
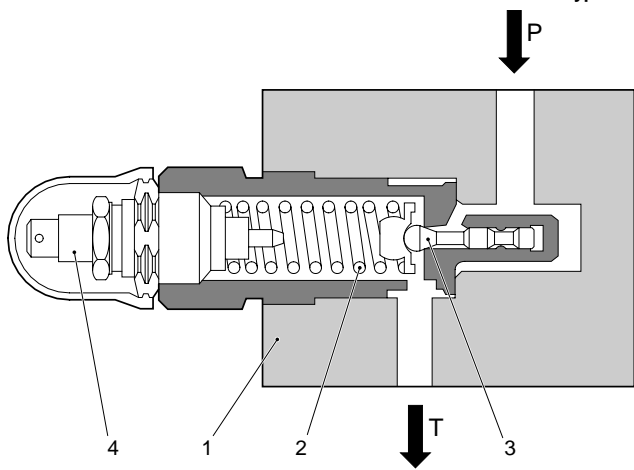


<p>Size 6 to 30 up to 630 bar up to 330 L/min</p>	<p>Pressure Relief Valve Direct Acting Type RD, Series 10</p>	<p>Data Sheet <a href="#">R-1001/10.98</a> GB</p>
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>◇ Quick response.</li> <li>◇ Cartridge type available.</li> <li>◇ Easily built into manifold.</li> <li>◇ Compact.</li> <li>◇ Seat type minimises internal leakage in comparison with a balanced type relief valve.</li> <li>◇ Includes chatter resistant mechanism to ensure stable operation.</li> </ul> <div style="text-align: right; margin-right: 50px;">  <p>Type RD</p> </div> <div style="text-align: center; margin-top: 20px;">  </div> <p><b>Functional Description</b></p> <p>Type RD Series 10 Pressure Relief Valves are direct operated, seat type, relief valves that are used to prevent sudden pressure increases, and to support the load within a hydraulic system.</p> <p>The valves primarily comprise a body (1), spring (2), poppet with damping spool (3) (pressure stages 25 to 400 bar), (or ball pressure stage 630 bar - size 10 only) and an adjustment element (4) that facilitates setting system pressures.</p> <p>The spring (2) pushes the poppet (3) onto the seat. The P channel is connected to the system. The pressure present in the system is applied to the poppet area (or ball).</p> <p>If the P channel pressure rises above the value set at the spring (2), the poppet or ball (3) will open against the spring (2). System pressure fluid now flows from channel P into channel T. The stroke of the poppet (3) is limited by a damping spool</p>		
<p>Model RD</p>	<p>Page 1.9</p>	<p>Data Sheet R-1001/10.98</p>



**Ordering Code – Pressure Relief Valve, Direct Operated**

RD 6 C 10 2 / 315 V

**Pressure Relief Valve,  
Direct Operated**

**Size**  
6, 8, 10, 15, 20, 25, 30

**Suitable Oil**  
No Code: Mineral Oil  
V: Phosphate Ester  
W: Fatty Acid Ester,  
Water Glycol

**Type of Mounting**  
P: Sub-plate Mounting  
G: Threaded Connection (BSP)  
C: Cartridge Type

Size	P	G	R	C
6	O	O	O	O
8	-	O	O	-
10	O	O	O	O
15	-	O	O	-
20	O	O	O	O
25	-	O	O	-
30	O	O	O	O

**Series Number**  
10

**Maximum Setting Pressure**

Code	Maximum Setting Pressure	Size						
		6	8	10	15	20	25	30
25	25 bar	O	O	O	O	O	O	O
50	50 bar	O	O	O	O	O	O	O
100	100 bar	O	O	O	O	O	O	O
200	200 bar	O	O	O	O	O	O	O
315	315 bar	O	O	O	O	O	-	-
400	400 bar	O	O	O	O	O	-	-
630	630 bar	-	O	O	-	-	-	-

**Adjusting Element**  
1: Rotary Knob  
2: Thread Pin with Hexagon and Protective Cap  
3: Lockable Rotary Knob



Model  
RD

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**Ordering Code – Pressure Relief Valve, Direct Operated for Vent Control**

**RDV 6 C 10 1 / 315 12 V**

**Pressure Relief Valve,  
Direct Operated for Vent  
Control**

**Size**  
6, 10

**Type of Mounting**  
P: Sub-plate Mounting  
G: Threaded Connection  
(BSP)  
C: Cartridge Type

**Series Number**  
10

**Adjusting Element**  
1: Rotary Knob  
2: Thread Pin with Hexagon and  
Protective Cap  
3: Lockable Rotary Knob

**Suitable Oil**  
No Code: Mineral Oil  
V: Phosphate Ester  
W: Fatty Acid Ester,  
Water Glycol

**Plug-in Throttle in the P Port**  
08: Ø0.8 mm  
10: Ø1.0 mm  
12: Ø1.2 mm  
15: Ø1.5 mm  
18: Ø1.8 mm

**Maximum Setting Pressure**  
25: 25 bar  
50: 50 bar  
100: 100 bar  
200: 200 bar  
315: 315 bar  
400: 400 bar



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RD

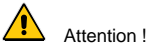
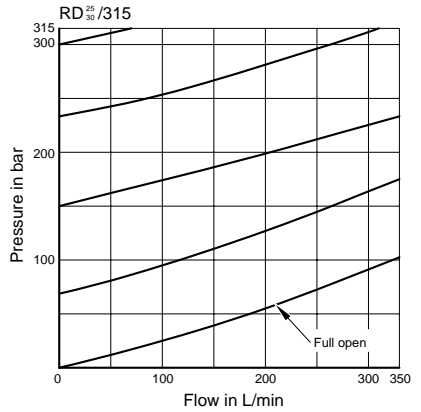
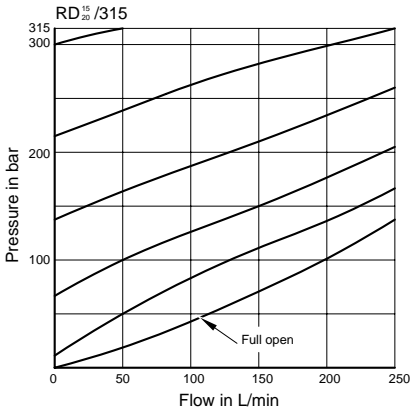
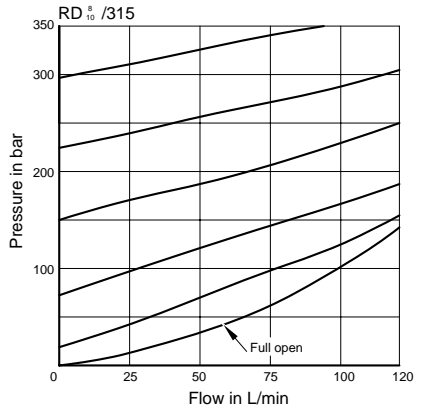
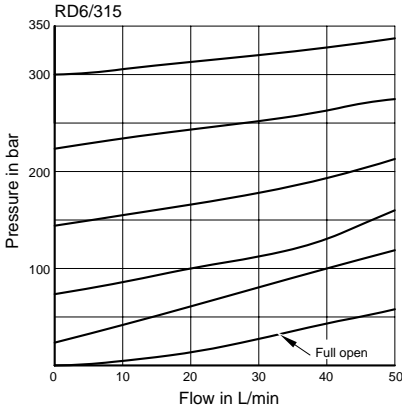
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**Characteristic Curves**

Measure at  $\nu = 36\text{cSt}$  and  $t = 50^\circ\text{C}$



The characteristic curves are valid for when the output pressure = zero over the complete flow range, and are measured without consideration of the housing pressure drop.

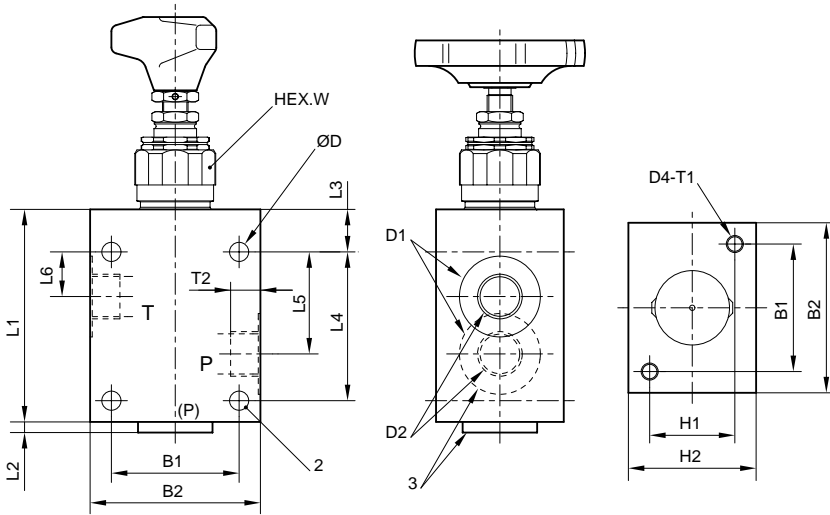


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**Unit Dimensions - Threaded Connections (dimensions in mm)**



**1. Adjustment Element 'S'**

- Grub screw for pressure setting and protective cap
- Internal hexagon (up to size 20)
- External hexagon (sizes 25, 30)

**2 Four Valve Fixing Holes**

**3 Connection Port P, optional (e.g. for pressure measuring) for dimensions see D2**

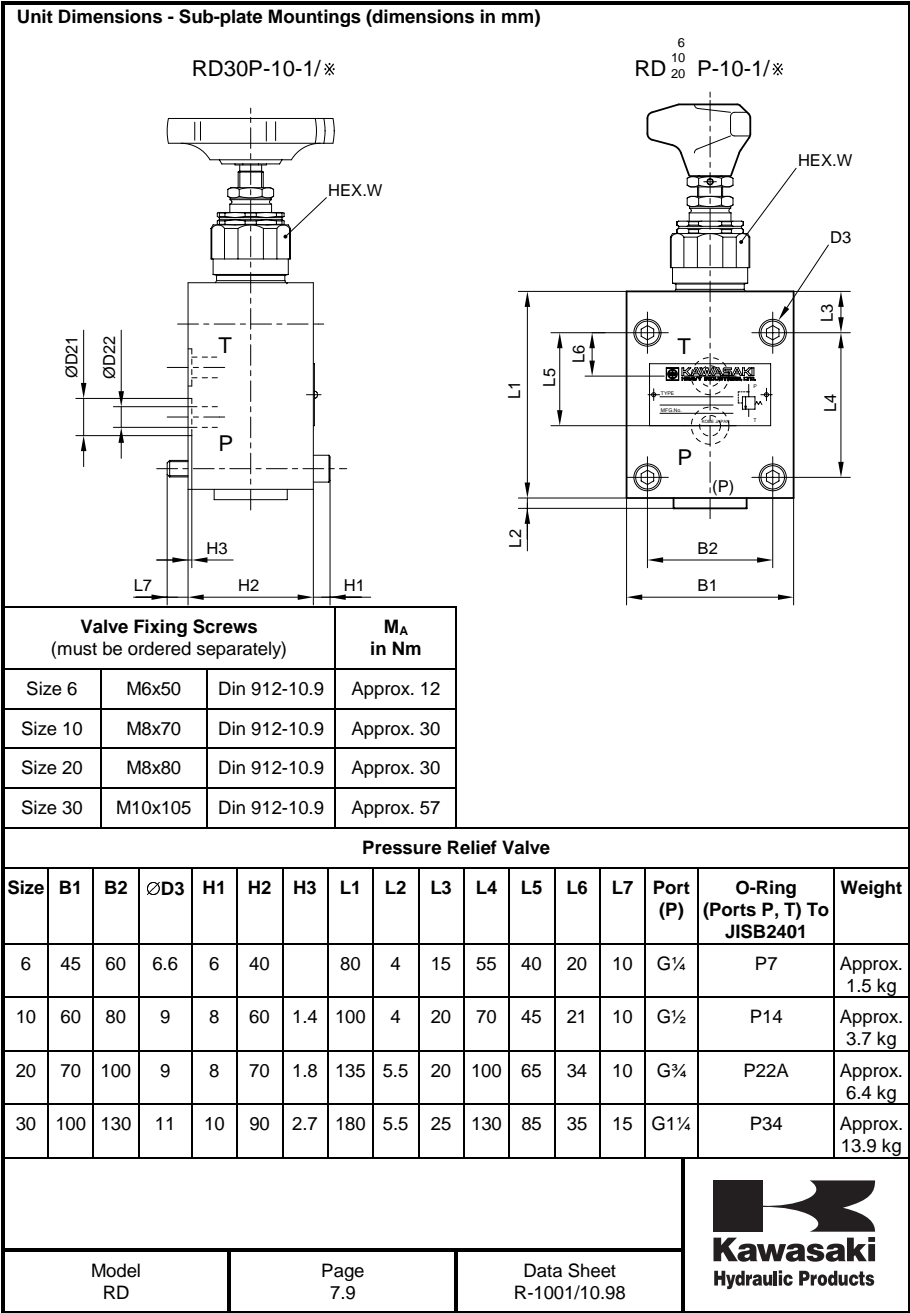
Size	B1	B2	ØD1	D2	ØD3	D4	H1	H2	L1	L2	L3	L4	L5	L6	T1	Weight
6	45	60	25	G ¼	6.6	M6	25	40	80	4	15	55	40	20	10	Approx. 1.5 kg
(8) + 10	60	80	(28) 34	(G 3/8) G ½	9	M8	40	60	100	4	20	70	49	21	20	Approx. 3.7 kg
(15) + 20	70	100	(42) 47	(G ¾) G1	9	M8	50	70	135	(4) 5.5	20	100	65	34	20	Approx. 6.4 kg
(25) + 30	100	130	(56) 61	(G1¼) G1½	11	M10	60	90	180	5.5	25	130	85	35	25	Approx. 13.9 kg



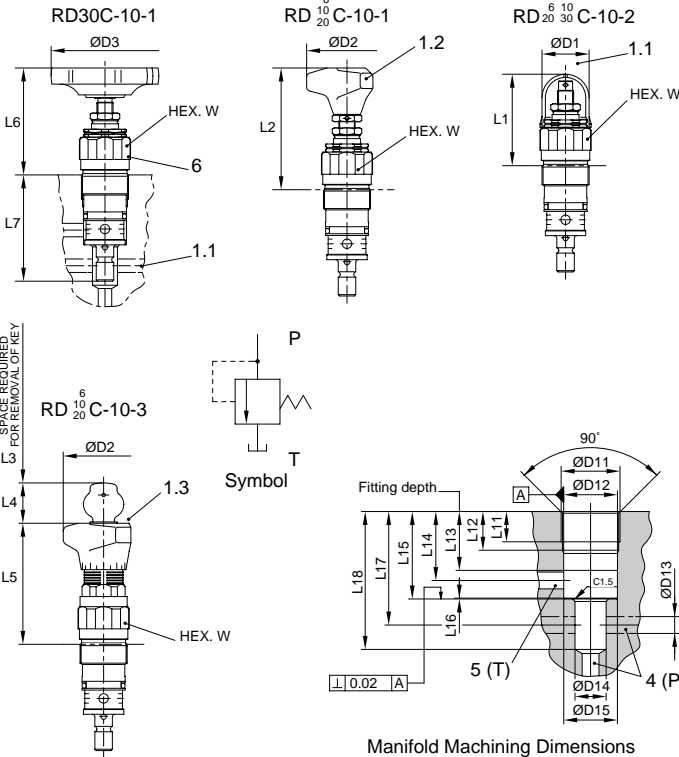
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**Unit Dimensions – Cartridge Valve (Cartridge) (dimensions in mm)**



Manifold Machining Dimensions

- 1.1 Adjustment Element '2'
  - Grub Screw for pressure setting and protective cap
  - Internal hexagon (up to size 20)
  - External hexagon (size 30)
- 1.2 Adjustment Element '1'
  - Rotary Knob (up to size 30)
  - Hand Wheel (size 30)
- 1.3 Adjustment Element '3'
  - Lockable Rotary Knob up to size 10 (sizes 20 to 100 bar)
- 4 Connection Port P, optional about the circumference or at the bottom


- 5 Connection Port T, optional about the circumference
- 6 Type code

Model RD
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Unit Dimensions – Cartridge Valve (Cartridge) (dimensions in mm) (continued)															
Cartridge Valve															
Type	D1	D2	D3	L1	L2	L3	L4	L5	L6	L7	W	D11	D12	D13	D14
<sup>RD</sup> 6	34	60	-	72	94	15	23	98	-	66	32	M28x1.5	25H8	6	15
<sup>RD</sup> 10				68	91			94		79	36	M35x1.5	32H8	10	18.5
<sup>RD</sup> 20	40	60		65	88			91		109	46	M45x1.5	40H8	20	24
<sup>RD</sup> 30	50	-	80	83	-	-	-	-	94	136	60	M60X2	55H8	30	38.75
Manifold Machining Dimensions															
Type	D15	D16	L11	L12	L13	L14	L15	L16	L17	L18	Mass	Tightening Torque Nm			
<sup>RD</sup> 6	24.9	6	15	19	30	35	45	0.5x45°	56.5	66.5	0.4 kg	118			
<sup>RD</sup> 10	31.9	10	18	23	35	41	52		67.5	82	0.5 kg	137			
<sup>RD</sup> 20	39.9	20	21	27	45	54	70		91.5	112	1.0 kg	167			
<sup>RD</sup> 30	54.9	30	23	29		60	84		113.5	143	2.2 kg	196			
<p>KAWASAKI PRECISION MACHINERY (UK) LTD                      Ernesettle, Plymouth, Devon, PL5 2SA, England                      Tel: +44 1752 364394 Fax: +44 1752 364816                      E Mail:info@kpm-uk.co.uk</p>									<p>The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract</p>						
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<p>Model RD</p>			<p>Page 9.9</p>			<p>Data Sheet R-1001/10.98</p>									