

In-line Flow Control Valves Series RFU - NPTF/INCH

Panel or wall-mounted flow controllers

In-line/Unidirectional, RFU

Ports M5 [10-32 UNF],

1/8", 1/4" NPTF

The unidirectional flow controllers are equipped with M5 [10-32 UNF], 1/8" and 1/4" ports, each of which is available with two different types of adjustment (see diagrams).

They are used mainly for controlling the speed of cylinders.

They may be mounted on control panels or cylinders, as required.



TECHNICAL SPECIFICATIONS

| | |
|-----------------------|--|
| Valve group | Unidirectional controller, [meter-in, meter-out] |
| Construction | In-Line Needle type |
| Mounting | Through holes in body, or control panel |
| Materials | Aluminum body, Brass needle, Buna-N seals |
| Port sizes | M5 [10-32 UNF], 1/8", 1/4", NPTF |
| Installation | As required |
| Operating temperature | 32° - 175° F, [dry air necessary down to -4° F] |
| Fluid | Filtered air |
| Lubricant | Oil compatible with Buna-N, [3° - 10° E] |

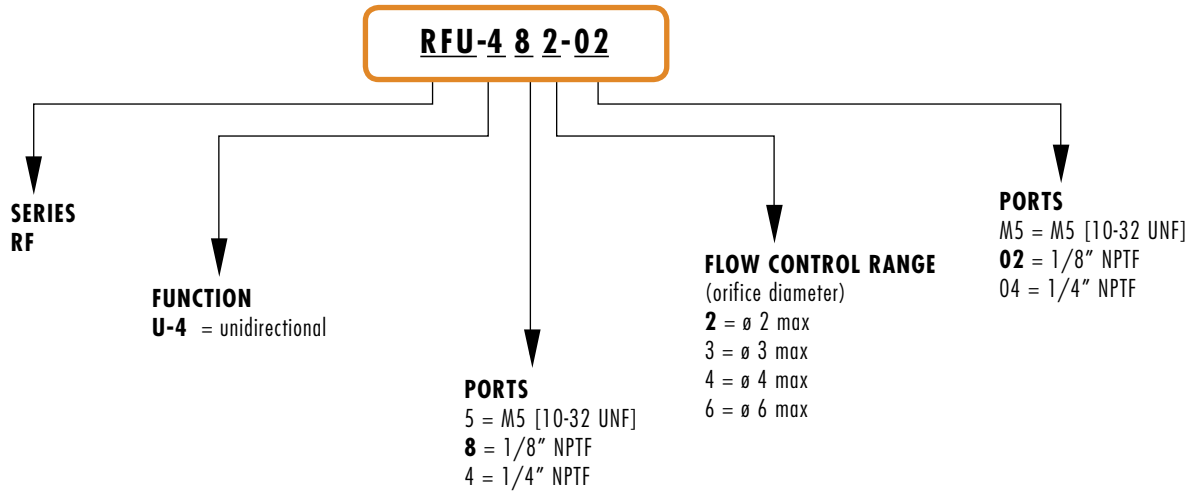
PNEUMATIC DATA

| | |
|---------------------------------|--------------------------------------|
| Operating pressure | 1.0 - 10 bar, [14.5 - 145 psi] |
| Nominal pressure | 6 bar, [87 psi] |
| Nominal flow | See graphs |
| Nominal diameter (Flow Orifice) | 1/8" = 2 mm [.079"], or 3 mm [.118"] |
| | 1/4" = 4 mm [.157"], or 6 mm [.236"] |

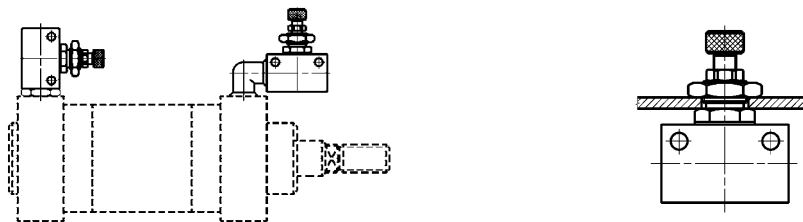
*Qn flowrate [SCFM] determined with a supply pressure of 6 bar, [87 psi], and with a pressure drop of 1 bar, [14.5 psi].

**Dimensions are in inches

CODING OF FLOW CONTROLLERS



EXAMPLES OF VALVE MOUNTING ASSEMBLY



UNIDIRECTIONAL FLOW CONTROLLERS

To ensure the right choice of 1/4" unidirectional flow controller Mod. RFU 444 or Mod. RFU 446, proceed as follows:
 calculate the quantity of air in NL/min. (see cylinder table),
 determine the stroke time of the cylinder;
 refer to the graph to see which controller is the right type. In the case of bidirectional regulators, refer to the graph and check whether the flow control range is suitable for the work required.

1/8" NPFT

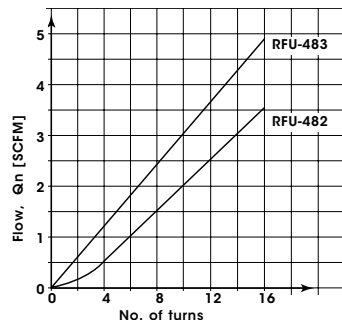
RFU 482-02
RFU 483-02

Mod. RFU 482 flow from B → A needle type
 OPEN = 149 NL/min [6.32 SCFM]
 CLOSED = 130.5 NL/min [4.61 SCFM]

Mod. RFU 482 flow from B → A needle type
 OPEN = 180 NL/min [6.36 SCFM]
 CLOSED = 140 NL/min [4.94 SCFM]

NB: Qn is determined with a pressure of 6 bar at the inlet and ΔP = 1 bar at the outlet.

N° = number of

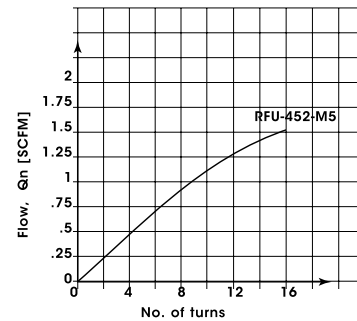


M5 [10-32 UNF]

RFU 452-M5

Mod. RFU-452 flow from B → A needle type
 OPEN = 55 NL/min [1.94 SCFM]
 CLOSED = 41 NL/min [1.45 SCFM]

NB: Qn is determined with a pressure of 6 bar at the inlet and ΔP=1 bar at the outlet.
 N° = number of screw turns



1/4" NPFT

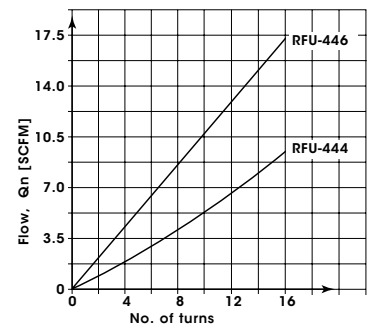
screw turns. **RFU 444-04**
RFU 446-04

Mod. RFU 444 flow from B → A needle type
 OPEN = 680 NL/min [24.01 SCFM]
 CLOSED = 534 NL/min [18.86 SCFM]

Mod. RFU 446 flow from B → A needle type
 OPEN = 680 NL/min [24.01 SCFM]
 CLOSED = 534 NL/min [18.86 SCFM]

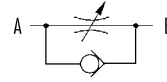
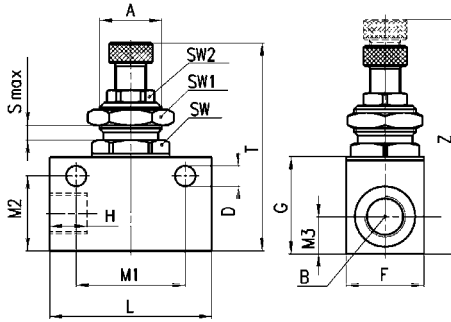
NB: Qn is determined with a pressure of 6 bar at the inlet and ΔP = 1 bar at the outlet.

N° = number of screw turns.



Unidirectional flow controller Series RFU

To regulate the speed of a cylinder, the air flow from the chamber which is being discharged must be regulated. For this reason, the unidirectional flow controller must be connected as follows: connect the threaded outlet marked A to the cylinder inlet and the threaded outlet marked B to the valve user port.



DIMENSIONS (in inches)

| Mod. | A | B | H | D | F | G | L | M1 | M2 | M3 | T | Z | SMax | SW | SW1 | SW2 |
|-------------------|---------------|-------------|------|------|------|-------|-------|-------|------|------|-------|-------|------|------|------|------|
| | METRIC | UNF | | | | | | | | | | | | | | |
| RFU 452-M5 | M10x1 | 10-32 | .256 | .165 | .551 | .630 | 1.02 | .728 | .520 | .280 | 1.54 | 1.750 | .118 | .472 | .551 | .315 |
| | | NPTF | | | | | | | | | | | | | | |
| RFU 482-02 | M12X1 | 1/8" | .354 | .177 | .629 | .826 | 1.338 | .964 | .649 | .315 | 1.811 | 2.007 | .157 | .551 | .669 | .354 |
| RFU 483-02 | M12X1 | 1/8" | .354 | .177 | .629 | .826 | 1.338 | .964 | .649 | .315 | 1.811 | 2.007 | .157 | .551 | .669 | .354 |
| RFU 444-04 | M20x1.5 | 1/4" | .492 | .255 | .984 | 1.181 | 2.047 | 1.377 | .944 | .472 | 2.362 | 2.716 | .275 | .866 | .944 | .551 |
| RFU 446-04 | M20x1.5 | 1/4" | .492 | .255 | .984 | 1.181 | 2.047 | 1.377 | .944 | .472 | 2.362 | 2.716 | .275 | .866 | .944 | .551 |