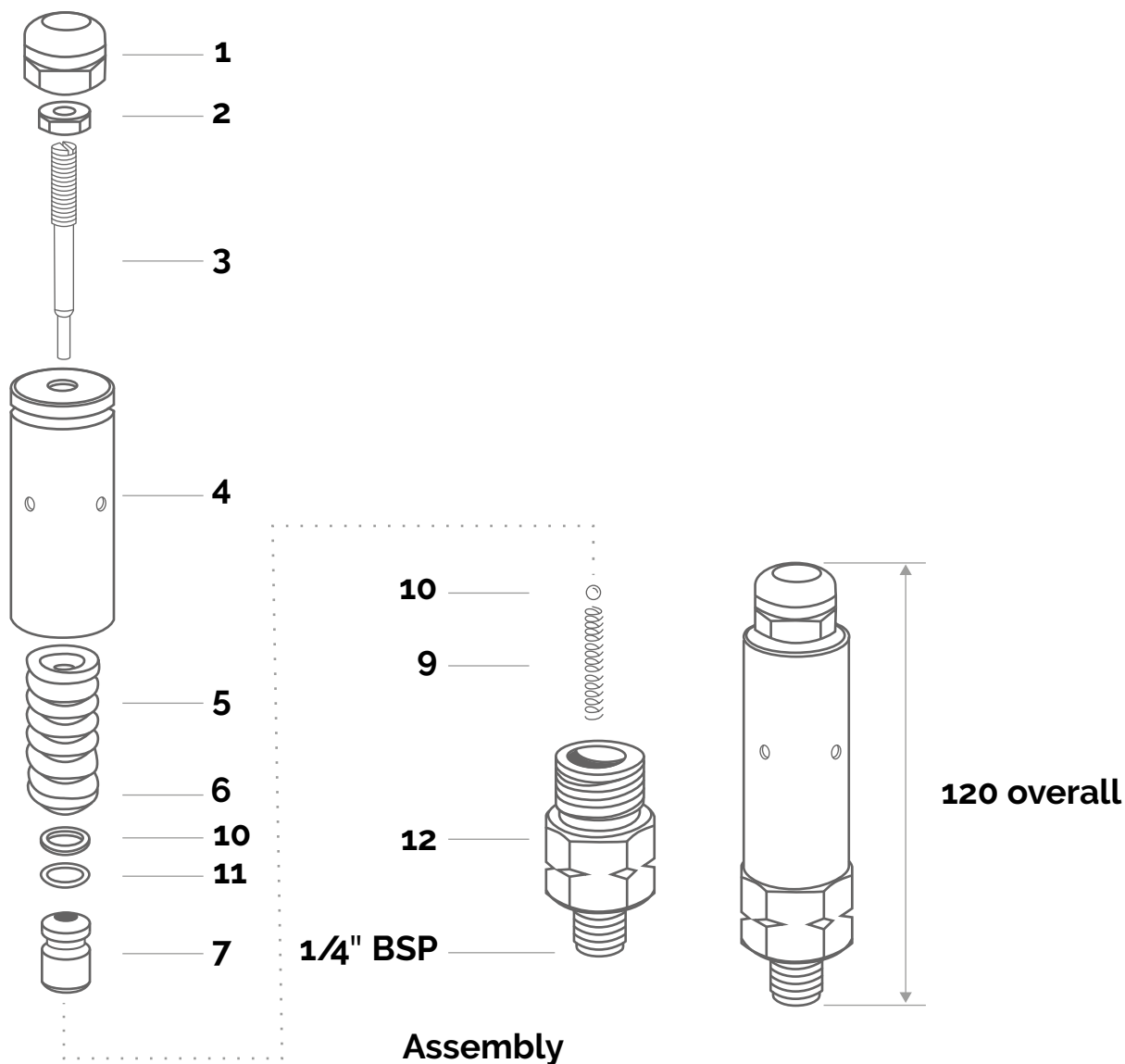




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3091 MDE Relief Valve Model 60 G 1/4
Adjustable 4000 to 6000 PSI 275 to 414 bar

Item	Description	Part number†
1	Dome nut	M 013612
2	Lock nut	M 013611
3	Pressure adjusting screw	M 013667
4	Housing	M 013666
5	Pressure spring	M 013668
6	Spring cap	M 013607
7*	Brass piston	M 013663
8*	Ball	M 013605
9*	Spring-seal retaining	M 013604
10*	Anti-extrusion ring	M 013662
11*	O-ring	M 012103
12*	Hex body	M 013661

Drawn May 2004
For illustration purposes only, drawings are not to scale.

*Part of service kit 3091 SK
†Items available to order upon request only

PED requirement: The valve body to be pressure tested to 1.5 maximum WP before assembly.

Operating, adjustment and connection instructions

Part Number 3091 – Connection G 1/4 BSPP Male.

Designed working pressure range: 275 to 414 bar.

Standard pressure setting as supplied is 310 bar.

Temperature range: -30°C to +50°C

Proof test pressure: 621 bar

Design operation

The design principal of this relief valve is based on a double action rising piston. High pressure air enters the valve via the pressure housing **12** and forces the stainless steel ball **8** to effect a pressure seal on the internal seat of the brass piston **7** which is free to move vertically within **12** pressure housing. A minor spring **9** maintains contact of the stainless steel ball **8** to the internal seat at all times. As the pressure increases the piston **7** moves against the major pressure spring **5** which eventually allows the ball to be displaced from its seat by the projecting adjusting screw **3** previously set and locked with nut **2** at the desired relief pressure. Dome nut **1** is then re-fitted.

Adjustment Instructions: Important information

The design of the valve is such that by rotating the adjuster screw **3** results in a pressure increase when turned anti-clockwise and a decrease to original setting when turned clockwise.

IT IS IMPORTANT THAT THE ADJUSTING SCREW 3 IS NOT SCREWED ALL THE WAY OUT WHILST IN SERVICE OR UNDER PRESSURE.

Adjustment procedure

Remove domed nut **1** revealing the adjusting screw **3** and locknut **2**. It is a sensible precaution with an unknown pressure system where the operator is unsure at what pressure the valve is set at, to initially slacken the locknut **2** and rotate the adjusting screw **3** in a clockwise direction to reduce any initial setting down to a safe limit.

Pressurise the system, monitor line pressure with a gauge and using a screwdriver adjust the screw **3** in an anti-clockwise direction in very small increments at the same time monitoring the gauge pressure reading to ascertain at what pressure the relief valve starts to audibly vent to the atmosphere. Continue adjusting until the desired relief pressure is reached. Holding adjusting screw **3** steady with a screwdriver tighten the locknut **2** then re-fit the dome cap **1**. Now carry out a further pressure check to confirm setting until the desired relief pressure is reached. Holding adjusting screw **3** steady with a screwdriver tighten the locknut **2** then re fit the dome cap **1**. Now carry out a further pressure check to confirm setting.

WARNING

For use with Air & Group 2 Gases only as defined in PED 97/23/EC

Not to be used in systems that exceed the working pressure and temperature range as stated above.

Only to be used in static situations. Not designed for earthquake situations.

Connection torque settings

Not to exceed 35 Nm (26 fl/lbs)



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Flow rates and set pressure/reset

65.5 m³/hr @ 350 bar

66.6 m³/hr @ 250 bar

Opening	Max	Reset	Overshoot%
3520	3780	3300	7.4
4130	4390	3850	6.3
4200	4400	3950	4.8

All above pressures in PSIG