

**P.A. – S.p.A. – EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO**

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 C.F. e P. IVA 01035950359 – Cap. Soc. i.v. € 750.000,00 – Codice Identificativo C.E.E. IT 01035950359
 ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351
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VB85/160 – 280 R Pressure regulating valve (Unloader)

Recycled water version

Technical manual: E 282

At gun closure, the waterflow is discharged in bypass reducing the pressure in the system upstream of the valve.

DN 15


- **60.0423.60** G 1/2" F Blue spring
 - **60.0423.00** G 1/2" F White spring
- Dynamic seals made up of O-ring and Back-up ring.
 - Optimized internal passages that guarantee reduced pressure loss.
 - Antirotation device of the piston positioned inside the valve and obtained by an hexagonal sector of the piston itself.
 - O-rings of the fittings positioned upstream to the thread : no risk of fittings ejected in case of overpressure.
 - Double feed connection.
 - Version with knob fitted with locknut for minimum working pressure adjustment.

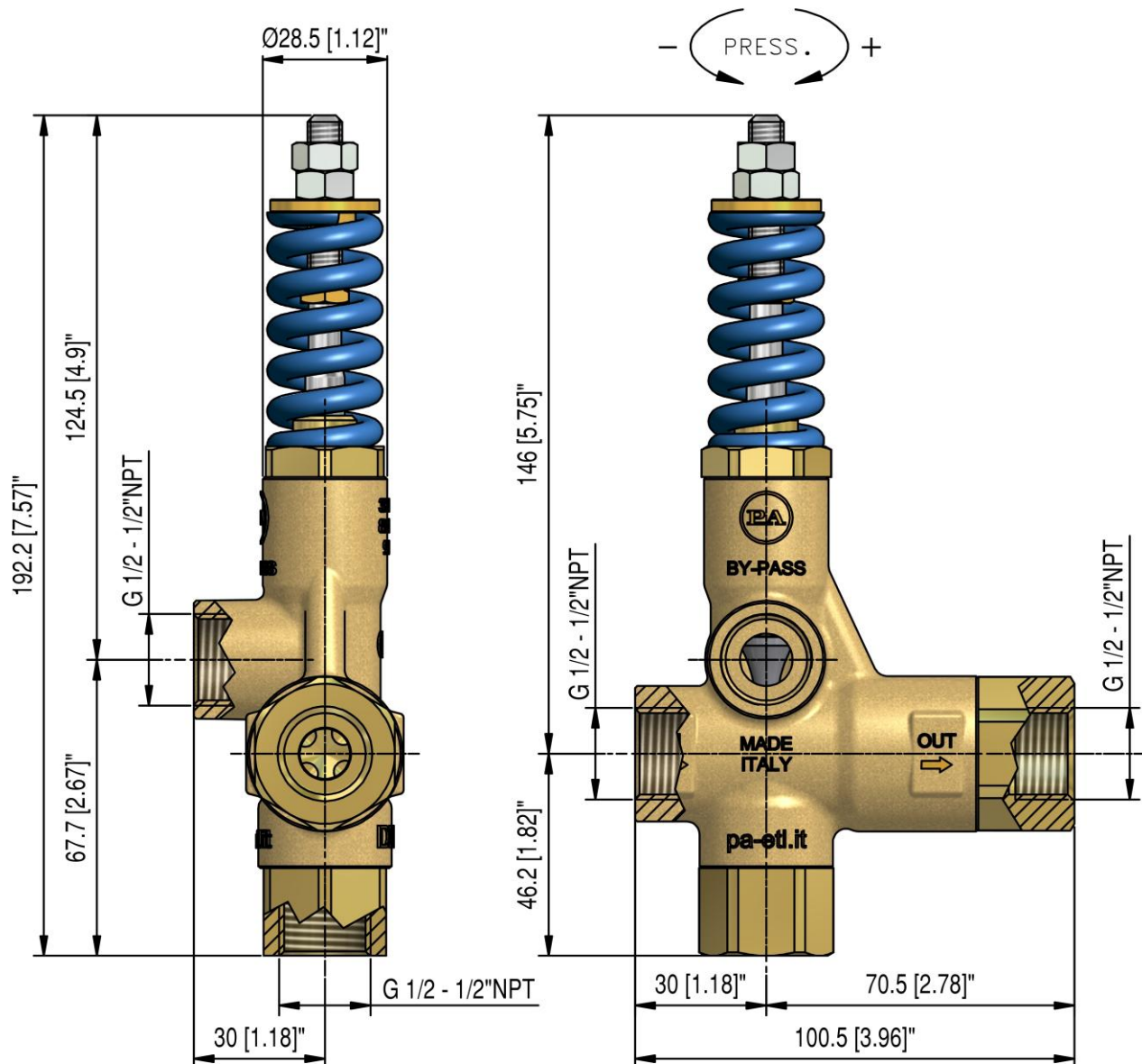
TECHNICAL SPECIFICATIONS

Construction material		Brass body and internal parts in Sst.										
Rated temperature (1)		90°C – 195°F										
Nominal Size		DN 15										
PART NUMBER	RATED PRESSURE		PERMISSIBLE PRESSURE		MINIMUM ADJUSTABLE PRESSURE		% PRESSURE DECREASE FOR VALVE RESET (2)	MAXIMUM FLOW (3)		WEIGHT		INLET OUTLET BYPASS
	bar	psi	bar	psi	bar	psi		l/min	USGpm	g	lbs	
60.0423.60	280	4050	310	4500	28	400	30	80	21	1154	2.55	G 1/2" F
60.0423.00	160	2300	180	2600	28	400	30	80	21	1152	2.5	G 1/2" F

- 1) The valve has been designed for a continuous use with water at a temperature of **60°C (140°F)**. It can work for short periods with water at the maximum temperature of **90°C (195°F)**.
- 2) When the valve is in bypass mode, this is the decrease of pressure that has to occur in the circuit downstream of the valve, in order that the valve can restore the working pressure in the system. The indicated figure is expressed as a percentage of the pressure setting (working pressure).
- 3) If the valve is fed through the lower inlet port, the maximum flow rate is 40 l/min.

At gun closure, a pressure increase occurs in the circuit downstream of the valve. This pressure increase is used to activate the valve and discharge all the flow in bypass. The value of the pressure increase cannot be calculated. It depends on the correct setting of the valve (see PRESSURE ADJUSTMENT/SETTING) and on the layout of the system: flow rate, working pressure, length and characteristic of the tubes, closing time of the gun.

DIMENSIONAL DRAWING



DESCRIPTION

The valve has two inlet ports with Bsp 1/2" F thread (1/2"NPT F) . If the valve is fed through the lower inlet port, the maximum flow rate is 40 l/min (10.6 USGpm).

The valve has an outlet port with Bsp 1/2" F thread (1/2"NPT F) .

The valve has also a bypass port with Bsp 1/2" F thread (1/2"NPT F) .

The valve is available in two different versions: with and without the plastic adjustment Knob.

SELECTION

This product is intended to be incorporated on a finished machine. 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, the pressure of the machine must not exceed the permissible pressure imprinted on the valve.

OPERATION

The valve regulates the pressure of the system by altering the flow discharged by the bypass. The adjustment is carried out by changing, by means of a piston, the position of a ball that partially shuts the bypass opening. At gun closure, a check valve closes and isolates the part of the circuit downstream of the valve: the pressure increase that remains trapped is used to activate the complete opening of bypass. All the flow supplied by the pump is therefore discharged at low pressure through the bypass and the pump works at low pressure.