

# Lacquer Pressure Regulator PRM-2017, mechanical

## 1. Introduction

The APSON Lacquer Pressure Regulator PRM-2017 is a *mechanically* controllable pressure regulator for often changing aggressive media. In comparison to PRM-2015, it has an approx. 35% larger throughput and a longer housing. It has 5 integrated outputs and keeps the pressure of the medium at the outlets constant and independent of the pressure fluctuations of the medium supply system at the input of the regulator, if the input pressure is larger than the preset output pressure.

The regulator is particularly optimized for good rinsing barness and small solvent consumption. Therefore it is particularly suitable to the employment in automatic systems for the processing of lacquers, solvents, caustic solutions, a.o.



Fig. 1: APSON Lacquer Pressure Regulator PRM-2017

## 2. Features

- Environmental carefully due to short rinsing times.
- Very good rinsing barness and small solvent consumption.
- Compact design, large throughput and small pressure losses.
- Very fast exchange of a defective diaphragm (2 minutes).
- Simplest handling at assembling, adjustment and maintenance.
- Rational maintenance and spareparts holding.

### 3. Structure and Function

The **APSON Lacquer Pressure Regulator PRM-2017** consists of a pressure chamber, which is separated from the main spring chamber by means of a solvent-resistant diaphragm. The diaphragm is subjected on one side with the pressure of the to be regulated medium and on the other side with the force of the manually adjustable main spring.

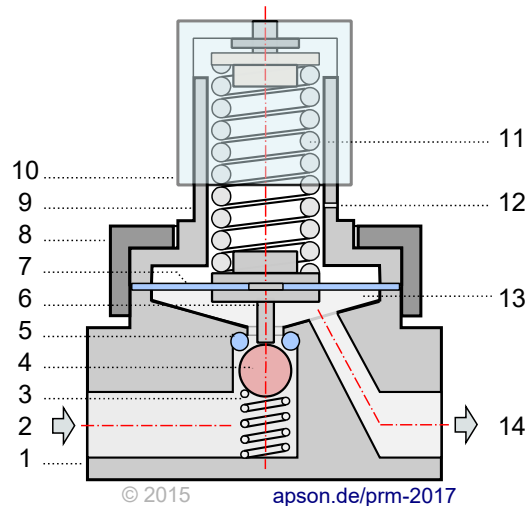


Fig. 2: APSON Lacquer Pressure Regulator PRM-2017 - Structure

**Legend:** 1 = Lower casing part, 2 = Input, 3 = Recoil spring, 4 = Sealing ball, 5 = Sealing ring, 6 = Thrust piece, 7 = Diaphragm, 8 = Overthrow nut, 9 = Upper casing part, 10 = Adjustment nut, 11 = Main spring, 12 = Vent hole, 13 = Pressure chamber, 14 = Output/s.

The thrust piece connected with the diaphragm controls the medium quantity per time unit, flowing through the pressure regulator, via the throttle provided with the sealing ball. The regulation procedure is achieved through the equilibrium of the force between the main spring on one side, and on the other side by the resulting force due to the medium pressure together with the force of the recoil spring in the supply bore of the throttle.

The desired medium pressure at the outlet of the regulator is adjusted by manually rotating the adjustment nut of the regulator. For rinsing of the pressure regulator the adjustment nut must be set to a pre-determined value, so that the throttle is fully opened.

**Important:** The pressure regulator is to be operated normally in vertical position, to be effective cleanable resp. when decantable media (e. g. metallic lacquers) are to be processed. An eventual manometer is always to be operated in vertical position, because of the gas column in the rising tube.

**Important:** When exchanging the diaphragm it is to be made certain that the Teflon™-coated surface of the diaphragm points into the direction of the medium chamber.

**Application-Note:** Paint pressure regulators with multiple outlets can save costs, if applied correctly. Regulators of this kind are NOT intended for turning on or off individual consumers, or changing the output impedance of individual consumers, during operation. Otherwise, the pressure conditions change on the other consumers of the regulator. If in doubt, please clarify the regulator type with APSON prior to ordering. Normally for every consumer a usual APSON regulator with a single outlet is to be planned!

## 4. Technical Data

Denomination:	APSON Lacquer Pressure Regulator PRM-2017
Media:	Lacquers, solvents, alkalis, a.o.
Medium pressure input:	max. 20 bar
Operating pressure output:	approx. 0 to 16 bar
Connections:	1 inlet, 5 outlets. See Application-Note in the previous section!
Materials:	Medium-touching parts made of inoxidable steel. Union nut and cover part from aluminum, hardcoated. Diaphragm from rubber with fabric proportion, Teflon™-coated.
Mass:	approx. 650 g

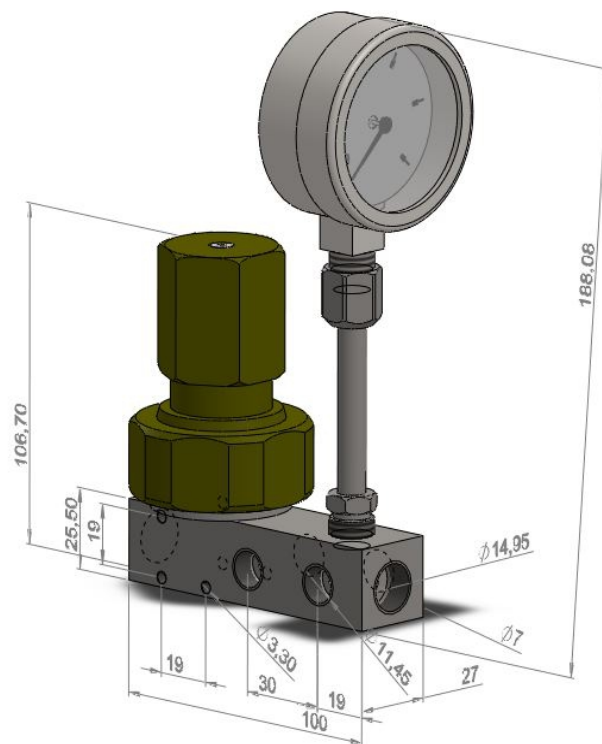


Fig. 3: APSON Lacquer Pressure Regulator PRM-2017 - Dimensions [mm]

## 5. Ordering Data

Denomination	Part-Nr.
APSON Lacquer Pressure Regulator PRM-2017 (see Application-Note, further above)	040-A021-3E
APSON Lacquer Pressure Regulator Key (wrench width 54 mm)	100-0105

Options: All aluminum sections made of inoxidable steel.

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