300x911xxx MATERIAL REGULATOR

IMPORTANT: READ THIS MANUAL CAREFULLY BEFORE INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT

300-911Axx	Low Flow Regulator 1/4” orifice
300-911Bxx	Medium Flow Regulator 5/16” orifice
300A911Bxx	Abrasive Med. Flow Reg. 5/16 orifice
300-911Cxx	High Flow Regulator 3/8” orifice

SERVICE KITS

Use only Johnstone replacement parts to insure compatibility and longest life.

- Low Flow Repair Kit: 300-911ARK
- Medium Flow Repair Kit: 300-911BRK
- Medium Abrasive Rep. Kit 300A911BRK
- High Flow Repair Kit: 300-911CRK

WARNING:
DO NOT OPERATE REGULATOR AT PRESSURES ABOVE RECOMMENDED MAXIMUM OF 5000PSI (340 BAR) MATERIAL AND 100PSI (6.8 BAR) AIR.

SPECIFICATIONS

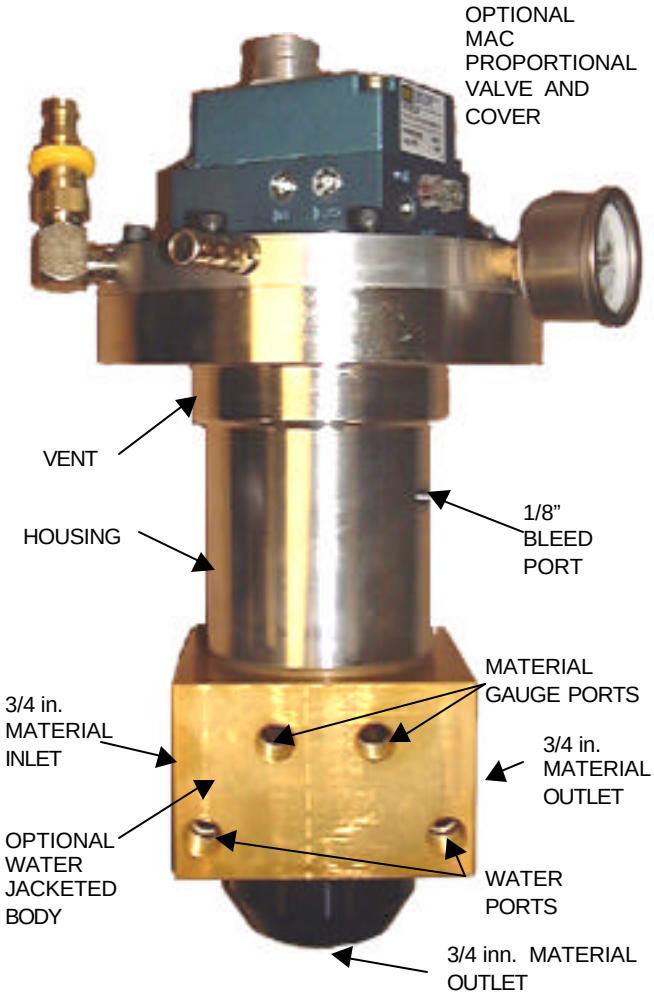
Air Inlet Port Size	1/4" NPT
Fluid Inlet Port Size	3/4" NPT
(2) Fluid Outlet Port Size	3/4” NPT
Static Pressure Ratio	37:1

MAINTENANCE SCHEDULE

MONTHLY:
Bleed Material from the housing.
Check for material leakage in the housing vent hole.
EVERY SHUTDOWN:
Depressurize the regulator.

OPERATION

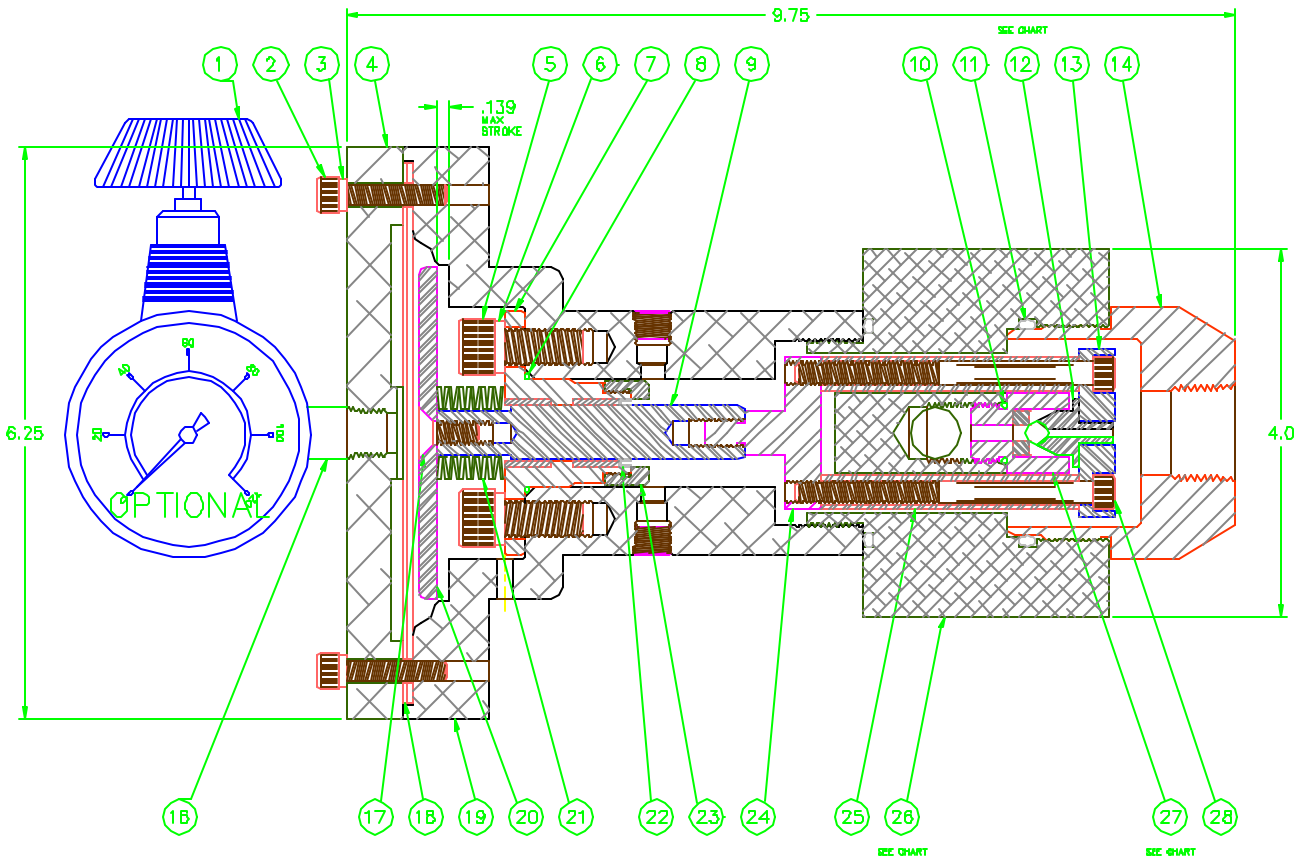
Supply material and air pressure to the regulator. Adjust the Air Regulator to change the material pressure. Increase the air pressure for more PSI and decrease the air pressure for less PSI.

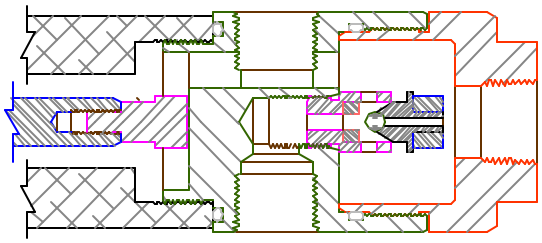


REPLACEMENT PROCEDURE

DEPRESSURIZE THE REGULATOR – MATERIAL, AIR AND WATER PRESSURE.
Remove Fluid and Pneumatic connections.
Install new Fluid and Pneumatic Connections and tighten.
Bleed the air from the water system.
Supply material air pressure to the regulator.
Operate the regulator to bleed the air.
(Purge 1 to 2 gallons of material)

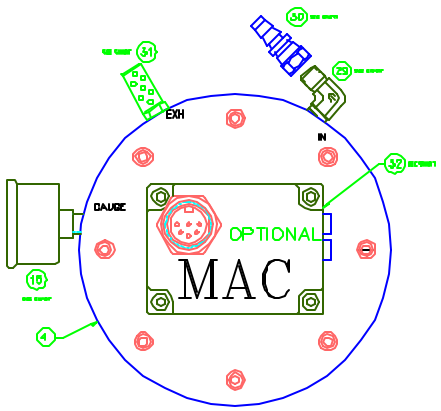
Johnstone Dispensing Systems 1872 Enterprise Drive PH (248) 293-5700
Rochester Hills MI 48309 FX (248) 293-5800
INGERSOLL-RAND FLUID PRODUCTS





MAT. IN PORT

VIEW ROTATED 90°, FULL OPEN POSITION



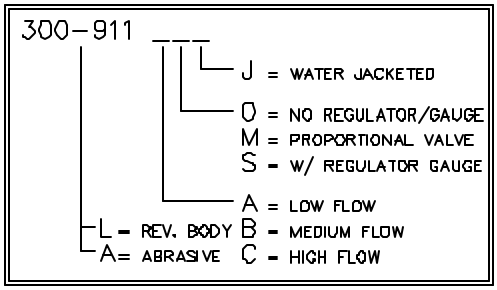
* = INLUDED IN REPAIR KIT SEE CHART

	DET	QTY.	PART No.	DESCRIPTION
	32	1	363-124	PROPORTIONAL VALVE (OPTIONAL)
	31	1	360-249	MUFFLER w/PROP. VALVE.
	30	1	363-000B03	3/8" BARB X #6 JIC w/PROP. VALVE
	29	1	363-048	ELBOW #6 X 1/8" NPT 90 w/PROP. VALVE
	28	2	402-518	1/4 - 20 X 3 1/4 SHCS
*	27	1	SEE CHART	SEAT
	26	1	SEE CHART	BODY
	25	2	402-517	SPACER
	24	1	402-514	LOWER PLATE
	23	1	402-522	COLLAR
*	22	1	360-650	SEAL
*	21	13	361-974	BELLEVILLE WASHER
	20	1	402-519	DIAPHRAGM PLATE
	19	1	402-525	HOUSING
*	18	2	402-290V	DIAPHRAGM VITON
	17	1	350-400	1/4 - 20 X 3/4 FLAT SOCKET CAP
	16	1	350-949	1/4 X 1 1/2 NIPPLE
	15	1	SEE CHART	35D-D53 w/REG. 361-7D8 w/ PROP.
	14	1	402-520	END CAP
	13	1	402-516	UPPER PLATE
*	12	1	SEE CHART	POPPET
*	11	2	350-129V	O-RING VITON
*	10	1	350-336	O-RING BUNA
	9	1	402-521	SHAFT
*	8	1	362-088	O-RING VITON
	7	1	402-523	RETAINER
	6	4	361-916	LOCK WASHER 7/16"
	5	4	360-581	10 MM X 25 MM SHCS
	4	1	SEE CHART	402-330 STD. / 402-330A PROP. VALVE
	3	8	361-233	LOCK WASHER 1/4"
	2	8	360-583	6 MM X 30 MM SHCS
	1	1	SEE CHART	361-821 REGULATOR (OPTIONAL)

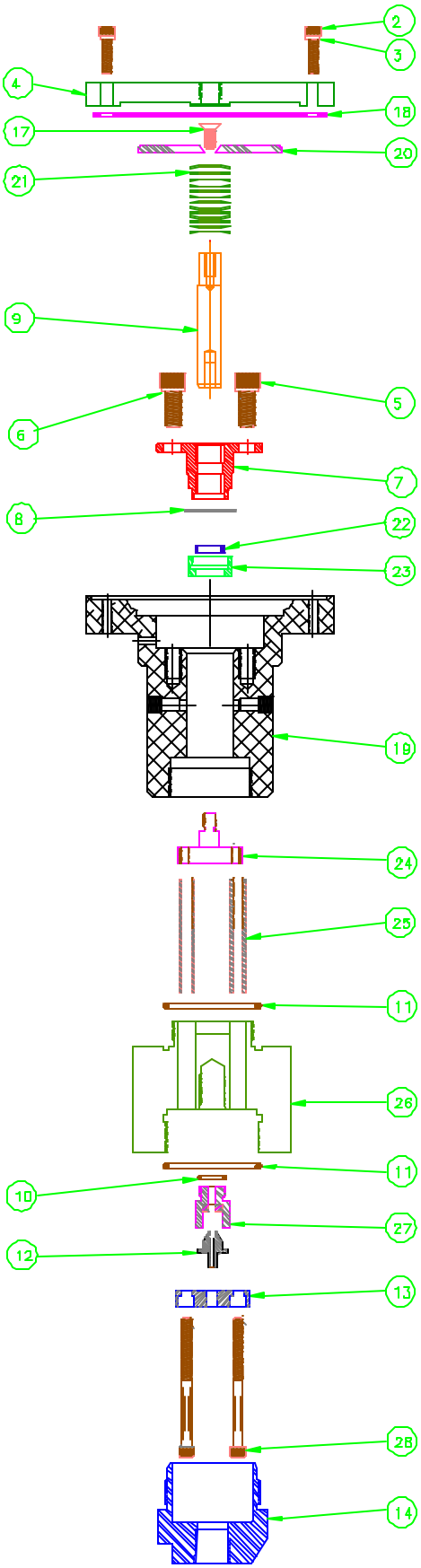
There are several different types of Material regulators.

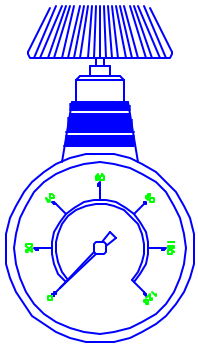
1. Non Temperature Conditioning
2. Temperature Conditioning the body is water jacketed
3. Standard flow and reverse porting regulators used to mirror dispense paths on robots.
4. Low Flow 9/32 orifice: Medium Flow 5/16 orifice: High Flow 3/8 orifice.
5. The Medium flow regular is offered in a abrasive resistant version.
6. A manual Air regulator can be added to control the material flow
7. A Proportional regulator can be added to control the flow.

Use the chart to find the correct style regulator.

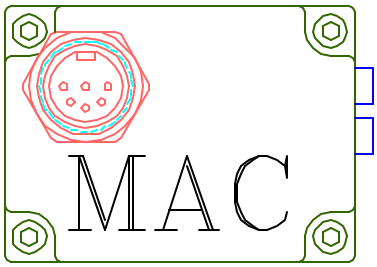


LOW FLOW MASTIC REG. No.	15 GAUGE 0–160 PSI	1 REGULATOR 0–160 PSI	12 POPPET 9/32	27 SEAT	26 BODY	32 PROP. VALVE	4 COVER PLATE	27 SEAT
300-911A0	–	–	402-515	402-513	4D2-524	–	402-330	
300-911A0J	–	–	402-515	402-513	4D2-990 WATER JACKETED	–	402-330	
300L911A0J	–	–	402-515	402-513	402-990-0P WATER JACKETED	–	402-330	
300-911AS	350-053	361-821	402-515	402-513	4D2-524	–	402-330	300-911ARK
300-911ASJ	350-053	361-821	402-515	402-513	4D2-990 WATER JACKETED	–	402-330	
300L911ASJ	350-053	361-821	402-515	402-513	402-990-0P WATER JACKETED	–	402-330	
300-911AMJ	361-708	–	402-515	402-513	4D2-990 WATER JACKETED	363-124	402-330A	
300L911AMJ	361-708	–	402-515	402-513	402-990-0P WATER JACKETED	363-124	402-330A	
MED. FLOW MASTIC REG. No.			POPPET 5/16					
300-911B0	–	–	402-991	402-992	4D2-524	–	402-330	
300-911B0J	–	–	402-991	402-992	4D2-990 WATER JACKETED	–	402-330	
300L911B0J	–	–	402-991	402-992	402-990-0P WATER JACKETED	–	402-330	
300-911BS	350-053	361-821	402-991	402-992	4D2-524	–	402-330	300-911BRK
300-911BSJ	350-053	361-821	402-991	402-992	4D2-990 WATER JACKETED	–	402-330	
300L911BSJ	350-053	361-821	402-991	402-992	402-990-0P WATER JACKETED	–	402-330	
300-911BMJ	361-708	–	402-991	402-992	4D2-990 WATER JACKETED	363-124	402-330A	
300L911BMJ	361-708	–	402-991	402-992	402-990-0P WATER JACKETED	363-124	402-330A	
300A911B0	–	–	403-071	402-992	4D2-524	–	402-330	300A911BRK
300A911BSJ	350-053	361-821	402-991	402-992	4D2-524	–	402-330	
HIGH FLOW MASTIC REG No.			POPPET 3/8					
300-911C0	–	–	402-993	402-994	4D2-524	–	402-330	
300-911C0J	–	–	402-993	402-994	4D2-990 WATER JACKETED	–	402-330	
300L911C0J	–	–	402-993	402-994	402-990-0P WATER JACKETED	–	402-330	
300-911CS	350-053	361-821	402-993	402-994	4D2-524	–	402-330	300-911CRK
300-911CSJ	350-053	361-821	402-993	402-994	402-990 WATER JACKETED	–	402-330	
300L911CSJ	350-053	361-821	402-993	402-994	402-990-0P WATER JACKETED	–	402-330	
300-911CMJ	361-708	–	402-993	402-994	4D2-990 WATER JACKETED	363-124	402-330A	
300-911CMJ	361-708	–	402-993	4D2-994	402-990-0P WATER JACKETED	363-124	402-330A	

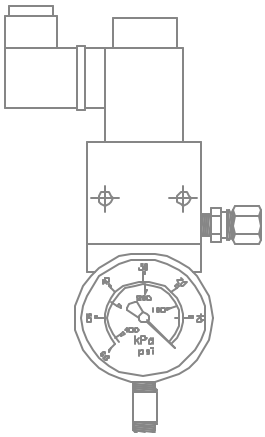




MANUAL
REGULATOR
361-821
GAUGE NO. 350-053



MAC PROPORTIONAL
VALVE OPTION
363-124
GAUGE NO. 361-821



HERION PROPORTIONAL
VALVE (OLD STYLE)
361-983

DISASSEMBLING THE MATERIAL REGULATOR

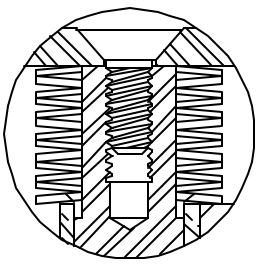
WARNING:
REMOVE MATERIAL PRESSURE FROM SYSTEM AND TURN OFF AIR BEFORE CONTINUING

1) Unscrew the Air Regulator.
2) Unscrew the eight Socket Screws (2) and Lock Washers (3) that hold the diaphragm cover (4).
3) Remove the Diaphragm Cover (4) and the two Diaphragms (18).
4) Unscrew the Flat Socket Screw (17) that holds on the Diaphragm Plate (20).
5) Remove the Diaphragm Plate (20) and the thirteen Belleville Washers (21).
6) Unscrew the four Socket Screws (5) and Lock Washers (6) that hold the Retainer (7).
7) Remove the Retainer (7) and the Housing (19) can be unscrewed from the Jacketed body (26).
8) Unscrew the Shaft (9) from the Lower Plate (24).
9) Unscrew the End Cap (14) from the Jacketed Body (26).
10) Unscrew the two Socket Screws (28) that hold the Upper Plate (13).
    a) Remove the Upper Plate (13), the Poppet Valve (12) and both Spacers (25).
11) The Valve Seat (27) can be removed with a ¾" socket
    a) The "C" size valve seat requires a 7/8 six-point socket.
12) Remove the Seal and O-rings from the body and discard.

ASSEMBLING THE MATERIAL REGULATOR

ASSEMBLING THE MATERIAL SECTION – INSPECT AND CLEAN ALL PARTS CAREFULLY AND REPLACE IF NECESSARY – LUBRICATE ALL SEALS AND O-RINGS

1) Install the O-ring (10) on the Valve Seat (27) and thread it into the Body (26) and tighten (20 Ft/Lbs.).
2) Install the two Socket Screws (28) into the Upper Plate (13).
    a) Slide the Spacers (25) over the Socket Screws (28).
    b) Install the Poppet Valve (12) ¼" guide into the Upper Plate (13).
    c) Push the above assembly into the Body (26) until the Poppet Valve and Seat are mated.
    d) Hold the Lower Plate (24) against the Socket Screws (28) and tighten to 10 Ft/Lbs.
3) Install the O-ring (12) into both ends of the Body (26).
4) Thread the End Cap (14) into the Body (26) and tighten to 30 Ft/Lbs.
5) Thread the Housing (19) onto the Body (26) and tighten to 40 Ft/Lbs.
6) Install the Seal (22) into the Retainer (7) Lip Facing Material.
    a) Thread the Collar (23) onto the Retainer (7) and tighten to 10 Ft/Lbs.
    b) Install the O-ring (8) on the Retainer (7) and lubricate.
7) Install the Retainer (7) into the Housing (19) and tighten the Socket Screws (5) and Lock Washers (6) to 30 Ft/Lbs.
8) Hold the Shaft (9) in the up position.
   Install the Thirteen Belleville Washers (21) onto the shaft.



    a) The Washers go in opposite directions. Start the first washer large diameter facing the Retainer (7).
9) Place the Diaphragm Plate (20) on the Shaft (9) and tighten the Flat Socket Screw (17).
10) Install the Piston Assembly (step 9) and push the Shaft (9) into the Retainer (7) and thread the Shaft (9) onto the Upper Plate (24) and tighten the Flat Socket Screw (17) to 12 Ft/Lbs.
11) Install the two Diaphragms (18) in the Housing (19) and align the holes.
12) Install the Cover (4) and thread the eight Socket Screws (2) and Lock Washers (3) to 10 Ft/Lbs.
13) Install the Air Regulator.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
No Material Output	Air Supply Turned Off	Turn the Air Supply on the system
	Material Ball Valves Closed	Open Ball Valves
	Insufficient Material Supply Pressure	Check the Supply Pumps for Correct Operation and Pressure
	Filter Plugged	Replace Filter Element
	Temperature Setting Incorrect	Set Temperature to the Correct Setting
	Mastic Regulator or Supply Hose Plugged	Replace Mastic Regulator or Supply Hose
	Air Diaphragm in Mastic Regulator Damaged	Replace Diaphragms
	Cured Material inside of the Mastic Regulator	Remove and Rebuild the Mastic Regulator
	Mechanical Bind in the Mastic Regulator	Remove and Rebuild the Mastic Regulator
Unable to Regulate Flow	Insufficient Air Supply to Mastic Regulator	Verify Air Supply for a Closed Ball Valve and Correct Hose Size
	Cured Material inside of the Mastic Regulator	Remove and Rebuild the Mastic Regulator
	Valve or Poppet Inside Mastic Regulator Damaged	Replace Valve and Poppet
	Mechanical Bind in the Mastic Regulator	Remove and Rebuild the Mastic Regulator
	Proportional Air Valve Operating Improperly	See Proportional Air valve or See Air Valve Controller Card
Material Leaking	From Vent Hole	Remove and Rebuild the Mastic Regulator
	From body to housing	Defective O-Ring Rebuild the Mastic Regulator