

ภาคผนวก

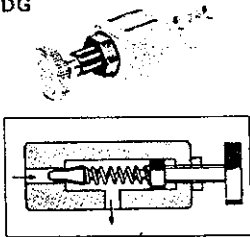
ภาคผนวก ก.
แก้ศาลออกอุปกรณ์ไฮดรอลิก

ตารางที่ 1. เค็ดตลอกควลัปลดควมดัน

Relief Valves

Max. Pressure 250kgf/cm²

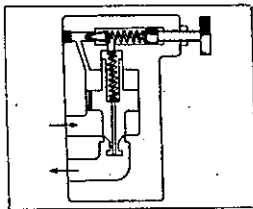
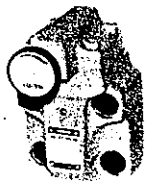
DG



These valves protect the hydraulic system from excessive pressure, and can be used to maintain constant pressure in a hydraulic system.

Valve type	Valve size	Model number	Max. flow l/min	Max. pressure kgf/cm ²	Pressure adjustment range kgf/cm ²	Approx. mass kg		
Remote control relief valve	1/8	DT-01	—	250	5-250	1.6		
		DG-01	—			1.4		
Direct type relief valve	1/4	DT-02	16	210	Refer to model number designation below.	1.5		
		BT-03 BG-03				100	5.0	
							4.7	
		BT-06 BG-06				200	5.0	
							5.6	
BT-10 BG-10	400	8.5						
BF-16	800	8.7						
Pilot operated relief valve	3/8	S-BG-03	100	250	5-250	4.1		
						S-BG-06	200	5.0
								5.0
						1-1/4	400	8.5
2	800	13.4						
Low noise type pilot operated relief valve	3/8	S-BG-03	100	250	5-250	4.1		
						S-BG-06	200	5.0

BG



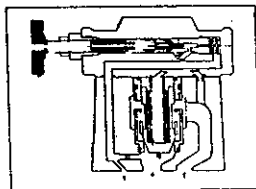
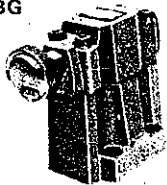
● Sub-plate

Valve model number	Piping size	Sub-plate model number	Approx. mass kg
DG-01	1/4	DGM-02	0.7
DG-02			
BG-03	3/8	BGM-03	2.4
S-BG-03	1/2	BGM-03X	3.1
BG-06	3/4	BGM-06	4.7
S-BG-06	1	BGM-06X	5.7
BG-10	1-1/4	BGM-10	8.4
	1-1/2	BGM-10X	10.3

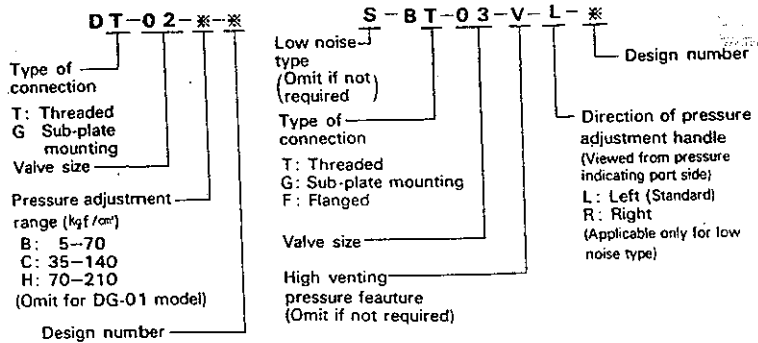
● Pipe Flange

Piping size	Flange kit model number		Approx. mass kg
	Threaded connection	For socket welding	
1-1/2	F3-16W-B	F3-16W-A	2.7
	F3-16-B	F3-16-A	

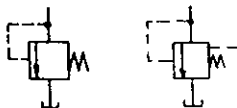
S-BG



● Model Number Designation



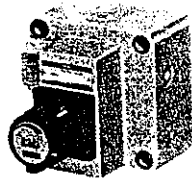
● Graphical Symbol



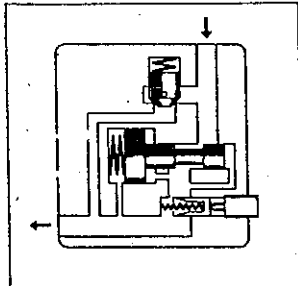
ตารางที่ 2. แล็คตาลอกวาล์วควบคุมอัตราการไหล

Flow Control Valves
Flow Control & Check Valves

Max. Pressure
210kgf/cm²



These valves are used to control the flow rates in hydraulic circuits. Control is precise regardless of changes of oil temperature and pressure. Valves with an integral check valve allow free oil flow from the outlet port to the inlet port. The valves have a digital flow adjusting dial by which flow setting of the valve can be done easily.



Valve size	Model number	Max. metered flow capacity l/min	Min. metered flow capacity l/min	Max. pressure kgf/cm ²	Approx. mass kg		
1/8	FG-01	4	0.02	210	1.3		
	FCG-01	8	(0.04)				
1/4	FG-02	30	0.05		210	3.8	
	FCG-02						
3/8	FG-03	125	0.2			210	7.9
	FCG-03						
3/4	FG-06	250	2	210			23.0
	FCG-06						
1-1/4	FG-10	500	4		210		52.0
	FCG-10						

Note: Figures in () means min. flow at pressure more than 70kgf/cm²

● Sub-plate

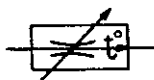
Valve model number	Piping size	Sub-plate model number	Approx. mass kg
F*G-01	1/4	FGM-01X	0.8
	1/4	FGM-02	2.3
F*G-02	3/8	FGM-02X	3.1
	1/2	FGM-02Y	3.9
F*G-03	1/2	FGM-03X	5.7
	3/4	FGM-03Y	12.5
F*G-06	1	FGM-03Z	16
	1-1/4	FGM-06Y	37
F*G-10	1-1/2	FGM-06Z	
	2	*FGM-10Y	

● Pipe Flange

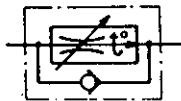
Piping size	Flange kit model number		Approx. mass kg
	Threaded connection	For socket welding	
1-1/2	F3-16W-B	F3-16W-A	2.7
2	F3-16-B	F3-16-A	2.7

★ When ordering, please specify pipe flanges according to the above table.

● Graphical Symbol

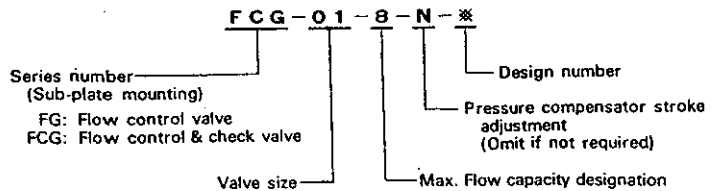


FG series.



FCG series

● Model Number Designation



ตารางที่ 3. ตารางมอเตอร์ไฟฟ้า



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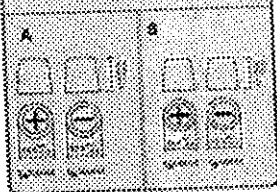
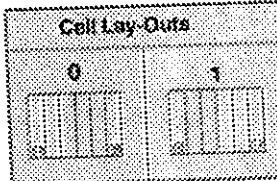
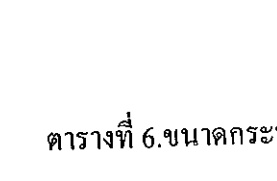

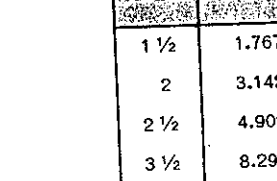
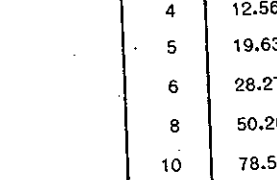
MITSUBISHI ELECTRIC CORPORATION

MODEL			PRICE	MODEL			PRICE
ชนิดธรรมดา 1450 รอบ 220V (2 สาย)				ชนิดหุ้มฉนวน 1450 รอบ (3 สาย) IP 55			
SP-KR	1/4 HP 4P		1,060	SF-JR	1/4 HP 4P	(L)	1,780
SP-KR	1/3 HP 4P		1,290	SF-JR	1/2 HP 4P	(L)	2,500
SP-KR	1/2 HP 4P		2,190	SF-JR	1 HP 4P	(L)	2,900
ชนิดคอมแพคต์เซโรดคาร์บิง 1450 รอบ 220V (2 สาย)				SF-JR	2 HP 4P	(L)	3,640
SC-KR	1/4 HP 4P		1,500	SF-JR	3 HP 4P	(L)	4,310
SC-KR	1/3 HP 4P		1,670	SF-JR	5 HP 4P	(L,H)	6,230
SC-KR	1/2 HP 4P		2,360	SF-JR	7.5 HP 4P	(L,H)	8,660
SCL-KR	1 HP 4P		3,730	SF-JR	10 HP 4P	(L,H)	10,800
SCL-KR	1.5 HP 4P		6,070	SF-J	15 HP 4P	(L,H)	19,200
SCL-KR	2 HP 4P		7,170	SF-J	20 HP 4P	(L,H)	24,500
SCL-KR	3 HP 4P		8,700	SF-J	25 HP 4P	(L,H)	30,200
SCL-KR	5 HP 4P		15,240	SF-J	30 HP 4P	(L,H)	36,200
ชนิดใช้ลม 1450 รอบ 220V (2 สาย)				SF-J	40 HP 4P	(L,H)	48,800
SI-K	1.2 HP 4P		6,920	SF-J	50 HP 4P	(L,H)	63,100
SI-K	1 HP 4P		9,220	SF-J	60 HP 4P	(L,H)	74,800
SI-K	1.3/4 HP 4P		11,530	SF-J	75 HP 4P	(L,H)	94,300
ชนิดหุ้มฉนวน 1450 รอบ 220/380V (3 สาย)				ชนิดหุ้มฉนวน 1450 รอบ 220/380V (3 สาย) IP54			
SB-JR	1 HP 4P		2,400	SF-JR	1/4 HP 4P		1,620
SB-JR	2 HP 4P		3,040	SF-JR	1/2 HP 4P		2,280
SB-J	3 HP 4P		3,700	SF-JR	1 HP 4P		2,640
SB-J	5 HP 4P		5,200	SF-JR	2 HP 4P		3,310
SB-J	7.5 HP 4P		7,370				
SB-J	10 HP 4P		8,980				

ตารางที่ 4. แคทตาล็อกสายไฮดรอลิก

สายไฮดรอลิก		ID (in)	OD (in)	พื้นที่ภายใน	รัศมีสายไฮดรอลิก น้อยที่สุด(in)	ความดัน	
ขนาด	SAE					ทำงาน	ระเบิด
3/16	100-R1	3/16	1/2	0.0276	4	3000	12000
3/16	100-R2A	3/16	5/8	0.0276	4	5000	20000
1/4	100-R1	1/4	5/8	0.0491	4	2750	11000
1/4	100-R2A	1/4	11/16	0.0491	4	5000	20000
1/4	100-R3	1/4	9/16	0.0491	3	1250	5000
5/16	100-R1	5/16	11/16	0.0767	5	2500	10000
5/16	100-R2A	5/16	3/4	0.0767	4 1/2	4250	17000
3/8	100-R1	3/8	25/32	0.1104	5	2250	9000
3/8	100-R2A	3/8	27/32	0.1104	5	4000	16000
3/8	100-R3	3/8	3/4	0.1104	4	1125	4500
13/32	100-R1	13/32	13/16	0.1296	5 1/2	2250	9000
1/2	100-R1	1/2	29/32	0.1963	7	2000	8000
1/2	100-R2A	1/2	31/32	0.1963	7	3500	14000
1/2	100-R3	1/2	15/16	0.1963	5	1000	4000
5/8	100-R1	5/8	1 1/32	0.3068	8	1500	6000
5/8	100-R2A	5/8	1 3/32	0.3068	8	2750	11000
3/4	100-R1	3/4	1 3/16	0.4418	9 1/2	1250	5000
3/4	100-R2A	3/4	1 1/4	0.4418	9 1/2	2250	9000
3/4	100-R3	3/4	1 1/4	0.4418	6	750	3000
3/4	100-R4	3/4	1 1/4	0.4418	5	300	1200
7/8	100-R1	7/8	1 5/16	0.6013	11	1125	4500
7/8	100-R2A	7/8	1 3/8	0.6013	11	2000	8000
1	100-R1	1	1 1/2	0.7854	11	1000	4000
1	100-R2A	1	1 9/16	0.7854	11	2000	8000
1	100-R3	1	1 1/2	0.7854	8	550	2250
1	100-R4	1	1 1/2	0.7854	6	250	1000

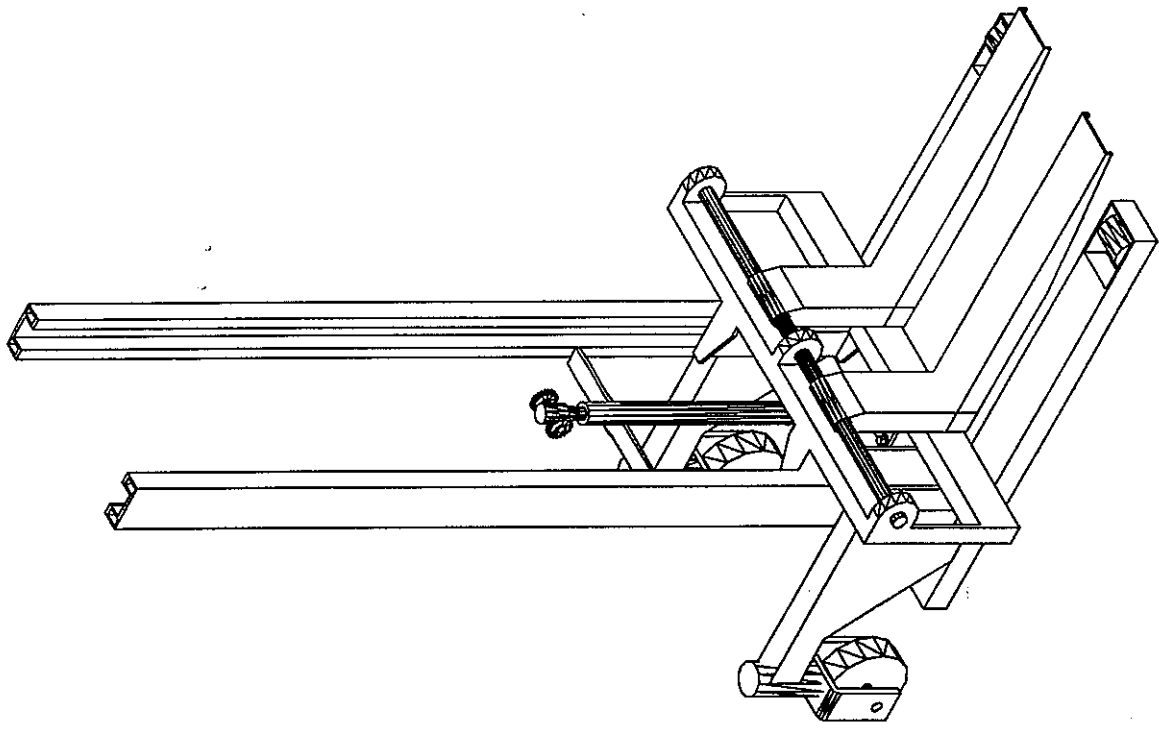
ตารางที่ 5. ตารางเลือกใช้แบตเตอรี่

Terminals	ADVANCE Model	Capacity (Ah)		Overall Dimensions (mm)				Number Cells (Pos.)	Terminal		Approx Weight (kg)		Cell Layout	Handle Type
		24V	32V	L	W	H	TH		Standard	Option	Net	Gross		
	A30 MF	40	32	195	127	200	222	9	B	A	9.7	9.9	1	Flip
	A40L MF	40	32	195	127	200	222	9	B	A	9.7	9.9	0	Flip
	A50 MF	45	36	236	127	210	222	13	B	A	12.8	12.8	1	Flip
	A60L MF	45	36	236	127	210	222	13	B	A	12.8	12.8	0	Flip
	A80 MF	75	60	256	170	201	224	13	A		18.2	18.3	1	Basket
	A90L MF	75	60	256	170	201	224	13	A		18.2	18.3	0	Basket
	A125 MF	95	68	303	170	201	224	17	A		22.5	22.5	1	Basket
	A135 MF	95	68	303	170	201	224	17	A		22.5	22.5	0	Single Flip
	A175 MF	125	82	341	174	190	190	11	A		15.5	15.7	0	Flip
	A275 MF	175	80	278	174	190	190	13	A		18.7	19.0	0	Flip
	A300 MF	190	80	353	174	190	190	19	A		25.5	25.8	0	Flip

ตารางที่ 6. ขนาดกระบอกสูบ

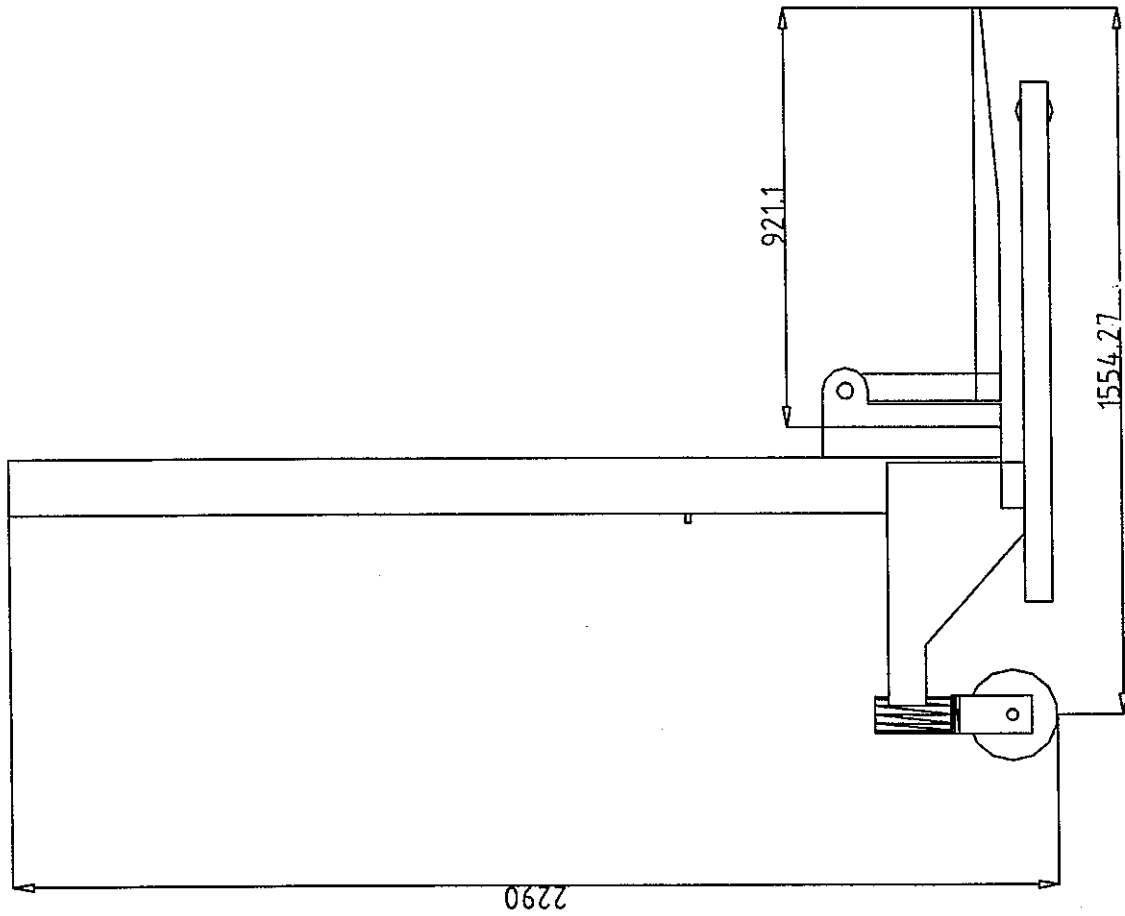
ปริมาณจุลยหัวสูบ			แรง (lbs) ที่ได้จากกระบอกสูบที่ความดัน (psi) ต่าง ๆ									
ขนาดกระบอก	พื้นที่ลูกสูบ (in ²)	แกลลอนต่อความยาว 1 ฟุตของระยะชัก	100	250	300	500	800	1000	1200	1500	2250	2500
1 1/2	1.767	.0918	176.7	441.6	530.1	883.5	1414	1767	2120	2650	3976	4418
2	3.142	.1632	314.2	785.5	942.6	1571	2514	3142	3770	4713	7070	7855
2 1/2	4.909	.2550	490.9	1227	1473	2454	3927	4909	5891	7364	—	—
3 1/2	8.296	.4309	829.6	2074	2489	4148	6637	8296	9955	12444	18670	—
4	12.566	.6528	1257	3142	3770	6783	10050	12560	15079	18850	—	—
5	19.635	1.020	1963	4908	5890	9817	15708	19635	23567	—	—	—
6	28.274	1.468	2877	7068	8482	14137	22619	28274	33928	—	—	—
8	50.266	2.611	5027	12566	15079	25133	40213	50266	—	—	—	—
10	78.540	4.080	7854	19636	23562	39270	67832	—	—	—	—	—

ภาคผนวก ข.
DRAWING



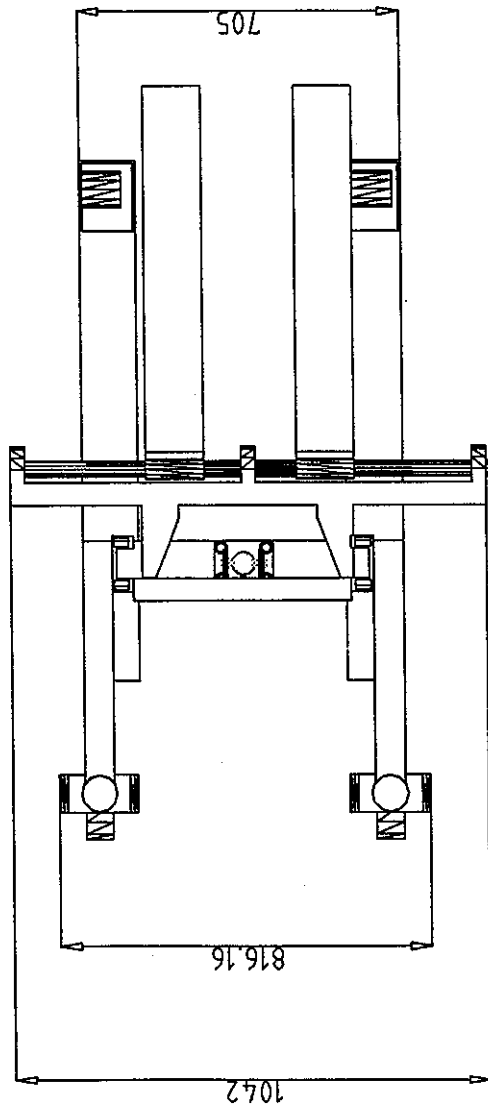
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HANDLIFT		
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DATE:16/3/04	CODE:43361609	PAGE :



NOTE: ALL DIMENSIONS ARE IN MILLIMETRE.

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HANDLIFT SIDE VIEW		
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HANDLIFT TOP VIEW

SCALE : 1:1

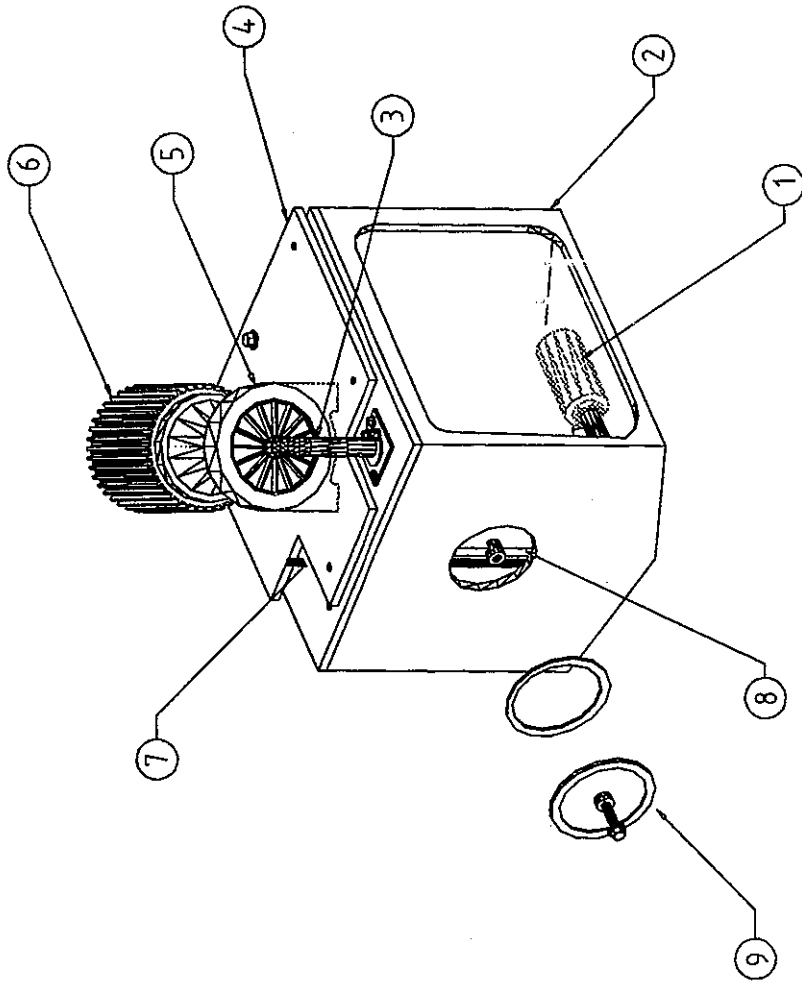
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PART	NAME
1	STAINER
2	BODY
3	SUCTION LINE
4	STEEL PLATE
5	VANE PUMP
6	ELECTRIC MOTOR
7	RETURN LINE
8	STEEL PLATE
9	GLASS

NOTE ALL DIMENTION ARE MILLIMETRE.

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OIL TANK

MEC.DRW.PROJ

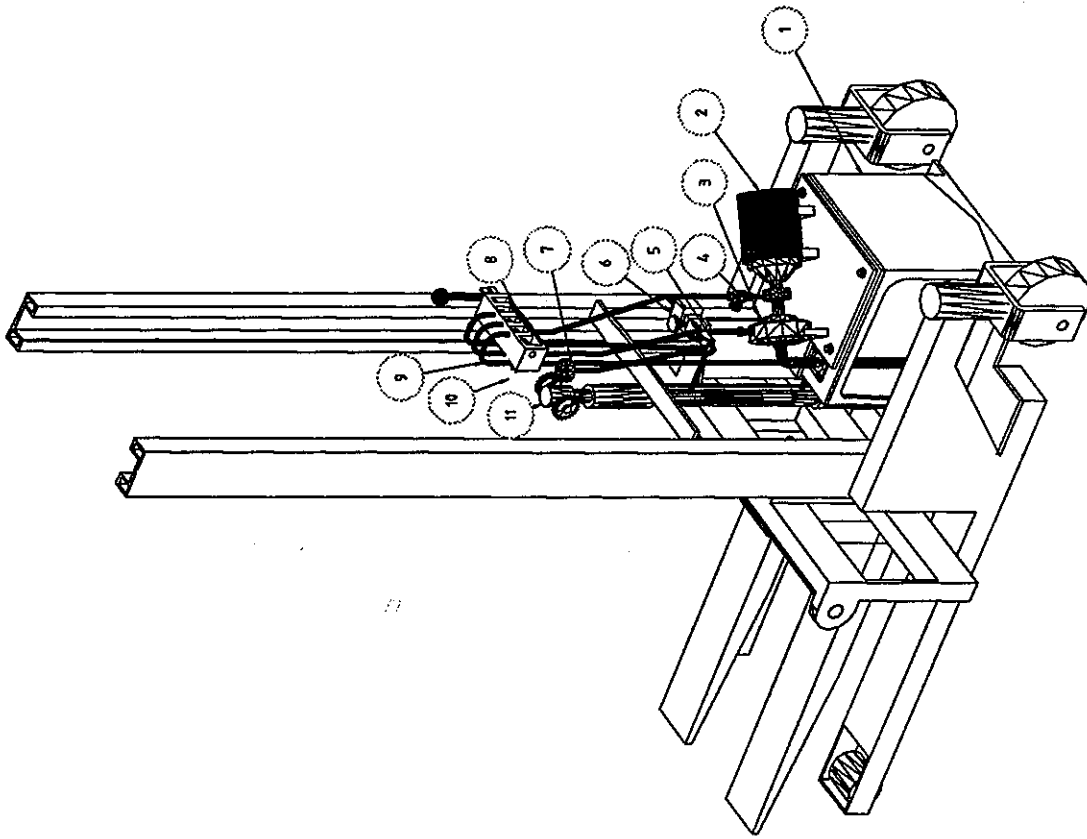
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DATE:16/3/04



No.	NAME
1	OIL TANK
2	MOTOR
3	VAN PUMP
4	RETURN FILIER
5	GAUGE COCK
6	RELIFT VALVE
7	PRESSURE GAUGE
8	CONTROL VALVE
9	HOSE
10	FLOW CONTROL VALVE
11	CYLENDER

NOTE: ALL DIMENTION ARE IN MILLIMETRE.

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HANDLIFT

SCALE : 1:1

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DATE: 16/3/04

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