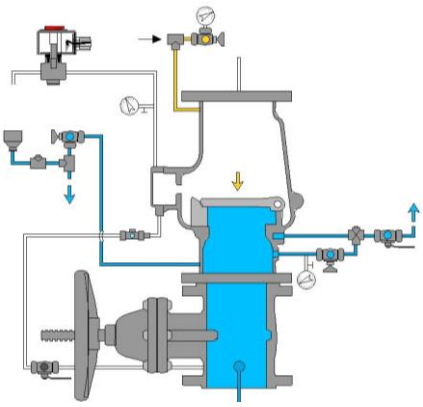
# SINGLE INTERLOCK PREACTION EQUIPMENT

MODEL AGCX
Electric Actuation
(Ductile Iron)






## PRODUCT DESCRIPTION

The Single Interlock Preaction System Model AGCX from AG Fire Sprinkler is designed for water sensitive areas that require protection from inadvertent water flow into the sprinkler system piping. This Deluge Valve is a hydraulically operated, latching clapper-type valve used to control the water supply to a preaction system. Deluge systems use open sprinklers or nozzles as discharge outlets in the fire area, while preaction systems use closed sprinklers or nozzles. Both systems use separate detection devices to control the operation of the Deluge Valve.

The AGCX Deluge Valve can be reset externally, without cover removal. This is achieved by pushing in and turning the external reset knob at the rear of the Deluge Valve.

## TECHNICAL DATA

| | |
|---|---|
| **Model** | AGCX |
| **Material** | Ductile Iron |
| **Nominal size** | Grooved: 2" (50 mm), 2 ½" (65 mm) & 3" (80 mm)<br>Flanged: 4" (100 mm), 6" (150 mm) & 8" (200 mm) |
| **Rated working pressure** | 250 psi (17,2 bar) for 2", 2½", 3", 8" valve sizes<br>300 psi (20,7 bar) for 4" & 6" valve sizes |
| **Factory tested to a hydrostatic pressure** | 500 psi (34,5 bar) for 250 psi (17,2 bar) pressure service<br>600 psi (41,4 bar) for 300 psi (20,7 bar) pressure service |
| **Installation position** | Vertical mounting |
| **End and Trim connection** | ANSI/AWWA C606 grooved inlet and outlet (2", 2 ½" & 3")<br>Threaded openings Per ANSI B 2.1<br>Flange connection: ANSI B 16.5 Class 150 (4", 6" & 8")<br>ISO 7005-2 PN16 (only for Ductile Iron Model) |
| **Cv factor** | 2" (50 mm): 101<br>2 ½" (65 mm): 236<br>3" (80 mm): 254<br>4" (100 mm): 469<br>6" (150 mm): 886<br>8" (200 mm): 1516 |
| **Finish** | Red RAL 3000 |



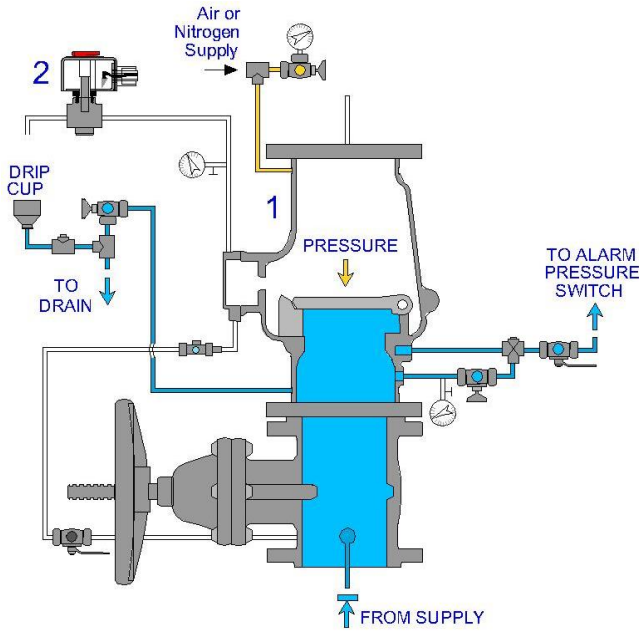
*C/Alfoz de Bricia nº4 | P.I. Villalonquéjar | 09001 Burgos (Spain) | Tlfno: +34 947 28 11 08*

## OPERATION: SINGLE INTERLOCK PREACTION EQUIPMENT AGCX ELECTRIC ACTUATION

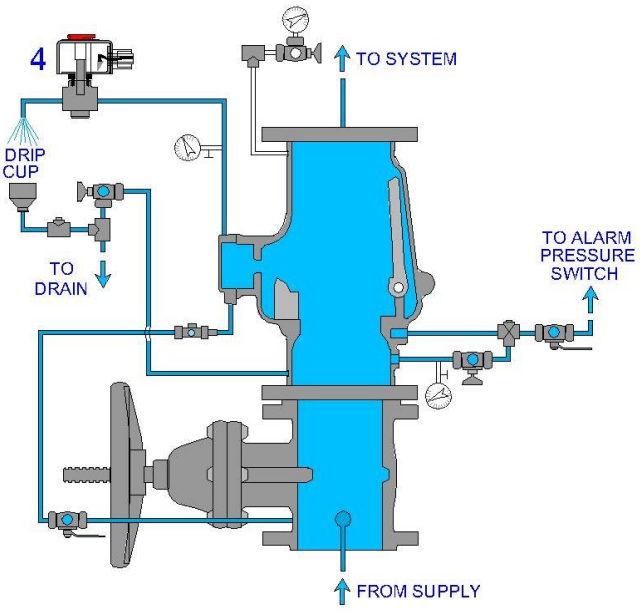
The Model AGCX from AG Fire Sprinkler is suitable for systems that include electric fire detention and a piping system with a wide variety of open nozzles.

In SET position, the closed solenoid valve **(2)**, retains sufficient water pressure in the pushrod chamber of the Model AGCX Deluge Valve **(1)** to maintain it closed. Energizing the solenoid valve **(2)** relieves the water pressure, thus opening the Deluge Valve **(1)** and allowing water to flow into the sprinkler system.

To fully operate a cross-zoned single interlock system, two electrical detectors must activate and a sprinkler head must open. Subsequent activation of a second, nearby or adjacent, detector will cause the panel to energize the solenoid valve **(2)** open and release water into the sprinkler system piping. Water flowing into the sprinkler system piping will simultaneously produce water pressure that causes the transfer of contacts in the pressure switch mounted in the Single Interlock Preaction System's riser assembly. This pressure switch can electrically initiate the shut down or startup of equipment, such as computers or other second alarm devices.




VALVE CLOSED (SET POSITION)




VALVE OPENED (OPERATION CONDITION)

## DIMENSIONS

| Valve Size | End Connection | Dimensions End to End | Weight | Equivalent Length |
|---|---|---|---|---|
| 2" (50mm) | Groove/ Groove | 12 ½" (318 mm) | 34 lbs (15 kg) | 4,4 ft (1,3 m) / 3,1 ft (1,0 m) |
| 2½" (65mm) | Groove/ Groove | 12 ½" (318 mm) | 34 lbs (15 kg) | 6,0 ft (1,8 m) / 4,3 ft (1,3 m) |
| 3" (80mm) | Groove/ Groove | 12 ½" (318 mm) | 34 lbs (15 kg) | 12,6 ft (3,8 m) / 9,0 ft (2,7 m) |
| 4" (100mm) | Groove/ Groove | 14" (356 mm) | 64 lbs (29 kg) | 14 ft (4,3 m) / 10 ft (3,0 m) |
| | Flange/ Groove | 16" (406 mm) | 79 lbs (36 kg) | |
| | Flange/ Flange | 16" (406 mm) | 92 lbs (42 kg) | |
| 6" (150mm) | Groove/ Groove | 16" (406 mm) | 95 lbs (43 kg) | 29,4 ft (9,0 m) / 20,9 ft (6,4 m) |
| | Flange/ Groove | 19" (483 mm) | 122 lbs (56 kg) | |
| | Flange/ Flange | 19" (483 mm) | 138 lbs (69 kg) | |
| 8" (200mm) | Groove/ Groove | 19 3/8" (492 mm) | 148 lbs (67 kg) | 53,5 ft (16,3 m)<br>38,1 ft (11,6 m) |
| | Flange/ Flange | 21 1/4" (540 mm) | 197 lbs (90 kg) | |
| | Flange/ Flange | 21 1/4" (540 mm) | 259lbs (117,5kg) | |



*C/Alfoz de Bricia nº4 | P.I. Villalonquéjar | 09001 Burgos (Spain) | Tlfno: +34 947 28 11 08*

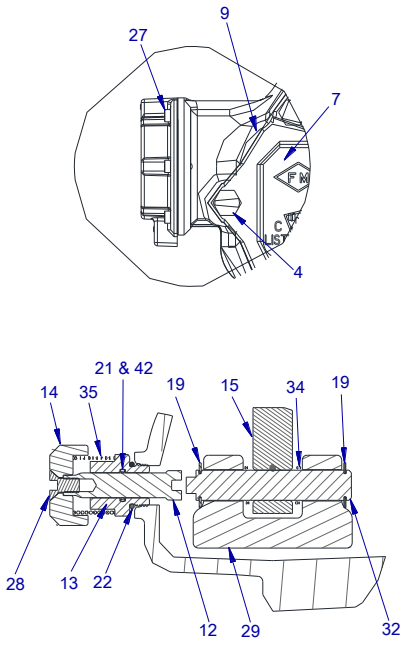
Groove dimensions:

| Nominal Pipe Size | Outlet Diameter | Groove Diameter | Groove Width | Outlet Face to Groove |
|---|---|---|---|---|
| 2” (50 mm) | 2,375” (60 mm) | 2,250” (57 mm) | 11/32” (9 mm) | 5/8” (16 mm) |
| 2 ½” (65 mm) | 2,875” (73 mm) | 2,720” (69 mm) | 11/32” (9 mm) | 5/8” (16 mm) |
| 3” (80 mm) | 3,500” (89 mm) | 3,344” (85 mm) | 11/32” (9 mm) | 5/8” (16 mm) |
| 4” (100 mm) | 4,5” (114 mm) | 4,334” (110 mm) | 3/8” (9,5 mm) | 5/8” (16 mm) |
| 6” (150 mm) | 6,625” (168 mm) | 6,455” (164 mm) | 3/8” (9,5 mm) | 5/8” (16 mm) |
| 8” (200 mm) | 8,625” (219 mm) | 8,441” (214 mm) | 7/16” (11 mm) | 3/4” (19 mm) |

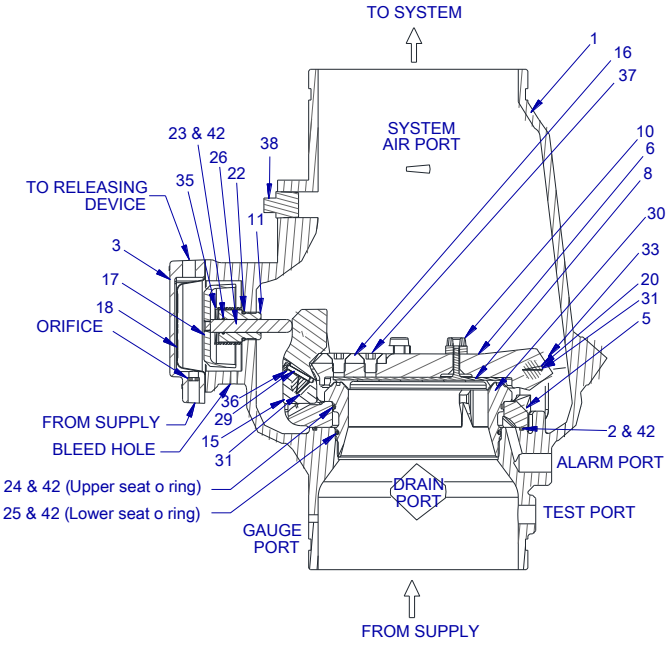
Flange Dimensions:

| Flange Type | Nominal Pipe Size | Bolt Circle Diameter | Bolt Hole Diameter | Flange Outside Diameter | Flange Thickness | Nº Bolts |
|---|---|---|---|---|---|---|
| AMSE B16.5 Class 150 | 4” (100mm) | 7 ½” (191mm) | ¾” (19mm) | 9” (229mm) | 15/16” (24mm) | 8 |
| ISO 7005-2 PN16 | 4” (100mm) | 73/32” (180mm) | ¾” (19mm) | 9” (229mm) | 15/16” (24mm) | 8 |
| AMSE B16.5 Class 150 | 6” (150mm) | 9½” (241mm) | 7/8” (22mm) | 11” (279mm) | 15/16” (24mm) | 8 |
| ISO 7005-2 PN16 | 6” (150mm) | 9 7/16” (240mm) | 29/32” (23mm) | 11” (279mm) | 15/16” (24mm) | 8 |
| AMSE B16.5 Class 150 | 8” (200mm) | 11 ¾” (298mm) | 7/8” (22mm) | 13½” (343mm) | 1” (25.4mm) | 8 |
| ISO 7005-2 PN16 | 8” (200mm) | 11 5/8” (295mm) | 29/32” (23mm) | 13½” (343mm) | 1” (25.4mm) | 12 |

## SCREW-IN SEAT CONFIGURATION DELUGE VALVE AGCX PART LIST




EXTERNAL RESET ASSEMBLY




AGCX DELUGE VALVE

| Nº | Part No. 2" | 2½" | 3" | 4" | 6" | 8" | Part Description | QTY | Material |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 91006011 | 91006012 | 91006013 | 91006005 | 91006007 | 91006028 | Valve Body Groove/Groove | 1 | Ductile Iron 65-45-12 |
| | N/A | N/A | N/A | 91006045 | 91006067 | N/A | Valve Body Flange/Groove | | |
| | N/A | N/A | N/A | 91006035 | 91006037 | 91006039 | Valve Body Flange/Flange | | |
| 2 | N/A | N/A | N/A | N/A | N/A | 91006414 | O-ring (Mounting Ring) | 1 | Buna-N |
| 3 | 71040416 | | | | | | Pushrod Cover Assembly | 1 | Ductile Iron65-45-12 & Brass C36000 |
| 4 | 91106123 | | | N/A | N/A | N/A | Hex Bolt ½"-13 x 1¼" | 6 | Zinc Plated Steel |
| | N/A | | | 95606107 | N/A | N/A | Hex Bolt ½"-13 x 1½" | 6 | Zinc Plated Steel |
| | N/A | | | N/A | 91106006 | N/A | Hex Bolt 5/8"-11 x 1¾" | 6 | Zinc Plated Steel |
| | N/A | | | N/A | N/A | 95606110 | Hex Bolt 5/8"-11 x 2" | 8 | Zinc Plated Steel |
| 5 | 91306013 | | | 91306014 | 91306016 | 91306018 | Mounting Ring | 1 | Stainless Steel CF8 or CF8M |



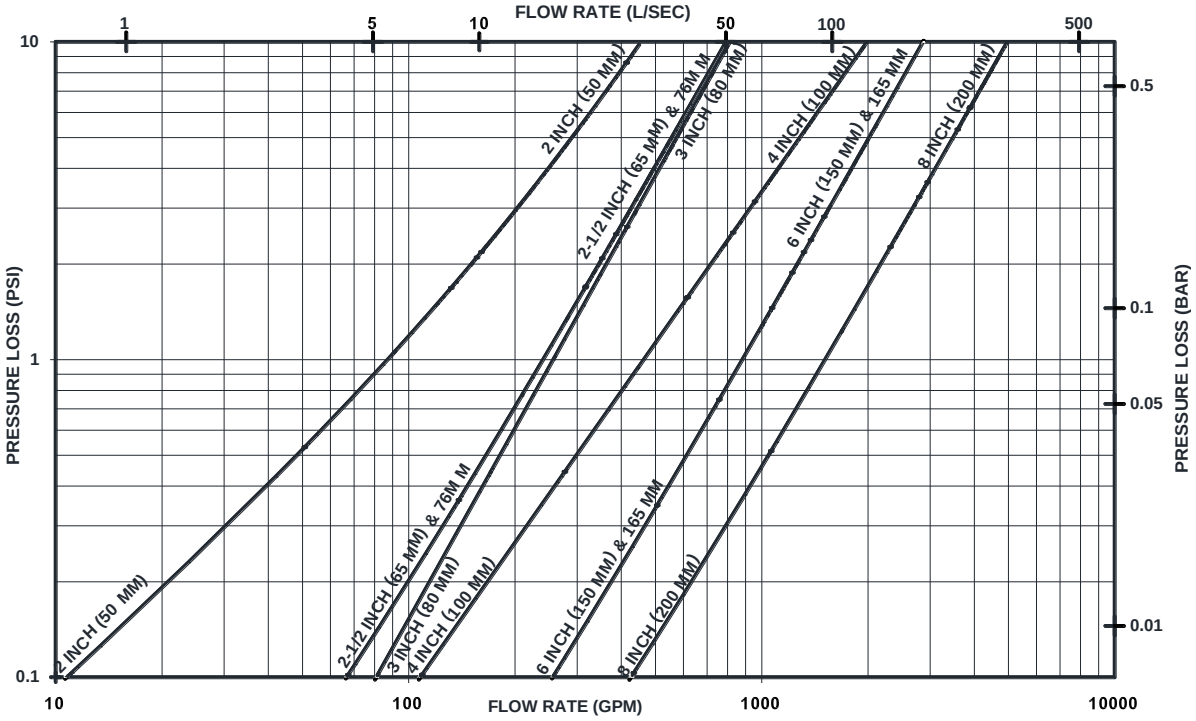
*C/Alfoz de Bricia nº4 | P.I. Villalonquéjar | 09001 Burgos (Spain) | Tlfno: +34 947 28 11 08*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | 91916013 | 91916014 | 91916016 | 91916008 | Clapper | 1 | Stainless Steel CF8 or CF8M |
| 7 | 92116063 | 92116064 | 92116065<br>92116066 | 92116068 | Access Cover | 1 | Ductile Iron 65-45-12 |
| 8 | 93416003 | 93416014 | 93416016 | 93416008 | Seal Assembly | 1 | Stainless Steel 304 & EPDM |
| 9 | OR06003 | 93706004 | 93706006 | 93706008 | Access Cover Gasket | 1 | Buna-N or Neoprene |
| 10 | 93722000 | 93722000 | N/A | N/A | Bumpstop Assembly | 1 | Stainless Steel<br>UNS S31600<br>& EPDM |
| | N/A | N/A | 93722000 | N/A | | 2 | |
| | N/A | N/A | N/A | 93722000 | | 3 | |
| 11 | 93916006 | | | | Pushrod Guide | 1 | Acetal |
| 12 | 93916066 | | | | Reset Shaft | 1 | Brass UNS C36000 |
| 13 | 94106066 | | | | Reset Housing | 1 | Brass UNS C36000 |
| 14 | 94356006 | | | | Reset Knob | 1 | Aluminum 6061 |
| 15 | 94506003 | 94506004 | 94506016 | 94706008 | Lever | 1 | Stainless Steel UNS S17400 |
| 16 | 95006414 | 95006412 | 95006410 | 95006410 | Striker | 1 | Aluminum Bronze C95400 |
| 17 | 95106006 | | | | Piston | 1 | Stainless Steel CF8M |
| 18 | 95276006 | | | | Diaphragm | 1 | EPDM & Polyester |
| 19 | 95306267 | N/A | N/A | N/A | Retaining Ring, 3/8" Shaft, Lever Pin | 2 | Stainless Steel<br>15-7 or 17-7 |
| | N/A | 95306267 | N/A | N/A | Retaining Ring, ½" Shaft, Lever Pin | | |
| | N/A | N/A | 95306269 | N/A | Retaining Ring, 5/8" Shaft, Lever Pin | | |
| | N/A | N/A | N/A | 95316408 | Retaining Ring, ¾" Shaft, Lever Pin | | |
| 20 | 95306267 | N/A | N/A | N/A | Retaining Ring, 3/8" Shaft, Hinge Pin | 2 | Stainless Steel<br>15-7 or 17-7 |
| | N/A | 95306267 | 95306267 | N/A | Retaining Ring, ½" Shaft, Hinge Pin | | |
| | N/A | N/A | N/A | 95316408 | Retaining Ring, ¾" Shaft, Hinge Pin | | |
| 21 | 95406007 | | | | O-Ring, Reset Housing ID | 1 | Buna-N |
| 22 | 95406024 | | | | O-Ring, Reset Housing & Pushrod Guide OD | 2 | Buna-N |
| 23 | 95406407 | | | | O-Ring, Pushrod Guide ID | 1 | Buna-N |
| 24 | 95406410 | 95406409 | 95436126 | 95406413 | O-Ring, Upper Seat | 1 | Buna-N |
| 25 | 95406411 | 95406420 | 95446226 | 95406412 | O-Ring, Lower Seat | 1 | Buna-N |
| 26 | OR 06006 | | | | Pushrod | 1 | Stainless Steel UNS S30300 |
| 27 | OR 06114 | | | | Socket Head Screw, ¼"-20 x 5/8" | 6 | Steel |
| 28 | OR 06127 | | | | Flat Head Socket Cap Screw 3/8"-16 x ¾" | 1 | Steel |
| 29 | 95606133 | N/A | N/A | N/A | Socket Head Screw #6-32 x ½" | 1 | Stainless Steel 18-8 |
| | N/A | 95606130 | 95606130 | 95606130 | Socket Head Screw #10-32 x 1" | | Stainless Steel UNS S31600 |
| 30 | 96016003 | 96016014 | 96016016 | 96016008 | Seat | 1 | Stainless Steel CF8M |
| 31 | 96206003 | N/A | N/A | N/A | Hinge Pin | 1 | Stainless Steel UNS S30400 |
| | N/A | 96216086 | 96216068 | 96206008 | | | Stainless Steel UNS S21800 |
| 32 | 96216003 | N/A | N/A | N/A | Lever Pin | 1 | Stainless Steel UNS S17400 |
| | N/A | 96216044 | 96216047 | 96216008 | | | Stainless Steel UNS S21800 |
| 33 | 96310003 | 96906904 | 96906904 | 96310008 | Clapper Spacer | 2 | Teflon or Acetal |
| 34 | 96406003 | N/A | N/A | N/A | Lever Spring | 1 | Stainless Steel UNS S30400 |
| | N/A | 96406004 | 96406005 | 96406008 | | 1 | Stainless Steel UNS S31600 |
| 35 | 96406906 | | | | Piston/ Reset Spring | 2 | Stainless Steel UNS S31600 |
| 36 | 96906112 | N/A | N/A | N/A | Spring Lock Washer, #6 | 1 | Stainless Steel 18-8 |
| | N/A | 96906111 | 96906111 | 96906111 | Spring Lock Washer, #10 | 1 | Stainless Steel UNS S31600 |
| 37 | 95606140 | N/A | N/A | N/A | Flat Head Socket Cap Screw ¼"-20 x ½" | 2 | Stainless Steel 18-8 |
| | N/A | 95606139 | N/A | N/A | Flat Head Socket Cap Screw ¼"-20 x ½" | | Stainless Steel UNS S31600 |
| | N/A | N/A | N/A | 95606135 | Flat Head Socket Cap Screw ½"-13 x ¾" | | Stainless Steel UNS S31600 |
| 38 | 98604402 | | | | Plug, ½" NPT | 1 | Steel |
| 39 | 94616921 | | | | Knob Caution Label (Not Shown) | 1 | Polystyrene |
| 40 | 91556922 | | | | Ball Chain, 1/8" (Not Shown) | 6 | Nickel Plated Brass |
| 41 | 91556923 | | | | Clamping Link, Ball Chain (Not Shown) | 1 | Nickel Plated Brass |
| 42 | 699993406 | | | | O-Ring Grease, Duponttm | A/R | Krytox® GPL-205 |



*C/Alfoz de Bricia nº4 | P.I. Villalonquéjar | 09001 Burgos (Spain) | Tlfno: +34 947 28 11 08*

## FRICTION LOSS




Friction loss (Expressed in equivalent length of Schedule 40 pipe), based on Hazen & Williams formula:

| Valve Size | End Connection | | Cv |
|---|---|---|---|
| | C = 120 | C = 100 | |
| 2" (50mm) | 4.4 ft (1,3 m) | 3.1 ft (1,0 m) | 101 |
| 2 ½" (65mm) | 6.0 ft (1,8 m) | 4.3 ft (1,3 m) | 236 |
| 3" (80mm) | 12.6 ft (3,8 m) | 9.0 ft (2,7 m) | 254 |
| 4" (100mm) | 14 ft (4,3 m) | 10 ft (3,0 m) | 469 |
| 6" (150mm) | 29.4 ft (9,0 m) | 20.9 ft (6,4 m) | 886 |
| 8" (200mm) | 53.5 ft (16,3 m) | 38.1 ft (11,6 m) | 1516 |

## ORDERING INFORMATION

| SIZE | PREACTION COMPLETE VALVE | SEPARATED COMPONENTS | | | |
|---|---|---|---|---|---|
| | | DELUGE VALVE | ELECTRIC ACT. TRIM | PREMOUNTING SERVICE | MOUNTING & TEST |
| 2" DN50 | PAPSE050AERR0 | VD050RR0 | TRAP050080AE0 | PREMTRIMAGCX1 | MYPTRIMAGCX1 |
| 2 ½" DN65 | PAPSE065AERR0/1 | VD065RR0/1 | TRAP050080AE0 | PREMTRIMAGCX1 | MYPTRIMAGCX1 |
| 3" DN80 | PAPSE080AERR0 | VD080RR0 | TRAP050080AE0 | PREMTRIMAGCX1 | MYPTRIMAGCX1 |
| 4" DN100 | PAPSE100AEBR0/1 | VD100BR0/1 | TRAP100200AE0 | PREMTRIMAGCX1 | MYPTRIMAGCX1 |
| 6" DN150 | PAPSE150AEBR0 | VD150BR0 | TRAP100200AE0 | PREMTRIMAGCX1 | MYPTRIMAGCX1 |
| 8" DN200 | PAPSE200AEBR0/1 | VD200BR0/1 | TRAP100200AE0 | PREMTRIMAGCX1 | MYPTRIMAGCX1 |

Specify:

| | |
|---|---|
| Valve Model | |
| Quantity | |
| Material | |
| Size of valve | |
| End and Trim connection | |
| Trim | |



*C/Alfoz de Bricia nº4 | P.I. Villalonquéjar | 09001 Burgos (Spain) | Tlfno: +34 947 28 11 08*

## AG FIRE SPRINKLER

AG Fire Sprinkler offers a wide selection of components. Then a list of products is presented by AG Fire Sprinkler, we can offer all these components, made with precision to protect people, anywhere, anytime.

- Sprinklers:
  - Standard Coverage
  - Extended Coverage
  - Storage
  - Dry
  - Accessories

- Alarm Check Valves for Sprinkler
  - Wet
  - Dry
  - Preaction Equipment
  - Accessories

- Spray System Open Nozzles
  - High Velocity Nozzles
  - Medium Velocity Nozzles
  - Window Nozzles
  - Hydroshield Nozzles
  - Mushroom Type Nozzles

- Foam equipment
  - Tanks
  - Proportioners
  - Foam Discharge Equipment
  - Foam Concentrates

- Deluge equipment Water Spray and Foam
  - Clapper Deluge Valves
  - Diaphragm Deluge Valves

- Monitors
  - Manual Monitors
  - Remote Monitors
  - Monitor Nozzles
  - Towers and Trolleys

- Valves
  - Butterfly Valves
  - Gate Valves
  - Check Valves
  - Pressure Control Valves
  - Test and Drain
  - Hose, Hydrant and Fire Connection Valves
  - Fire Department Connections

The equipment presented in this data sheet is to be installed in accordance with the latest published Standards of the national fire protection association (NFPA), FM Global, LPCB, VdS or other similar organizations, also with the provisions of governmental codes or ordinances whenever applicable.
This documentation is not contractual. AG Fire Sprinkler reserves the right to any kind of change without notice.



*C/Alfoz de Bricia nº4 | P.I. Villalonquéjar | 09001 Burgos (Spain) | Tlfno: +34 947 28 11 08*