



INSTRUCTION MANUAL

AIR OPERATED FLUID REGULATOR FOR THICK MATERIALS - SMALL MODEL

Manual : 1009 573.144.112

ORIGINAL MANUAL

Date : 21/09/10 - Supersede : 15/06/05 Modif. : Update

Dear Customer,

We thank you very much for purchasing an accessory from KREMLIN range.

To get the best result, safe and efficient operation of your thick material regulator, we advice you to read and make yourself familiar with this instruction and service manual.

1. SAFETY INSTRUCTIONS

- ➔ The personnel involved in operating and servicing this equipment must be aware of all the safety requirements stated in this manual. The workshop supervisor must be certain that the personnel has perfectly understood the safety instructions and complies with them.
- ➔ Use the equipment only in a properly ventilated area to maximize health care. Any misuse of the spray equipment or accessories can damage them and result in serious body injury, fire or explosion hazard.
- ➔ This equipment is installed on installations operating under very high pressure. Check the maximum fluid pressure supplied upstream of the regulator.
- ➔ All fittings must be tight and in good condition.
- ➔ Before cleaning or removing components of the equipment, it is compulsory :
 - to stop the pump by shutting off the compressed air supply,
 - to open the drain valve,
 - to point the spray gun into an appropriate waste receptacle and press the trigger to depressurize the system.

KREMLIN - REXSON

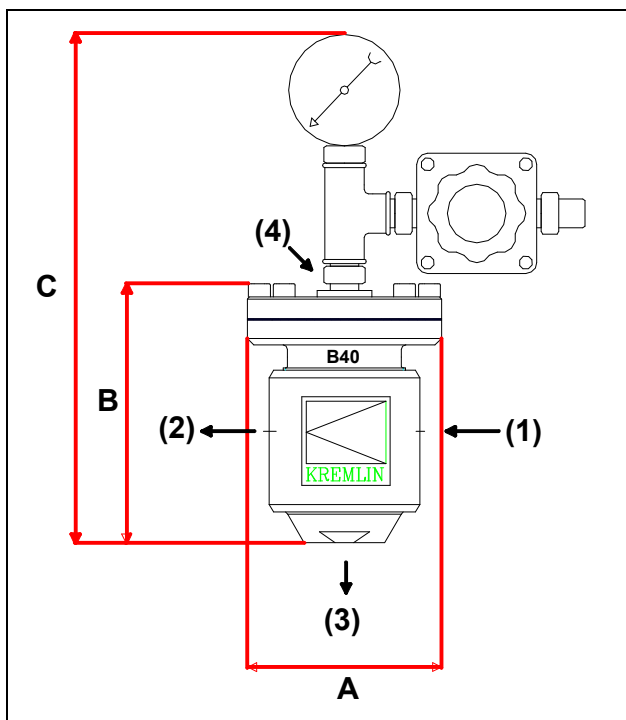
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2. TECHNICAL FEATURES



The regulator is designed to handle thick materials on cold installations under medium or high pressure.

The fluid pressure adjustment at the regulator outlet is carried out by setting pilot air pressure.

The pilot air must be carried out by means of an accurate air regulator to obtain a better adjustment of air operated regulator.

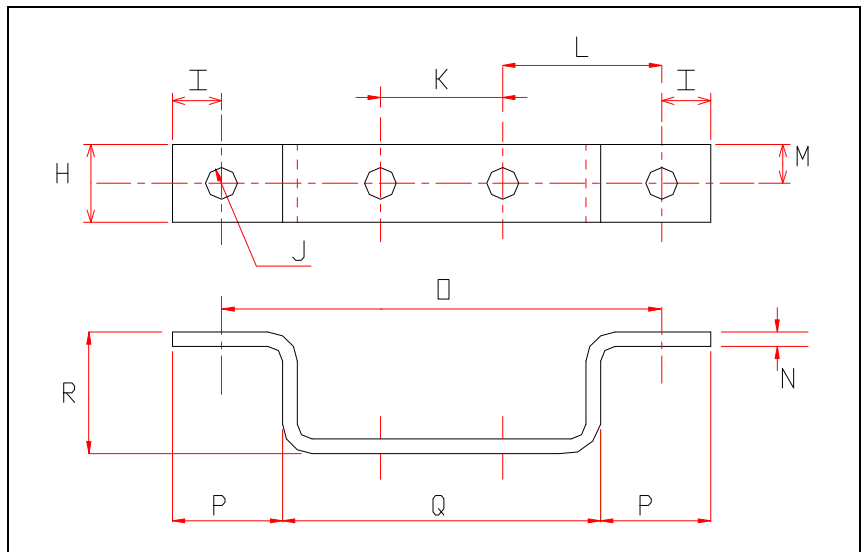
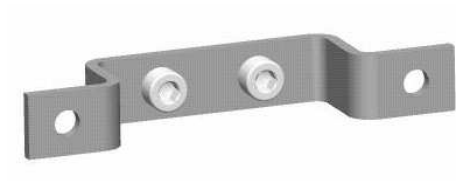
2 standard versions of the PM regulator are available :
 - standard version 1 : PM 40 bar / 580 psi that becomes a PM 80 bar / 1160 psi when adding a pilot stage.
 - standard version 2 : PM 160 bar / 2320 psi that becomes a PM 240 bar / 3480 psi when adding a pilot stage.

These pressure indicate the **maximum** fluid pressure at the **outlet** of the regulator.

The valve outlet, located downward, is shut off by a plug.

Kind of regulator	With standard version 1 (B 40 marking)				With standard version 2			
	PM 40 bar / 580 psi		PM 80 bar / 1160 psi		PM 160 bar / 2320 psi		PM 240 bar / 3480 psi	
Dimensions :	mm	"	mm	"	mm	"	mm	"
- A	Ø 90	3.54	Ø 90	3.54	Ø 90	3.54	Ø 90	3.54
- B (regulator without pilot)	133	5.23	153	6.02	140	5.51	160	6.29
- C (regulator with pilot)	248	9.76	268	10.55	255	10.03	275	10.82
Number of diaphragms	1		2		2		3	
Weight :	kg	lb	kg	lb	kg	lb	kg	lb
- Regulator without pilot	2,5	5.51	2,8	6.17	2,8	6.17	3,1	6.83
- Regulator with pilot	3,3	6.83	3,6	7.93	3,6	7.93	3,9	8.59
Fittings :	- Fluid inlet (1) F 3/8 NPS - Fluid outlet (2) F 3/8 NPS - Valve or gauge outlet (3) F 1/4 NPT - Pilot air (4) F 1/4 BSP							
Pressure	bar	psi	bar	psi	bar	psi	bar	psi
- Inlet (maxi P)	300	4350	300	4350	300	4350	300	4350
- Outlet (maxi P)	40	580	80	1160	160	2320	240	3480
Recommended use range								
- Inlet	30 to 100	435 to 1450	60 to 160	870 to 2320	60 to 250	870 to 3625	60 to 300	870 to 4350
- Outlet	10 to 35	145 to 507	20 to 70	290 to 1015	30 to 150	435 to 2175	30 to 220	435 to 3180
Pilot air pressure (maxi P)	6	87	6	87	6	87	6	87
Wetted parts	Treated steel Steel, Carbide PTFE, FPM Polyethylene							
Fluid maximum temperature	50°C / 106 °F							

BRACKET (OPTION)



Ind.	mm	"	Ind.	mm	"	Ind.	mm	"	Ind.	mm	"
H	16	0.63	I	10	0.4	J	Ø 6,5	Ø 0.26	K	25	0.98
L	20	0.8	M	8	0.31	N	3	0.12	O	90	3.54
P	22,5	0.89	Q	65	2.56	R	25	0.98			

3. TROUBLESHOOTING CHART

DEFECT	CAUSE	SOLUTION
Overpressure at the regulator outlet	Air pilot pressure too high. Bad proofness between seat and ball. Too important fluid pressure upstream of the regulator.	Decrease pilot pressure. Clean and replace. Decrease pressure at the supply pump.
No material coming out from the regulator	Insufficient air pilot pressure. Ball blocked on the seat.	Increase pilot air pressure. Clean and replace.
Irregular flow rate.	Too much pulsation in the distributing network. Improper tightness between seat and ball.	Check distributing network. Clean and replace.
Leakage at the diaphragm housing of the regulator.	Defective GT seal.	Replace.

4. REMOVAL

■ REPLACEMENT OF THE PIN WITH BALL (10) AND OF THE SEAT ASSEMBLY (9)

Unscrew the lower cover (14).

Unscrew the 2 screws (13) and extract the lower cross-link (11).

Loosen the nut (12) and extract the pin with ball (10).

Unscrew the seat assembly (9) and replace the ring (27).

Clean the parts with white spirit or with an appropriate cleaning solvent. Change them if necessary.

Remount the whole by operating in reverse order.

■ REPLACEMENT OF THE DIAPHRAGMS (2) AND OF THE PISTON GT SEAL (25)

Removal :

Unscrew the 8 screws (15) and extract the upper cover (1).

Remove the control stage(s) (depending on the regulator version).

Put aside the diaphragm (2).

Unscrew the screw (17), then remove the diaphragm support (3).

Extract the spring (5) and unscrew the housing diaphragm (4) that gives access to the GT seal (25).

Reassembly :

Clean the parts with white spirit or change them if necessary .

Lubricate the seals (refer to drawing bellow).

Place GT seal (25), lips downwards, in its housing, inside the diaphragm housing (4).

GT seal (25) →

Place the spring (16), the piston (5) and tighten the screw (17).

Change the diaphragm (2), if necessary.

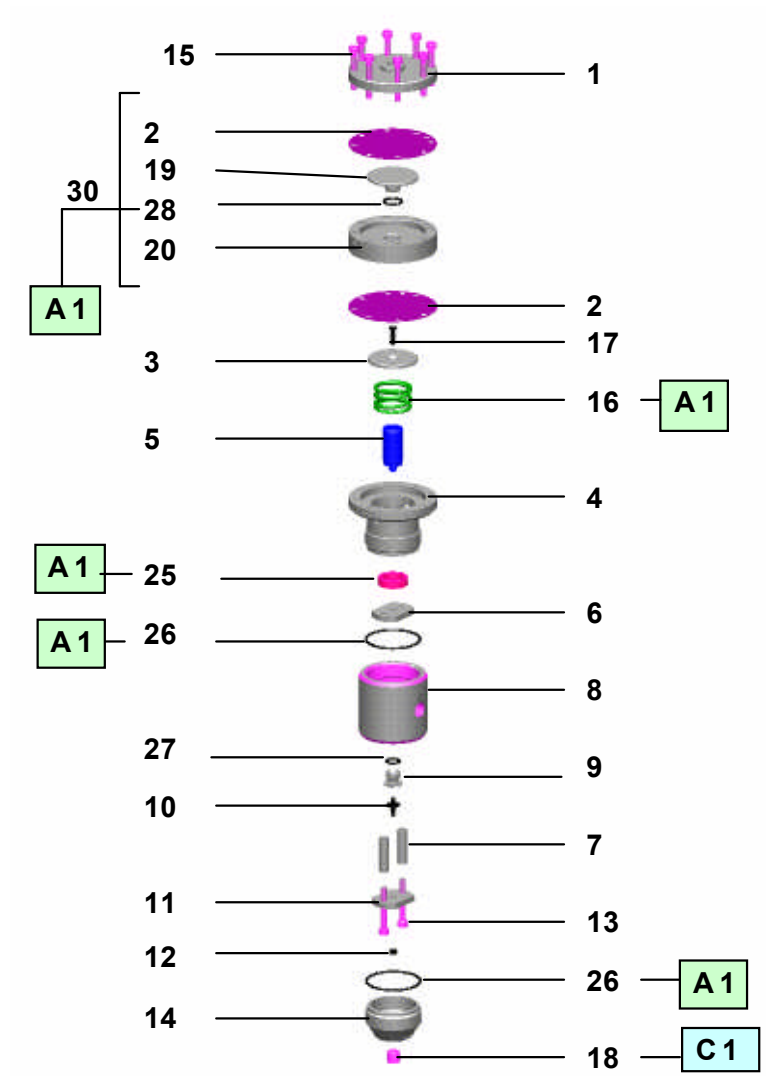
Remount the parts corresponding to their pilot stages.

Fix the whole by tightening the 8 screws (15) .



CAUTION : Line up the hole $\varnothing 5 / \varnothing 3/16$ on the diaphragms with those of the pilot stages.

■ ASSEMBLY INSTRUCTIONS



Index	Instructions
A 1	PTFE grease
C 1	High strength Aneorobic Pipe Sealant Loctite 577