

# Full lift safety valve with spring loading.(AIT)

Model 495



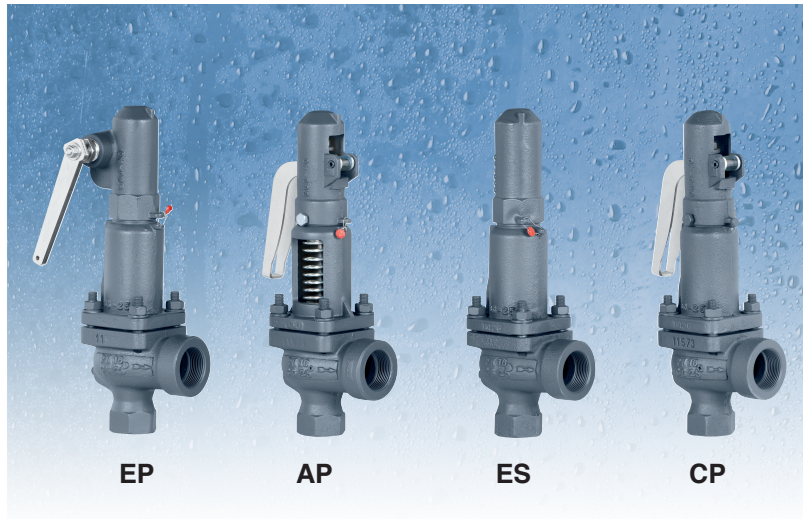
EN

The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.

Design in accordance with "International Standard ISO 4126-1 Safety Valves".

In accordance with the requirements of the pressure equipment directive 2014/68/EU.

EC valve verification certified by: TÜV Rheinland Industrie Service GmbH, Notified Body for Pressure Equipment ID-No. 0035. Type (Module B) EC examination report nº 33530455 certified by: TÜV Rheinland Ibérica ICT, S.A. In compliance with the ATEX 2014/34/EU directive "Protective equipment and systems for use in potentially explosive atmospheres". Other authorisations: ISCIR, ITI, NASTHOL, EAC,...etc.



## Specifications

- 90° angular flow.
- Activated by direct action helicoid spring.
- Simplicity of construction ensuring minimum maintenance.
- Materials carefully selected for their resistance to corrosion. With the exception of washers and couplings, the valves are free of non-ferric materials.
- Internal body designed to offer favourable flow profile.
- Sealing surfaces treated and balanced, making them extremely tightness, even exceeding EN 12266-1.
- Great discharge capacity. For liquids typically used with openings similar to proportional safety valves.
- Equipped with draining screws for removing condensation.
- Auto-centering plug.
- Threaded shaft with lever positioner facilitating immediate manual action.
- Elevator, independent of the seal, designed facilitate sudden opening when the steam expands and, with any fluid, guarantees absolute opening and closing precision.
- All the valves are supplied sealed at the set pressure requested, simulating operational conditions, and are vigorously tested.
- All components are numbered, registered and checked. If requested in advance, material, casting, test and efficiency certificates will be enclosed with the valve, and the instruction manual, in accordance with P.E.D. 2014/68/EU.

## IMPORTANT

Depending on demand:

- 1.- Blocking screw which facilitates hydrostatic testing of the container which to be protected.
- 2.- Rapid limiter to reduce the coefficient of discharge.
- 3.- Fluorelastomer (Vitón) seals, Silicone's rubber, PTFE (Teflón)... etc., achieving leakage levels less than:

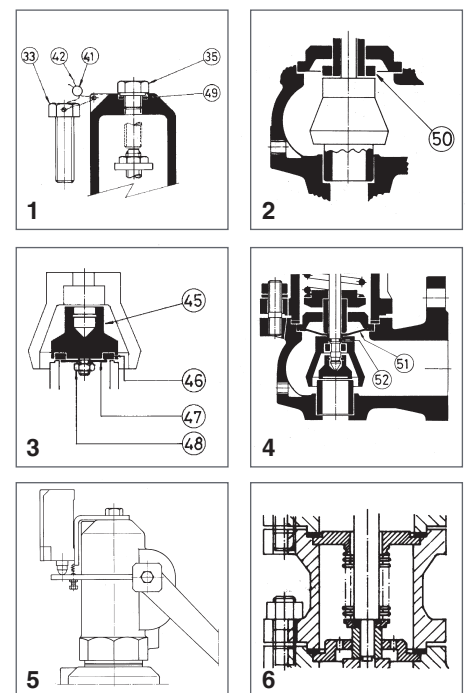
$$0,3 \times 10^{-3} \frac{\text{Pa cm}^3}{\text{sec.}}$$

The ranges of application allow certain flexibility although we recommend limiting them to:

| RANGE OF APPLICATION FOR THE SEALS |                     |                            |         |                    |             |
|------------------------------------|---------------------|----------------------------|---------|--------------------|-------------|
| FLUID                              | SET PRESSURE IN bar |                            |         |                    |             |
|                                    | 0,2                 | 1,8                        | 4,0     | 4,8                | 7,0 30 40,0 |
| Saturated steam                    | S                   | V                          | T       |                    |             |
| Liquids and gases                  | S                   |                            | V       |                    | T           |
| SEALS                              | TEMPERATURE IN °C   |                            |         |                    |             |
|                                    |                     | ACCORDING TO MANUFACTURERS |         | RECOMMENDED BY VYC |             |
|                                    |                     | MINIMUM                    | MAXIMUM | MINIMUM            | MAXIMUM     |
| Silicone's rubber                  | S                   | -60                        | +200    | -50                | +115        |
| Fluorelastomer (Vitón)             | V                   | -40                        | +250    | -30                | +150        |
| PTFE (Teflón)                      | T                   | -265                       | +260    | -80                | +230 (1)    |

(1) For temperatures exceeding 230°C apply metallic seal only.

- 4.- Fluorelastomer (Vitón) membrane and O-ring isolating the rotating or sliding parts from the working fluid.
- 5.- Electrical contact indicating open/closed.
- 6.- Balance bellows to:
  - Protect the spring from atmospheric influences.
  - Ensure outside of valve body is totally tightness.
  - Level out external or self-generated back pressure.
- 7.- Possibility of manufacture in other types of material, for special operating conditions (high temperatures, fluids, etc.).
- 8.- Totally free of oil and grease, to work with oxygen, avoiding possible fire risks (UV-Oxygen-VBG 62).
- 9.- Special springs for critical temperatures.



| N° PIECE             | PIECE                | MATERIAL                             |     |     |     |                                      |     |     |     |                                      |     |     |     |                                  |     |     |     |     |     |     |     |
|----------------------|----------------------|--------------------------------------|-----|-----|-----|--------------------------------------|-----|-----|-----|--------------------------------------|-----|-----|-----|----------------------------------|-----|-----|-----|-----|-----|-----|-----|
|                      |                      | CAST IRON                            |     |     |     | NODULAR IRON                         |     |     |     | CAST STEEL                           |     |     |     | STAINLESS STEEL                  |     |     |     |     |     |     |     |
| 1                    | Body                 | Cast iron (EN-5.1301)                |     |     |     | Nodular iron (EN-5.3106)             |     |     |     | Cast steel (EN-1.0619-N)             |     |     |     | Stainless steel (EN-1.4408)      |     |     |     |     |     |     |     |
| 2                    | Closed bell          | Cast iron (EN-5.1301)                |     |     |     | Nodular iron (EN-5.3106)             |     |     |     | Nodular iron (EN-5.3106)             |     |     |     | Stainless steel (EN-1.4408)      |     |     |     |     |     |     |     |
| 3                    | Open bell            | Cast iron (EN-5.1301)                |     |     |     | Nodular iron (EN-5.3106)             |     |     |     | Cast steel (EN-1.0619+N)             |     |     |     | Stainless steel (EN-1.4408)      |     |     |     |     |     |     |     |
| 4, 5, 6              | Hood                 | Nodular iron (EN-5.3106)             |     |     |     | Nodular iron (EN-5.3106)             |     |     |     | Nodular iron (EN-5.3106)             |     |     |     | Stainless steel (EN-1.4408)      |     |     |     |     |     |     |     |
| 7                    | Elevator             | Nodular iron (EN-5.3106) (1)         |     |     |     | Nodular iron (EN-5.3106) (1)         |     |     |     | Nodular iron (EN-5.3106) (1)         |     |     |     | Stainless steel (EN-1.4408) (4)  |     |     |     |     |     |     |     |
| 8                    | Cam                  | Carbon steel (EN-1.0037 St-37.2) (3) |     |     |     | Carbon steel (EN-1.0037 St-37.2) (3) |     |     |     | Carbon steel (EN-1.0037 St-37.2) (3) |     |     |     | Stainless steel (EN-1.4301)      |     |     |     |     |     |     |     |
| 9, 10                | Lever                | Carbon steel (EN-1.0037 St-37.2)     |     |     |     | Carbon steel (EN-1.0037 St-37.2)     |     |     |     | Carbon steel (EN-1.0037 St-37.2)     |     |     |     | Carbon steel (EN-1.0037 St-37.2) |     |     |     |     |     |     |     |
| 11                   | Seating              | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4542)      |     |     |     |     |     |     |     |
| 12                   | Plug                 | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4542)      |     |     |     |     |     |     |     |
| 13                   | Lead                 | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 14                   | Spring press         | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Stainless steel (EN-1.4305)      |     |     |     |     |     |     |     |
| 15                   | Separator            | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 16                   | Rod                  | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 17                   | Lever shaft          | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Stainless steel (EN-1.4305)      |     |     |     |     |     |     |     |
| 18                   | Gudgeon              | Carbon steel (EN-1.1231)             |     |     |     | Carbon steel (EN-1.1231)             |     |     |     | Carbon steel (EN-1.1231)             |     |     |     | Stainless steel (EN-1.4310)      |     |     |     |     |     |     |     |
| 19                   | Ring                 | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 20, 21               | Safety ring          | Stainless steel (EN-1.4310)          |     |     |     | Stainless steel (EN-1.4310)          |     |     |     | Stainless steel (EN-1.4310)          |     |     |     | Stainless steel (EN-1.4310)      |     |     |     |     |     |     |     |
| 22                   | Spring               | Spring steel (EN-10270-1-SH) (2)     |     |     |     | Spring steel (EN-10270-1-SH) (2)     |     |     |     | Spring steel (EN-10270-1-SH) (2)     |     |     |     | Stainless steel (EN-1.4310)      |     |     |     |     |     |     |     |
| 23                   | Gland                | Carbon steel (EN-1.1191 Ck-45)       |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Stainless steel (EN-1.4305)      |     |     |     |     |     |     |     |
| 24                   | Hollow screw         | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)      |     |     |     |     |     |     |     |
| 25                   | Hollow screw nut     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)      |     |     |     |     |     |     |     |
| 26                   | Buffer nut           | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)          |     |     |     | Stainless steel (EN-1.4305)      |     |     |     |     |     |     |     |
| 27                   | Rod check nut        | Carbon steel (EN-1.1141)             |     |     |     | Carbon steel (EN-1.1141)             |     |     |     | Carbon steel (EN-1.1141)             |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 28, 29, 48           | Nut                  | Carbon steel (EN-1.1141)             |     |     |     | Carbon steel (EN-1.1141)             |     |     |     | Carbon steel (EN-1.1141)             |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 30, 31               | Washer               | Carbon steel (EN-1.1141)             |     |     |     | Carbon steel (EN-1.1141)             |     |     |     | Carbon steel (EN-1.1141)             |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 32                   | Stud                 | Carbon steel (EN-1.1181)             |     |     |     | Carbon steel (EN-1.1181)             |     |     |     | Carbon steel (EN-1.1181)             |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 33, 34, 35           | Screw                | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Carbon steel (EN-1.1191)             |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 36                   | Cap                  | Carbon steel (EN-1.1181)             |     |     |     | Carbon steel (EN-1.1181)             |     |     |     | Carbon steel (EN-1.1181)             |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 38                   | Coupling             | Graphite                             |     |     |     | Graphite                             |     |     |     | Graphite                             |     |     |     | PTFE (Teflón)                    |     |     |     |     |     |     |     |
| 39                   | Coupling             | PTFE (Teflón)                        |     |     |     | PTFE (Teflón)                        |     |     |     | PTFE (Teflón)                        |     |     |     | PTFE (Teflón)                    |     |     |     |     |     |     |     |
| 40                   | Seal                 | Graphite                             |     |     |     | Graphite                             |     |     |     | Graphite                             |     |     |     | PTFE (Teflón)                    |     |     |     |     |     |     |     |
| 41                   | Seal                 | Plastic                              |     |     |     | Plastic                              |     |     |     | Plastic                              |     |     |     | Plastic                          |     |     |     |     |     |     |     |
| 42                   | Sealing wire         | Sealing wire                         |     |     |     | Sealing wire                         |     |     |     | Sealing wire                         |     |     |     | Sealing wire                     |     |     |     |     |     |     |     |
| 43                   | Characteristic plate | Stainless steel (EN-1.4301)          |     |     |     | Stainless steel (EN-1.4301)          |     |     |     | Stainless steel (EN-1.4301)          |     |     |     | Stainless steel (EN-1.4301)      |     |     |     |     |     |     |     |
| 45                   | Plug                 | Stainless steel (EN-1.4401)          |     |     |     | Stainless steel (EN-1.4401)          |     |     |     | Stainless steel (EN-1.4401)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 46                   | Sealing disk         | PTFE (Teflón)                        |     |     |     | PTFE (Teflón)                        |     |     |     | PTFE (Teflón)                        |     |     |     | PTFE (Teflón)                    |     |     |     |     |     |     |     |
|                      |                      | Silicone's rubber                    |     |     |     | Silicone's rubber                    |     |     |     | Silicone's rubber                    |     |     |     | Silicone's rubber                |     |     |     |     |     |     |     |
|                      |                      | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)           |     |     |     |     |     |     |     |
| 47                   | Washer               | Stainless steel (EN-1.4401)          |     |     |     | Stainless steel (EN-1.4401)          |     |     |     | Stainless steel (EN-1.4401)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 49                   | Coupling             | Copper                               |     |     |     | Copper                               |     |     |     | Copper                               |     |     |     | PTFE (Teflón)                    |     |     |     |     |     |     |     |
| 50                   | Limiter              | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4028)          |     |     |     | Stainless steel (EN-1.4401)      |     |     |     |     |     |     |     |
| 51                   | Membrane             | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)           |     |     |     |     |     |     |     |
| 52                   | O-ring               | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)               |     |     |     | Fluorelastomer (Vitón)           |     |     |     |     |     |     |     |
|                      | R1 x R2              | 3/4" x 1 1/4" to 1" x 1 1/2"         |     |     |     |                                      |     |     |     |                                      |     |     |     |                                  |     |     |     |     |     |     |     |
|                      | PN                   | 16                                   |     |     |     | 40                                   |     |     |     | 40                                   |     |     |     | 40                               |     |     |     |     |     |     |     |
| OPERATING CONDITIONS | PRESSURE IN bar      | 16                                   | 13  | 13  | 13  | 40                                   | 35  | 32  | 28  | 24                                   | 40  | 35  | 32  | 28                               | 24  | 21  | 20  | 40  | 34  | 32  | 29  |
|                      | MAX. TEMP. IN °C     | 120                                  | 200 | 250 | 300 | 120                                  | 200 | 250 | 300 | 350                                  | 120 | 200 | 250 | 300                              | 350 | 400 | 450 | 120 | 200 | 250 | 300 |
|                      | MIN. TEMP. IN °C     |                                      | -10 |     |     |                                      |     |     |     |                                      |     |     |     |                                  |     |     |     |     |     |     |     |

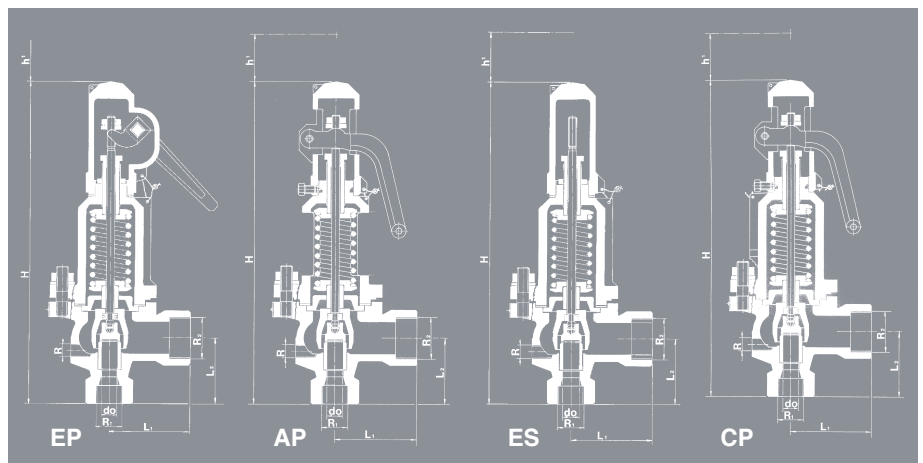
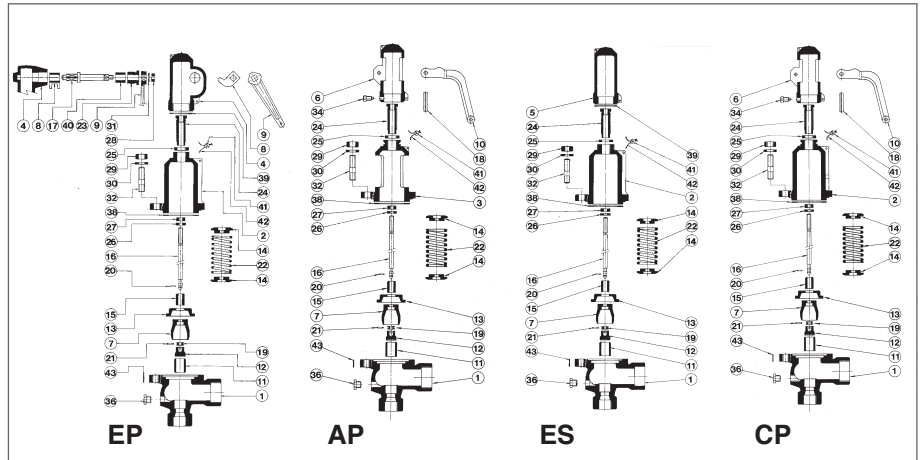
(1) R.3/4" x 1 1/4" in stainless steel (EN-1.4408).

(2) Maximum temperature EP, ES and CP 250°C / AP 400°C.

(3) R.3/4" x 1 1/4" in stainless steel (EN-1.4301).

(4) R.1" x 1 1/2" in stainless steel (EN-1.4401).

| R1 x R2                          |                           | 3/4" x 1 1/4"   |       |       |       | 1" x 1 1/2" |       |       |       |
|----------------------------------|---------------------------|---|-------|-------|-------|-------------|-------|-------|-------|
| CONNECTIONS                      |                           | Whitworth cylindrical female thread ISO 228/1 (DIN-259) |       |       |       |             |       |       |       |
| do                               |                           | 16  |       |       |       | 20          |       |       |       |
| $A_0 = \frac{\pi \cdot do^2}{4}$ |                           | 201   |       |       |       | 314         |       |       |       |
| H                                |                           | 320   |       |       |       | 370         |       |       |       |
| h <sup>1</sup>                   |                           | 112   |       |       |       | 129         |       |       |       |
| L <sub>1</sub>                   |                           | 80  |       |       |       | 85          |       |       |       |
| L <sub>2</sub>                   |                           | 65  |       |       |       | 80          |       |       |       |
| R                                |                           | 1/4"  |       |       |       | 1/4"        |       |       |       |
| MODEL                            |                           | EP AP ES CP   |       |       |       | EP AP ES CP |       |       |       |
| WEIGHT IN Kgs.                   | CAST IRON                 | 5,24  | 4,64  | 4,84  | 5,04  | 6,60        | 5,88  | 6,12  | 6,32  |
|                                  | NODULAR IRON              | 5,97  | 5,31  | 5,53  | 5,73  | 7,47        | 6,68  | 6,94  | 7,14  |
|                                  | CAST STEEL                | 5,65  | 5,01  | 5,22  | 5,42  | 7,50        | 6,70  | 6,97  | 7,17  |
|                                  | STAINLESS STEEL           | 5,65  | 5,01  | 5,22  | 5,42  | 7,50        | 6,70  | 6,97  | 7,17  |
| CODE                             | CAST IRON 2002-495.       | 5346  | 53461 | 53462 | 53463 | 5106        | 51061 | 51062 | 51063 |
|                                  | NODULAR IRON 2002-495.    | 8346  | 83461 | 83462 | 83463 | 8106        | 81061 | 81062 | 81063 |
|                                  | CAST STEEL 2002-495.      | 8344  | 83441 | 83442 | 83443 | 8104        | 81041 | 81042 | 81043 |
|                                  | STAINLESS STEEL 2002-495. | 8342  | 83421 | 83422 | 83423 | 8102        | 81021 | 81022 | 81023 |



**Recommended ranges of application.**  
**Open and closed pressures in % of set pressure.**  
**Set pressures and regulating ranges.**  
**Coefficient of discharge.**  
**Discharge capacity.**

See brochure Model 496.

Model 495 R. 3/4" x 1 1/4" = Model 496 DN - 20x32. do = 16.  
 Model 495 R. 1" x 1 1/2" = Model 496 DN - 25x40. do = 20.

**VYC industrial, sau**  
 Founded in 1914

www.vycindustrial.com  
 Avenc del Daví, 22 Pol. Ind. Can Petit 08227 TERRASSA (Barcelona) SPAIN  
 ☎ +34 93 735 76 90 ✉ 119 @ info@vycindustrial.com

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