

# Pressure Compensated Flow Control, SAE 20 / NG 16

$Q_{\max} = 60 \text{ gpm [230 l/min]}$ ,  $p_{\max} = 3000 \text{ psi [210 bar]}$   
direct acting, slide piston design, hydraulic operated  
Series PODS-20...



- Screw-in cartridge according to ISO 17209 – Common Cavity
- Compact construction
- For common cavities C2040 – 1 5/8-12 UN
- Reliable and high positive re-seat duration
- All external parts are zinc-plated for longer life
- All cartridges valves are 100% functionally tested

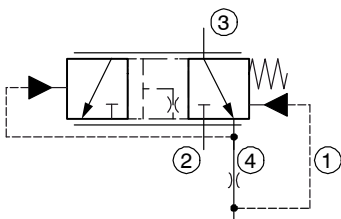
## 1 Description

Series PODS-20... pressure-compensated cartridges are size SAE 20 / NG 16, high performance screw-in cartridges with a 1 5/8-12 UN mounting thread.

This unit is a direct acting, screw in cartridge style, spool type, priority on demand pressure compensated flow control element. This unit is used to provide a load sense steering first with the priority flow when the steering demands the flow and the amount it requires before any other function in the system. When the steering or any other priority functions are satisfied, only then the excess flow is diverted to

the auxiliary port for other functions. When the steering wheel is turned, the flow from port 3 is distributed to the priority port 4 when the system calls for it. The remaining flow is available to the rest of the working hydraulic system thru the excess port 2. The distribution is controlled by the load sense signal to port 1 from the steering unit, so the flow to the steering unit is always determined by the actual steering rate. All external parts of the cartridge are zinc plated and are thus suitable for use in the harshest operating environments.

## 2 Symbol



PODS-20...

## 3 Technical data

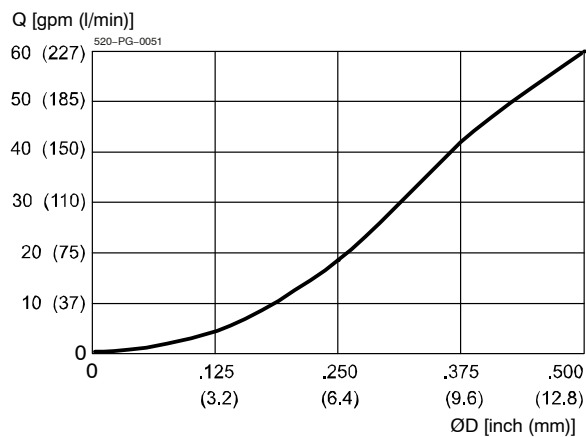
General characteristics	Description, value, unit
Designation	pressure-compensated flow control
Design	direct acting, slide piston design, hydraulic operated
Mounting method	screw-in cartridge 1 5/8-12 UN
Tightening torque	see chapter 5, dimensions & sectional view
Size	SAE 20 / NG 16 for cavity type C2040
Weight	3.10 lbs [1.41 kg]
Mounting attitude	unrestricted
Ambient temperature range	-40 °F...+248 °F [-40 °C...+120 °C]

Hydraulic characteristics	Description, value, unit	
Maximum operating pressure	3000 psi	[210 bar]
Maximum flow rate	60 gpm	[230 l/min]
Flow direction	see symbol	
Hydraulic fluid	HL and HLP mineral oil to DIN 51 524; for other fluids, please contact BUCHER	
Hydraulic fluid temperature range	-13 °F...+158 °F	[-25 °C...+70 °C]
Viscosity range	10...500 mm <sup>2</sup> /s (cSt), recommended 15...250 mm <sup>2</sup> /s (cSt)	
Minimum fluid cleanliness Cleanliness class to ISO 4406 : 1999	class 18/16/13	

## 4 Performance graphs

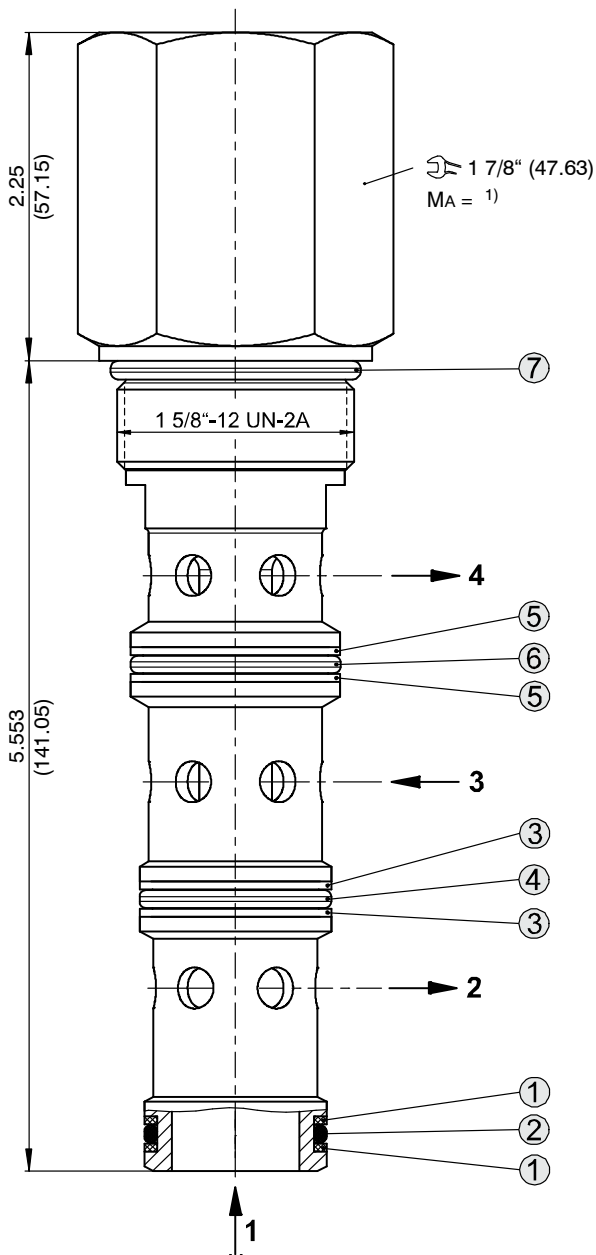
measured with oil viscosity 33 mm<sup>2</sup>/s (cSt)

Q = f (Ø) Flow - Equivalent throttle orifice dia characteristic  
flow 3 → 4 with 175 psi spring



## 5 Dimensions & sectional view

Dimensions in inches (millimeters)



Tightening torque  $M_A$  <sup>1)</sup>  $\pm 10\%$

Cavity type	C2040
When fitted in steel/aluminum	135 ft-lbs (183 [Nm])

## 6 Installation information



### ATTENTION!

Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.



### IMPORTANT!

When fitting the cartridges, use the specified tightening torque. No adjustments are necessary, since the cartridges are set in the factory.

Seal kit NBR no. SKN-2042 <sup>2)</sup>

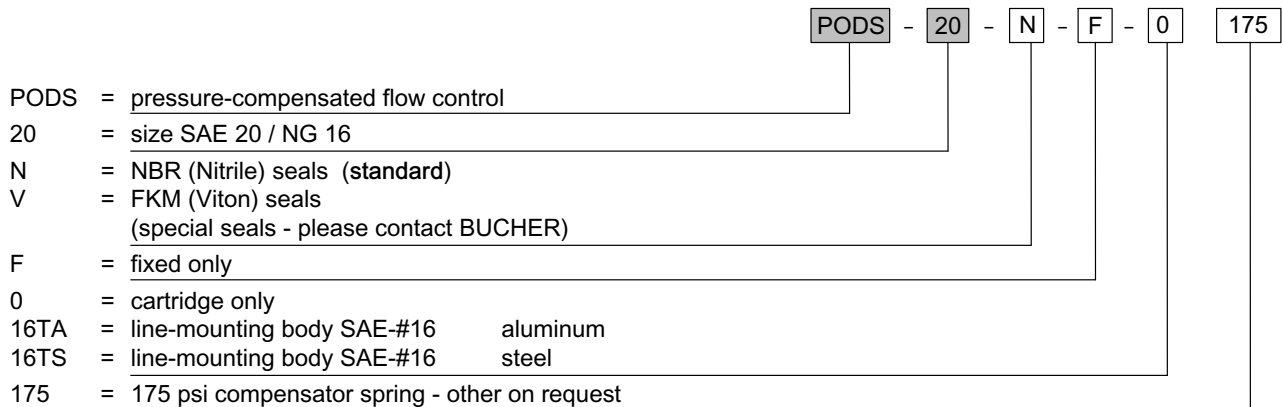
Item	Qty.	Description	
7	1	O-ring no. 920 $\varnothing$ 1.475 x 0.118 N90	Inch
6	2	O-ring no. 124 $\varnothing$ 1.237 x 0.103 N70	Inch
4	2	O-ring no. 122 $\varnothing$ 1.112 x 0.103 N70	Inch
2	2	O-ring no. 121 $\varnothing$ 1.049 x 0.103 N70	Inch
5	2	Backup ring no. 121	Inch
3	2	Backup ring no. 122	Inch
1	2	Backup ring no. 124	Inch



### IMPORTANT!

<sup>2)</sup> Seal kit with FKM (Viton) seals, no. SKV-2042

### 7 Ordering code



### 8 Related data sheets

Reference	(Old no.)	Description
520-P-000050		Form tools
520-P-000450		Cavity type C2040

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[www.bucherhydraulics.com/commoncavity](http://www.bucherhydraulics.com/commoncavity)

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Classification: 430.310.320.305.330.320