for inspection testing and maintenance requirement or to the authority having jurisdiction. For details of warranty, refer Ayvaz's current price list, conditions of sale or contact Ayvaz directly.

Dimensions



Upright		
Sprinkler Identification Number (Sin)	AZ003	AZ004
Coverage	Standart Coverage	
Response Time Index (Rti)	Standart Response (5mm Glass Bulb)	Quick Response (3mm Glass Bulb)
Size	1/2" npt	
K Factor	5.6 (80)	
Finish	Brass, Chrome	
Operating Temperatures	57 °C (135°F), 68 °C (155°F), 79 °C (175°F), 93 °C (200°F)	
Listings	UL Listed	
Min. Working Pressure	7 PSI (0,5bar)	
Max. Working Pressure	175PSI (12bar)	
Factory Hydrostatic Test Pressure	500 PSI (35 Bar)	

Material Specification	
Frame	Bronze Forging UNS-C87400 or Casting DZR
Deflector	Brass UNS-28000
Glass Bulb	Glass with Glycerin Solution, JOB® G5 or Day-Impex-937 for AZ003/ AZ005 JOB® F3 0r Day-Impex-941 for AZ004/ AZ006
Set Screw	Brass UNS-28000
Button	Brass UNS-28000
Spring	Stainless Steel
Seal	Teflon® Tape

Pendent / Standart Response – Quick Response



Description

AZ005 / AZ006 Standard / Quick Response Pendent sprinklers are designed for
use in light and ordinary hazards. The temperature response is standard response (5 mm glass bulb) and quick response (3mm glass bulb). The sprinklers come with compact design, glass bulb type, available in several different finishes and temperature ratings. The pendent sprinklers must be installed in pendent position.
Pendent Recessed Sprinklers are installed with adjustable or non-adjustable Escutcheon plates (also termed as Rosette plates). These are intended to be installed with finished ceilings. Escutcheon plate adjustment provides convenience in Pendent Sprinkler installation in case of areas with finished ceilings or walls.

Sprinkler Operation

During a fire conditions, the thermal-sensitive liquid in the glass bulb expands, causing the bulb to shatter, releasing the button and spring seal assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

Care and Handing

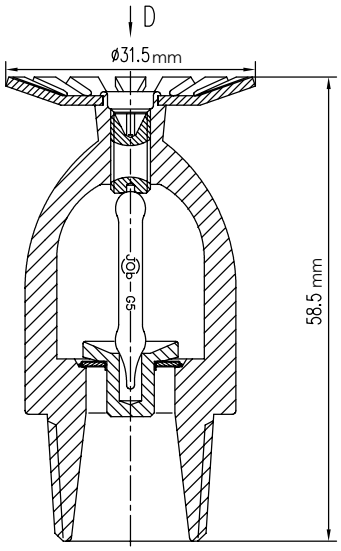
Sprinklers must be handled with due care, they must be stored at ambient temprature for best results. Storage as well as any onward shipment is to be made in original packing only. Sprinklers must be visually inspected carefully before installation. Sprinklers visibly damaged, dropped or exposed to temperature in excess of the maximum ambient temperature permitted, should never be installed. Never install any glass blub sprinkler if the bulb is cracked or if there is a loss of liquid from the bulb. Sprinkler must be installed after the piping is in place to prevent mechanical damage. Use Teflon Tape or soft thread sealent on male thread of the Sprinkler for the leak tight Sprinkler joint.
Use proper wrench and appropriate torque. Excessive tightening torque may distort the Sprinkler inlet and cause leakage. Sprinkler must never be painted, plated or coated after they leave factory.

The AYVAZ Sprinkler described herein must be installed and maintained in accordance with the latest edition of AYVAZ technical data, the latest standard of National Fire protection Association (NFPA) and UL Listings standard of any other authorities having jurisdiction. The owner is solely responsible for maintaining their fire protection system and device in proper operating condition.

Inspection Testing and Maintenance

Refer to NFPA 25 for inspection testing and maintenance requirement or to the authority having jurisdiction. For details of warranty, refer AYVAZ's current price list, conditions of sale or contact AYVAZ directly.

Dimensions



Pendent		
Sprinkler Identification Number (Sin)	AZ005	AZ006
Coverage	Standart Coverage	
Response Time Index (Rti)	Standart Response (5mm Glass Bulb)	Quick Response (3mm Glass Bulb)
Size	1/2" npt	
K Factor	5.6 (80)	
Finish	Brass, Chrome, White Polyster	
Operating Temperatures	57 °C (135°F), 68 °C (155°F), 79 °C (175°F), 93 °C (200°F)	
Listings	UL Listed	
Min. Working Pressure	7 PSI (0,5bar)	
Max. Working Pressure	175PSI (12bar)	
Factory Hydrostatic Test Pressure	500 PSI (35bar)	

Material Specification	
Frame	Bronze Forging UNS-C87400 or Casting DZR
Deflector	Brass UNS-28000
Glass Bulb	Glass with Glycerin Solution
	JOB® G5 or Day-Impex-937 for AZ003/ AZ005
	JOB® F3 0r Day-Impex-941 for AZ004/ AZ006
Set Screw	Brass UNS-28000
Button	Brass UNS-28000
Spring	Stainless Steel
Seal	Teflon® Tape
Standard Escutcheon (Model A-1)	Cold Rolled Steel

Sidewall / Standart Response – Quick Response



Description

AZ001 / AZ002 Standard / Quick Response Sidewall sprinklers are designed for use in light and ordinary hazards. The temperature response is standard response (5 mm glass bulb) and quick response (3mm glass bulb). The sprinklers come with compact design, glass bulb type, available in several different finishes and temperature ratings. The Sidewall sprinklers must be installed in Sidewall position.

Sidewall Recessed Sprinklers are installed with adjustable or non-adjustable Escutcheon plates (also termed as Rosette plates). These are intended to be installed with finished ceilings. Escutcheon plate adjustment provides convenience in Sidewall Sprinkler installation in case of areas with finished ceilings or walls.

Sprinkler Operation

During a fire conditions, the thermal-sensitive liquid in the glass bulb expands, causing the bulb to shatter, releasing the button and spring seal assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

Care and Handing

Sprinklers must be handled with due care, they must be stored at ambient temprature for best results. Storage as well as any onward shipment is to be made in original packing only. Sprinklers must be visually inspected carefully before installation. Sprinklers visibly damaged, dropped or exposed to temperature in excess of the maximum ambient temperature permitted, should never be installed. Never install any glass blub sprinkler if the bulb is cracked or if there is a loss of liquid from the bulb. Sprinkler must be installed after the piping is in place to prevent mechanical damage. Use Teflon Tape or soft thread sealent on male thread of the Sprinkler for the leak tight Sprinkler joint.

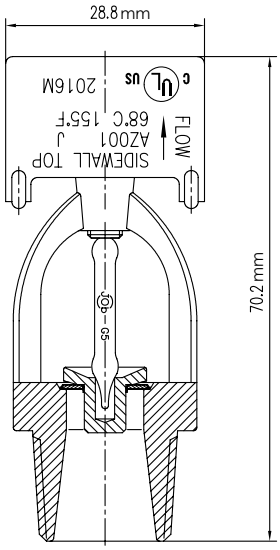
Use proper wrench and appropriate torque. Excessive tightening torque may distort the Sprinkler inlet and cause leakage. Sprinkler must never be painted, plated or coated after they leave factory.

The AYVAZ Sprinkler described herein must be installed and maintained in accordance with the latest edition of AYVAZ technical data, the latest standard of National Fire protection Association (NFPA) and UL Listings standard of any other authorities having jurisdiction. The owner is solely responsible for maintaining their fire protection system and device in proper operating condition.

Inspection Testing and Maintenance

Refer to NFPA 25 for inspection testing and maintenance requirement or to the authority having jurisdiction. For details of warranty, refer AYVAZ's current price list, conditions of sale or contact AYVAZ directly.

Dimensions



Sidewall		
Sprinkler Identification Number (Sin)	AZ001	AZ002
Coverage	Standart Coverage	
Response Time Index (Rti)	Standart Response (5mm Glass Bulb)	Quick Response (3mm Glass Bulb)
Size	1/2" npt	
K Factor	5.6 (80)	
Finish	Brass, Chrome, White Polyster	
Operating Temperatures	57 °C (135°F), 68 °C (155°F), 79 °C (175°F), 93 °C (200°F)	
Listings	UL Listed	
Min. Working Pressure	7 PSI (0,5bar)	
Max. Working Pressure	175PSI (12bar)	
Factory Hydrostatic Test Pressure	500 PSI (35 Bar)	

Material Specification	
Frame	Bronze Forging UNS-C87400 or Casting DZR
Deflector	Brass UNS-28000
Glass Bulb	Glass with Glycerin Solution, JOB® G5 or Day-Impex-937 for AZ003/ AZ005 JOB® F3 0r Day-Impex-941 for AZ004/ AZ006
Set Screw	Brass UNS-28000
Button	Brass UNS-28000
Spring	Stainless Steel
Seal	Teflon® Tape
Standard Escutcheon (Model A-1)	Cold Rolled Steel

Concealed Pendent / Standart Response – Quick Response



Description

AZ007 / AZ008 Standard / Quick Response Pendent Concealed Sprinklers are thermo-sensitive glass bulb sprinklers having decorative flat cover plate designed to conceal the sprinkler for smooth ceiling. The cover plates are available in several decorative finishes to match architectural requirements. The unique design allows installation and testing of the sprinkler prior to installation of the cover plate with cup. Sprinkler housing is threaded to fix cover plate with cup assembly to provide 12.7mm (1/2") vertical adjustment. The cover plate and cup design allows installation of the sprinkler and pressure testing of the fire fighting system prior to installation of a suspended ceiling or final painting of the ceiling. The sprinkler cover assembly can be removed and reinstalled for removal of ceiling panels for access to building service equipments. AYVAZ Pendent Concealed Sprinklers are Standard Response (5mm glass bulb) or Quick response (3mm glass bulb) with standard coverage

Sprinkler Operation

The Sprinkler operating device is state of the art heat responsive frangible glass bulb supplied by a world leader in this innovative technology. The glass bulb contains fluid which expands when exposed to heat. When rated temperature is reached, the bulb shatters and water flows through the sprinkler and strikes deflector, forming an uniform water spray pattern to control or extinguish fire.

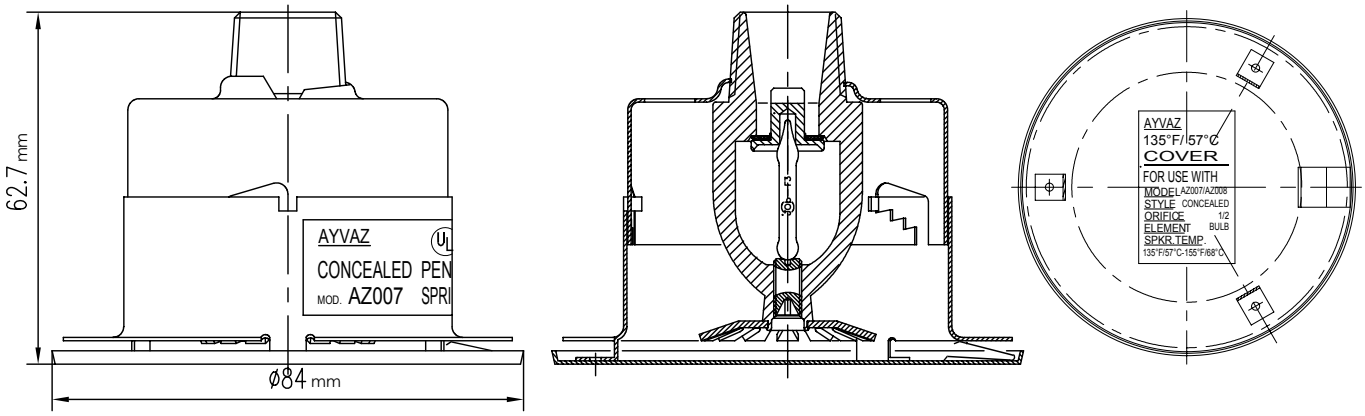
Care and Handing

Sprinklers must be handled with due care, they must be stored at ambient temprature for best results. Storage as well as any onward shipment is to be made in original packing only. Sprinklers must be visually inspected carefully before installation. Sprinklers visibly damaged, dropped or exposed to temperature in excess of the maximum ambient temperature permitted should never be installed. Never install any glass bulbs sprinkler if the bulb is cracked or if there is a loss of liquid from the Bulb. Sprinkles must be installed after the piping is in place, to prevent mechanical damage. Do not attempt to make-up for insufficient adjustment in the Escutcheon plate by over tightening the sprinkler. Use Teflon tape or soft thread sealant on male thread of the sprinkler for leak tight sprinkler joint. Use proper wrench. Use appropriate torque. Excessive tightening torque may distort the sprinkler inlet and cause leakage. Sprinklers must never be painted, plated or coated after they leave factory.
The AYVAZ Sprinkler described herein must be installed and maintained in accordance with the latest edition of AYVAZ technical data, the latest standard of National Fire protection Association (NFPA) and UL Listings standard of any other authorities having jurisdiction. The owner is solely responsible for maintaining their fire protection system and device in proper operating condition.

Inspection Testing and Maintenance

Refer to NFPA 25 for inspection testing and maintenance requirement or to the authority having jurisdiction. For details of warranty, refer AYVAZ's current price list, conditions of sale or contact AYVAZ directly.

Dimensions

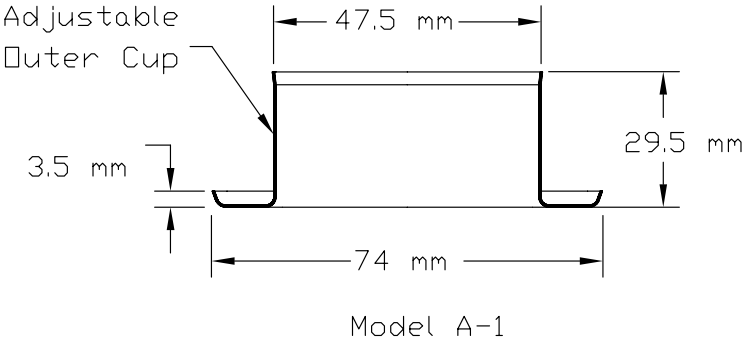


Concealed Pendent		
Sprinkler Identification Number (Sin)	AZ007	AZ008
Coverage	Standart Coverage	
Response Time Index (Rti)	Standart Response (5mm Glass Bulb)	Quick Response (3mm Glass Bulb)
Size	1/2" npt	
K Factor	5.6 (80)	
Finish	Brass, Chrome, White Polyster	
Operating Temperatures	57 °C (135°F), 68 °C (155°F), 79 °C (175°F), 93 °C (200°F)	
Cover Plate Temperatures	57 °C (135°F), 68 °C (155°F)	
Listings	UL Listed	
Min. Working Pressure	7 PSI (0,5bar)	
Max. Working Pressure	175PSI (12bar)	
Factory Hydrostatic Test Pressure	500 PSI (35 Bar)	

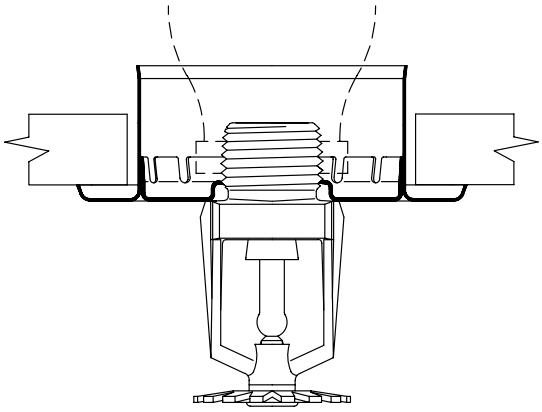
Material Specification	
Frame	Bronze Forging UNS-C87400 or Casting DZR
Deflector	Brass UNS-28000
Glass Bulb	Glass with Glycerin Solution,
	JOB® G5 or Day-Impex-937 for AZ003/ AZ005
	JOB® F3 0r Day-Impex-941 for AZ004/ AZ006
Set Screw	Brass UNS-28000
Button	Brass UNS-28000
Spring	Stainless Steel
Seal	Teflon® Tape
Standard Escutcheon	Cold Rolled Steel
(Model D-1)	

Two Piece Sprinkler Escutcheon / Model A-1





Model A-1



Description

Recessed two piece push fit rosette suitable for most 15mm pendent sprinkler heads. Two piece rosettes must be installed in accordance with the relevant guidelines issued by the Authority Having Jurisdiction. Maximum adjustment depth - 20mm

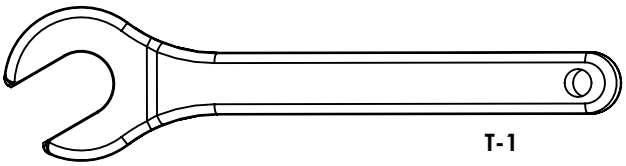
Material Specification

Item Material
Inner Pressed Spring Steel
Outer Pressed Steel
Weight 35g

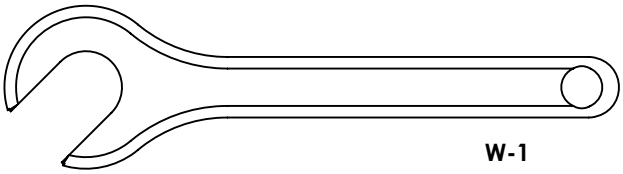
Standard Finishes

Polished Chrome
White (RAL9010)

Sprinkler Wrenches / Model T-1 / W-1



T-1



W-1

Sprinkler Model	Use Wrench
AZ001	T-1
AZ002	
AZ003	
AZ004	
AZ005	
AZ006	
AZ007	W-1
AZ008	

Sprinkler Cabinets / Model C-6 / C-12

NFPA 13 requires a representative number of each type and temperature rating of sprinkler head to be kept in a cabinet on the premises. NFPA 13 also requires a special sprinkler wrench to be provided in the cabinet. This allows for immediate removal and replacement of sprinklers that have operated or that have become damaged. Stock of spare sprinklers should include sprinklers of all the types and temperature ratings as are installed in the sprinkler system, in the following quantities:



Number Of Sprinklers In The System	Minimum Number Of Spare Sprinklers Required
Under 300	6
300-1,000	12
Over 1,000	24

Cabinet Capacity	Cabinet Part Name
6 sprinklers	C-6
12 sprinklers	C-12

Indoor Fire Hose Cabinets





1" Semi Rigid Fire Hose Double Door Cabinet						
Model	Type	Valve Size	Hose Length (m)	Dimension (mm)	Door Type	
AFC-R1020DDS	Recessed	1"	20	1000x750x200	Double	Steel
AFC-R1025DDS			25			
AFC-R1030DDS			30			
AFC-R2020DDS		2"	20			
AFC-R2025DDS			25			
AFC-R2030DDS			30			
AFC-R1020DDG	Recessed	1"	20	1000x750x200	Double	Glass
AFC-R1025DDG			25			
AFC-R1030DDG			30			
AFC-R2020DDG		2"	20			
AFC-R2025DDG			25			
AFC-R2030DDG			30			
AFC-S1020DDS	Surface	1"	20	1020x770x200	Double	Steel
AFC-S1025DDS			25			
AFC-S1030DDS			30			
AFC-S2020DDS		2"	20			
AFC-S2025DDS			25			
AFC-S2030DDS			30			
AFC-S1020DDG	Surface	1"	20	1020x770x200	Double	Glass
AFC-S1025DDG			25			
AFC-S1030DDG			30			
AFC-S2020DDG		2"	20			
AFC-S2025DDG			25			
AFC-S2030DDG			30			

1" Semi Rigid Fire Hose Single Door Cabinet						
Model	Type	Valve Size	Hose Length (m)	Dimension (mm)	Door Type	
AFC-R1020D0S	Recessed	1"	20	750x1000x200	Single	Steel
AFC-R1025D0S			25			
AFC-R1030D0S			30			
AFC-R2020D0S		2"	20			
AFC-R2025D0S			25			
AFC-R2030D0S			30			
AFC-R1020D0G	Recessed	1"	20	750x1000x200	Single	Glass
AFC-R1025D0G			25			
AFC-R1030D0G			30			
AFC-R2020D0G		2"	20			
AFC-R2025D0G			25			
AFC-R2030D0G			30			
AFC-S1020D0S	Surface	1"	20	770x1020x200	Single	Steel
AFC-S1025D0S			25			
AFC-S1030D0S			30			
AFC-S2020D0S		2"	20			
AFC-S2025D0S			25			
AFC-S2030D0S			30			
AFC-S1020D0G	Surface	1"	20	770x1020x200	Single	Glass
AFC-S1025D0G			25			
AFC-S1030D0G			30			
AFC-S2020D0G		2"	20			
AFC-S2025D0G			25			
AFC-S2030D0G			30			

Specifications

Inside Equipments

•Reel, delivering water at its center, made of material resist of corrosion, EN 671-1 certified.
• Fire hose, round, semi-hard, EN 694 certified.
• 1" line hose between the valve and the reel center.
• 2" fire valve, brass.
• 2" storz coupling (aluminium), threaded inside.
• 2" x 1" storz type reducer (aluminium).
• Reel arm move the reel 270°.
• Nozzle with jet / spray / off modes, comply with UL&FM and EN 671-1.
• Reel hub made of A1 grade DKP sheet metal.
• Real arm painted Black-RAL 9005, reel hub electrostatic powder painted Red-RAL 3002.
• Products are packaged after they have been tested %100.

Demountable Door

• Door made of A1 grade DKP sheet metal or glass, demountable.
• Tempered glass for glass door, 4mm and smoke color.
• The recessed type key is used on the door surface which is not creating raise on the door surface.
• Doors are available as an opening to the right or left direction by rotating 180°.
• FIRE and HOSE warning writing on the door surface which have undeletable, untearable and undeform able properties.
• Painted with electro static powder paint which have 70 micron thickness.
• Standard colors are Red-RAL 3002 and White-RAL 9016. Optional colors and designs are available. (in RAL codes)

Cabinet

• Made of A1 grade DKP sheet metal, recessed or surface.
• Valve fittings on side, top and back of the case.
• Housing for one 6kg fire extinguisher positioned horizontal or vertical also our case can single or double door type.
• Cabinet have installation, ventilation and discharge outlets.
• Console to bear the real, reinforced.
• Cabinet designed for reels used at right and left sides.
• Painted with electro static powder paint which have 70 micron thickness.
• Standard colors are Red-RAL 3002 and White-RAL 9016. Optional colors and designs are available. (in RAL codes)

Outdoor Fire Hydrant Cabinets



Products	Dimensions (mm)
2" – 20m Flat Fire Hose, Single Door, Double Basket Fire Hydrant Cabinet	760x1460x230
2" – 30m Flat Fire Hose, Single Door, Double Basket Fire Hydrant Cabinet	760x1460x230
2 ½" – 20m Flat Fire Hose, Single Door, Double Basket Fire Hydrant Cabinet	760x1460x230
2 ½" – 30m Flat Fire Hose, Single Door, Double Basket Fire Hydrant Cabinet	760x1460x230

Products	Dimensions (mm)
2" – 20m Flat Fire Hose, Single Door, Single Basket Fire Hydrant Cabinet	760x960x230
2" – 30m Flat Fire Hose, Single Door, Single Basket Fire Hydrant Cabinet	760x960x230
2 ½" – 20m Flat Fire Hose, Single Door, Single Basket Fire Hydrant Cabinet	760x960x230
2 ½" – 30m Flat Fire Hose, Single Door, Single Basket Fire Hydrant Cabinet	760x960x230

Specifications

Inside Equipments

- 2" or 2 1/2" diameter, 20m or 30m flat fire hose.
- Single or double flat fire hose basket.
- 2" or 2 1/2" Aluminium Branch pipe nozzle with jet / spray / off modes.
- There are two aluminium coupling on the each edge of hose as mounted with clamp.
- Special design hose reel made of A1 grade DKP one piece sheet metal.
- Special design hose basket is painted with 70 micron thickness electro static powder paint.
- Coupling key and reduction adepter are optional equipments.

Demountable Door

- Door made of A1 grade DKP sheet metal.
- Handle, made of stainless Cr-Ni material, recessed.
- Hinge system, made of stainless Cr-Ni material, hidden.
- Doors are available as an opening to the right or left direction by rotating 180°.
- Standard colors are Red-RAL 3002
- Optional colors and designs are available.

Cabinet

- Cabinet made of A1 grade DKP sheet metal.
- Console to bear the real, reinforced
- Cabinet have installation, ventilation and discharge outlets.
- Products are painted with 70 micron thickness electro static powder paint.
- Standard colors are Red-RAL 3002
- Optional colors and designs are available.

Base

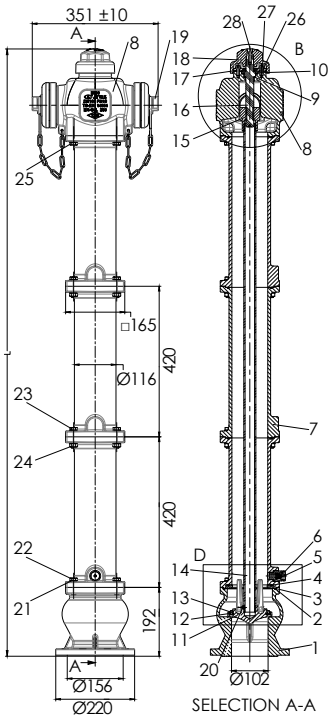
- Base made of A1 grade DKP sheet metal.
- Standard colors are Black-RAL 9005.
- Optional colors and designs are available.
- Installation bolts and nuts are not supplying by us.

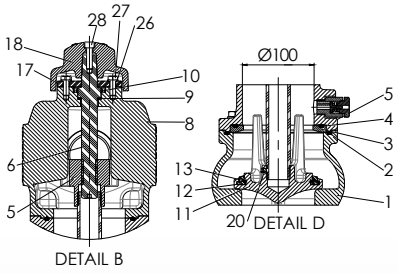
Roof

- Base made of A1 grade DKP sheet metal.
- The roof is designed to be curved forward and backward.
- Products are painted with 70 micron thickness electro static powder paint.

Fire Hydrant / Model AFH-1000







AFH-100 model fire hydrants are a valve group that provides the firefighters with the water at the flow rate and pressure required to intervene in the fire.
AFH-100 model fire hydrants have automatic drip system against to freezing.
Automatic dripping feature provides AFH-100 model hydrants to be in the “dry barrel type” hydrant category.

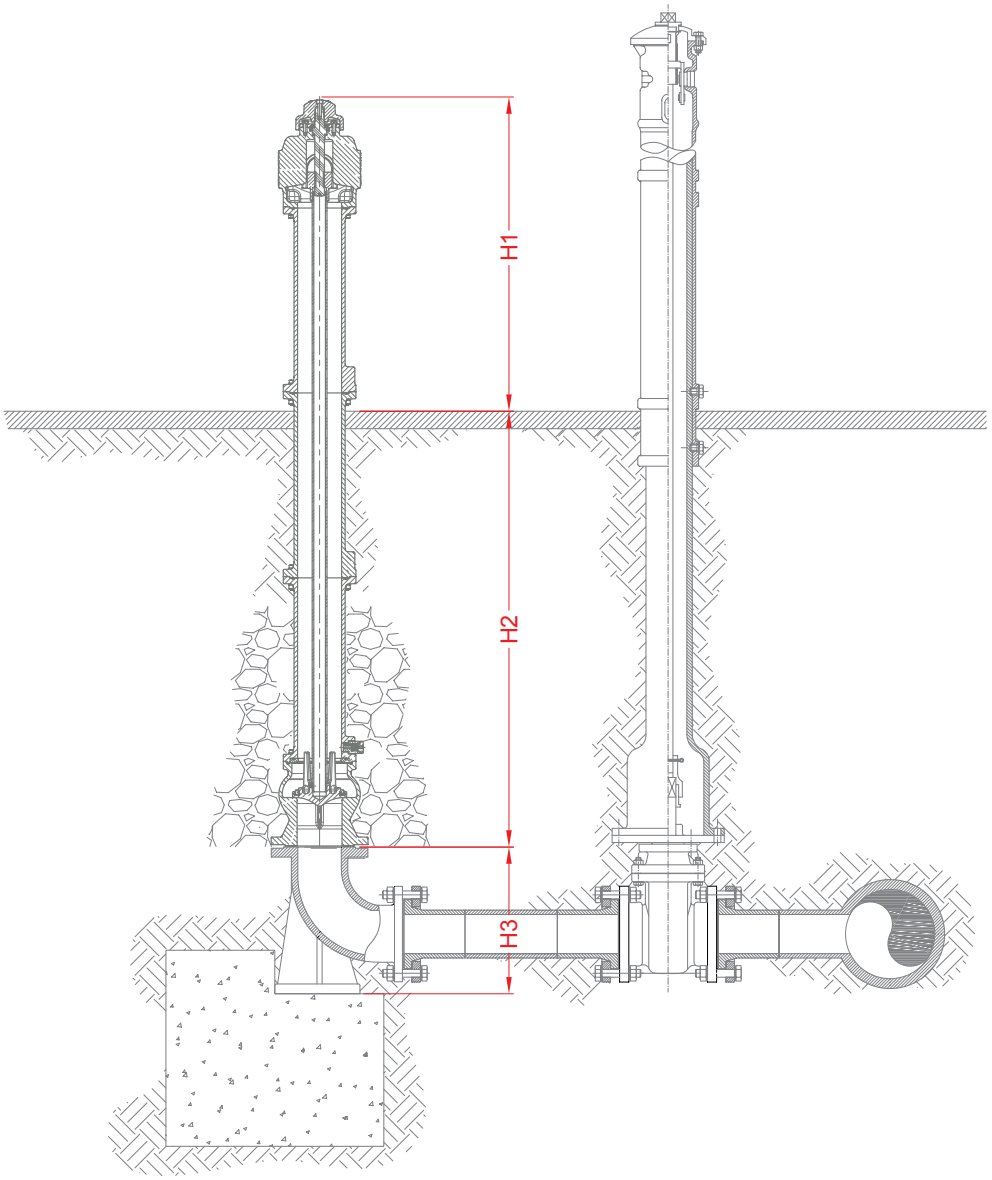
Specifications

Body : Cast Iron GG-25
Elbow : Cast Iron GG-25
Coating : Epoxy powder coating
Temperature Range : 0 °C - 80 °C (32° F- 176° F)
Inlet Size : 4” (DN100)
Outlet Size : 2 x 21/2” (2 pcs x DN65)
Design Standard : EN 14384
Flange Standard : EN1092-2 (ISO 7005-2), PN16
Max Working Pressure : 232 psi (1600kPa)

Model	Length	Part No
AFH-100-130	130 cm	703702000145
AFH-100-170	170 cm	703702000175
AFH-100-215	215 cm	703702000215
AFH-100-250	250 cm	703702000245

No.	Part	Material	Size
1	Lower Body	GG 25	-
2	O-Ring	NBR	Ø4x139
3	Bushing	Ms58	-
4	O-Ring	NBR	Ø4x116
5	Intermediate Section-1	GG 25	-
6	Anti Frost	Ms58	-
7	Intermediate Section-2	GG 25	-
8	Upper Body	GG 25	-
9	Bearing Material	Delrin	-
10	Seal	-	Ø32xØ45x7
11	Disc	GGG 40	-
12	O-Ring	EPDM	-
13	Internal cCrclip	AISI 301	-
14	Transmission Pipe	St 37-2	-
15	Bearing Strip	GGG 40	-
16	Camshaft	AISI 420	-
17	Upper Head	St 37-2	-
18	Opening Head	GG 25	-
19	Coupling with Chained	Aluminium	DN65
20	Set Screw	-	-
21	Spring Washer	-	DIN 128 - A12
22	Bolt	8,8	M12x40
23	Bolt	8,8	M12x50
24	Nut	8,8	M12
25	Bolt	8,8	M12x35
26	Spring Washer	-	DIN 128 - A8
27	Bolt	8,8	M8x22
28	Xex Socket Head Bolt	8,8	M8x30

Dimensions



Dimensions					
Water Inlet	Water Outlet	Length (mm)	H1 (mm)	H2 (mm)	H3 (mm)
DN100	DN65 x DN65	1300	900	400	270
		1700		800	
		2150		1250	
		2500		1600	

AYVAZ

NOTES

FIRE FIGHTING PRODUCTS

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