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ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351
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# VS 80/400 SST 303 ATEX

**Technical manual: E 221**

**Relief valve**


- **60.0550.00** **1/2” Bsp F**
- **60.0550.50** **1/2" NPT F**

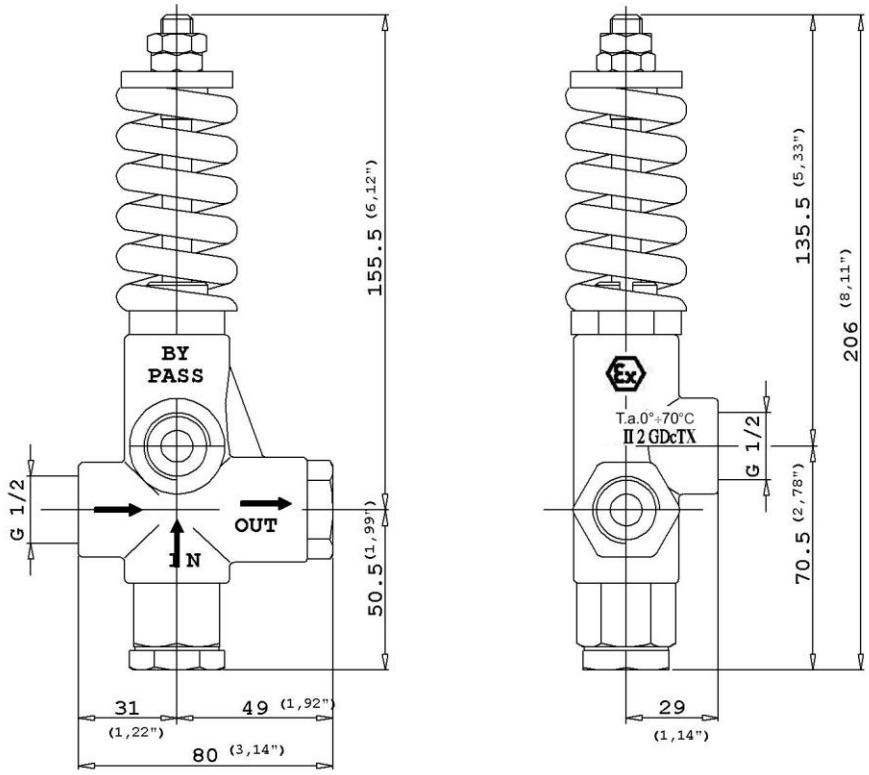
  - Body and internal parts made of stainless steel Aisi303.

## CERTIFICATIONS AND STANDARDS

- **Atex Directive 2014\34\EU (DNV 0575 CERTIFICATION)**
- **CE compliant**

| TECHNICAL SPECIFICATIONS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rated temperature** | 70°C – 158°F | | | | | | | | | |
| **Nominal Diameter** | DN15 | | | | | | | | | |
| **PN** | **RATED PRESSURE** | | **PERMISSIBLE PRESSURE** | | **PRE-SET PRESSURE** | | **MAXIMUM FLOW** | | **WEIGHT** | **INLET OUTLET BYPASS** |
| | **bar** | ***psi*** | **bar** | ***psi*** | **bar** | ***psi*** | **l/min** | **USGpm** | **g** | |
| 60.0550.00 | 400 | *5800* | 450 | *6500* | - | - | 80 | 21 | 1180 | 1/2” Bsp F |
| 60.0550.50 | 400 | *5800* | 450 | *6500* | - | - | 80 | 21 | 1210 | 1/2” NPT F |

## DIMENSIONAL DRAWING




### SELECTION

This product is to be utilized with clean fresh water, even slightly additivated with normal detergents. For use involving different or corrosive liquids, contact the PA Technical department. Appropriate filtration should be installed when using impure liquids. Choose the valve in line with the working data of the machine where to be installed (permissible pressure, maximum flow rate and rated temperature of the system). In any case, any over-pressure of the machine must not exceed the permissible pressure marked on the valve.

### OPERATION

The valve limits the maximum pressure of the system. In the event of over-pressure, this relief valve will open to allow the liquid to by-pass. During normal system operation, a shutter driven by a spring will keep the bypass opening close. The set valve pressure can be regulated by adjusting the spring load by means of the dedicated adjusting screw.

### INSTALLATION

This product is intended to be incorporated on a finished machine.On a machine that produces hot water,this valve must be fitted upstream the heat generator. In addition it is recommended to install devices that limit the fluid temperature accidental increase.

### DISCHARGE SYSTEM AND WATER ADDUCTION

It is advisable to direct the bypass discharge liquid to a baffled tank that will reduce possible turbolence and air bubbles generated by the immission of the bypass flow, which could be harmful for the pump.
When large flow volumes, close tho the max flow rate, are used, it is not advisable to return the bypass liquid to the pump as this may cause dangerous pressure spikes, dangerous for the pump.

### PRESSURE ADJUSTMENT/SETTING

The valve is supplied without pressure setting. The setting is done with the system “on”and with pressure inside the circuit. The valve setting pressure is achieved by operating on the adjusting screw (pos.9): by screwing it, the set pressure will increase.Once the desired pressure is attained, block the screw by locking the counternut (pos.7)

## TROUBLESHOOTING

| PROBLEMS | PROBABLE CAUSES | SOLUTIONS |
|---|---|---|
| Leaking out the bypass port during normal system operation. | - Seat or shutter is worn.<br>- Foreing material is jammed between seat and shutter. | - Replace.<br>- Clean. |
| | - System working pressure is above the set pressure. | - Re-set the system pressure. |

## REGULATIONS

See Norms Manuals.
The accessory hereby described bears the CE marking in accordance with the standards and directives published in the Declaration of conformity.
For a correct utilization, follow the directions described in this manual and re-print them on the Use and Maintenance manual of the machine. If needed, ask for the original Conformity Declaration for the chosen accessory.
The present manual is valid for all unloader valves named **VS 80/400 INOX 303 ATEX**.

T.a.0÷70° C

**CE Ex II 2 GD c TX**

ATEX marking (see ATEX norms manual, PN: 10.9408.06)

## SERVICING

The relief valve useful life is 10 years with general inspection and service after 5 years.
The life duration depends from the working conditions such as type of fluid, ambient and operating conditions (pressure and temperature).
PA recommends to regularly service the relief valves every two years.

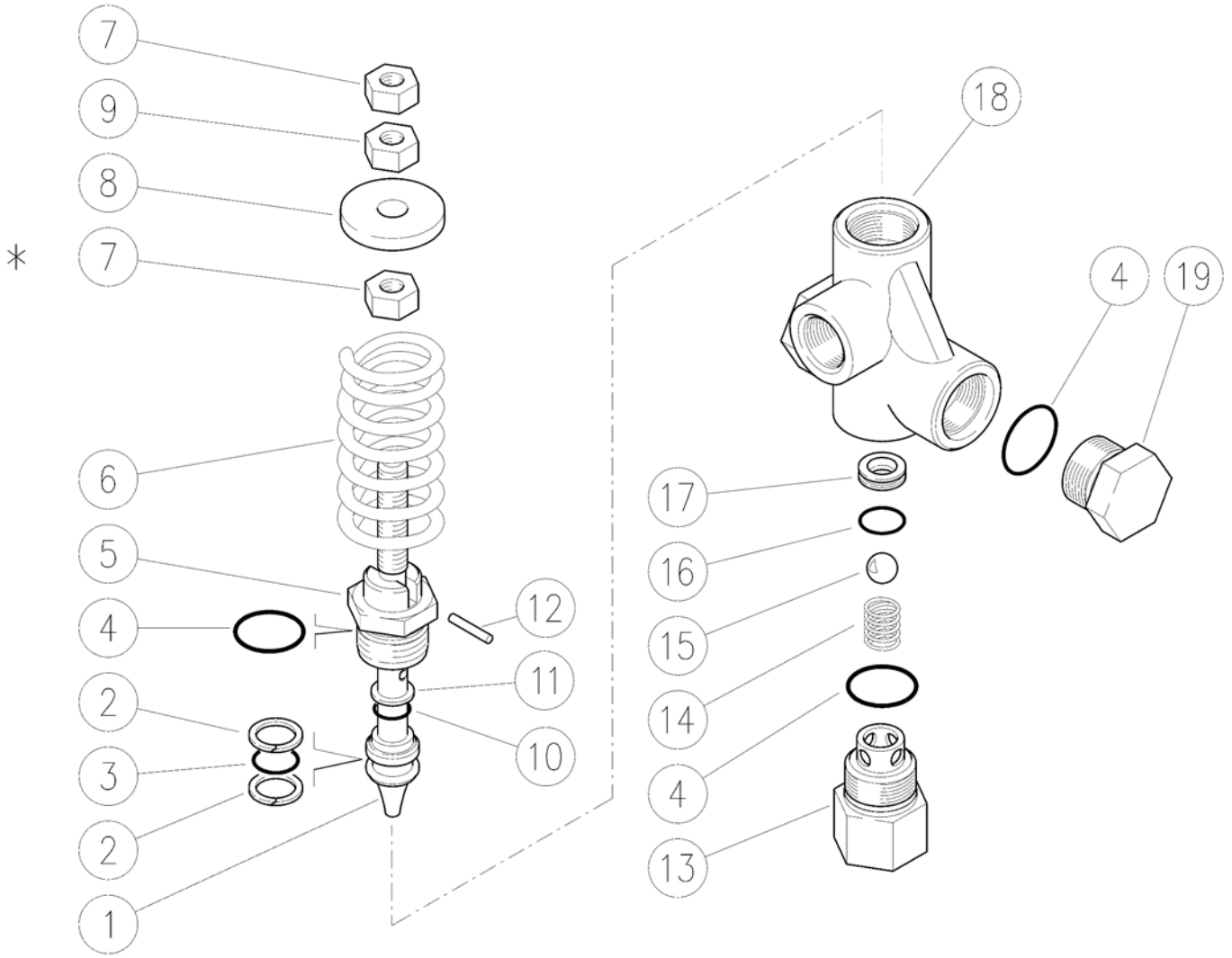
**Any unauthorized servicing operation will cause the interruption of any "PA" responsability and warranty on the product.**

***Technical data, descriptions and illustrations are indicative and liable to modification without notice.***

| | |
|---|---|
| **Instruction manual, maintenance, installation, spare parts.**<br>For a correct utilization, follow the directions of this manual.<br>**Re-print them on the use and maintenance booklet of the machine.** | n. 12.9221.00 |

**60.0550.00 VS80/400Atex safety valv. 1/2F Bsp Ai303**

**60.0550.50 VS80/400 safety valv. 1/2F Npt Ai303**




| Pos. | P/N | Description | Q.ty | K1 | K2 | K3 | K4 | |
|---|---|---|---|---|---|---|---|---|
| 1 | 60.0432.51 | Piston, M10 Sst. | 1 | | | | | 3 |
| 2 | 10.4014.00 | Back-up ring, opn. 18x13,5x1,2 mm | 2 | • | | | | 10 |
| 3 | 10.3178.01 | O-ring, 2,62x13,1 mm Ni 85 | 1 | • | | | | 10 |
| 4 | 10.3072.01 | O-ring, 1,78x20,35 mm Ni 85 | 3 | • | | | | 10 |
| 5 | 60.0433.51 | Stem holder, Sst. | 1 | | | | | 5 |
| 6 | 60.0434.61 | Spring, 8,5x38x80 mm black | 1 | | | | | 3 |
| 7 | 11.4629.00 | Hex. nut, M10 | 2 | | | | | 10 |
| 8 | 60.0406.31 | Spring holding washer, brass | 1 | | | | | 10 |
| 9 | 11.4630.00 | Hex. nut, M10 | 1 | | | | | 10 |
| 10 | 10.3174.01 | O-ring, 2,62x9,93 mm Ni 85 | 1 | • | | | | 10 |
| 11 | 10.4015.00 | Back-up ring, 10x14,5x1,2 mm | 1 | • | | | | 10 |

| Kit | P/N | Description | |
|---|---|---|---|
| K1 | 60.0554.24 | Spares kit -VS80/400, 8x5pcs. | 1 |

(1) 60.0550.50

| Pos. | P/N | Description | Q.ty | K1 | K2 | K3 | K4 | |
|---|---|---|---|---|---|---|---|---|
| 12 | 15.1032.00 | Roll pin, 3x18 mm Sst. | 1 | | | | | 10 |
| 13 | 60.0405.51 | Suction coupl., 1/2F Bsp Sst. | 1 | | | | | 3 |
| 13 | 60.0438.51 | Suction coupl., 1/2"Npt Sst. (1) | 1 | | | | | 3 |
| 14 | 60.0410.51 | Spring, 1,6x11,5x20 mm Sst. | 1 | | | | | 5 |
| 15 | 14.7461.00 | Ball, 13/32" Sst. | 1 | • | | | | 10 |
| 16 | 10.3060.01 | O-ring, 1,78x12,42 mm Ni 85 | 1 | • | | | | 10 |
| 17 | 60.0408.51 | Seat, 8,5x15,9x4,5 mm Sst. | 1 | • | | | | 5 |
| 18 | 60.0431.55 | Housing -VB80, 1/2F Bsp Sst. | 1 | | | | | 3 |
| 18 | 60.0436.55 | Housing -VB80, 1/2F Npt Sst. (1) | 1 | | | | | 1 |
| 19 | 60.0552.51 | Plug, sst. M24x1,5, hex.27 | 1 | | | | | 5 |