

<b>CV</b>	
<b>Check Valves</b>	
<b>SH</b>	
<b>Shuttle Valves</b>	
<b>LM</b>	<b>Load/Motor Controls</b>
<b>FC</b>	<b>Flow Controls</b>
<b>PC</b>	<b>Pressure Controls</b>
<b>LE</b>	<b>Logic Elements</b>
<b>DC</b>	<b>Directional Controls</b>
<b>MV</b>	<b>Manual Valves</b>
<b>SV</b>	<b>Solenoid Valves</b>
<b>PV</b>	<b>Proportional Valves</b>
<b>CE</b>	<b>Electronics</b>
<b>BC</b>	<b>Coils &amp; Bodies &amp; Cavities</b>
<b>TD</b>	<b>Technical Data</b>

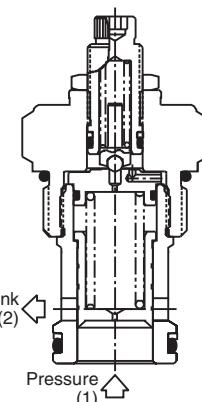
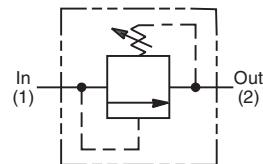
**Pilot Operated Relief Valve  
Series RAH161**

## General Description

Pilot Operated Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

## Features

- Low override curve
- Ball-type pilot for added stability
- High accuracy - pilot operated design
- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



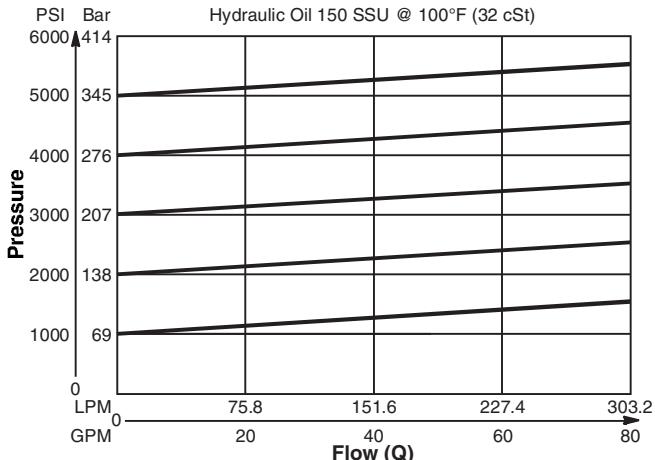
## Specifications

<b>Maximum Flow</b>	302.8 LPM (80 GPM)
<b>Maximum Inlet Pressure</b>	380 Bar (5500 PSI)
<b>Maximum Pressure Setting</b>	350 Bar (5000 PSI)
<b>Maximum Tank Pressure</b>	350 Bar (5000 PSI)
<b>Reseat Pressure</b>	80% of crack pressure
<b>Leakage at 150 SSU (32 cSt)</b>	5 cc per 100 PSI (6.8 Bar) setting
<b>Cartridge Material</b>	All parts steel. All operating parts hardened steel.
<b>Operating Temp. Range (Ambient)</b>	-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)
<b>Fluid Compatibility/Viscosity</b>	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
<b>Filtration</b>	ISO Code 16/13, SAE Class 4 or better
<b>Approx. Weight</b>	0.9 kg (2.0 lbs.)
<b>Cavity</b>	C16-2 (See BC Section for more details)
<b>Form Tool</b>	Rougher      None Finisher      NFT16-2F

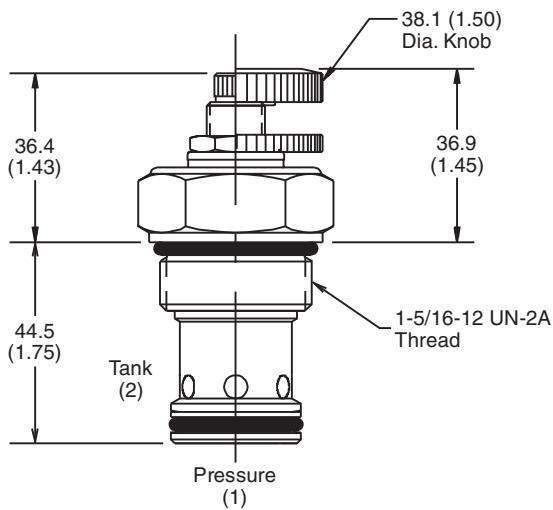
## Performance Curve

### Flow vs. Inlet Pressure

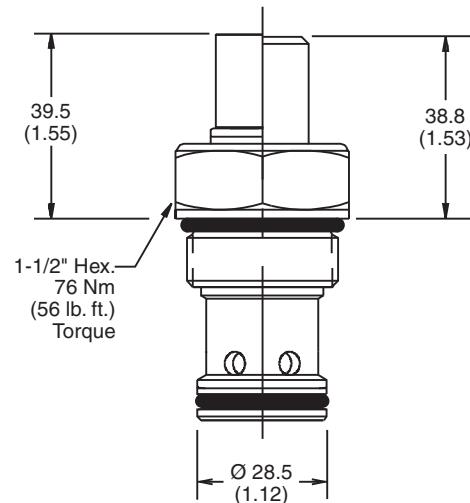
(Pressure rise through cartridge only)



**Dimensions** Millimeters (Inches)



Screw/Knob Version



Fixed Cap/Tamper Resistant Version

**CV**

Check  
Valves

**SH**

Shuttle  
Valves

**LM**

Load/Motor  
Controls

**FC**

Flow  
Controls

**PC**

Pressure  
Controls

**LE**

Logic  
Elements

**DC**

Directional  
Controls

**MV**

Manual  
Valves

**SV**

Solenoid  
Valves

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Proportional  
Valves

**CE**

Coils &  
Electronics

**BC**

Bodies &  
Cavities

**TD**

Technical  
Data

**Ordering Information**

<b>RAH161</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/>	<input type="checkbox"/>	
16 Size Pilot Operated Relief Valve	<input type="checkbox"/>	<input type="checkbox"/>	Seals	Optional Pressure Setting	Body Material

Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-15)
S	Screw Adjust
T	Tamper Resistant Cap (717785)

Code	Seals / Kit No.
Omit	Nitrile / (SK16-2)
V	Fluorocarbon / (SK16-2V)

Code	Body Material
Omit	Steel
A	Aluminum

Optional Pressure Setting		
Pressure ÷ 10		
i.e. 235 = 2350 PSI		
(Omit if standard setting is used)		
Setting Range:		
100 to 5000 PSI		
All settings at 37.5 LPM (10 GPM)		

Code	Port Size	Body Part No.
Omit	Cartridge Only	
12P	3/4" NPTF	(B16-2-*12P)
16P	1" NPTF	(B16-2-*16P)
8T	SAE-8	(B16-2-*8T)
12T	SAE-12	(B16-2-*12T)
16T	SAE-16	(B16-2-*16T)
12B	3/4" BSPG	(B16-2-12B)†
16B	1" BSPG	(B16-2-*16B)

\* Add "A" for aluminum, omit for steel.

† Steel body only.

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ 37.5 LPM (10 GPM)
20	13.8 - 138 Bar (200 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ 37.5 LPM (10 GPM)
30	20.7 - 207 Bar (300 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ 37.5 LPM (10 GPM)
50	34.5 - 345 Bar (500 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ 37.5 LPM (10 GPM)