

Manual Pumps

Hydraulic Pumps

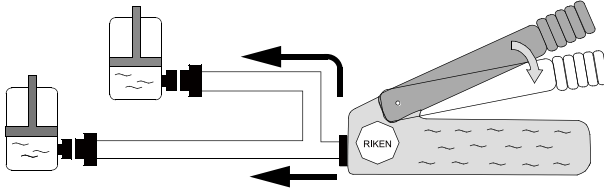
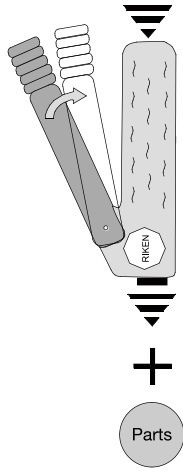
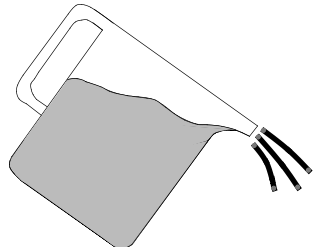
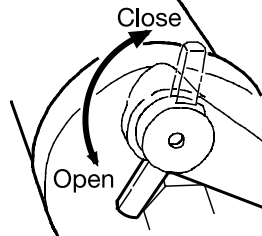


Manual Pumps

■ Features

- The standard maximum operating pressure of the Riken manual hydraulic pumps is 70 MPa.
- A wide choice of models is available, allowing selection to meet the required oil level and operating speed of the cylinder.
- A two-stage speed control which switches high/low pressures automatically is provided, for highly effective work (except for some models).
- The pumps incorporate all necessary valves such as safety valve, air valve, and operating valve, and are integrated with the oil tank, which reduces the size and weight and facilitates transport.
- We can also manufacture pumps integrated with manual pumps and cylinders for low pressure and other special pumps. Please consult us.

Hydraulic Pumps

<p>Pumps whose effective oil level is larger than the total oil required for the cylinder used should be selected. In particular, caution is required when operating multiple cylinders by one pump.</p> 	<p>Normally, manual pumps should be used horizontally. When used vertically (with the outlet port facing downward), additional parts are required for P-16B, P-1B, and P-4. Please indicate your requirement.</p> 
<p>The pump must not be refilled with hydraulic oil while the cylinder is extended. Refilling to the appropriate oil level should be done checking with the attached oil level gauge. If too much oil is refilled, the oil may leak out of the air valve.</p> 	<p>The pumps should be used after the air valve is opened. Using the pumps with the air valve closed may evacuate the inner side of the tank, causing a failure of suction or breakage of the tank, etc.</p> 

- The pressure gauge is usually optional item (see P. 149).
* For manual pumps for the single-acting cylinders, the mounting fixtures for the pressure gauge are also optional items (see P. 151).
* For manual pumps for the double-acting cylinders, the mounting fixtures for the pressure gauge are only attached to P-1D (DCB), P-4D (DCB), and P-8D (DCB).
- Hydraulic oil
The pumps are delivered filled with hydraulic oil. To refill the oil, must use only "Riken's Genuine Oil" (see P. 164) or general hydraulic oil (ISO VG32). Consult us if using hydraulic oil other than general hydraulic oil.

■ Manual Pump Specification List

Pump series No	Maximum operating pressure (Mpa)		Discharge volume (cm ³ /stroke)		Effective oil level of the tank cm ³	Indicated page
	High pressure	Low pressure	High pressure	Low pressure		
P-1 series	70	2	2.3	13.0	600	55
P-4 series	70	2	2.3	13.0	1800※	56
P-8 series	70	2	3.1	31.0	1800	57
P-5 series	70	3	6.1	90.0	5000	58
P-7 series	70	2	9.0	90.0	8000	59
P-7-210 series	21	2	22.0			
P-7-140 series	14	2	32.0			
P-16B	70	2	1.0	5.0	220	60
P-6	70	2	1.9	10.8	550	
P-3	70	1	1.7	9.5	170	
P-14	40	7	5.1	25.0	5500	

※P-4-AL is 1200 cm³.