

Logic element, pressure compensator with dynamic load sense Common cavity, Size 12

VRLA-12A-D

04.84.10 - X - 57 - Z

RE 18321-83

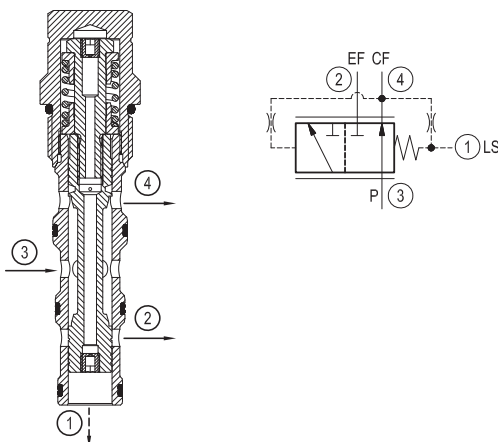
Edition: 02.2025

Replaces: 07.2017



Description

The valve delivers priority flow, from 0 to max. available, on demand to port 4, while compensating for load changes downstream. In neutral, all input flow at 3 is given to the priority port 4. Pressure at 4 is applied to the spool against a spring force so that increasing pressure causes increasing by-pass of input flow to port 2. Load sense pressure at port 1, obtained between the downstream control and the load, assists the spring, and moves the spool back toward supplying priority flow. Comparison between priority outlet and LS pressure seeks a constant differential pressure over the control valve. As load and flow control change, the priority flow is increased or decreased to satisfy the demand establishing that differential. An orifice connects the priority outlet port and the spring chamber, giving a small pressure assist to the spring, enhancing response time to provide priority flow in the event that load sense pressure momentarily drops.

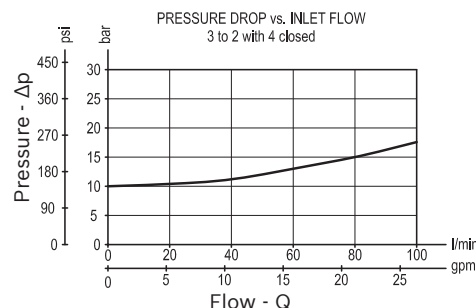
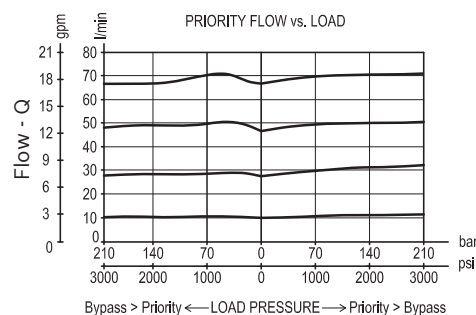


Technical data

Max. operating pressure	350 bar (5000 psi)
Max. inlet flow	100 l/min. (26 gpm)
Max. priority flow	80 l/min. (21 gpm)
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	81 - 95 Nm (60 - 70 ft-lbs)
Weight	0.32 kg (0.71 lbs)
MTTFD	150 years see RE 18350-51
Cavity	CA-12A-4N (see data sheet 18325-70)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit ¹⁾	Code: RG12A4080000100 material no: R930097139
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation	No restrictions
Other Technical Data	See data sheet 18350-50

¹⁾ Only external seals for 10 valves

Characteristic curve



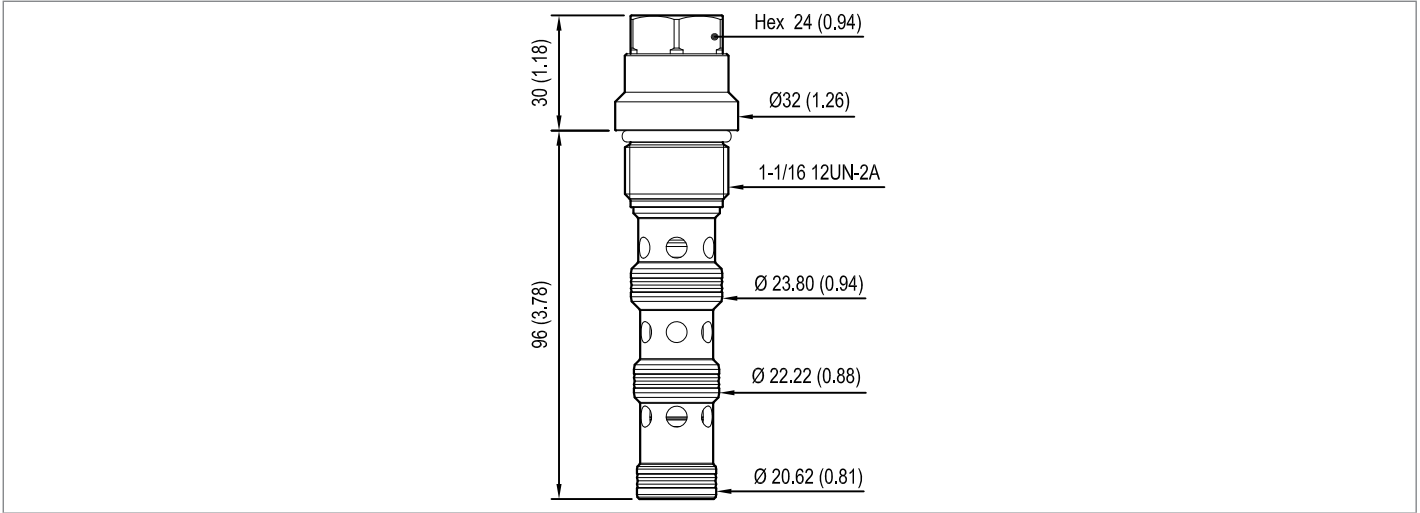
Ordering code

Ordering code		04.84.10	X	57	Z	00	*
Logic element, pressure compensator with dynamic load sense							Series 0/A to L unchanged performances and dimensions
							Version and options standard
LS orifice diameter mm (inches)							SPRINGS
05 0.5 (0.02)							Bias spring bar (psi)
07 0.7 (0.03)							
10 1.0 (0.04)							
						10	10 (145) ± 15%
57 Common cavity, Size 12							

Preferred types

Type	Material number	Type	Material number
048410055710000	R930001086		
048410075710000	R930001089		
048410105710000	R930001097		

Dimensions



Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-cv@boschrexroth.com
www.boschrexroth.com/compacthydraulics

© This document, as well as the data, specifications and other information set forth in it, are the exclusive property of Bosch Rexroth Oil Control S.p.a.. It may not be reproduced or given to third parties without its consent. The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging. Subject to change.