

General Description

The FDC101 Series Flow Divider/Combiner Valves are used to proportion the flow from a single source into two actuators. In the reverse mode, it will take flow from two sources and combine it into one flow. When dividing or combining flow to synchronize two cylinders, please consider that the flow accuracy is $\pm 10\%$.

Operation

When flow enters the divider inlet port, it will pass through orifices in each of the interconnected spools. The flow passing through the orifices creates a pressure drop which pulls the two spools away from each other. The flow then passes to the two divider outlet ports. The division of this flow (50-50, 60-40, or 66-33) is determined by orifice sizes in the two spools.

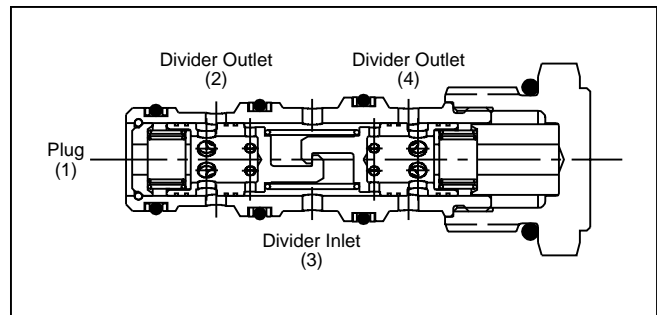
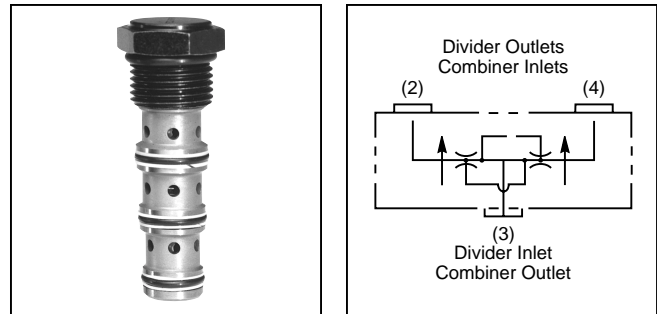
When flow is being combined, it enters the valve through the two combiner inlets (divider outlets). The pressure drop across the orifices pulls the two spools together. The combined flow then passes through the combiner outlet (divider inlet).

Features

- Hardened, precision ground parts for durability
- Cartridge design
- Ratios of 50-50, 60-40, & 66-33 available

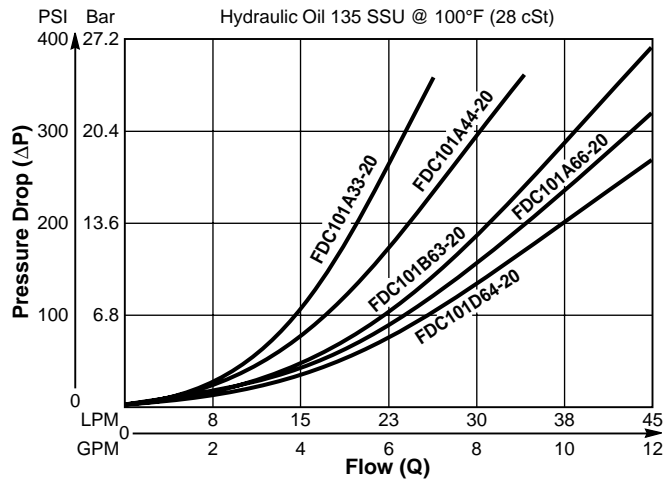
Specifications

Maximum Flow	45 LPM (12 GPM) See ordering information
Max. Operating Pressure	245 Bar (3500 PSI)
Accuracy	$\pm 10\%$
Operating Temp. Range (Ambient)	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Cartridge Material	All parts steel. All operating parts hardened steel.
Body Material	Steel or Aluminum
Filtration	ISO code 16/13, SAE Class 4 or better
Mounting	No Restrictions
Cavity	Common Cavity No. C10-4

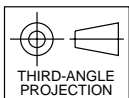
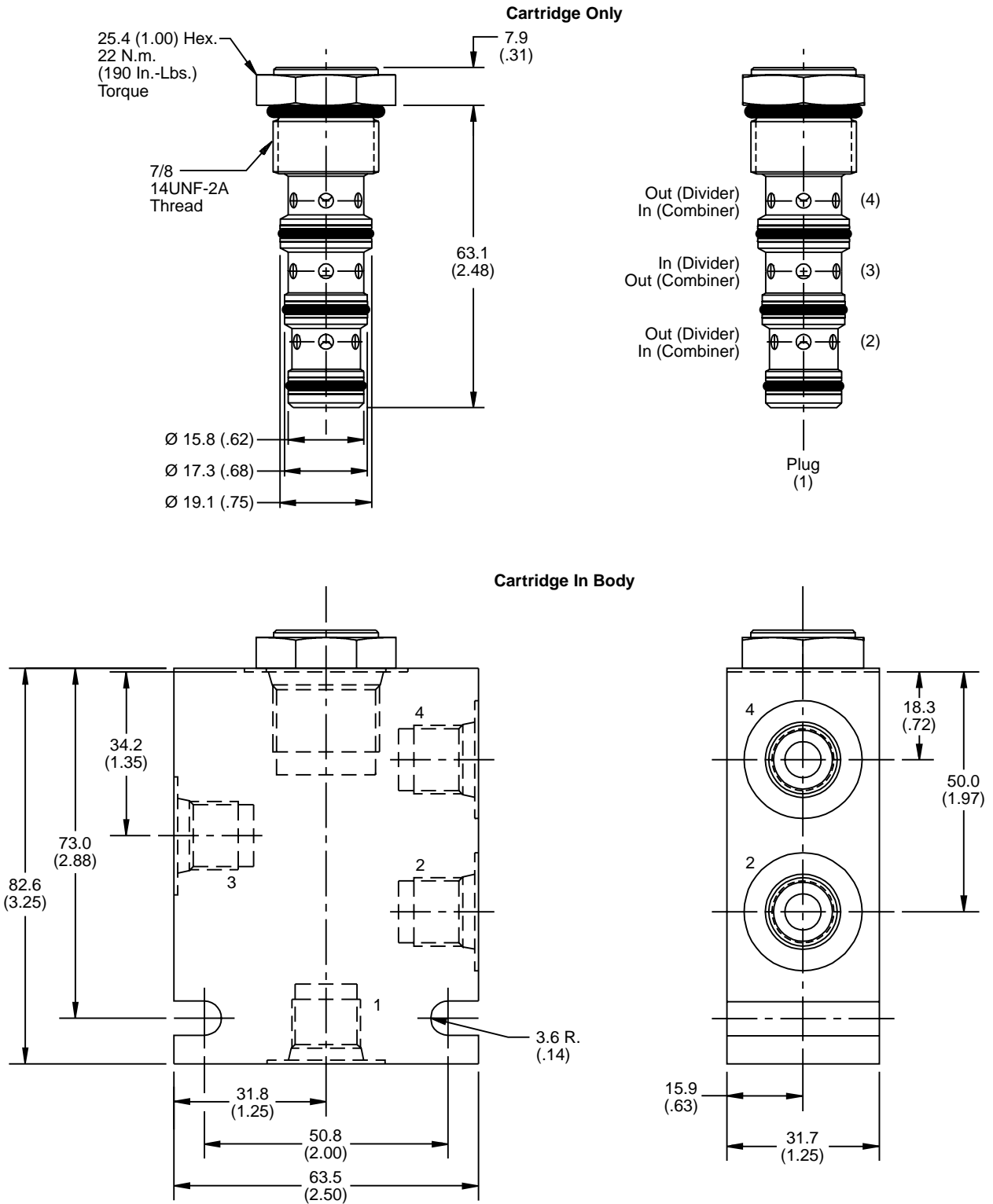


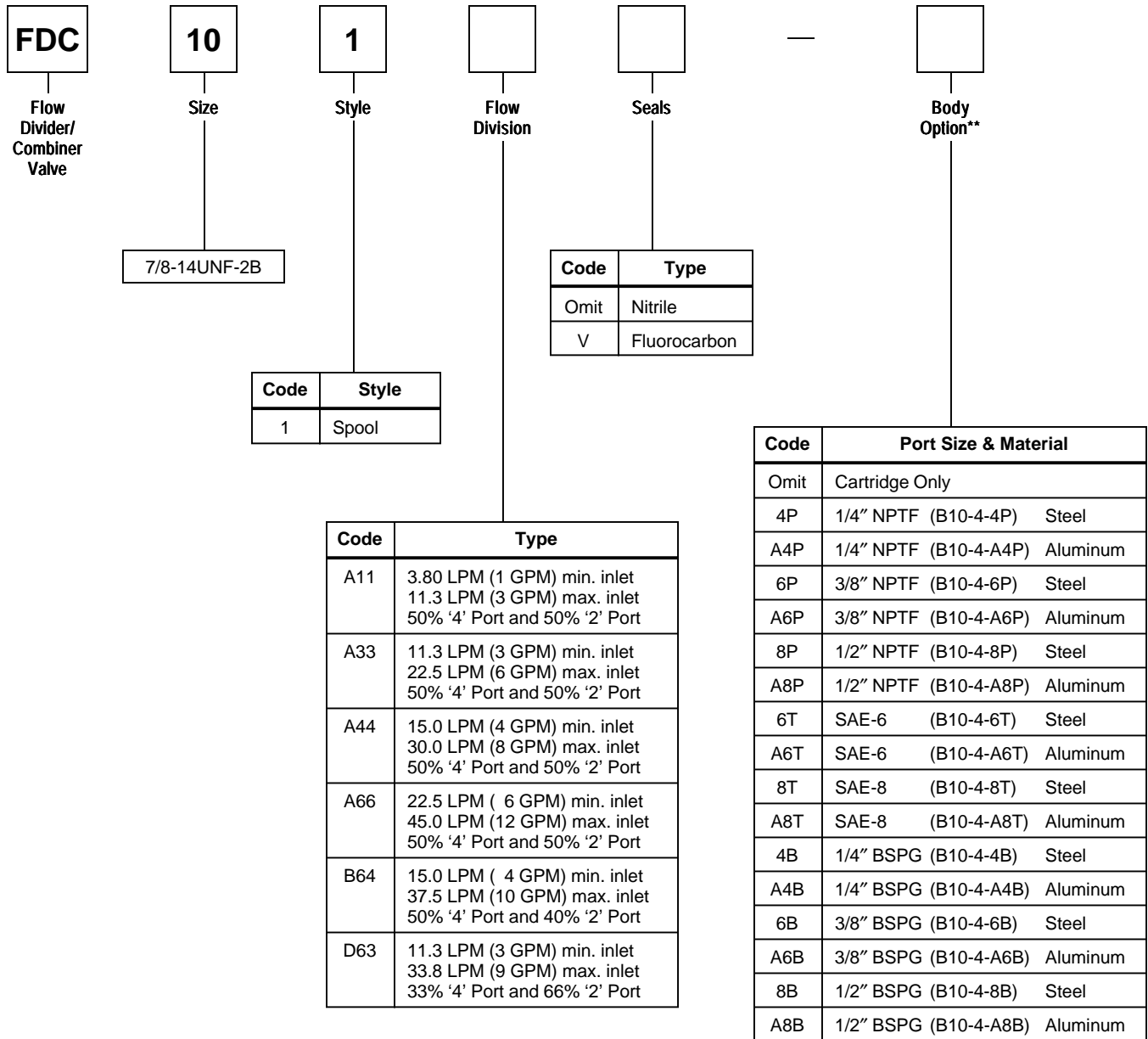
Performance Curve

Flow vs. Pressure Drop
 (Through cartridge only)



*Inch equivalents for millimeter dimensions are shown in (**)





SERVICE PARTS
Nitrile Seal Kit: SK10-4
Fluorocarbon Seal Kit: SK10-4V

Shipping Weight
 Cartridge Only .14 kg (0.3 lbs.)
 Cartridge in Body 1.1 kg (2.3 lbs.)

**The FDC101 cartridge has three ports. Due to its size, it requires a B10-4 series body. As a result, all cartridges in a body will be supplied with a plug located 180° from the cartridge cavity (port 1).

- B10-4-6T body — 6HP*50-S
- B10-4-8T body — 8HP*50-S
- B10-4-4P body — 102 x 4
- B10-4-6P body — 102 x 6
- B10-4-8P body — 102 x 8

When machining a manifold using the FDC101, use C10-4 cavity. Do not machine a port that directs flow to the nose of the cavity.