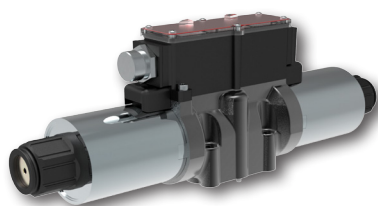


# RPEW4-10

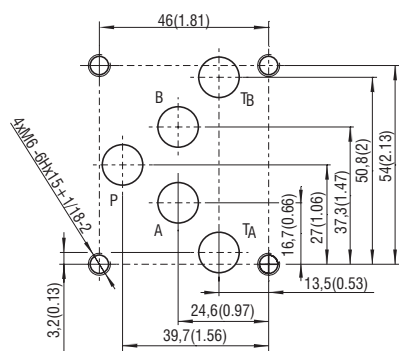
Size 10 (D05) • Q<sub>max</sub> 140 l/min (37 GPM) • p<sub>max</sub> 350 bar (5100 PSI)



## Technical Features

- › Direct acting directional control valve with subplate mounting surface acc. to ISO 4401, DIN 24340 (CETOP 05)
- › High transmitted hydraulic power up to 350 bar with optimized design to minimize pressure drop
- › Five chamber housing design with reduced hydraulic power dependence on fluid viscosity
- › Wire box for solenoid electrical connection with cable gland [1/2" NPT]
- › Optional 3-pin or 5-pin connector acc. to ANSI/B93.55M
- › Type for AC power supply with a rectifier bridge built in the wire box
- › Wide range of interchangeable spools and manual overrides available
- › CSA Certificate upon request
- › Soft-shift spool speed control option
- › Optional shift position indicators (raised arrows) installed on the terminal plate
- › In the standard version, the valve housing is phosphated and steel parts zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available (ISO 9227, 520 h salt spray)

## ISO 4401-05-04-0-05



Ports P, A, B, T - max  $\varnothing$ 11.2 mm (0.44 in)

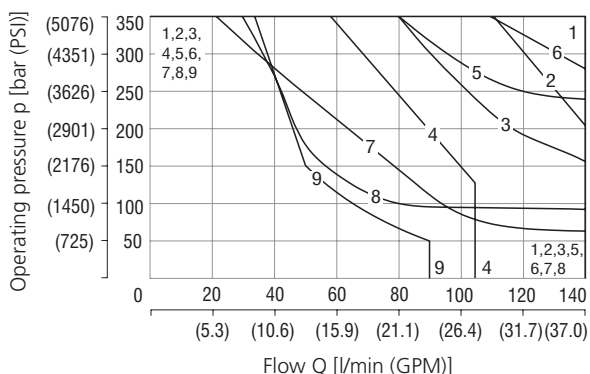
## Technical Data

Valve size		10 (D05)	
Max. flow	l/min (GPM)	140 (37)	
Max. operating pressure at ports P, A, B	bar (PSI)	350 (5080)	
Max. operating pressure at port T	bar (PSI)	210 (3050)	
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... +176)	
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... +176)	
Ambient temperature range	°C (°F)	-30 ... +50 (-22 ... +122)	
Supply voltage tolerance	%	AC: $\pm$ 10	DC: $\pm$ 10
Max. switching frequency	1/h	15 000	
Enclosure type acc. to EN 60529		IP65	
Switching time at v=32 mm <sup>2</sup> /s (156 SUS)	ON	ms	AC: 50 ... 330 DC: 50 ... 120
	OFF	ms	AC: 100 ... 300 DC: 30 ... 90
Mass	kg (lbs)	3.9 (8.6) 5.4 (11.9)	
	Datasheet	Type	
General information		GI_0060	Products and operating conditions
Coil types		C_8007	C31K*
Mounting interface		SMT_0019	Size 10
Spare parts		SP_8010	

## Characteristics measured at v = 32 mm<sup>2</sup>/s (156 SUS)

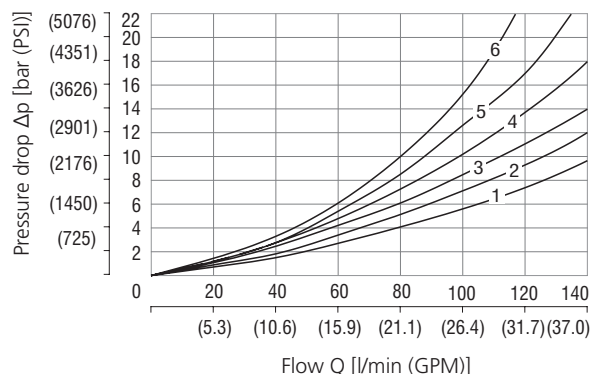
### Operating limits

Operating limits for maximum hydraulic power at rated temperature and supply voltage equal to 90% nominal.



1	Z11	5	Y51	7	L21
1	Z51	3	C11	2	R21
1	H11	3	C51	6	J15
1	H51	2	R11	6	J75
1	P11	2	X11	8	A51
1	P51	4	B11	9	C21
5	Y11	4	B51		

### Pressure drop related to flow rate



	P-A	P-B	A-T	B-T	P-T		P-A	P-B	A-T	B-T	P-T
Z11,P11,Y11, R11,X11,B11	1	1	2	2		C11	4	3	4	5	1
Z51,P51,Y51, B51		1	2			C21	6	6	6	6	4
R21	1	1	1	3		C51	4			5	1
J15	1	2	2	3		L21	1	1	1	2	2
J75,A51	1	1				H11	1	1	2	2	1
H51		1	2		1						

For operating limits under conditions and flow directions other than shown contact our technical support. Admissible operating limits may be considerably lower with only one direction of flow (A or B plugged, or without flow.)

### Ordering Code

**4/2 and 4/3 directional control valve, solenoid operated, wire box**

**Valve size**

**Number of valve positions**  
 two positions **2**  
 three positions **3**

**Spool symbols**  
 see the table "Spool Symbols"

**Rated supply voltage of solenoids**  
 (at the wire box terminal)  
 12 V DC / 3.17 A **01200**  
 24 V DC / 1.73 A **02400**  
 120 coil V AC / 0.38 A / 60 Hz\* **12060**  
 \*DC coils with rectifier in wire box

**Connector for wire box**  
 DC solenoid (DC-rectified) **EW1**  
 DC solenoid with quenching diode **EW2**

**Wire box power supply**  
 DC power supply **K**  
 AC power supply (rectifier in wire box) **R**

**CSA Certified standard CSA marking**  
**U** No designation

**Surface treatment**  
 housing phosphated, steel parts  
 zinc-coated (ZnCr-3), ISO 9227 (240 h)  
**A** zinc-coated (ZnCr-3), ISO 9227 (240 h)  
**B** zinc-coated (ZnNi), ISO 9227 (520 h)

**Seals**  
 NBR  
**V** FPM (Viton)

**Soft-shift spool speed control**  
**No designation** without soft-shift control  
**T0** with plugged cavity for optional soft shift installation  
**T2** orifice Ø0.6 mm (0.02 inch) in T line bridge  
**T3** adjustable needle valve in T line bridge

**Manual override**  
**No designation** standard  
**N1** cap nut covered  
**N2** rubber boot protected  
**N4** hand screw  
**N5** socket head screw  
**N9** without manual override

Wire box version, supply connector	
without connector, 1/2 NPT thread at both ends (either side can be used for wiring, remove cover-plug accordingly)	<b>50</b>
50 with LED (B side plugged, A side with feed-through plug)	<b>51</b>
3-pin connector (ANSI/B93.55M) mounted on A-side (B-side plugged, only for single solenoid valves)	<b>52</b>
3-pin connector (ANSI/B93.55M) mounted on B-side (A-side plugged, only for single solenoid valves)	<b>53</b>
52 with LED	<b>54</b>
53 with LED	<b>55</b>
5-pin connector (ANSI/B93.55M) mounted on A-side (B-side plugged, only for double solenoid valves)	<b>56</b>
5-pin connector (ANSI/B93.55M) mounted on B-side (A-side plugged, only for double solenoid valves)	<b>57</b>
56 with LED	<b>58</b>
57 with LED	<b>59</b>

- For directional valves with two solenoids, one solenoid must be de-energized before the other solenoid can be charged.
- The port restrictor plugs can be ordered separately from the spare parts data sheet.
- Mounting bolts M6 x 40 DIN 912-10.9 or studs must be ordered separately. Tightening torque is 14 Nm (10.3 lbf.ft).
- Besides the shown, commonly used valve versions other special models are available. Contact our technical support for their identification, feasibility and operating limits.

### Spool Symbols

Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			P51		
C11			Y51		
H11			C51		
P11			B51		
Y11			Z51		
L21			H51		
B11			X11		
C21			C11		
R11			H11		
R21			J15		
A51			J75		

### Solenoid Coil for Wire box in millimeters (inches)

<p>EW1</p> <p>Protection degree IP65</p>	
--	--

### Manual Override in millimeters (inches)

No designation - standard	Designation N1 - cap nut covered	Designation N2 - rubber boot protected	Designation N4 - hand screw	Designation N5 - socket head screw, size 3	Designation N9 - without manual override

In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

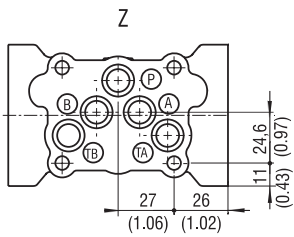
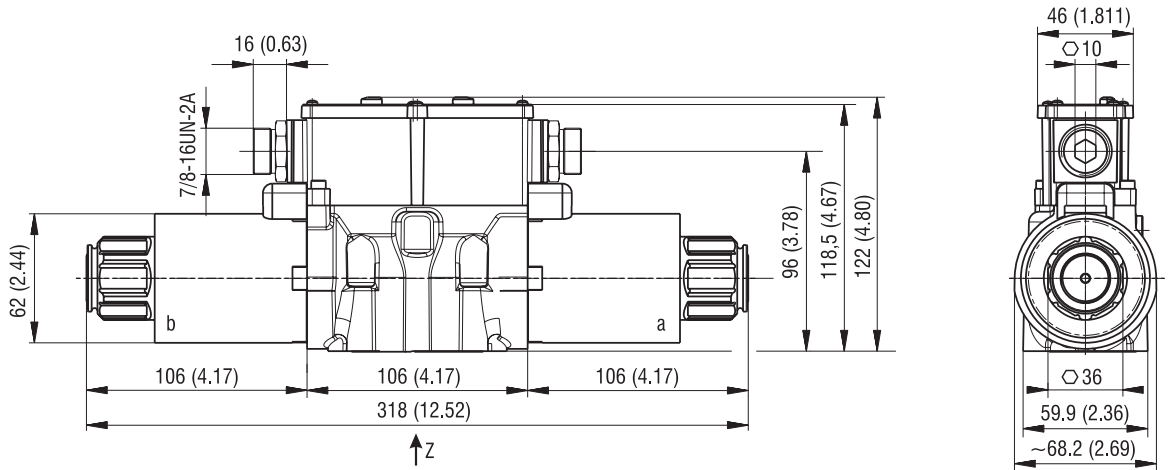
### Spool Speed Control in millimeters (inches)

Designation T0 - Plug VSTI M10x1	Designation T2 - Orifice $\varnothing$ 0.6 (0.02)	Designation T3 - Needle valve
<p>Plugged cavity for optional soft-shift control devices installation (T2, T3)</p>	<p>Switching time ON and OFF</p> <p>120 ... 350 ms</p>	<p>The orifice extends the valve shifting time.</p> <p>The needle valve allows continuous adjustment of the shifting time.</p> <p>30 ... 2000 ms</p>
<p>The switching times shown are valid for viscosity <math>\nu = 32 \text{ mm}^2/\text{s}</math> (156 SUS) and nominal voltage. They depend on working pressure and flow rate of the directional control valve.</p>		

**Dimensions** in millimeters (inches)

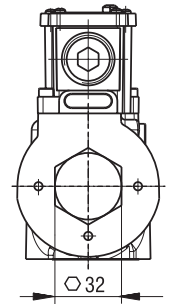
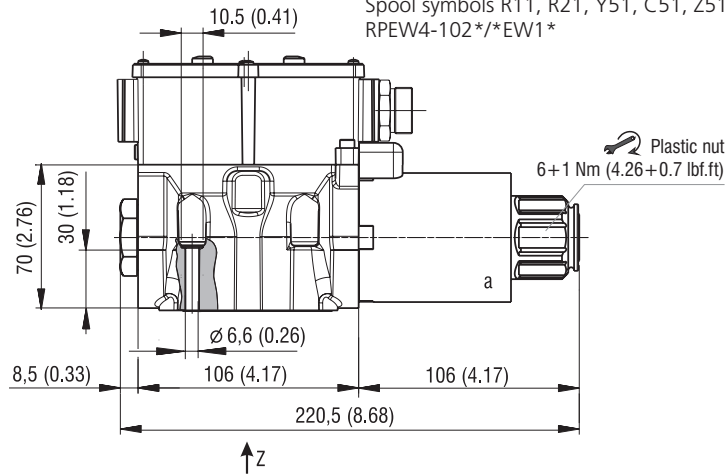
**Valve with two solenoids**

RPEW4-103\*/\*EW1\*



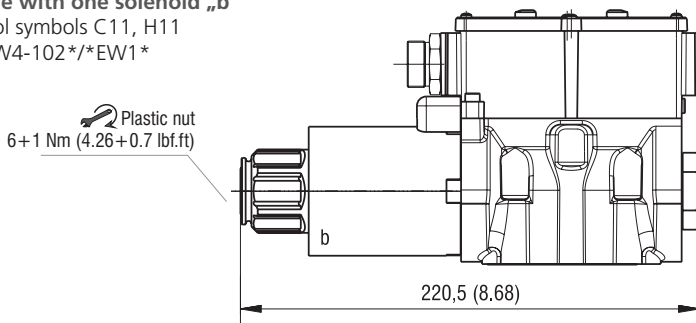
**Valve with one solenoid „a”**

Spool symbols R11, R21, Y51, C51, Z51, H51  
RPEW4-102\*/\*EW1\*



**Valve with one solenoid „b”**

Spool symbols C11, H11  
RPEW4-102\*/\*EW1\*



Mounting screws 14 Nm (10.3 lbf.ft)  
M6 x 40 DIN 912-10.9