

Logic element, pressure compensator  
with dynamic load sense  
Common cavity, Size 20

VRLA-20A-D

04.84.10 - X - 58 - Z

**RE 18321-85**

Edition: 03.2016

Replaces: 10.2009

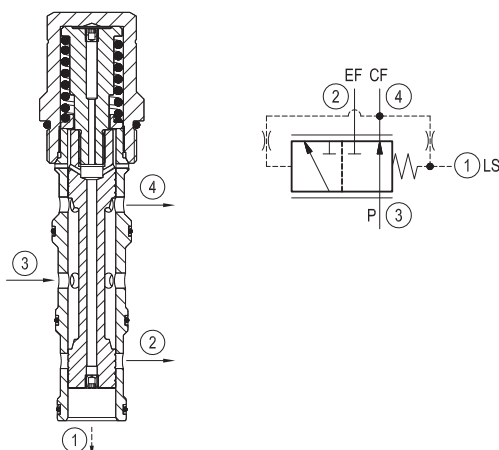


| Technical data                            |   |
|---|---|
| Max. operating pressure                   | 350 bar (5000 psi)  |
| Max. inlet flow                           | 230 l/min. (60 gpm)   |
| Max. priority flow                        | 170 l/min. (45 gpm)   |
| Fluid temperature range                   | -30 to 100 °C (-22 to 212 °F)   |
| Installation torque                       | 128 - 149 Nm (95 - 110 ft-lbs)  |
| Weight                                    | 1.1 kg (2.4 lbs)  |
| Cavity                                    | CA-20A-4N (see data sheet 18325-70)   |
| Lines bodies and standard assemblies      | Please refer to section "Hydraulic integrated circuit" or consult factory                                       |
| Seal kit <sup>1)</sup>                    | Code: RG20A4010530100<br>material no: R930001947  |
| Fluids                                    | Mineral-based or synthetics with lubricating properties<br>at viscosities of 10 to 500 mm <sup>2</sup> /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   |

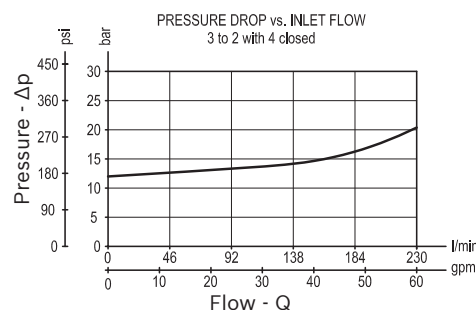
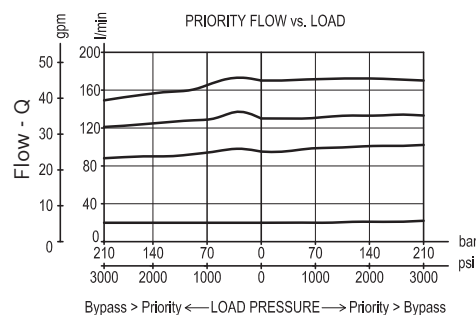
1) Only external seals for 10 valves

**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.



**Characteristic curve**



**Ordering code**

|                 |          |           |          |           |          |
|-----------------|----------|-----------|----------|-----------|----------|
| <b>04.84.10</b> | <b>X</b> | <b>58</b> | <b>Z</b> | <b>00</b> | <b>*</b> |
|-----------------|----------|-----------|----------|-----------|----------|

Logic element, pressure compensator with dynamic load sense

Series O/A to L unchanged performances and dimensions

Version and options standard

LS orifice diameter mm (inches)

|           |            |
|-----------|------------|
| <b>05</b> | 0.5 (0.02) |
| <b>08</b> | 0.8 (0.03) |
| <b>10</b> | 1.0 (0.04) |

|           |                       |
|-----------|-----------------------|
|           | SPRINGS               |
|           | Bias spring bar (psi) |
| <b>12</b> | 12 (175) ± 15%        |

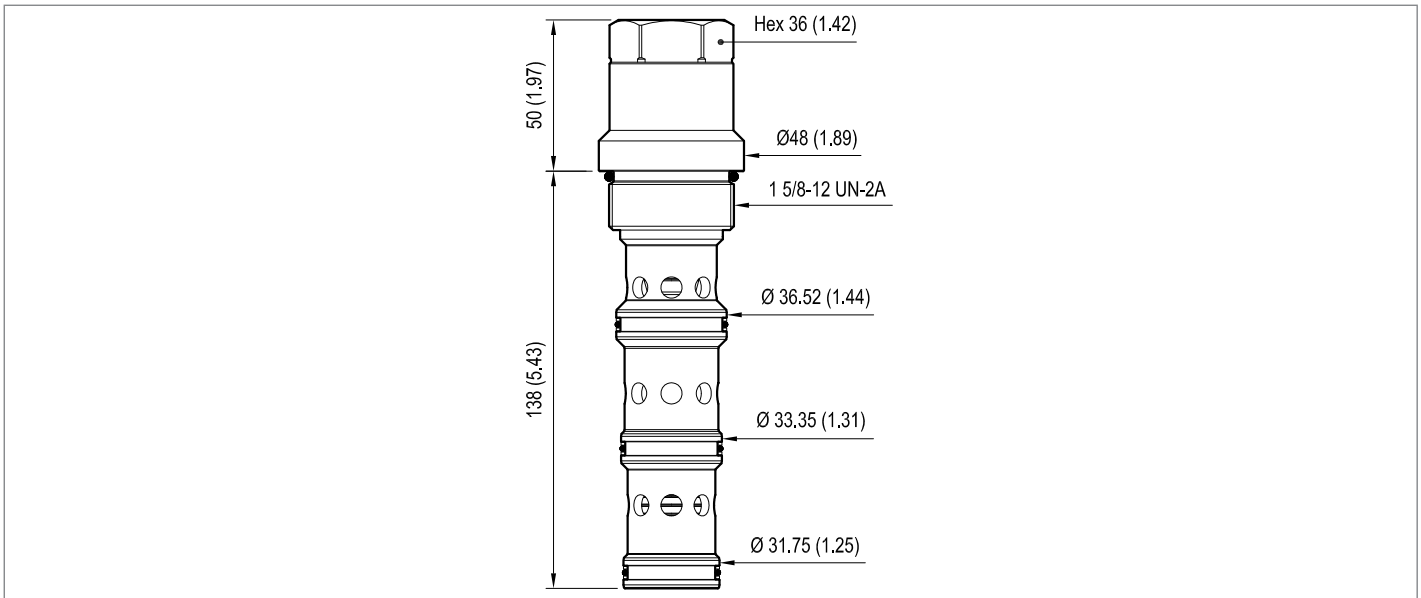
**58** Common cavity, Size 20

**Preferred types**

| Type            | Material number |
|-----------------|-----------------|
| 048410055812000 | R930001087      |
| 048410085812000 | R930001093      |
| 048410105812000 | R930001098      |

| Type | Material number |
|------|-----------------|
|      |                 |
|      |                 |
|      |                 |

**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.