

### Specifications

For other materials or modifications, please consult TESCO. M.

#### OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

<b>Nominal Diameter</b>	DN 2
<b>Nominal Pressure PN</b>	145 psig / 10.0 bar
<b>Type of Construction</b>	In-line
<b>Control Range at 44 psig / 3.0 bar Inlet Pressure</b>	0-20 l/min
<b>Flow Capacity</b>	$C_v = 0.024$
<b>Operating Temperature</b>	<b>Needle Valve:</b> 32°F to 158°F / 0°C to 70°C <b>Needle Metering Valve:</b> 32°F to 86°F / 0°C to 30°C
<b>Leak Rate</b>	<b>Needle Metering Valve:</b> $<10^{-5}$ <b>Needle Metering Valve with Flow Meter:</b> $<10^{-4}$

#### MEDIA CONTACT MATERIAL

<b>Body</b>	Brass
<b>Seat</b>	<b>Needle Metering Valve:</b> Copper <b>Needle Metering Valve with Flow Meter:</b> Silver

#### OTHER

<b>Weight</b>	<b>Needle Metering Valve:</b> 0.27 lbs / 0.12 kg <b>Needle Metering Valve with Flow Meter:</b> 0.49 lbs / 0.22 kg
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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

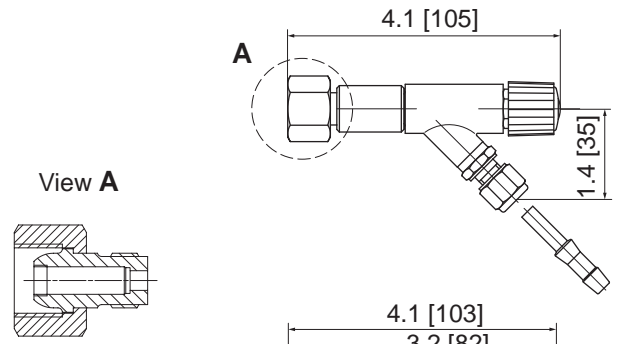
- Laboratory, R&D and analyzer applications
- Low pressure sampling valve applications

### 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

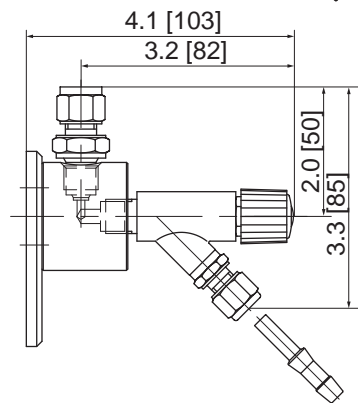
# NEEDLE METERING VALVE

## Needle Metering Valve Drawings

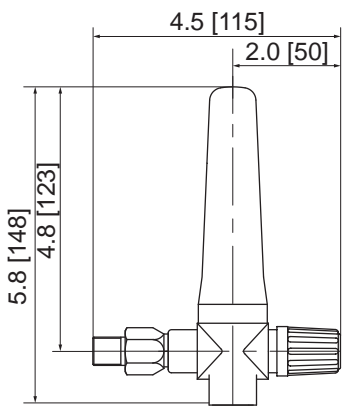


D43472  
Needle Metering Valve  
with Inlet Connector  
(G 3/8" female Swivel Nut)

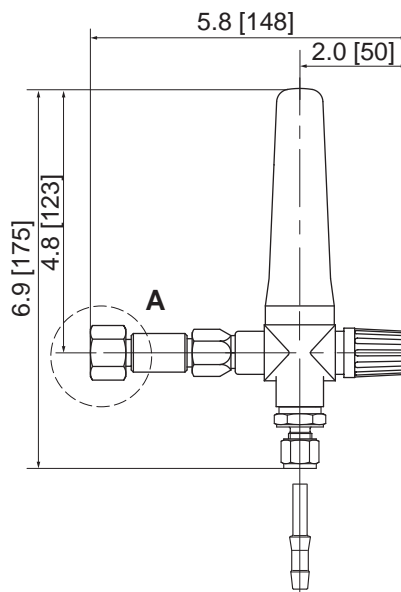
G 3/8" Swivel Nut  
Connector



D43595  
Needle Metering Valve  
with Wall Mounting Plate



D45547  
Needle Metering Valve  
with Flow Meter

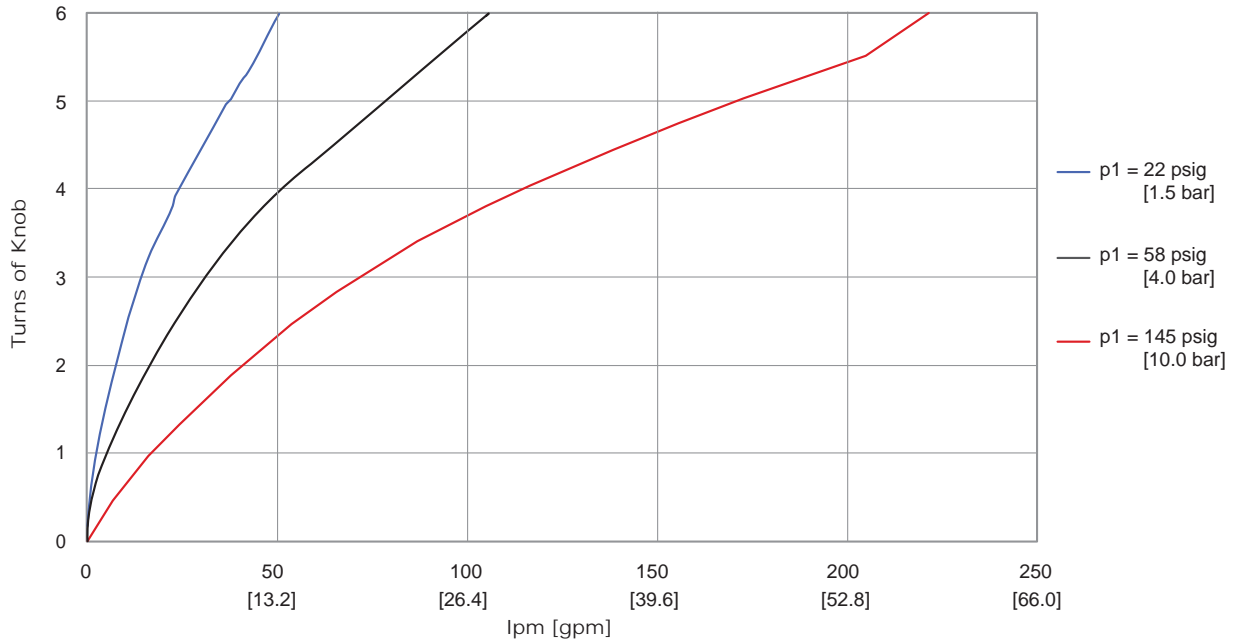


D45570  
Needle Metering Valve  
with Flow Meter and Inlet Connector

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](http://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.

## 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 <b>Attention: For CO or test gases including CO, please use Stainless Steel Diaphragm Metering Valve</b>	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 <b>Attention: For CO or test gases including CO, please use Stainless Steel Diaphragm Metering Valve</b>	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

## Needle Metering Valve with Flow Meter - Part Number Selector

Example for selecting a part number:

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

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

Example for selecting a part number:

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