

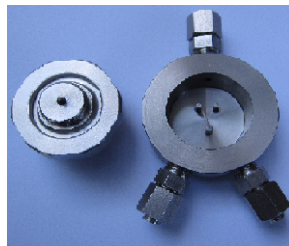
# Mini Paint Pressure Regulator PRP-3001-PF, pneumatic

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## 1. Introduction

The **APSON Mini Paint Pressure Regulator PRP-3001-PF** is a pneumatically controllable pressure regulator for the processing of often to change aggressive media, e.g. paints, solvents, alkalis. The regulator is optimized for good rinsing and low solvent consumption. Due to its adapter interface it is very quickly interchangeable and is particularly suitable for highly available automated systems.



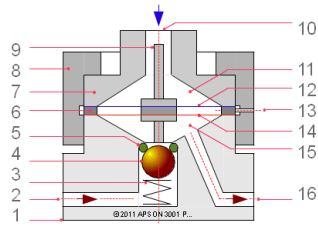
APSON Mini Paint Pressure Regulator PRP-3001-PF, with Quick-Adapter

## 2. Performance Characteristics

- Compact size, small and light. Low pressure loss.
- Environmentally friendly due to very good rinsability, low solvent consumption.
- Very fast exchange in case of defect: Controller, 1 minute; Double membrane, 2 minutes.
- Very easy handling during installation, adjustment and maintenance.
- Increased safety due to use of a double membrane.
- Efficient maintenance and spare parts.

## 3. Structure and Function

The **APSON Mini Paint Pressure Regulator PRP-3001-PF** comprises a housing 1, a housing cover 7, a union nut 8 and a double membrane. This consists of control air diaphragm 12, medium-diaphragm 14, and spacer ring 6. The membranes interspace has an discharge output 13 as a safety device.



#### APSON Mini Paint Pressure Regulator PRP-3001-PF – Functioning Scheme

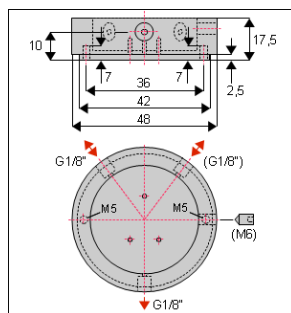
The double membrane separates the control air space 11 from the medium space 15. The regulator keeps the medium-pressure at the outlet 16 constant and unaffected by pressure fluctuations of the medium supply system at the input 2 of the regulator, if the input pressure is greater than the pneumatically preset output pressure.

*In case a damage occurs to the medium-membrane 14 at even perfect control air-membrane 12, then the penetrating medium is discharged from the membranes interspace through the orifice 13. In case a damage occurs to the control air-membrane 12 at even perfect medium-membrane 14, then the penetration air is discharged from the membranes interspace through the orifice 13. When the regulator is properly operated, thus the penetration of the medium into the pneumatic system can be prevented. Due to the hydrodynamic flow geometry of the regulator's interior, a very short rinsing cycle is achieved.*

The desired fluid pressure at the outlet of the regulator is pneumatically controlled through the air pressure set on the pneumatic input 10. Thereby, the pressure piece 9 of the double membrane acts on the sealing ball 4 and opens the sealing seat, more or less. The regulation process is determined by the pressure balance of control air pressure on one side and medium pressure on the other side, together with the force of the closing spring 3 in the supply bore. To rinse the pressure regulator, the control air pressure is to be brought to a predetermined value, so that the valve seat between sealing ring 5 and sealing ball 4 is fully open.

**Important:** When replacing the membranes, make sure that the Teflon™-coated surface of the respective membranes are mounted facing towards the medium compartment 15.

## 4. Quick-Adapter – Mounting Data



## 5. Technical Data

Designation:	APSON Mini Paint Pressure Regulator PRP-3001-PF
Media:	Paints, solvents, alkalis, a.o.
Medium Pressure, at input:	Max 15 bar (depending on the control air pressure)
Working pressure, at output:	Approx. 0 to 15 bar. (Note: At low pressure the hysteresis effects of the membrane should be considered.)
Control air pressure:	0 to 15 bar (depending on the medium pressure at the input)
Medium wetted parts:	Stainless steel *
Nut, spacer ring and cover:	Aluminium, hard coated *

Membranes:	Rubber with fabric, Teflon™-coated *
Control air connection:	Hole on the housing cover, with M5 thread
Medium connection:	3 times G1/8" on the adapter: 2 pass through, 1 output
Discharge outlet:	Hole in the nut, with M5 thread
Dimensions without adapter:	Ø 38 mm, height 33 mm
Dim. with adapter, L x W x H:	900 x 52 x 52 mm (inclusive connectors)
Mass:	If all metal parts made of stainless steel; regulator approx. 115 g, adapter approx. 190 g

\* Or according to customer specifications.

## 6. Ordering Data

Designation	Ordering Number
APSON Mini Paint Pressure Regulator PRP-3001-PF, with normal membrane	040A035-1
APSON Mini Paint Pressure Regulator PRP-3001-PF, with ondulated membrane (lesser hysteresis)	040A035-2
APSON Mini Paint Pressure Regulator PRP-3001-PF wrench (36 mm)	100A1383

Options: All parts also according to customer specifications.

APSON Lackiertechnik GmbH · Am Wiesengrund 15 · D-63075 · Offenbach · Germany  
 Phone: +49-69-82-369-447 · Mobile: +49-171-373-1633 · Fax: +49-69-82-369-448  
[email@apson.de](mailto:email@apson.de) · [www.apson.de](http://www.apson.de)

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