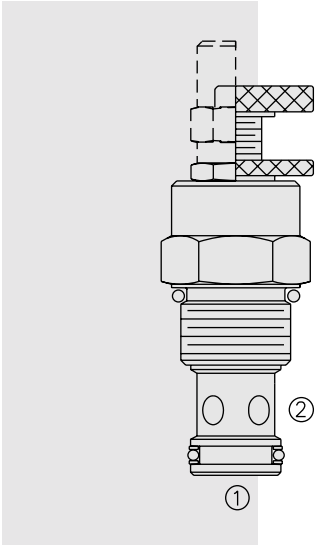


## NV12-20 Needle Valve



### DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve.

### OPERATION

The NV12-20 increases its orifice value from fully closed to fully open with counter-clockwise adjustment rotation.

### FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Cost effective cavity.
- Aluminum knob option.
- Positive shut-off.
- Linear adjustment.

### RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Flow:** 113.6 lpm (30 gpm) nominal at 7 bar (100 psi) at full open 4.5 turns

**Internal Leakage:** 0.15 cc/minute (3 drops/minute) max. at shut-off

**Adjustment Torque Required:** 0.17 Nm (1.5 lb.-in.) at 7 bar (100 psi);  
16.9 Nm (150 lb.-in.) at 207 bar (3000 psi)

**Temperature:** -40 to 120°C

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

**Installation:** No restrictions; See page 9.020.1

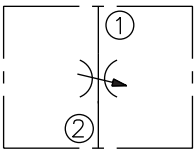
**Cavity:** VC12-2; See page 9.112.1

**Cavity Tool:** CT12-2XX; See page 8.600.1

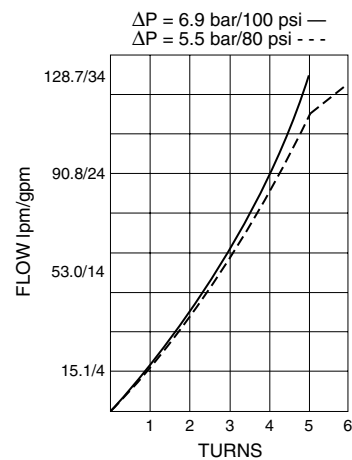
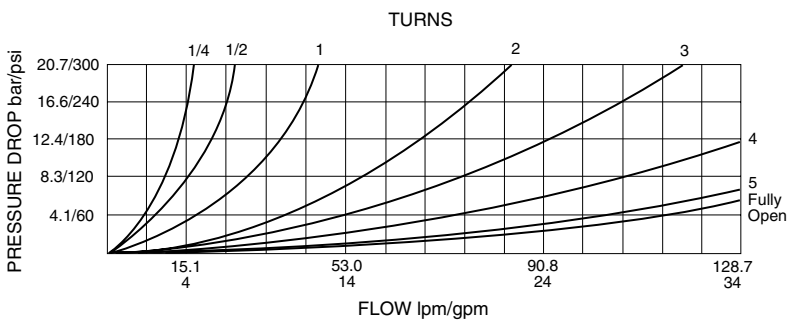
**Seal Kit:** SK12-2X-M; See page 8.650.1

### SYMBOLS

#### USASI/ISO:

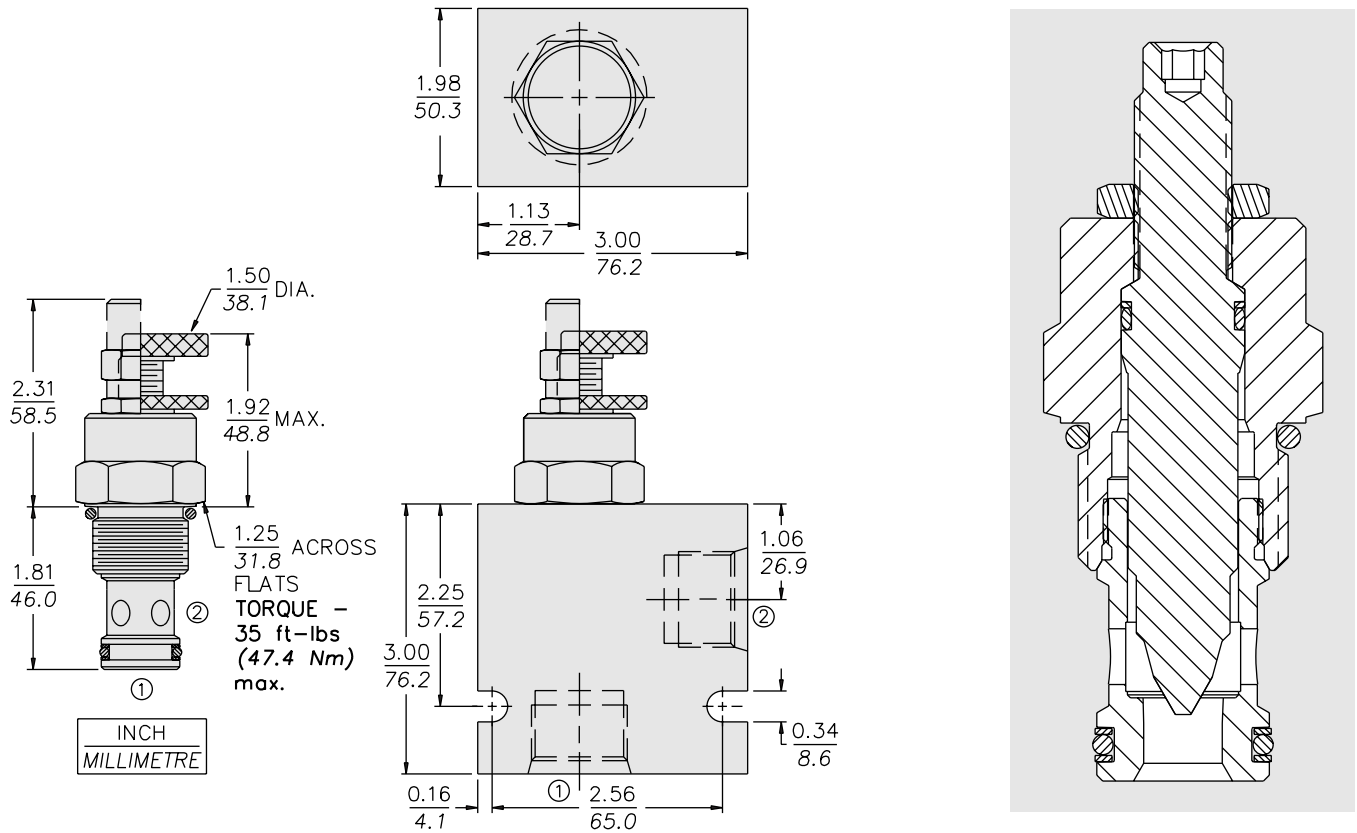


### PERFORMANCE (Cartridge Only)



# NV12-20

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.20 kg. (0.45 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard. Anodized aluminum knobs.

**Standard Ported Body:** Weight: 0.57 kg. (1.25 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); see page 8.012.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

## TO ORDER

### NV12-20

**Adjustment Option**

- 1/4 in. Hex Allen Head **A**
- 1-1/2 in. Dia. Alum. Knob **B**
- Option A with Cover Cap **C**
- Top Knob with Lock Nut **D**
- Top Knob Only **E**

**Seals**

- N** Buna N (Std.)
- V** Fluorocarbon

**Porting**

- 0** Cartridge Only
- 10T** SAE 10
- 12T** SAE 12
- 16T** SAE 16
- 4B** 1/2 in. BSP\*
- 6B** 3/4 in. BSP\*
- 8B** 1 in. BSP\*

\*BSP Body; U.K. Mfr. Only