

Needle Metering Valve

On/Off and Shut-off Valves

DCATLABO12162XEN2

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Nominal Diameter

DN 2

Nominal Pressure PN

145 psig / 10.0 bar

Type of Construction

In-line

Control Range at 44 psig / 3.0 bar Inlet Pressure

0-20 l/min

Flow Capacity

$C_v = 0.024$

Operating Temperature

Needle Valve: 32°F to 158°F / 0°C to 70°C

Needle Metering Valve: 32°F to 86°F / 0°C to 30°C

Leak Rate

Needle Metering Valve: $<10^{-5}$

Needle Metering Valve with Flow Meter: $<10^{-4}$

MEDIA CONTACT MATERIAL

Body

Brass

Seat

Needle Metering Valve: Copper

Needle Metering Valve with Flow Meter: Silver

OTHER

Weight

Needle Metering Valve: 0.27 lbs / 0.12 kg

Needle Metering Valve with Flow Meter: 0.49 lbs / 0.22 kg



TESCOM Needle Metering Valves are used for point-of-use applications. In combination with low pressure reducers or as stand-alone versions they offer precise control of gas flows.

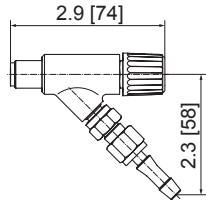
Applications

- Laboratory, R&D and analyzer applications
- Low pressure sampling valve applications

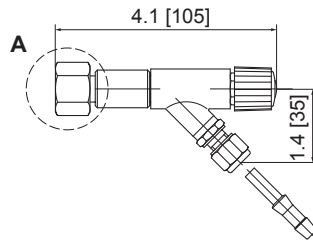
Features and Benefits

- Precise control of flows
- Available with a flow meter
- Linear flow characteristic
- Suitable for Oxygen and non-corrosive gases
- Suitable for gases up to 5.0 quality, except for ECD (Electronic Capture Detector) applications

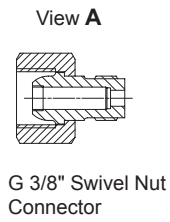
Needle Metering Valve Drawings



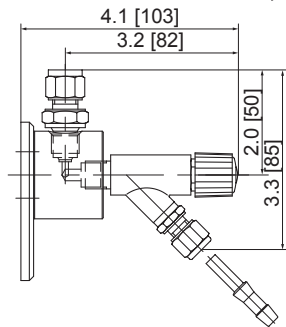
D41663
Needle Metering Valve
(G1/4" male)



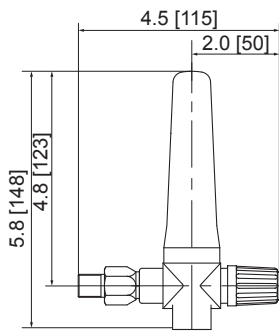
D43472
Needle Metering Valve
with Inlet Connector
(G 3/8" female Swivel Nut)



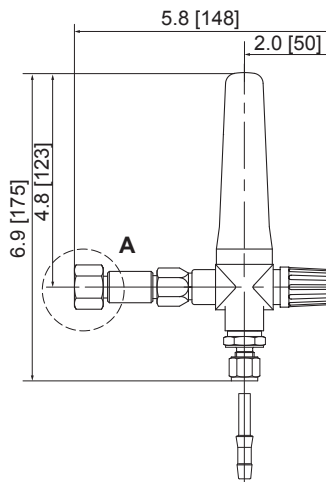
G 3/8" Swivel Nut
Connector



D43595
Needle Metering Valve
with Wall Mounting Plate



D45547
Needle Metering Valve
with Flow Meter

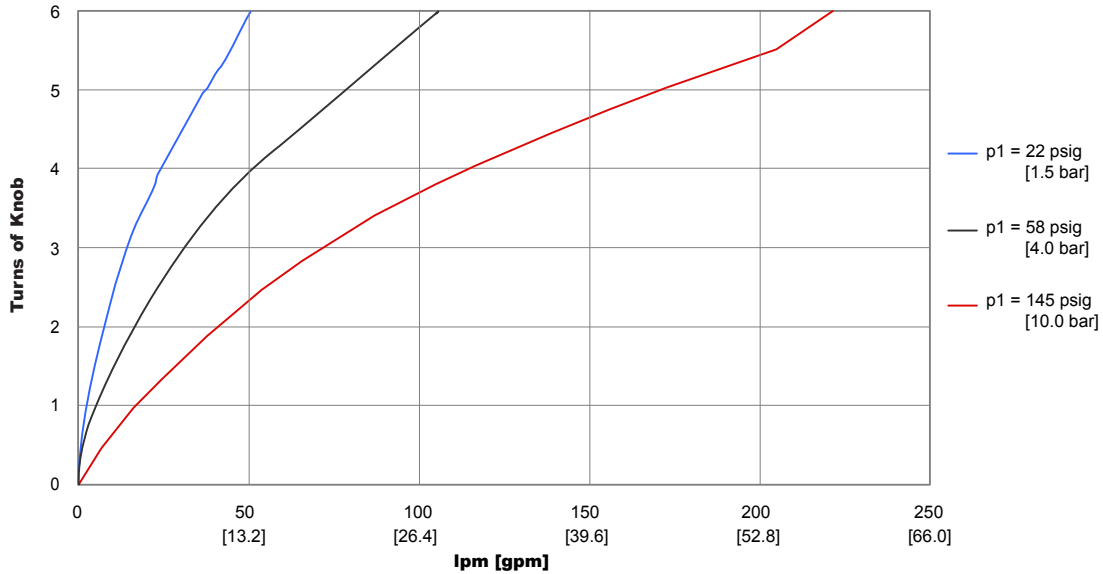


D45570
Needle Metering Valve
with Flow Meter and Inlet Connector

All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

Needle Metering Valve Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



Needle Metering Valve Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

D41663 - AO 03

BASIC SERIES	GAS	OUTLET PRESSURE CONNECTION
D41663 -	AO - Oxygen, all other non-corrosive gases Attention: For CO or test gases including CO, please use Stainless Steel Diaphragm Metering Valve	00 - Without 01 - Compression fitting 3 mm 02 - Compression fitting 1/8" 03 - Compression fitting 6 mm 05 - Compression fitting 6 mm with nozzle 6 mm 06 - Compression fitting 6 mm with nozzle 4 mm 07 - Compression fitting 1/8" with nozzle 1/8" 15 - Compression fitting 3 mm with nozzle 3 mm

Needle Metering Valve with Inlet G 3/8" Swivel Nut Connector - Part Number Selector

Example for selecting a part number:

D43472 - AO 05

BASIC SERIES	FLOW METER	OUTLET PRESSURE CONNECTOR
D43472 -	AO - Oxygen, all other non-corrosive gases Attention: For CO or test gases including CO, please use Stainless Steel Diaphragm Metering Valve	02 - Compression fitting 1/8" 05 - Compression fitting 6 mm with nozzle 6 mm

Needle Metering Valve with Wall Mounting Plate - Part Number Selector

Example for selecting a part number:

D43595 - AO 03 E

BASIC SERIES	GAS	OUTLET PRESSURE CONNECTION	INLET PRESSURE CONNECTOR
D43595 -	AO - Oxygen, all other non-corrosive gases Attention: For CO or test gases including CO, please use Stainless Steel Diaphragm Metering Valve	00 - Without (G 1/8" male) 02 - Compression fitting tube G 1/8" 02 - Compression fitting tube G 1/4" 05 - Compression fitting 6 mm with nozzle 6 mm	E - Without (G 1/4" female) F - Compression fitting 8 mm G - Compression fitting 10 mm

Needle Metering Valve with Flow Meter - Part Number Selector

Example for selecting a part number:

D45570	B	N
BASIC SERIES	FLOW METER	INLET PRESSURE CONNECTION
D45570 – Outlet – Compression fitting 6 mm with nozzle 6 mm	A – Size I (0.06 - 1 l/min) B – Size II (0.5 - 4 l/min) C – Size III (2 - 16 l/min) D – Size IV (4 - 32 l/min)	None – G 3/8" female swivel nut connector N – 1/4" NPTF female

Needle Metering Valve Nickel-plated and Flow Meter - Part Number Selector

Example for selecting a part number:

D45547	52	C	V
BASIC SERIES	GAS	OUTLET PRESSURE CONNECTION	SURFACE
D45547 – Can be used with wall bracket (See "Accessories for Wall Mounting") Outlet – G 3/8" female calibrated for AIR	52 – Adapter G 1/4" male	A – Size I (0.06 - 1 l/min) B – Size II (0.5 - 4 l/min) C – Size III (2 - 16 l/min) D – Size IV (4 - 32 l/min)	V – Chemically Nickel-Plated

Accessories for Wall Mounting

PART NUMBER	DESCRIPTION
D43342	Wall mounting bracket
D43371	Kit countersunk screws + dowels for wall plate
D42663-00-X	Wall plate, Brass
D42663-22-X	Wall plate, Stainless Steel
V09166	Wall plate cover
D42572	Gas label



WARNING! Do not attempt to select, install, use or maintain this product until you have read and fully understood the *TESCOM Safety, Installation and Operation Precautions*.