



Made in Japan

日本

RIKEN

The Maximum output in minimum energy

HYDRAULIC POWER

Hydraulic Accessories



Hydraulic Pumps



1000-4000 bar Equipment



Water Equipment



Variuse Equipment



Hydraulic cylinders





RIKEN KIKI Head Office



KAKIZAKI-KIKAI Factory



KAKIZAKI-KIKAI Factory

RIKEN KIKI (established in 1955) is one of the biggest Ultra-high pressure products manufacturer in JAPAN which covers more than 30 percent of the Japanese hydraulic market. The hydraulic equipment is produced in two factories, RIKEN-SEIKI and KAKIZAKI-KIKAI. Product categories are as below:

- Hydraulic pumps (Hand-, foot-, motor-, engine-, air-operated, Boosters)
- Hydraulic cylinders (Single-, double-acting, center-hole, jacking, etc.)
- Hydraulic valves (Directional, pressure, flow control, stacked, etc.)
- Hydraulic accessories (Gauges, switches, branches, couplers, hoses, etc.)
- Hydraulic tools (Torque wrenches, bolt tensioners, presses, pullers, etc.)
- 200MPa series (Pumps, cylinders, valves, accessories)
- 100MPa series (Pumps, hoses, couplers)
- Aluminum series (Hand-operated pumps, cylinders, spherical heads)

Single-Acting Cylinder

LJ series (short type/return-by-spring type)

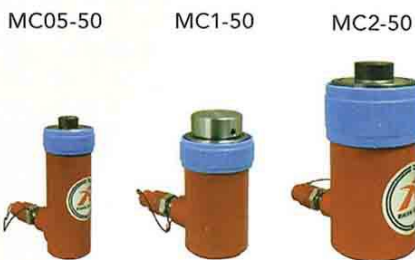


- All thin jacks with 15 mm stroke
- Those of 500kN or larger have a handle
- The cylinder tube and piston receiver are plated with electroless nickel.

type 700 bar	Capacity ton	Stroke mm	Weight kg
LJ 1-15	10	15	1.1
LJ 2-15	20		2.1
LJ 3-15	30		3.5
LJ 5-15	50		6.4
LJ 7.5-15	75		10.5
LJ 10-15	100		14.2
LJ 15-15	150		26.2
LJ 20-15	200		45.0

MC series (short type/return by spring type)

- The piston and the inner side of the cylinder tube are coated.



type 700 bar	Capacity ton	Stroke mm	Weight kg
MC 05-25	5	25	1.2
MC 05-50	5	50	1.7
MC 1-15	10	15	1.6
MC 1-25	10	25	1.9
MC 1-35	10	35	2.2
MC 1-50	10	50	2.1
MC 2-25	20	25	4.3
MC 2-50	20	50	5.6

MS series (return-by-spring type)

Long Type Cylinders

MS05-100 MS1-100 MS2-100



- Base, Piston and Cylinder Thread are in Milimeter
- The piston and the inner side of the cylinder tube are coated.

type 700 bar	Capacity ton	Stroke mm	Weight kg
MS 05-50	5	50	1.5
MS 05-75	5	75	2.0
MS 05-100	5	100	2.3
MS 05-125	5	125	2.5
MS 05-150	5	150	2.7
MS 1-50	5	50	2.8
MS 1-75	5	75	3.7
MS 1-100	10	100	4.1
MS 1-125	10	125	4.5
MS 1-150	10	150	4.9
MS 1-200	10	200	5.8
MS 1-250	10	250	6.6
MS 1-300	10	300	7.5
MS 2-75	10	75	8.2
MS 2-100	10	100	9.0
MS 2-125	20	125	9.8
MS 2-150	20	150	11.7
MS 2-200	20	200	12.5
MS 2-250	20	250	14.1
MS 2-300	20	300	16.0
MS 2-500	20	500	21.3

S series (return-by-spring type)

Base, Piston and Cylinder Thread are in Imperial

S1-100 S2-100



- The piston and the inner side of the cylinder tube are coated.

type 700 bar	Capacity ton	Stroke mm	Weight kg
S 04-15	4	15	0.7
S 04-40	4	40	1.2
S 04-50	4	50	1.1
S 04-70	4	70	1.4
S 04-127	4	127	1.9
S 04-150	4	150	2.1
S 1-12	10	12	1.5
S 1-35	10	35	2.3
S 1-50	10	50	3.1
S 1-55	10	55	2.1
S 1-100	10	100	3.8
S 1-120	10	120	4.4
S 1-150	10	150	4.7
S 1-200	10	200	5.8
S 1-225	10	225	6.5
S 1-300	10	300	7.4
S 2-25	20	25	4.6
S 2-50	20	50	5.8
S 2-70	20	70	8.0
S 2-126	20	126	9.7
S 2-200	20	200	12.3
S 2-250	20	250	14.5
S 2-320	20	320	17.0
S 2-510	20	510	25.0
S 3-50	30	50	11.7
S 3-125	30	125	15.3
S 3-300	30	300	19.0
S 4-125	40	125	19.5
S 5-25	50	25	9.4
S 5-50	50	50	13.8
S 5-53	50	53	18.0
S 5-100	50	100	22.0
S 5-153	50	153	26.0
S 7-25	70	25	16.5
S 7-50	70	50	22.6
S 7-100	100	100	31.5

R series (short type/return-by-load type)

R04-30

MR1-63

R2-50



type 700 bar	Capacity ton	Stroke mm	Weight kg
R 04-15	4	15	0.6
R 04-30	4	30	0.8
R 1-30	10	30	1.7
MR 1-63	10	63	2.3
R 1-63	10	63	2.3
R 2-10	20	10	3.3
R 2-50	20	50	5.1
R 3-50	30	50	7.5
R 5-50	50	50	13.0
R 10-50	100	50	30.0

Pull cylinder MSP/SP series

MSP 05-150

SP 1-150



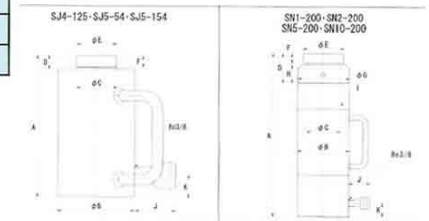
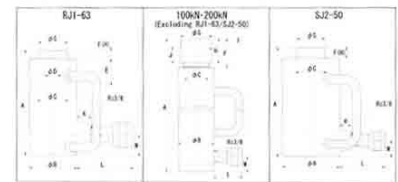
type 700 bar	Capacity ton	Stroke mm	Weight kg
MSP 05-150	5	150	4.6
SP 05-150	5		4.5
SP 1-150	10		6.9

Single Action Cylinders

RJ: Load by return

SJ: Spring Return

SN: Spring Return / Safety Nut



Hydraulic cylinders

Aluminum cylinder

SJ 2-50Al



type 700 bar	Capacity ton	Stroke mm	Weight kg
SJ 2-50 AL	20	50	4.5
SJ 2-100 AL	20	100	5.6
SJ 2-150 AL	20	150	6.9
SJ 3-50 AL	30	50	6.3
SJ 3-100 AL	30	100	8.6
SJ 3-150 AL	30	150	11.1
SJ 5-50 AL	50	50	9.3
SJ 5-100 AL	50	100	11.5
SJ 5-150 AL	50	150	13.7
SJ 10-50 AL	100	50	25.8
SJ 10-100 AL	100	100	29.9
SJ 10-150 AL	100	150	35.4

Super Flat Jack LF series

LF3-10

LF7.5-10



type 700 bar	Capacity ton	Stroke mm	Weight kg
LF 3-10	30	10	2.6
LF 5-10	50	10	4.1
LF 7.5-10	75	10	5.5
LF 10-10	100	10	6.2

type 700 bar	Capacity ton	Stroke mm	Weight kg
RJ 1-63	10	63	2.4
SJ 1-100	10	100	4.3
SJ 1-150	10	150	5.1
SJ 1-255	10	255	6.9
SJ 2-50	20	50	6.1
SJ 2-126	20	126	10.2
SJ 3-125	30	125	14.2
SJ 4-125	40	125	18
SJ 5-54	50	54	17
SJ 5-154	50	154	26.5
SN 1-200	10	200	6
SN 2-200	20	200	14
SN 5-200	50	200	33.5
SN 10-200	100	200	72

Battery Pump

BTP-2B-S



Double-type of BTP-2B-S

BTP-2BW-S



- A light and easy-to-operate pump alternative to a manual pump, which shows the battery level at a glance.
- The pump can be used for about 30 times when a pressure rising to 70 MPa after Ø50 –mm no-load stroke is repeated by the combination of Riken's single-acting cylinder S2-50 (200 KN×50mm stroke) and a 2-m hose on a full charge.
- The battery charge time is about 15 minutes.

Pump Series 700 bar	maximum operating pressure (bar)		Discharge Volume (cm ³ /stroke)		Oil Tank	Effective Oil Level	Motor Voltage	Approximate Weight kg
	High pressure	Low pressure	High pressure	Low pressure	Cm ³	Cm ³		
BTP 2B-S	700	20	60	700	1.2	1	DC 12 V	5.8
BTP 2E-S								

Double-Acting Cylinder Center Hole Cylinder

D04-50

LF3.5-100

D5-50

D10-50



The piston is coated.

Double-Acting Type

DC2-100



type 700 bar	Capacity ton	Stroke mm	Weight kg
D 04-50	4	50	2.2
D 04-85	4	85	2.6
D 04-150	4	150	3.3
D 04-200	4	200	3.9
D 04-250	4	250	4.3
D 1-50	10	50	3.3
D 1-100	10	100	4.5
D 1-150	10	150	5.3
D 1-200	10	200	6.1
D 1-260	10	260	6.9
D 1-300	10	300	7.5
D 2-55	20	55	7.1
D 2-100	20	100	11.8
D 2-150	20	150	13.5
D 2-200	20	200	15.1
D 2-300	20	300	18.4
D 2-500	20	500	25.5
D 3.5-100	35	100	20
D 3.5-150	35	150	23.5
D 3.5-300	35	300	32
D 5-50	50	50	25.5
D 5-100	50	100	28
D 5-150	50	150	31.5
D 5-300	50	300	46
D 5-500	50	500	60.5
D 10-50	100	50	46
D 10-150	100	150	62
D 10-300	100	300	81
D 10-500	100	500	152
D 20-150	200	150	130
D 20-300	200	300	169
D 20-500	200	500	268
D 20-1000	200	1000	450
D 30-300	300	300	398
D 30-500	300	500	494
D 30-850	300	850	650
D 50-300	500	300	740
D 50-500	500	500	928
D 50-850	500	850	1164

type 700 bar	Capacity ton	Stroke mm	Weight kg
DC 2-100	20	100	13.5
DC 2-200	20	200	19
DC 3-100	30	100	20
DC 3-200	30	200	26.5
DC 4-100	40	100	22.5
DC 4-200	40	200	30
DC 5-100	50	100	36
DC 5-200	50	200	47
DC 7-150	70	150	57
DC 10-150	100	150	89
DC 20-150	200	150	180

Hydraulic cylinders

Single-Acting Type

SC2-40



- A through - hole is provided at the center of the piston, and is useful for various tensile tests and tension units.
- SC6-20 has a handle.

type 700 bar	Capacity ton	Stroke mm	Weight kg
SC 1.2-40	12	40	13.5
SC 2-40	20	40	19
SC 3.6-20	36	20	20
SC 3.6-30	36	30	26.5
SC 6-20	60	20	22.5

Manual Pumps

P1-B



P-1-D



P-4



P-4-AI



P-16B



P-8



P-5



P-7

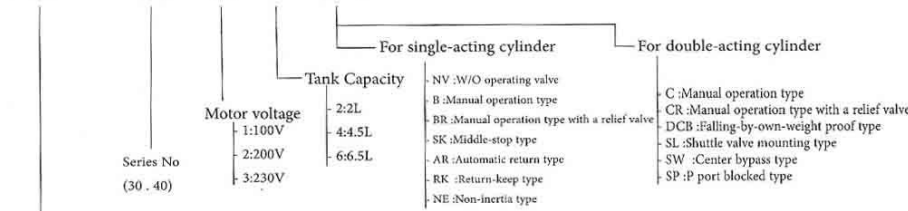


Pump Series 700 bar	maximum operating pressure (bar)		Discharge Volume (cm ³ /stroke)		Oil Tank	Effective Oil Level
	High pressure	Low pressure	High pressure	Low pressure	Cm ³	Cm ³
P - 1 Series	700	20	2.3	13	700	600
P - 4 Series	700	20	2.3	13	2500	1800
P - 8 Series	700	20	3.1	31	2100	1800
P - 5 Series	700	30	6.1	90	6000	5000
P - 7 Series	700	20	9	90	10000	8000
P - 7-210 Series	210	20	22			
P - 7-140 Series	140	20	32			
P - 16 B Series	700	20	1	5	280	220
P - 6 Series	700	20	1.9	10.8	800	550
P - 3 Series	700	10	1.7	9.5	300	170
P - 14 Series	400	70	5.1	25	6000	5500

Small-Size Portable Electric Pump (two-stage type)

Description of the type

SMP — 30 ※ * NV



SMP-3012NV

SMP-3012B

SMP-3012SP



• SMP-30/SMP-40 series

- The conventional SMP-3/4 series have been revamped as super -quiet type pumps.
- The adoption of a magnet motor greatly reduces noise compared whit the conventional types (max.70 dB), and durability has been improved while maintaining the same performance.
- A wide variety of models (13 models) is available to suit various applications.
- The speed controller for all models are available. (Option .Adjustable for smaller discharge volume.)

Pump Series 700 bar	maximum operating pressure (bar)		Discharge Volume (L/min)		Oil Tank Liter	Effective Oil Level Liter
	High pressure	Low pressure	High pressure	Low pressure		
SMP - 3012	700	15	0.2	2.0	2	1.8
SMP - 3014					4.5	4
SMP - 3016					6.5	6
SMP - 3052					2	1.8
SMP - 3054					4.5	4
SMP - 3056					6.5	6
SMP - 3022					2	1.8
SMP - 3024					4.5	4
SMP - 3026					6.5	6
SMP - 3032					2	1.8
SMP - 3034					4.5	4
SMP - 3036					6.5	6
SMP - 4012					700	15
SMP - 4014	4.5	4				
SMP - 4016	6.5	6				
SMP - 4022	2	1.8				
SMP - 4024	4.5	4				
SMP - 4026	6.5	6				
SMP - 4032	2	1.8				
SMP - 4034	4.5	4				
SMP - 4036	6.5	6				

Electric Pumps

MP series

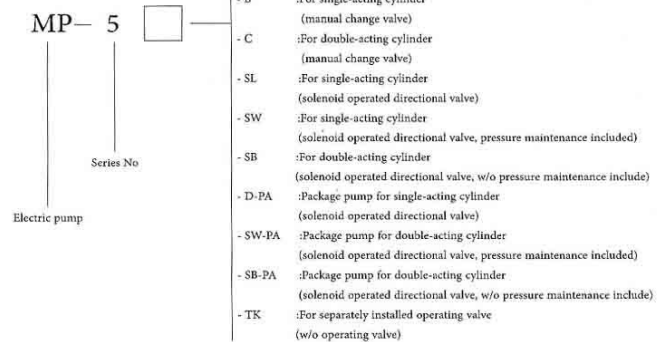


Pump Series	700 bar	maximum operating pressure (bar)		Discharge Volume (L/min)		Oil Tank Liter	Effective Oil Level Cm3	Approximate Weight kg
		High pressure	Low pressure	High pressure	Low pressure			
EMP - 5 Stage	Two	700	50	0.40/0.48	4.0/4.8	9	4.5	48~52

MP-5 series

- A pump combining both high – and low – pressure pumps to be driven by one motor to improve the work speed.
- Equipped with a double –safety mechanism of a safety valve and pressure switch to prevent overload.
- We can also manufacture a single- phase motor (AC 100/200V) specification.
- A one – point push – button switch is set in the MP- 5D-PA type package pump , and a two – point push – button switch and a control box are set in the MP-5SW-PA/SB-PA types. Simply connect the power and the pump is ready to use.
- See p.73and 74 for the description of each model and the instructions.

Description of the type



Pump Series	700 bar	maximum operating pressure (bar)		Discharge Volume (L/min)		Oil Tank Liter	Effective Oil Level Cm3	Approximate Weight kg
		High pressure	Low pressure	High pressure	Low pressure			
MP - 4	One Stage	700	-	0.4/0.48		4.5	3.5	41~40
MP - 5	Two Stage	700	30	0.4/0.48	2.0/2.4	8	4.5	70~59
MP - 6	One Stage	700	-	0.75/0.9		8	5	57~67
MP - 10	Two Stage	700	80	0.9/1.08	6.5/7.8	22	13	86~95
MP - 12h	One Stage	700	-	1.5/1.8		15	6.5	103~115
MP - 12	Two Stage	700	80	1.5/1.8	8.5/10.2	21	12	119~126
MP - 15h	One Stage	700	-	2.5/30		15	6.5	118~130
MP - 15	Two Stage	700	60	2.5/3.0	20.0/24.0	50	30	188~202
MP - 17h	One Stage	700	-	5.0/6.0		155	70	430
MP - 17	Two Stage	700	60	4.0/5.0	/48.0	155	70	500
MP - 20h	One Stage	700	-	10.0/12.0		155	70	540
MP - 20	Two Stage	700	60	9.0/11.0	/84.0	315	160	800
MP - 40	Two Stage	700	60	19.0/23.0	/168.0	750	370	2100
MP - 75	Two Stage	700	120	42	190	1300	1000	3200

Hydraulic Valves and Accessories

Direction Control Valves

Manual Operation
2-way/3-way Shut Off Valves

V-14



V-13C



• A valve used to open/close a circuit.

4-way Three Position Valve

SMVT-43



HOV-43



HOV-44T



Solenoid Operation

MSW-4



SOL-R-4



SOW-R-4



The coil is continuous rating type and can energized over a long duration.
Durable and reliable because the valve is a pressure balanced type.

Flow control Valve

FCV-13



FCV-35B



*specification						
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Cracking pressure (MPa)	Connection diameter (Rc)	Approximate weight (kg)
FCV-13		70	10	0.05	8/3	1.0



CH-13

CH-28



*specification							
type	Hydraulic designation	Maximum Operating pressure (MPa)	Pressure control range (MPa)	Control flow rate (L/min)	Precision	Connection diameter (Rc)	Approximate weight (kg)
FCV-35B		70	70~10	5~0.3	%10+	8/3	7.7

Pressure Gauge

DPS-100



AS type



ASG type



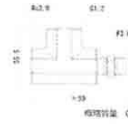
DS type



Standard and Glycerin type
Mega Pa display and KN display

gauge accessories

T2



T5



Pressure Control Valves

Needle Valve

NV-13



NV-14



*specification					
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Connection diameter (Rc)	Approximate weight (kg)
NV-13		70	10	8/3	0.9
NV-14			40	2/1	1.5

couplers

Couplers with sizes appropriate for the discharge volume of each pump are available. Incorrect size could prevent acquiring a predetermined speed or cause a heat generation of the hydraulic oil and noise.

S-1R



S-1H



VC-70-RC4

VC-70-RC3



VC-70-N3

VC-70-R4

VC-70-R3

S-24R



S-23H(24H)



S-3R



S-3H



S-5R



S-5H



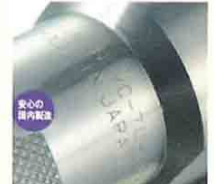
S-6R



S-6H



MADE IN JAPAN



Pressure Control Valves

Relief valve



RV-13

*specification							
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Pressure control range (Mpa)	Allowable back pressure (Mpa)	Connection diameter (Rc)	Approximate weight (kg)
RV-13	1 2	70	5	70~10	1	8/3	1.6
RV-14			10			2/1	

Counter Balance Valve



TCB-3-1

TCB-4-1

*specification							
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Pressure control range (Mpa)	Connection diameter (Rc)	Approximate weight (kg)	
TCB-3-1	1 2	70	20	10~2	8/3	3.5	
TCB-4-1			40		2/1	3.8	
TCB-8-1			80		1	8.5	
TCB-3-2			20	70~10	8/3	3.5	
TCB-4-2			40		2/1	3.8	
TCB-8-2			80		1	8.5	

Decompression Valve



RD-700

*specification							
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Pressure control range (Mpa)	Allowable back pressure (Mpa)	Connection diameter (Rc)	Approximate weight (kg)
RD-700	1 2	70	9	20~50	0.2	1/2	7.0

Electromagnetic Proportional

Relief Valve unit



VUP-12B

*Structure						
type\Details	Electromagnetic proportional relief valve	Inline filter	Sub-plate	Controller	Connecting cord	Approximate weight (kg)
VUP-12B	PRV-12B	MIF31-	MPS13-	ECR-1B12	5m x 2	19.0
VUP-13B	PRV-12B			ECR-1B13		

Check Valves



*specification						
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Cracking Pressure (Mpa)	Connection diameter (Rc)	Approximate weight (kg)
SCH-13B	1 2	70	2	0.05	3/8	0.3
CH-13			10			1.0
CH-14			40			4.0

*specification						
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Cracking Pressure (Mpa)	Connection diameter (Rc)	Approximate weight (kg)
CH-23	1 2	70	20	0.1	3/8	0.3
CH-24			40			0.5
CH-28			140			4.0

*specification							
type	Hydraulic designation	Maximum Operating pressure (MPa)	Maximum flow (L/min)	Cracking Pressure (Mpa)	Pilot area ratio	Connection diameter (Rc)	Approximate weight (kg)
CH-43	1 2	70	20	0.3	1:11	3/8	5.0
CH-44			10			1/2	
CH-48			140			1	

pressure switch

The Pressure can be set easily without using a tool



SPS

PCS-700

*specification								
type	Pressure setting (MPa)	Maximum operating pressure (MPa)	Minimum scale unit (MPa)	Maximum differential pressure (Mpa)	Repeatability ±(MPa)	Mounting screw diameter	Contact capacity	Approximate weight (kg)
SPS-7A	70~10	70	10	9	2	R8/3	250V 3A	0.35
SPS-70	7~1	7	1	0.9	0.2			
SPS-140	14~2	14	2	1.8	0.4			
SPS-210	21~3	21	3	2.7	0.7			
SPS-350	35~5	35	5	4.5	1			
SPS-500	50~10	50	10	6.5	1.5			
SPS-700	70~10	70	10	9	2	2/61	440V 10A	2.3 Type p.25
PCS-500(F)	50~10	70	5	7	0.5			
PCS-700(P)	70~20	70	5	9	0.5			

High Pressure Hose

Rubber Hose



Nylon Hose



A hose in which a new material which rejects a weld spatter is wrapped around the exterior of the high-pressure nylon hose described above. Within half of the weight of a rubber hose.

Anti-Spatter Hose



Within half of the weight of a rubber hose.

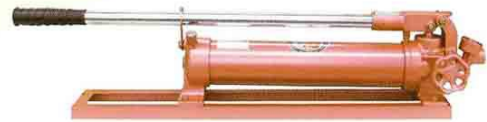
High Pressure

Manual Pump

UP-11



UP-31B



UP-22D



1000~4000 Bar Pump Series	maximum operating pressure (bar)		Discharge Volume (L/min)		Oil Tank	Effective Oil Level	Approximate Weight kg
	High pressure	Low pressure	High pressure	Low pressure	Cm3	Cm3	
UP - 11	1000	20	1.0	5.0	500	400	4.5
UP - 12	1000	20	2.3	13	1000	850	9.3
UP - 21 M	2000	20	0.75	9.75	700	600	8.2
UP - 21 D	2000	20	0.75	9.75	700	600	9.8
UP - 22 B	2000	30	1.6	3.1	2100	1800	18.6
UP - 22 M	2000	30	1.6	3.1	2100	1800	18.6
UP - 22 D	2000	30	1.6	3.1	2100	1800	20.2
UP - 31 B	3000	30	1.0	14.4	2100	1800	19
UP - 41 B	4000	30	0.8	14.4	2100	1800	19

High Pressure Electric Pump

MP-1000-4



SMP-200-14B



SMP-2000-4C



MP-2000-2



1000 - 2000 bar Pump Series	maximum operating pressure (bar)		Discharge Volume (L/min)		Oil Tank	Effective Oil Level	Approximate Weight kg
	High pressure	Low pressure	High pressure	Low pressure	Cm3	Cm3	
MP - 1000 - 4	1000		0.38/0.45		4.5	3.5	40
SMP - 200 - 12 B	2000	30	0.1	2.0	2	1.8	19
SMP - 200 - 14 B					4.5	4	22
SMP - 200 - 16 B					6.5	6	25
SMP - 200 - 22 B					2	1.8	19
SMP - 200 - 24 B					4.5	4	22
SMP - 200 - 26 B					6.5	6	25
SMP - 200 - 32 B					2	1.8	19
SMP - 200 - 34 B					4.5	4	22
SMP - 200 - 365 B					6.5	6	25
MP - 2000 - 4							
MP - 2000 - 4 C			0.35/0.42		22	10	117
MP - 2000 - 8			0.9/1.08		22	10	130
MP - 2000 - 8 C			0.9/1.08		22	10	137
MP - 2000 - 2	2000	210	0.18/0.21	1.0/1.2	20	10	100

Pump 1000-4000 bar

Single-Acting cylinder (200Mpa)

ULF series

Description of the type

ULF 10-10
 ULF series
 Stroke (mm)
 Maximum output
 10:1000 kN
 15:1500 kN
 20:2000 kN
 30:3000 kN



*Specification			
type 2000 bar	Capacity ton	Stroke mm	Weight kg
ULF 10 - 10	100	10	3.5
ULF 15 - 10	150	10	5.7
ULF 20 - 10	200	10	8.1
ULF 30 - 10	300	10	12.8

- Ultrahigh-pressure coupler



2000 Bar Hydraulic cylinder

Single-Acting cylinder (200Mpa) US series

Description of the type

US 3-50
 US series
 Stroke (mm)
 Maximum output
 3:300 kN
 5:500 kN
 10:1000 kN

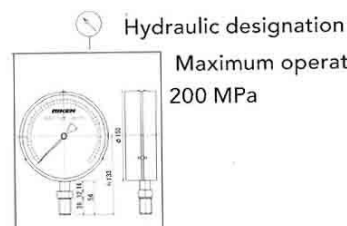


*specification			
type 2000 bar	Capacity ton	Stroke mm	Weight kg
US 3 - 50	30	50	6
US 5 - 50	50	50	10
US 5 - 100	100	100	13
US 5 - 150	150	150	15
US 10 - 50	50	50	18
US 10 - 150	150	150	24

Accessories and Valves

pressure gauge

AS 150-250M



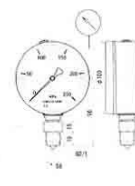
Maximum operating pressure: 200 MPa

- The designed mounting fixtures should be used for the attachment using the GA-2000 sleeve, GB-2000 bushing, and GC-2000 cone. We will also manufacture a pressure gauge with the display of load scales according to the cylinder upon request.

type	Maximum scale (MPa)	Minimum scale (MPa)	Connection diameter	Approximate weight (kg)
AS 150-250 M	250	5	G1/2	1.5

Hydraulic designation

ASBG 250-100M



Maximum operating pressure: 200 MPa

- Can be mounted in a narrow place because it is a flexible screw type.
- Include glycerin which is strong against the surge pressure and a rapid pressure reflection
- Calibration certificate and traceability of system diagram can not be issued because of special inner structure.

type	Maximum scale (MPa)	Minimum scale (MPa)	Connection diameter	Approximate weight (kg)
ASBG250-100M	250	2	G1/2	0.7

Special joint is required that depends on the pump type to be mounted.

Double-Acting cylinder (200Mpa) UD series

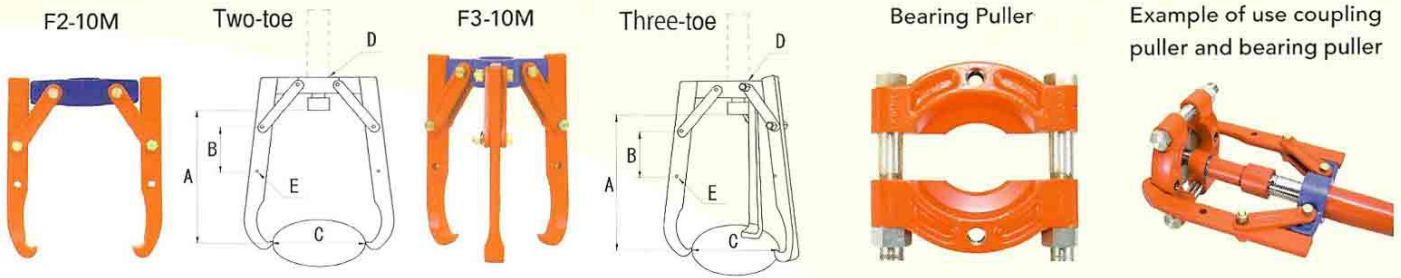
Description of the type

UD 3-125
 UD series
 Stroke (mm)
 Maximum output
 3:300 kN
 5:500 kN
 10:1000 kN
 20:2000kN



*specification			
type 2000 bar	Capacity ton	Stroke mm	Weight kg
UD 3 - 125	30	125	8
UD 5 - 150	50	150	15
UD 10 - 150	100	150	27
UD 20 - 100	200	100	60
UD 20 - 150	200	150	70

Various types of pulleys and gears can be pulled out easily.



Type		Maximum output	Max overall length A	Hole interval B	interval C	Thread diameter D	Cylinder Used (option)	Attachment Used (option)	Approximate Weigh (kg)
Two-toe type	F2-10	100KN	210	75	250	2 1/4-14NS	S1-150 S1-225	R-10P . R-113 R-117	6.5
	F2-10M					M58*2	MS1-150 MS1-250	R-10P . R-113 R-117 . MI-10	
	F2-20	200KN	315	110	350	3 5/16-12NS	S2-126 S2-200	R-20P . R-202 R-206	17.5
	F2-20M					M82*2	MS2-125 MS2-200	R-20P . R-202 R-206 . MI-20	
	F2-50	500KN	490	150	500	M127*2.5	S5-153 D5-300	R-50P	70
Three-toe type	F3-10	100KN	210	75	300	2 1/4-14NS	S1-150 S1-225	R-10P . R-113 R-117	9
	F3-10M					M58*2	MS1-150 MS1-250	R-10P . R-113 R-117 . MI-10	
	F3-20	200KN	315	110	420	3 5/16-12NS	S2-126 S2-200	R-20P . R-202 R-206	25
	F3-20M					M82*2	MS2-125 MS2-200	R-20P . R-202 R-206 . MI-20	
	F3-50	500KN	490	150	600	M127*2.5	S5-153 D5-300	R-50P	100

Panel boring tools

Port punch



Punching (Press)

RPF-10

- A wide span is provided so that the H-type and channel-type steel and other large angles can be used in a wide range.

- The cutting tools are easy to be removed because a double-acting cylinder is used.



Actual size round cutter	Q15~Q26	SPR-3/8X3/4	NUT-3/4	1 pc	Q15~Q31	WP-20	1 pc
	Q27~Q120		SPR-3/4X3/4	NUT-3/4		Q32~Q120	WP-10
Actual size square cutter	Q20~Q25	SPQ-1/2X3/4	NUT-1/2	1 pc	Q20	WP-20	1 pc
			NUT-3/4	1 pc	Q25	WP-10	1 pc
	Q30~Q75	SPQ-3/4X3/4	NUT-3/4	2 pcs	Q30~Q40	WP-20 WP-30	1 pc respectively
					Q45~Q50	WP-30	1 pc
			Q55	WP-20	1 pc		
	Q60~Q70	WP-30	1 pc				
	Q75	WP-20	1 pc				

type	Capacity ton	Stroke mm	Weight kg
RPF - 10	100	25	16
RPF - 20	200	25	27
RPF - 35	350	27	54
RPF - 50	500	35	71
RPF - 70	700	35	109
RPF - 100	1000	35	167

Water Manual Pump WP-1 B for 700 bar

- A manual pump whose hydraulic fluid is "water" and can increase the pressure up to 700 bar
- it is used the stainless-steel materials or special steel with special rust-proof treatment which contacts water.
- can be used in a place where the usage of oil is hesitated.
- A safe mechanism incorporating a safety valve like other time-tested 700 bar series
- Automatic high-low pressure switching pump for improved work efficiency.

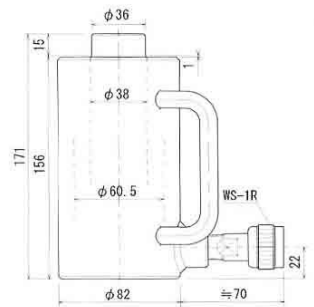


Type	Maximum operating pressure Bar	Discharge volume (cm ³ /stroke)		Port (Rc)	Tank water level	Effective water volume (cm ³)	Approximate weight Kg
		At low pressure (0~20 bar)	At high pressure (20~700 bar)				
WP 1-B	700	13.0	2.3	3/8	700	600	6.2

Water Single-Acting Cylinder WSJ2-50 for 700 bar

- A single-acting pump whose hydraulic fluid is "water" with the maximum output of 200 kN.
- spring return system
- coupler for water (0/JS-1 R) is included.

Type	Maximum operating pressure bar	Maximum output (kN)	Stroke (mm)	necessary water volume (cm ³)	Approximate weight (kg)
WSJ2-50	700	200	50	144	5.6



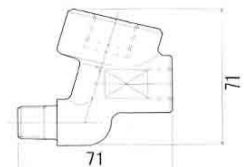
Water High-Pressure Nylon Hose for 700 bar

- A hose whose hydraulic fluid is "water" and can be used up to 70 MPa use with the cylinder and above pump.
- A coupler (WOC-13H) is attached on one side of the hose.
- The cap is made of stainless-steel.
- The standard overall length is 2 m. The hoses with other length are available on request.

Type	Maximum operating pressure bar	Capacity (cm ³ /m)	Expanded volume (cm ³ /m)	Minimum bend radius (mm)	Approximate weight (kg/m)
WNH3 /8-*X	700	31.2	4.3	60	0.21

Mounting Fixtures for Water Pressure Gauge WT-5 for 700 bar

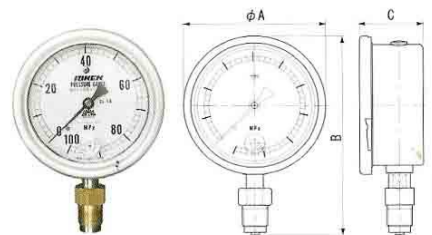
- Mounting fixtures required to mount the pressure gauge to the outlet port of the above pump.
- The packing for the pressure gauge is also included.
- Use with the below gauge WAS series



Water pressure gauge WAS series for 700 & 2000 bar

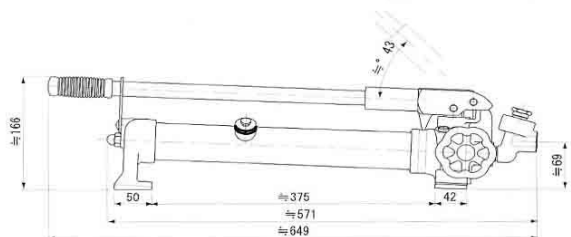
- The gauge can be used with water as operation fluid .
- can fix any direction by universal joint.
- Two size (@ 75 @ 100) available .
- The gauge should be used within 70% of the maximum scale.

Type	Maximum scale bar	Minimum scale bar	Outside dimension			Setscrew	Accuracy
			d> A	B	C		
WAS75-100M	1000	20	87	136±3	44± 2	GI /2	±1.6% F. S.
WAS100-100M			118	169±3	53± 2		
WAS100-250M	2500	00	118	170±3	53± 2		



Water Manual Pump WUP-21 M for 2000 bar

- A manual pump whose hydraulic fluid is "water" and can increase the pressure up to 2000 bar.
- Mounting fixtures for the pressure gauge are included.
- We also manufacture pressure vessels that can be used in combination with this pump. (Specify the inner diameter and the depth of the vessel.)



Type	Maximum operating pressure bar		Discharge volume (cm ³ /stroke)		Port	Tank water level (cm ³)	Effective water volume (cm ³)	Approximate weight (kg)
	High pressure	Low pressure	High pressure	Low pressure				
WUP-21M	2000	20	0.8	13.0	M1 6 x 1.5	700	600	8.4

Cable cutter

- Various types of pulleys and gears can be pulled out easily.
- An attachment to pull out the bearing using the two toes of the coupling puller and can be used for gear, pulley, etc. It is designed to be used both for 100 kN/200 kN/500 kN.



*Can cut the electric wire and cable with the outside diameter up to 100 mm.

Hydraulic intensifier

- The secondary side generates a pressure 6.25 times the primary side and discharges oil continuously.
- With a hydraulic unit of about an ultrahigh pressure of 70 MPa using the unit as a drive source, enabling lightweight and compact equipment and machinery to be created.
- The discharge volume in the low-pressure unit is used under the no-load condition, and the unit operates similarly to a high-/low-pressure two-stage pump.



Pinching Off Press

- The best tool for occlusion work of copper tube end which used is for various air conditioners and refrigerating machines.
- It is possible to start or stop by remote controlled switch with exclusive pump.
- We can design and manufacture units for other size of copper tube or location.



Various Equipment

Bolting Tools

Torque wrench



- Tightening/loosening can be switched easily by replacing the socket shafts.

Bolt Tensioner

- The hydraulic bolt tensioner gives tension to the bolts and stud bolts by the cylinder and performs a certain tensile force using the elasticity.
- A tightening force can be given precisely just by adjusting the hydraulic pressure.
- No bending or torsion caused by the torque friction occurs. In addition, no galling occurs in the screw and the bolt/nut/flange areas have no damages.
- Dimension list and stroke written as below are representative examples. Special type is available for any other stroke and diameter than listed as below list of reaction to receiving frame (Ø A dimension) not to touch beside nut.
- S-1R coupler is attached the bolt tensioner which has maximum output 2200kN or less.
- Maximum operation pressure of all models is 70MPa.

Torque Wrench Pump

EPH-10

SMP-40 SL



BS 1. 35-5G

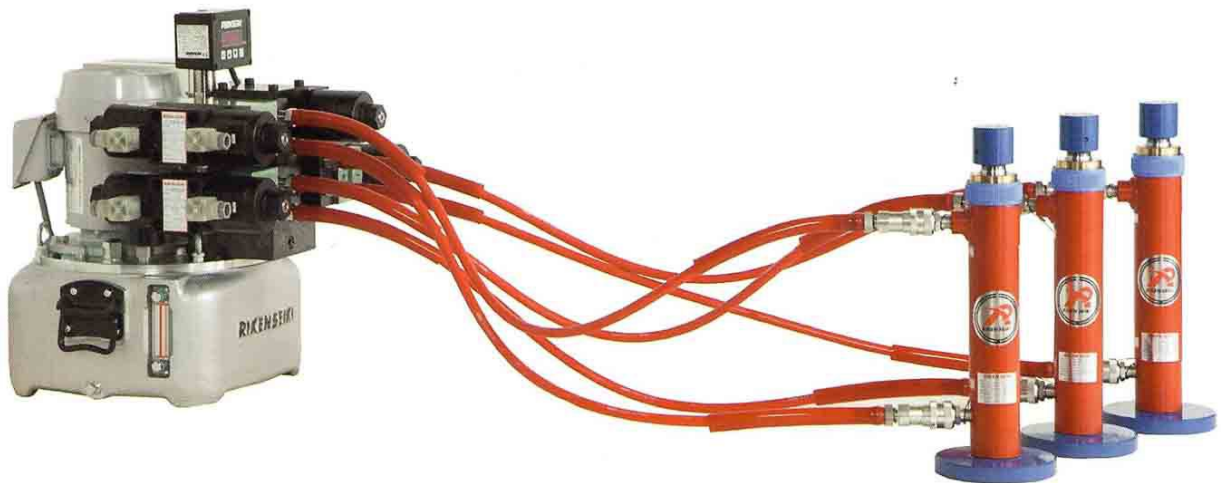
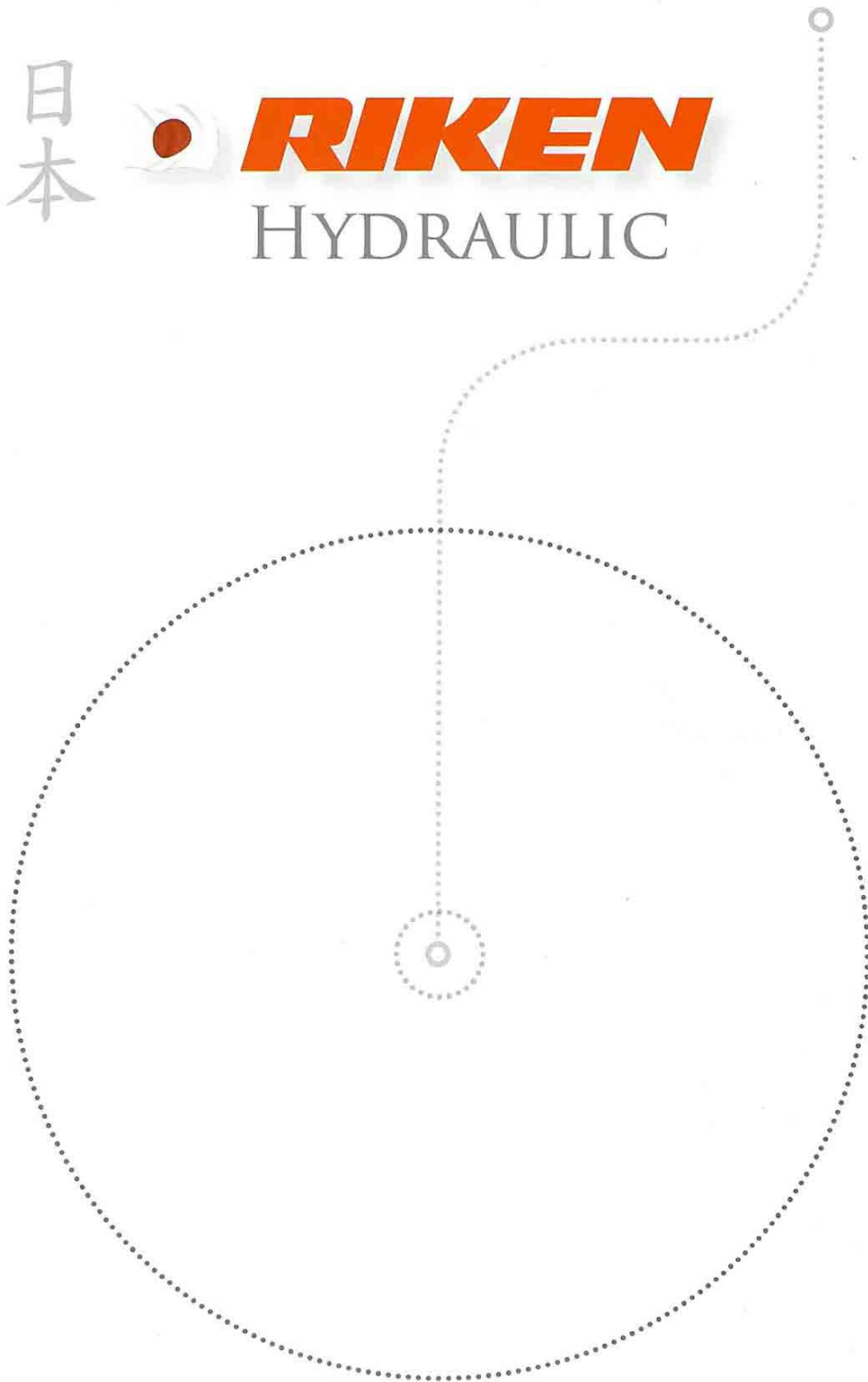


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