

Technical Information

# Hydraulic Power Packs

AWP / S / DL / SS / TC / VL / SS / VT / TP





## **RYAN HYDRAULICS**

Keep the concept seeking excellence.

RYAN try our best to create more value for you with products and service.

# RYAN Hydraulics

## About RYAN

RYAN's manufacturing base was established in 1986, with quality hydraulic components and solutions to hydraulic system in the applications of engineering machinery, mobile industries, agricultural machinery, aviation, mining, and other fields. Main products include gear pump, gear motor, flow divider, orbital motor, loadsensing proportional valve, monoblock valve, sectional valve, manifold assembly and hydraulic power unit as well.

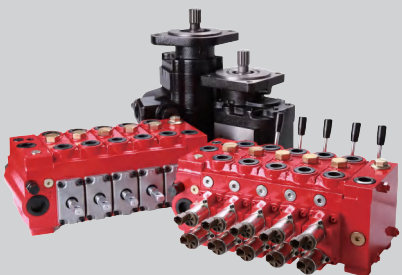
## Long-term Development Strategy

Reducing emissions by new energy is one of RYAN's long-term strategies. RYAN will be providing innovative technologies, products, and services for the global development of new energy, moving towards a century development strategy, and writing a century-new chapter in the hydraulic field.



## Innovation leads the future

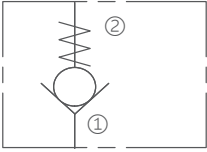
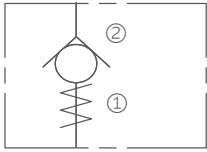
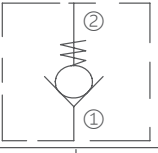
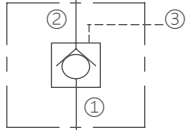
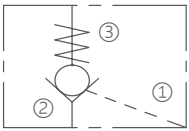
Through a few decades of development, RYAN's manufacturing base has built an intelligent manufacturing factory, gathering international R&D talents, accumulating rich R&D and manufacturing experience, possessing independent intellectual property rights, continuously providing customers with new products and technologies, and creating value for all of the customers.



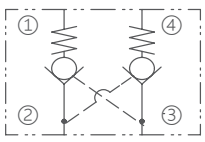
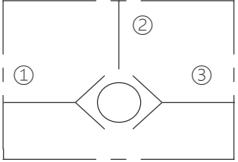
## Hydraulic Power Packs

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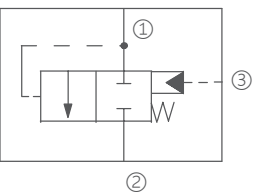
## Check Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRCV04-20	240bar	6L/min
	GRCV04-B20		
	GRCV08-20		30L/min
	GRCV08-B20		
	GRCV10-20B		
	GRCV10-20		
	GRCV12-20		
	GRCV16-20		
	GRCV2500-G18	350bar	10L/min
	GRCV2000-G14		23L/min
	GRCV2000-G38		50L/min
	GRCV2000-G12		80L/min
	GRCV42-M20	240bar	380L/min
		GRCV08-21	240bar
GRCV10-24		56L/min	
GRCV12-21		115L/min	
GRCVR2000-G14		350bar	20L/min
	GRCV3000-G14	350bar	116L/min
	GRCKBB-XCN	350bar	30L/min
	GRCKCB-XCN		60L/min
	GRCKCD-LCN		60L/min
	GRPC08-30	240bar	30L/min
	GRPC10-32	240bar	30L/min

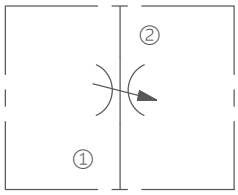
## Check Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRDC08-40	240bar	19L/min
	GRDC10-40		30L/min
	GRLS04-B30	240bar	6L/min
	GRLS08-30		19L/min
	GRLS10-30		30L/min

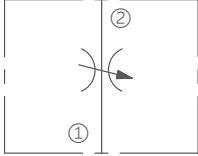
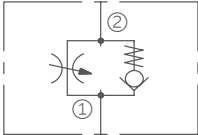
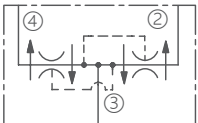
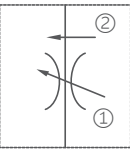
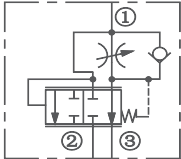
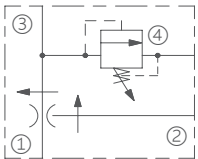
## Logic Elements

Function Selection	Model	Max. Working Pressure	Max. Flow
	GREP08-35	345bar	38L/min
	GREP10-S35	350bar	76L/min
	GREP12-S35	350bar	150L/min

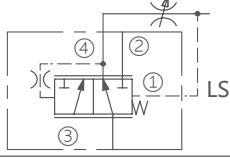
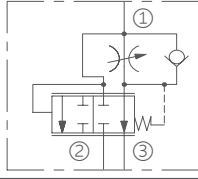
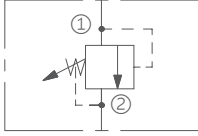
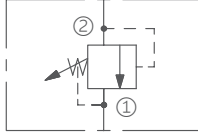
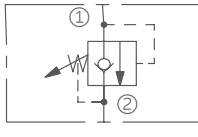
## Flow Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRNV-08	250bar	9L/min
	GRNV08-20	240bar	45L/min
	GRNV08-21		57L/min
	GRNV10-20		57L/min
	GRNV12-20		130L/min

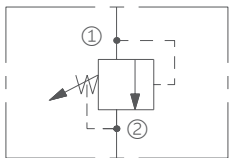
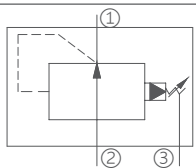
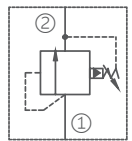
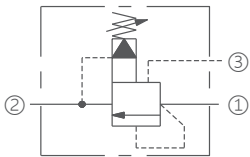
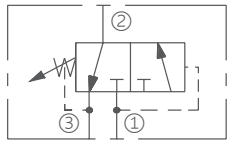
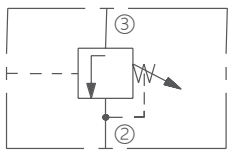
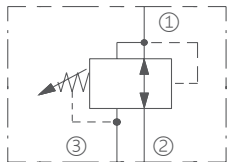
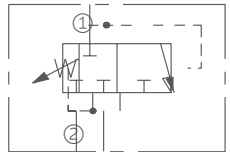
## Flow Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRMR10-20	240bar	53L/min
	GRNV10-22		60L/min
	GRFC08-20	240bar	23L/min
	GRFC10-20		45.4L/min
	GRFC10-21		57L/min
	GRFC12-20		130L/min
	GRFD50-45	345bar	45.4L/min
	GRFD52-45		91L/min
	GRFR08-20F	240bar	57L/min
	GRFRA10	240bar	57L/min
	GRFR10-30F	207bar	37.8L/min
	GRFR10-39	240bar	57L/min
	GRFRRV10-41F	207bar	19L/min

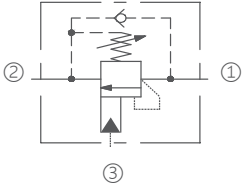
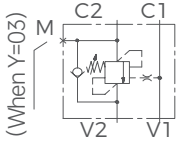
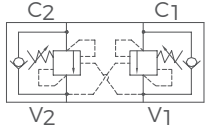
## Pressure Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GREC10-42	240bar	37.9L/min
	GRFR12-33	240bar	35L/min
	GRRV08	250bar	10 L/min
	GRYF08-09H	350bar	30L/min
	GRNRV-08		30L/min
	GRRV08-20	248bar	23L/min
	GRRV10-20	228bar	38L/min
	GRRV10-D20	350bar	80L/min
	GRRV10-B26	350bar	115L/min
	GRDRV08	250bar	30L/min
	GRRV08-22	240bar	30L/min
	GRRV10-22		114L/min
	GRRV10-23	240bar	114L/min

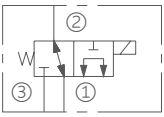
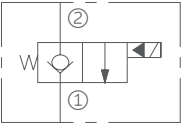
## Pressure Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRRV10-26	240bar	114L/min
	GRRV12-26	241bar	139L/min
	GRRV16-26	240bar	303L/min
	GRPBBB	350bar	217L/min
	GRRPEE	350bar	95L/min
	GRRPGE		200L/min
	GRRVEA-LCN	350bar	120L/min
	GRPS10-30	207bar	37.9L/min
	GRPS50-36	345bar	82L/min
	GRPS08-32	240bar	19L/min
	GRPS10-32	207bar	38L/min
	GRPR08-32	240bar	11L/min
	GRPR10-32	207bar	30L/min
	GRPR10-36	210bar	56L/min
	GRPS10-36	240bar	55L/min

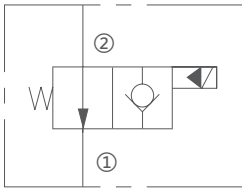
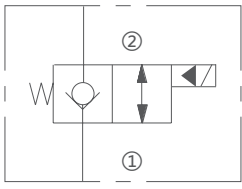
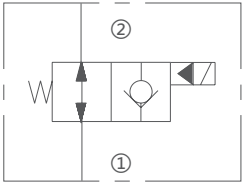
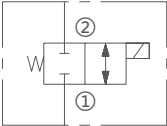
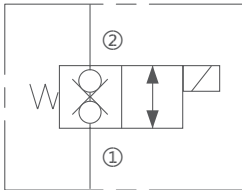
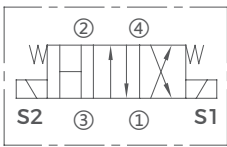
## Counterbalance Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRCBCA-LHN	280bar	60L/min
	GRCBBA-LHN	280bar	60L/min
	GRCCCA-LJN	350bar	60L/min
	GRCBBG-LJH	350bar	60L/min
	GRCBCG-LJN	350bar	60L/min
	GRCBCH-LJN	350bar	60L/min
	GRCBEA-LHN	280bar	120L/min
	GRCBEG-LJN	350bar	120L/min
	GRCBGG-LJN	350bar	240L/min
	GRCBGA-LHN	280bar	240L/min
	GRCBIG-LJN	350bar	32.8L/min
	GRCBIH-LJN	350bar	32.8L/min
	GR08.39.59.XYZ	350bar	60L/min
	GR08.44.07.XYZ	350bar	60L/min
	GR08.44.11XYZ	350bar	60L/min

## Solenoid Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRSV07-31	207bar	41L/min
	GRSV08-20	207bar	30.2L/min
	GRSV08-B20		19L/min
	GRSV10-20		56.8L/min
	GRSV12-20	240bar	113.6L/min
	GRSV08-20J	207bar	27L/min
	GRSV16-20		151L/min
	GRSV38-20J		23L/min

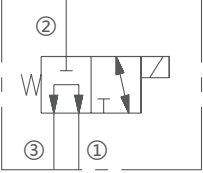
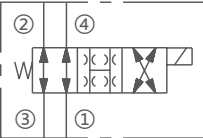
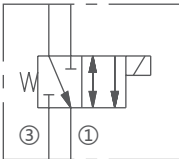
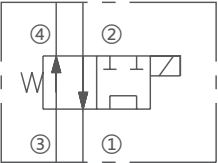
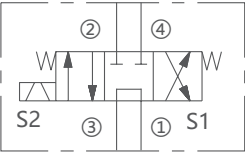
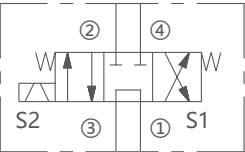
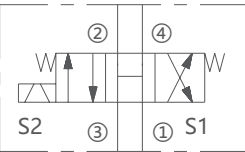
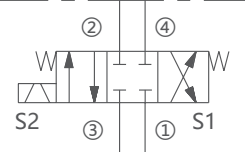
## Solenoid Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRSV08-21	207bar	37.9L/min
	GRSV10-21		68.1L/min
	GRSV12-21	240bar	113.6L/min
	GRSV16-21	207bar	151L/min
	GRSV08-22	207bar	30L/min
	GRSV10-22		57L/min
	GRSV12-22		113.6L/min
	GRSV16-22		151L/min
	GRSV08-23	207bar	30L/min
	GRSV10-23		68L/min
	GRSV16-23		151L/min
	GRSV10-24	207bar	60.6L/min
	GRSV08-26	207bar	2L/min
	GRSV38-26	207bar	3.4L/min
	GRSV08-28	207bar	114L/min
	GRSV08-C28	250bar	15L/min
	GRSV08-D28	207bar	30L/min
	GRSV10-28	240bar	76L/min
	GRSV10-47Z	240bar	300L/min

### Solenoid Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRSV10-4754B	240bar	300L/min
	GRSV12-28	240bar	114L/min
	GRSV08-29	207bar	11L/min
	GRSV10-29	240bar	76L/min
	GRSV08-30	207bar	11.4L/min
	GRSV08-31	207bar	11.4L/min
	GRSV08-58C	207bar	197L/min
	GRSV10-34	207bar	22.7L/min
	GRSV10-38	250bar	251L/min
	GRSV38-38	207bar	11L/min

## Solenoid Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	DASV08-33	207bar	82L/min
	DASV08-40	207bar	11.4L/min
	DASV10-40		22.7L/min
	DASV08-43	207bar	82L/min
	DASV10-43		
	DASV10-44	207bar	23L/min
	DASV08-47A	210bar	11L/min
	DASV10-47A	240bar	19L/min
	DASV08-47B	207bar	11L/min
	DASV10-47B	240bar	23L/min
	DASV08-47C	207bar	11L/min
	DASV10-47C	240bar	23L/min

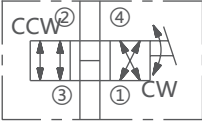
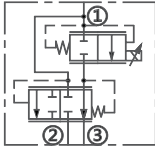
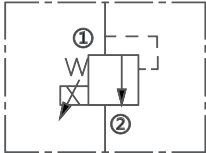
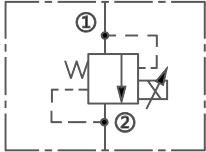
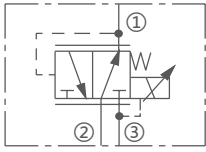
### Solenoid Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRSV08-47D	207bar	11L/min
	GRSV10-47D	240bar	23L/min
	GRSV10-5915	247bar	15L/min
	GRSVRV10-26	275.8bar	56.8L/min

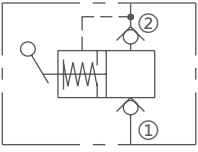
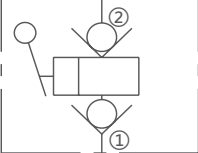
### Directional Control Valve

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRPD10-40	240bar	38L/min
	GRPD10-41	240bar	45L/min
	GRPD10-42	240bar	82L/min
	GRMR10-47A	240bar	11L/min

## Proportional Valves

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRMR10-47B	240bar	11L/min
	GRPV70-30	240bar	100L/min
	GRPV72-30		76L/min
	GRTS10-26	241bar	100L/min
	GRTS10-27	241bar	75.7L/min
	GRTS10-36	241bar	60L/min

## Hand Pumps

Function Selection	Model	Max. Working Pressure	Max. Flow
	GRHP10-20	207bar	1L/min
	GRHP10-21	240bar	163L/min
	GRHP16-21	241bar	21.3L/min Stroke



### DC Motors

Rated Voltage(V)	Power (W)	Rated Current(A)	Rated Torque(Nm)	Duty S2min-S3%	Insulation Class	Protective Class	Number of Teeth	Rotation	Weight (kg)
12	1200	140	3	1.2min-4.5%ED	F	IP54	2	CW	5.1
Rated Voltage(V)	Power (W)	Rated Current(A)	Rated Torque(Nm)	Duty S2min-S3%	Insulation Class	Protective Class	Number of Teeth	Rotation	Weight (kg)
12	1600	200	6	2min-7%ED	F	IP54	2	CW	7
Rated Voltage(V)	Power (W)	Rated Current(A)	Rated Torque(Nm)	Duty S2min-S3%	Insulation Class	Protective Class	Number of Teeth	Rotation	Weight (kg)
12	1600	205	6	2min-7%ED	F	IP54	2	CCW	6.9
Rated Voltage(V)	Power (W)	Rated Current(A)	Rated Torque(Nm)	Duty S2min-S3%	Insulation Class	Protective Class	Number of Teeth	Rotation	Weight (kg)
12	1800	225	6	2min-7%ED	F	IP54	2	CW	7.2

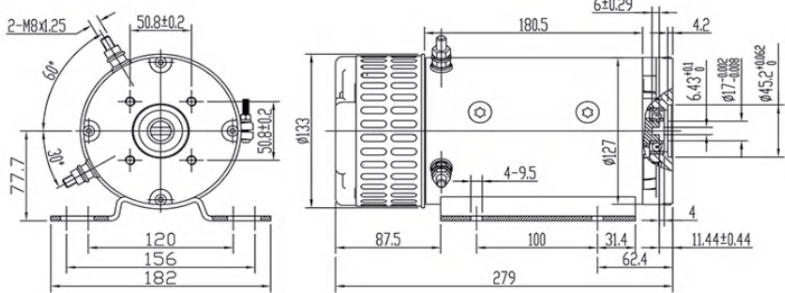


**DC Motors**

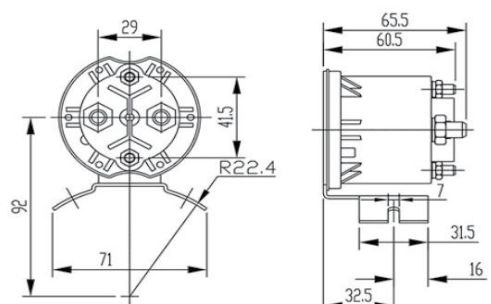
Rated Voltage (V)	Power (W)	Rated Current (A)	Rated Torque (Nm)	Duty S2min-S3%	Insulation Class	Protective Class	Number of Teeth	Rotation	Weight (kg)
24	2500	165	10	2min-8%ED	F	IP54	1	CW	7.2
24	2500	160	12	2min-8%ED	F	IP54	2	CW	9
24	2800	165	9	5min-13%ED	F	IP54	2	CW	9.2
24	3000	165	10	6min-11%ED	F	IP54	1	CW	12

**DC Motors**

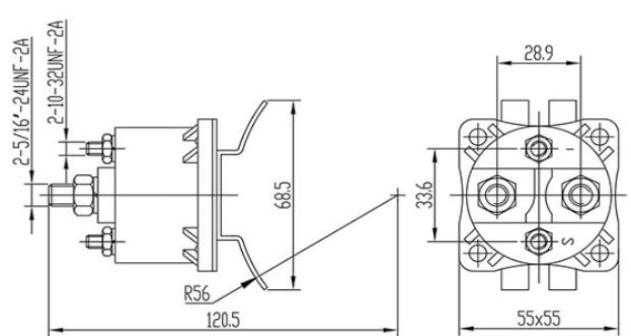
Rated Voltage (V)	Power (W)	Rated Current (A)	Rated Torque(Nm)	Duty S2min-S3%	Insulation Class	Protective Class	Number of Teeth	Rotation	Weight (kg)
24	4000	220	14	13min-28%ED	F	IP12	9	CW	15



Rated Voltage (V)	Suction voltage (V)	Release Voltage (V)	Coil Resistance (Ω)	Load current (A)	Large Stud (in)	Small stud (in)	Service Life (times)	Ambient Temperature (°C)
12	7.5	3.5	13.5	150/250	5/16-32UNF	10#-24UNF	100000	-20 C-82 C
24	16	7	48	150/250	5/16-32UNF	10#-24UNF	60000	-20 C-82 C
36	24	10.4	105	150/250	5/16-32UNF	10#-24UNF	60000	-20 C-82 C
48	32	13.9	195	150/250	5/16-32UNF	10#-24UNF	60000	-20 C-82 C

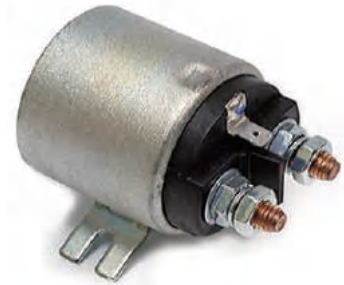
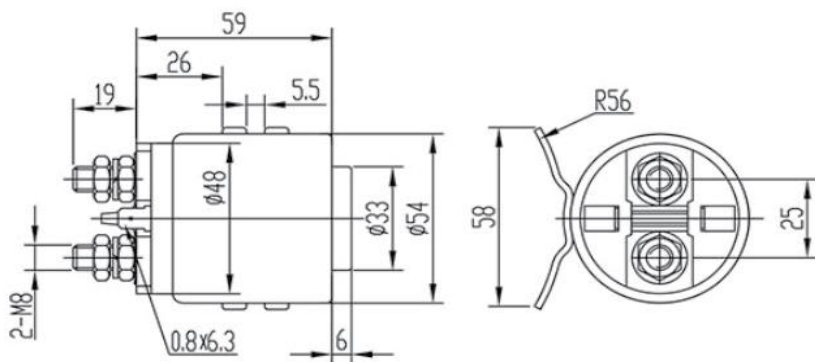


Rated Voltage (V)	Suction voltage (V)	Release Voltage (V)	Coil Resistance (Ω)	Load current (A)	Large Stud (in)	Small stud (in)	Service Life (times)	Ambient Temperature (°C)
12	6	2.3	7.1	150/250	5/16-32UNF	10#-24UNF	100000	-20 C-82 C
24	12	4.6	28.4	150/250	5/16-32UNF	10#-24UNF	60000	-20 C-82 C
36	25	8	130	150/250	5/16-32UNF	10#-24UNF	60000	-20 C-82 C

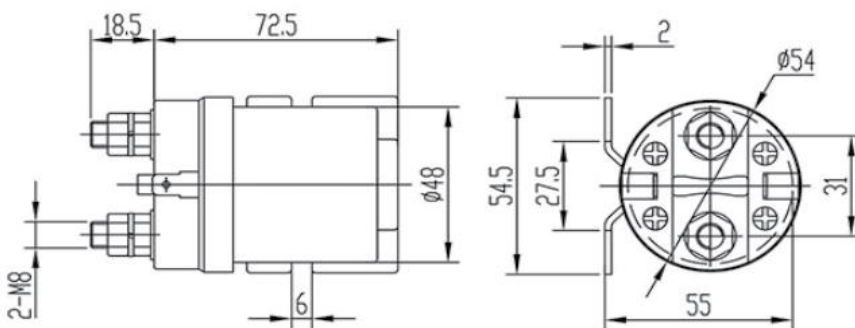


### Start switch

Rated Voltage (V)	Suction voltage (V)	Release Voltage (V)	Coil Resistance ( $\Omega$ )	Load current (A)	Large Stud (in)	Small stud (in)	Service Life (times)	Ambient Temperature ( $^{\circ}\text{C}$ )
12	7.5	3.5	6.4	150/250	M8	0.8×6.3	100000	-20 $^{\circ}\text{C}$ -82 $^{\circ}\text{C}$
24	16	7	22.7	150/250	M8	0.8×6.3	60000	-20 $^{\circ}\text{C}$ -82 $^{\circ}\text{C}$
36	24	10.4	95.4	150/250	M8	0.8×6.3	60000	-20 $^{\circ}\text{C}$ -82 $^{\circ}\text{C}$

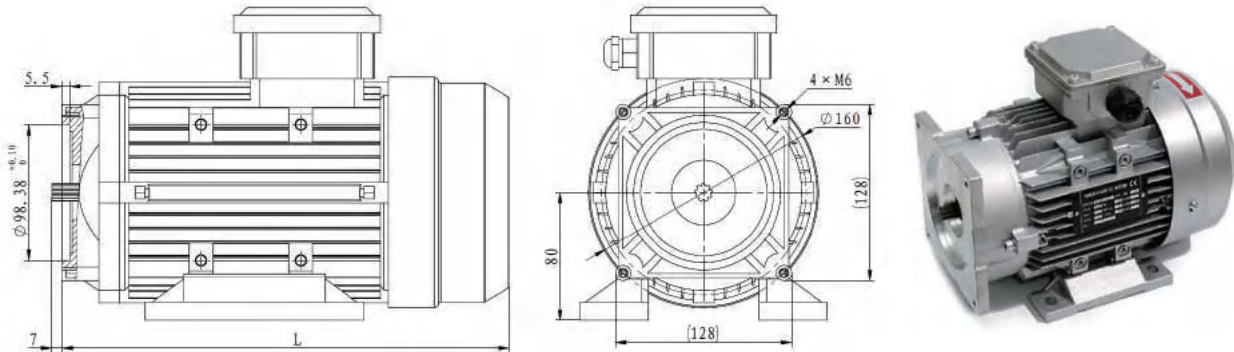


Rated Voltage (V)	Suction voltage (V)	Release Voltage (V)	Coil Resistance ( $\Omega$ )	Load current (A)	Large Stud (in)	Small stud (in)	Service Life (times)	Ambient Temperature ( $^{\circ}\text{C}$ )
12	6	2.3	6.5	150/250	M8	0.8×6.3	100000	-20 $^{\circ}\text{C}$ -82 $^{\circ}\text{C}$
24	12	4.6	22.4	150/250	M8	0.8×6.3	60000	-20 $^{\circ}\text{C}$ -82 $^{\circ}\text{C}$
36	25	8	93.4	150/250	M8	0.8×6.3	60000	-20 $^{\circ}\text{C}$ -82 $^{\circ}\text{C}$

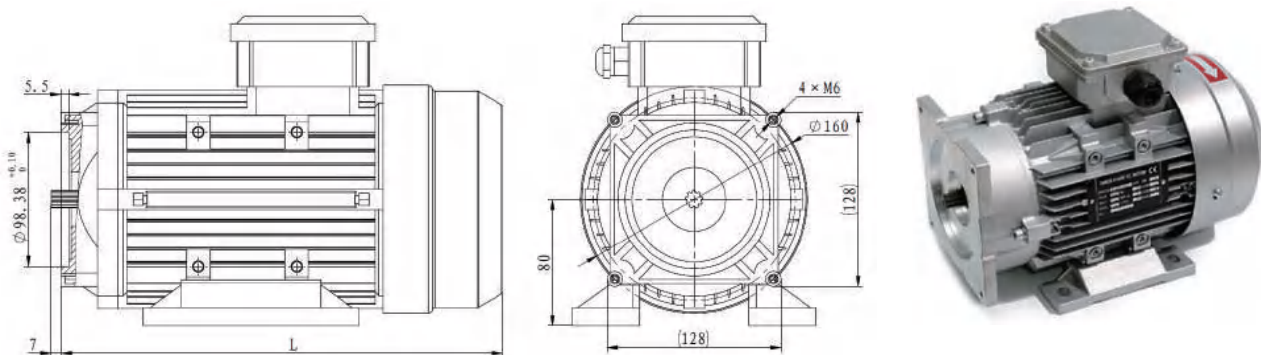


## AC Motors

Rated Voltage		Poles	Base number	Voltage (V)		Frequency (HZ)	Speed (rpm)	Current (A)		Length L (mm)
kW	HP			Single phase	Three phase					
0.75	1	2	80M	220	380	50	2825	3	1.7	240
0.75	1	2	80M	220	380	60	3450	3.3	1.5	
0.75	1	4	80M	220	380	50	1430	3.4	2.4	
0.75	1	4	80M	220	380	60	1725	3.8	1.8	

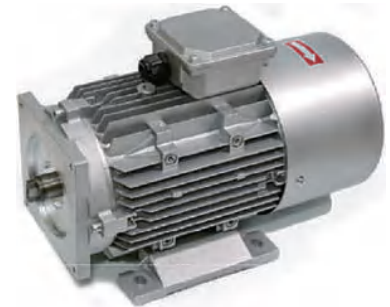
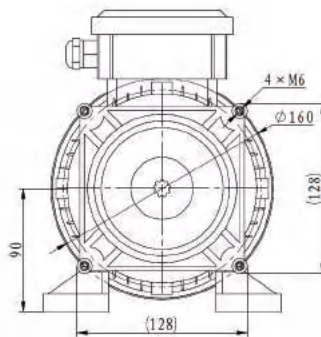
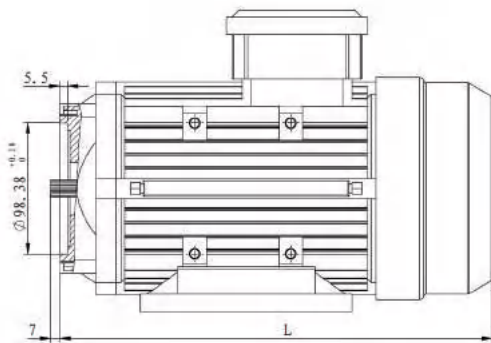


Rated Voltage		Poles	Base number	Voltage (V)		Frequency (HZ)	Speed (rpm)	Current (A)		Length L (mm)
kW	HP			Single phase	Three phase					
1.1	1.5	2	80M	220	380	50	2825	4.3	2.5	240
1.1	1.5	2	80M	220	380	60	3450	4.4	2.1	
1.1	1.5	4	80M	220	380	50	1430	4.8	2.8	
1.1	1.5	4	80M	220	380	60	1725	5.1	2.3	

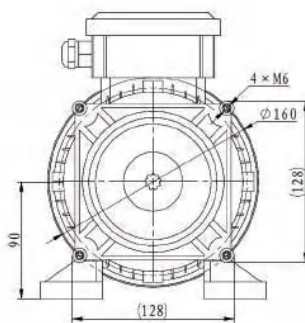
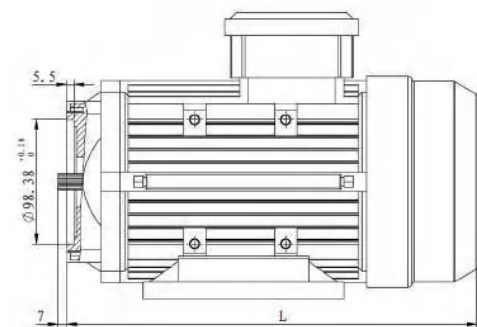


## AC Motors

Rated Voltage		Poles	Base number	Voltage (V)		Frequency (HZ)	Speed (rpm)	Current (A)		Length L (mm)
kW	HP			Single phase	Three phase					
1.5	2	2	90S	220	380	50	2825	5.6	3.2	270
1.5	2	2	90S	220	380	60	3450	5.7	3.5	
1.5	2	4	90S	220	380	50	1430	6.2	3.6	
1.5	2	4	90S	220	380	60	1725	6.4	3.8	



Rated Voltage		Poles	Base number	Voltage (V)		Frequency (HZ)	Speed (rpm)	Current (A)		Length L (mm)
kW	HP			Single phase	Three phase					
2.2	3	2	90L	220	380	50	2825	7.8	4.5	300
2.2	3	2	90L	220	380	60	3450	8.2	4.8	
2.2	3	4	90L	220	380	50	1430	8.7	5.1	
2.2	3	4	90L	220	380	60	1725	8.1	4.6	

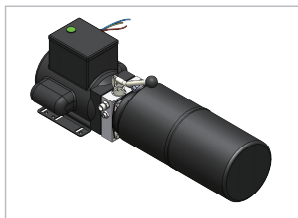


GRH has developed and manufactured hundreds of power packs, this product is a modular customized product, welcome to contact GRH engineers, for a more suitable product solution. The following are some common product solution examples.

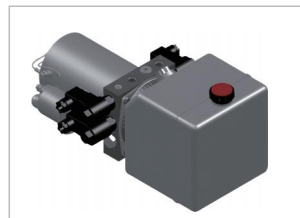
### Ordering Code

Pos.1	2	3	4	5	6	7	8	9	10	11
Motor	Schematic diagram	Disp.(cc/r)	System pressure	Motor power (kW)	Motor voltage (V)	Motor speed (RPM)	Solenoid valve voltage (V)	Tank volume (L)	Installation	Port size
DC- DC Motor	F**-	0.25	D- 100bar	**/	24/	**/	12-	4	H- Horizontal	A M14x1.5
AC- Three-phase AC Motor		0.5	E- 160bar				24-	5	HS- Side Hor	B M16x1.5
A- Single-phase AC Motor		0.75	F- 200bar					6	V- Vertical	C G1/4
		1.6	G- 250bar					8	T- Special	D G3/8
		2	H- 315bar					10		E NPT3/8
		2.5						12		F 9/16"SAE
		3								
		3.5								
		4								
		5								
		.....								
		12								

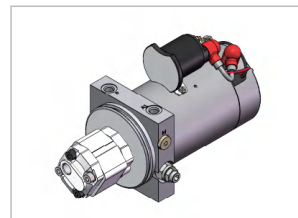
### Typical Application



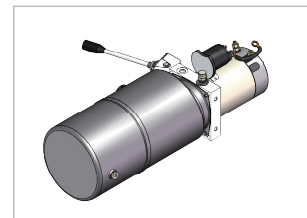
Vehicle Lift Power Pack



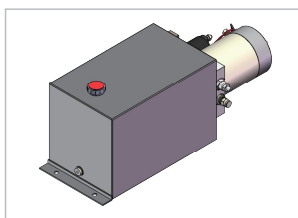
Scissor Lift Power Pack



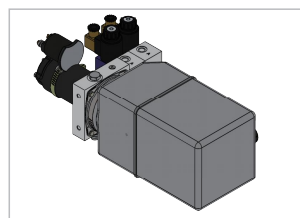
Aerial Working Platform Power Pack



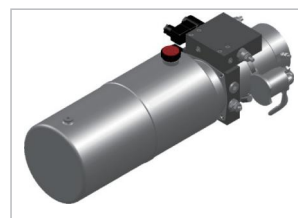
Semi-electric Stacker Power Pack



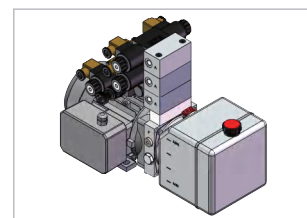
Electrical Stacker Power Pack



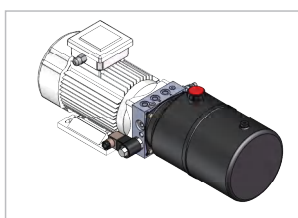
Van Truck Power Pack



Tailgate Power Pack



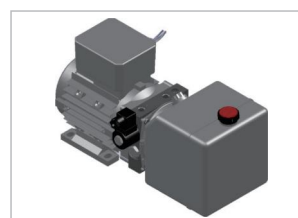
Tyre Changer Power Pack



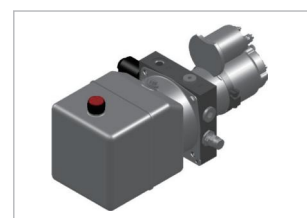
Dock Leveler Power Pack



Snow Sweeper Power Pack



Forklift Power Pack



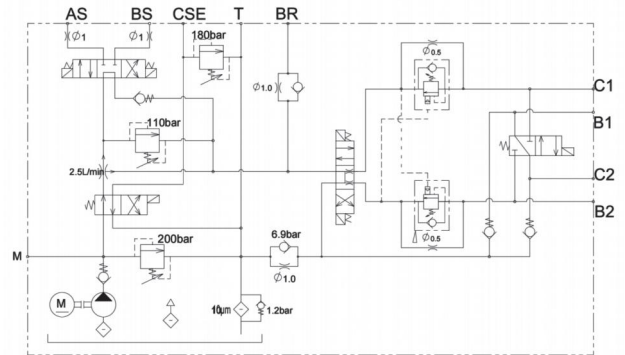
Mini for Medical Power Pack

## Permanent Magnet Synchronous Hydraulic Power Unit

### Introduction

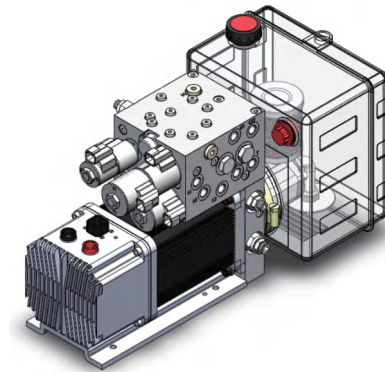
1. The structure integrates permanent magnet synchronous motor, the driver, hydraulic pump, oil tank, relief valve, check valve, solenoid valve, oil filter, air filter and other hydraulic system components.
2. Functional integration of hydraulic steering control circuit, hydraulic lifting control circuit, hydraulic drive walking control circuit.
3. The machine has compact and reasonable structure, high efficiency and energy saving, easy installation and maintenance, and is widely used in self-propelled aerial work platform.

F172

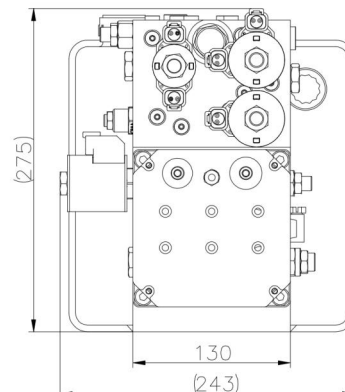
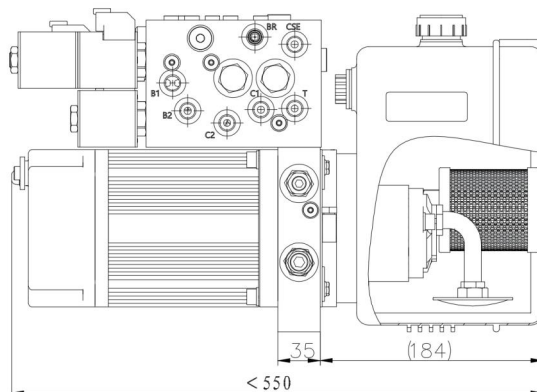


### Technical Data

Electric motor	DC-F172-4.0/F-3.5/24/24-7PH-CD
Hydraulic pump	4cc
Rated pressure	21MPa
Max. pressure	25MPa
Rated speed	3000rpm
Speed range	600~4000rpm
Temperature	-20~80°C
Tank capacity	7L



### Drawing



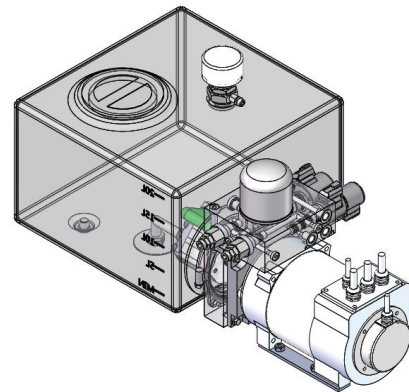
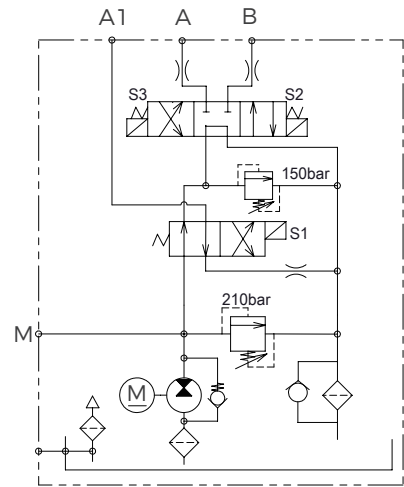
## Energy Recycling Power Unit

### Introduction

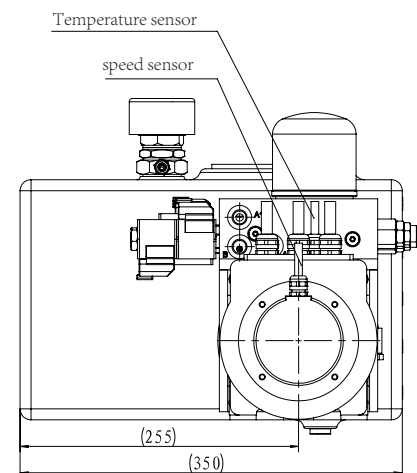
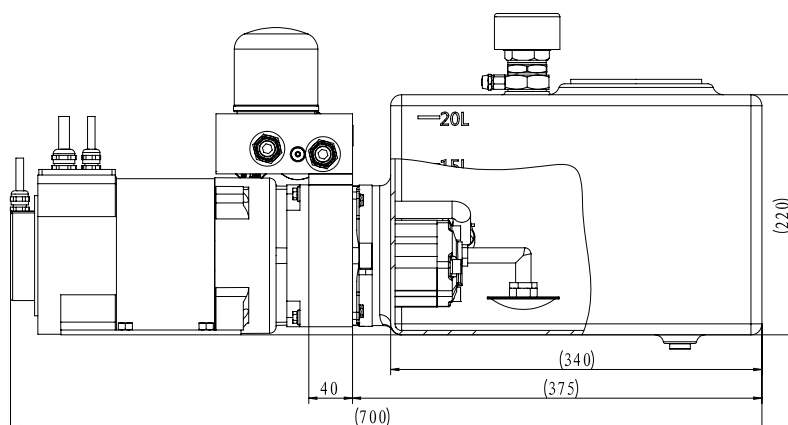
1. Integrates high-efficiency motor, high-pressure gear pump, relief valve, return oil filter, and oil tank.
2. Optional 3-5 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor.
3. Optional gear pump displacement.
4. Optional electric proportional valve control.
5. Applied in lifts over 12 meters scissor (aerial work platforms).

### Technical Data

Model	AC-F91D-4.0/F-3.5/16/2700/24-24H-C
Motor Voltage	16VAC
Motor Power	3.5kW
Motor Speed	2700rpm
Pump Displacement	4.0cc
System Pressure	210bar
Tank Capacity	24L
Port Size	G1/4

**F91D**


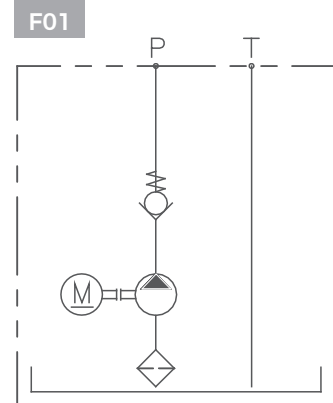
### Drawing



## Aerial Working Platform Power Pack 1

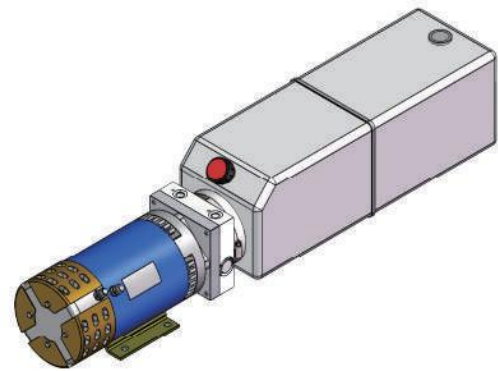
### Introduction

1. High-pressure gear pump / DC motor/Extended tank
2. Anti-reverse check valve

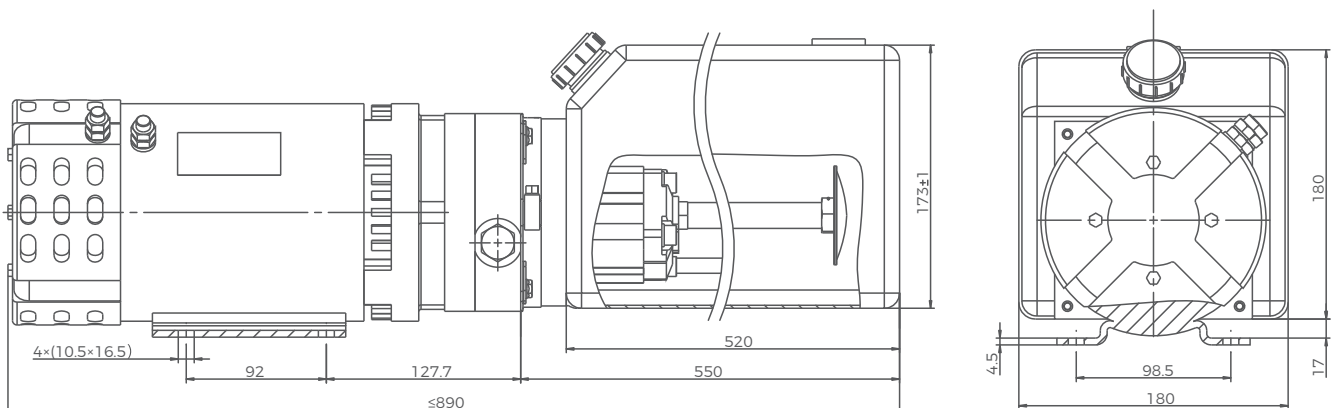


### Technical Data

Model	DC-F01-4.8/F-4.5/48-15PV-C
Voltage	DC48V
Power	4.5kW
Speed	2500rpm
Disp.	4.8cc/r
Pressure	21MPa
Volume	15L
Size	P, T: G1/4



### Drawing



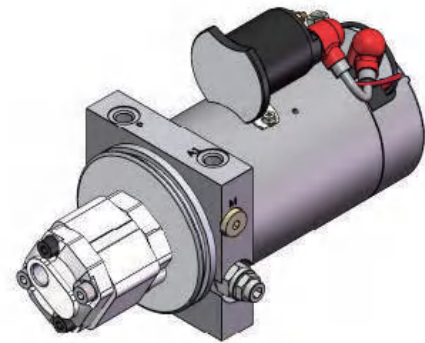
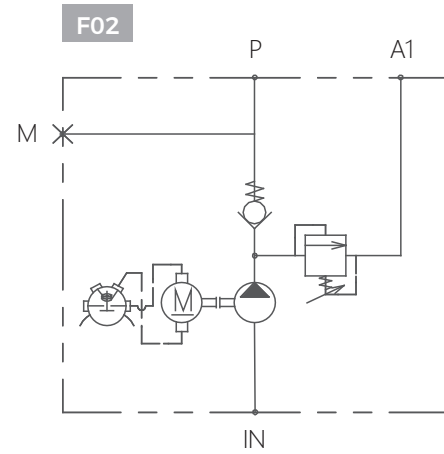
## Aerial Working Platform Power Pack 2

### Introduction

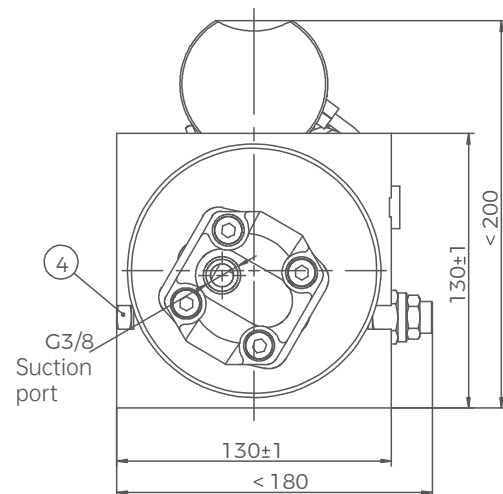
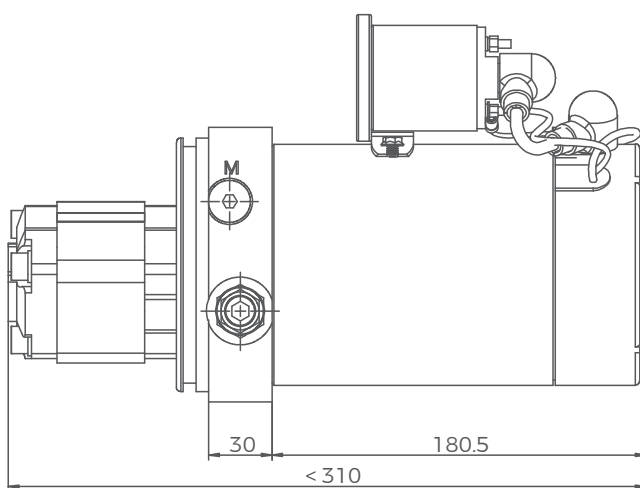
1. High-pressure gear pump / DC motor/Extended tank
2. Pressure limiting relief valve

### Technical Data

Model	DC-F02-2.1/F-2.2/12-C
Voltage	DC12V
Power	2.2kW
Speed	2600rpm
Disp.	2.1cc/r
Pressure	21MPa
Volume	None
Size	P, A1, M: G1/4; P: G3/8



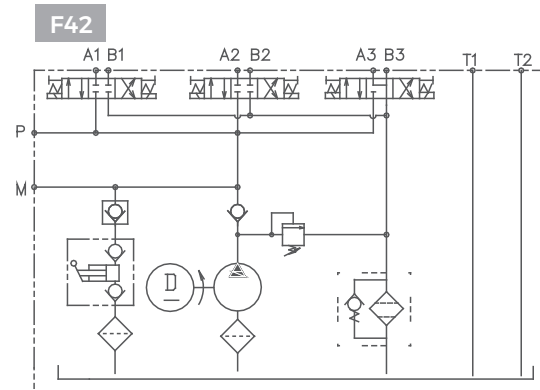
### Drawing



## Aerial Working Platform Power Pack 3

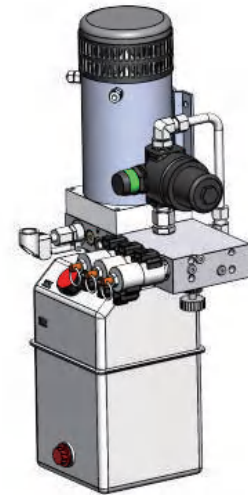
### Introduction

1. High-pressure gear pump / DC motor/Extended tank
2. Emergency manual pump
3. External oil return filter

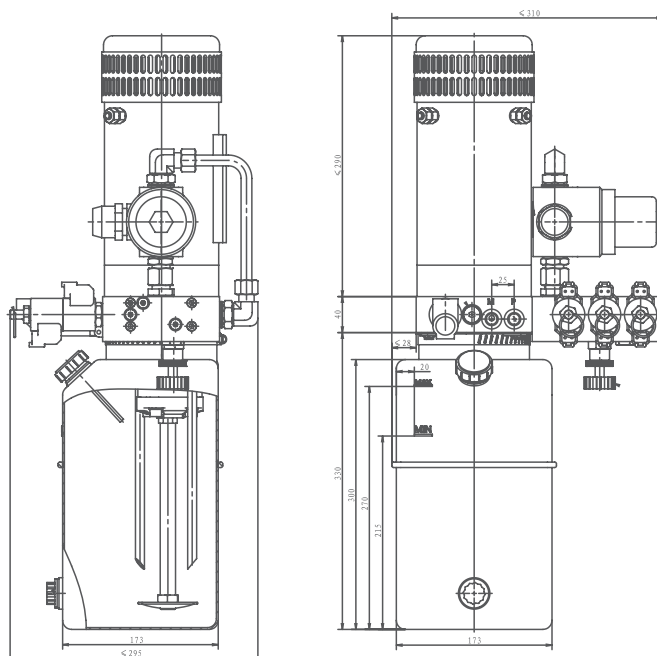


### Technical Data

Model	DC-F42-3.7/E-4/24/24-8PV-C
Voltage	DC24V
Power	4kW
Speed	2700rpm
Disp.	3.7cc/r
Pressure	21MPa
Volume	8L
Size	P, T, A, B, M: G1/4



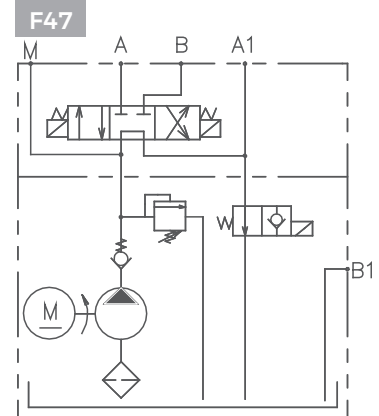
### Drawing



## Aerial Working Platform Power Pack 4

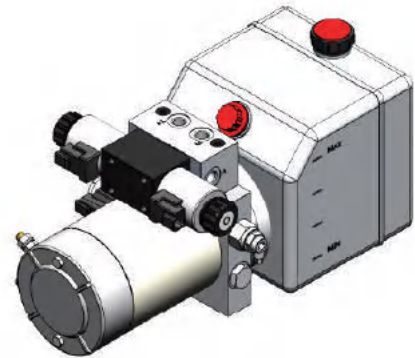
### Introduction

1. High-pressure gear pump / DC motor/Extended tank
2. Plastic oil tank

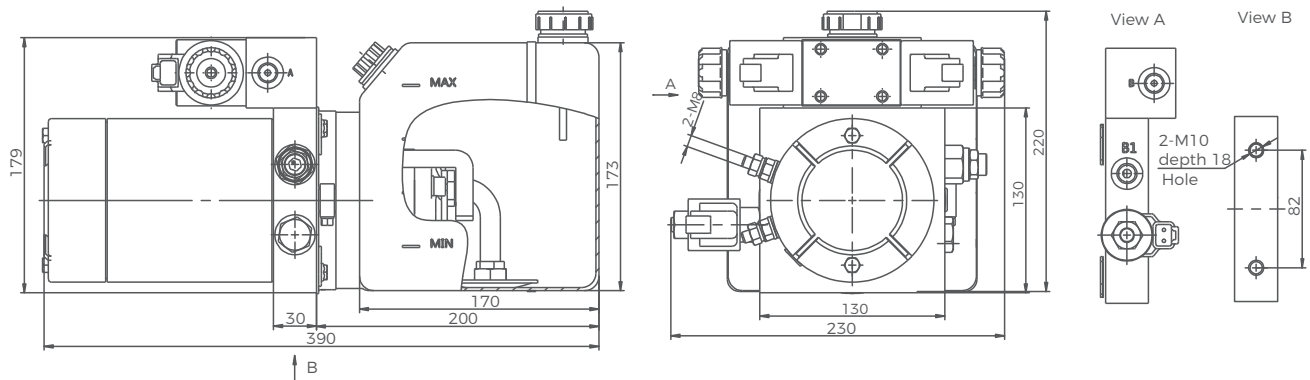


### Technical Data

Model	DC-F47-1.1/E-1.6/24/20-4PH-C-G
Voltage	DC24V
Power	1.6kW
Speed	2900rpm
Disp.	1.1cc/r
Pressure	14MPa
Volume	4L
Size	A, B, A1, B1, M: G1/4



### Drawing



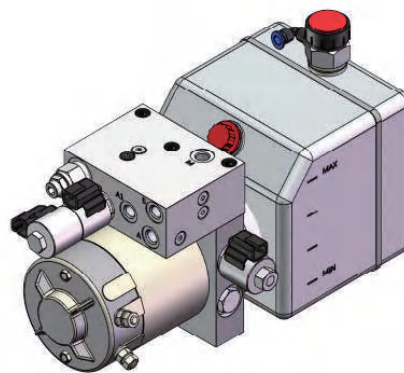
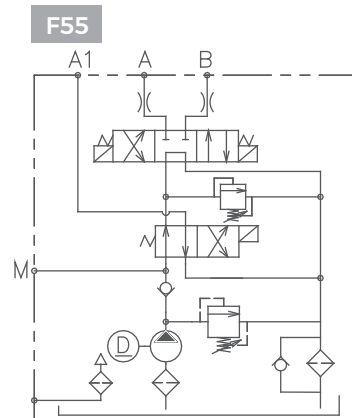
## Aerial Working Platform Power Pack 5

### Introduction

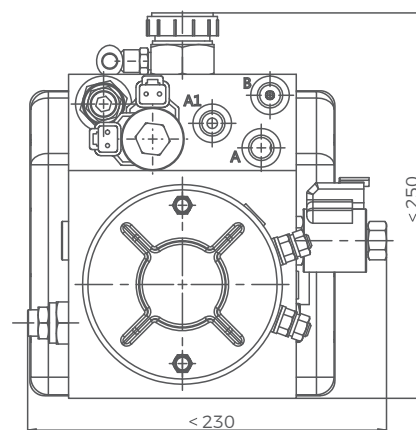
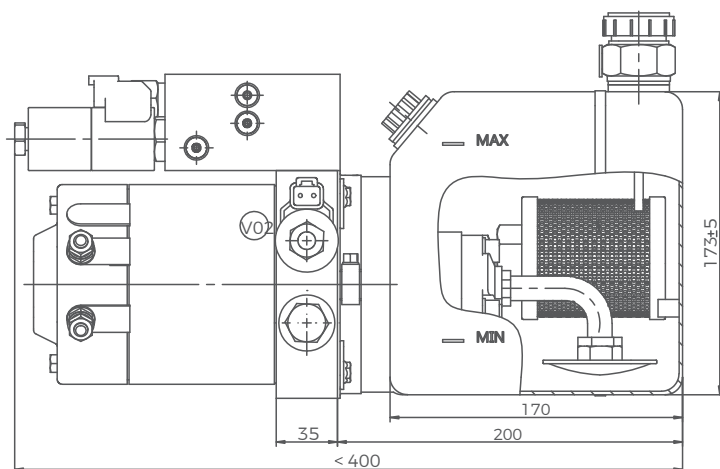
1. High-pressure gear pump / DC motor/Extended tank
2. Internal filter element

### Technical Data

Model	DC-F55-1.6/E-1.2/24/20-4PH-C
Voltage	DC24V
Power	1.2kW
Speed	3800~4400rpm
Disp.	1.6cc/r
Pressure	15.5MPa
Volume	4L
Size	A, B, A1, M: G1/4



### Drawing



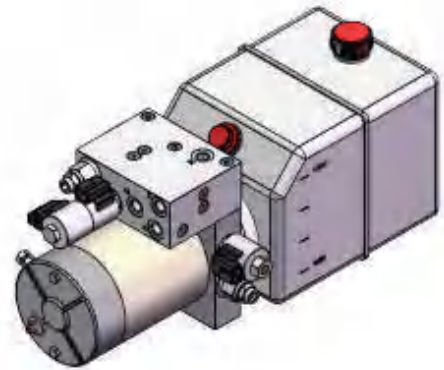
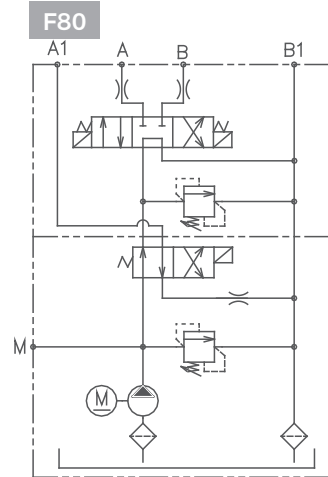
## Aerial Working Platform Power Pack 6

### Introduction

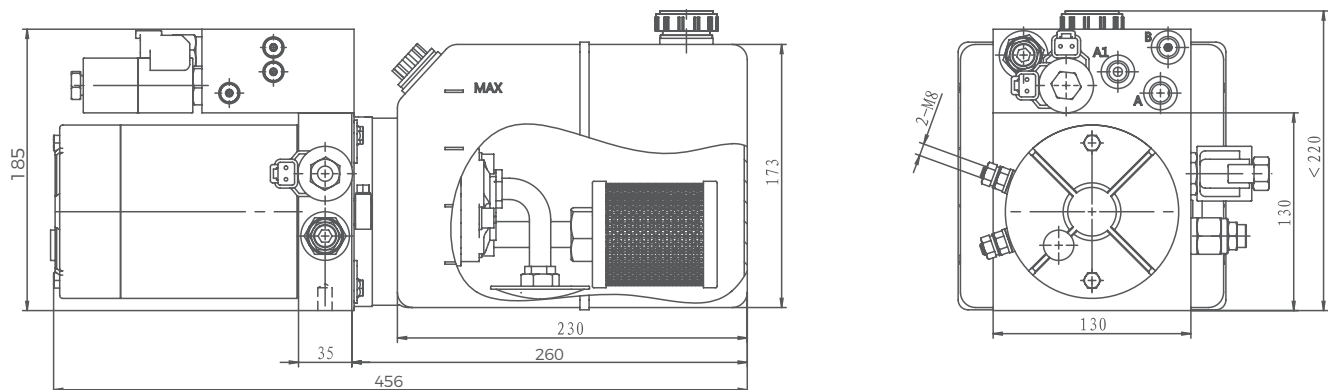
1. High-pressure gear pump / DC motor/Extended tank
2. Internal filter element

### Technical Data

Model	DC-F80-2.5/F-2.2/24/20-6PH-C1
Voltage	DC24V
Power	2.2kW
Speed	2600rpm
Disp.	2.5cc/r
Pressure	21MPa
Volume	6L
Size	A, B, A1, B1, M: G1/4



### Drawing



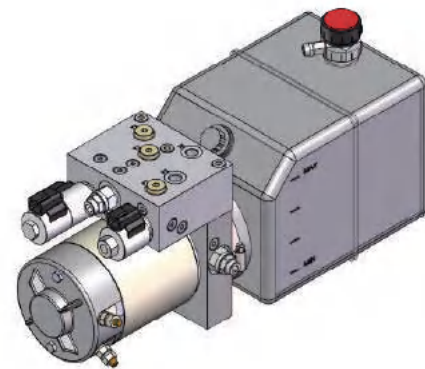
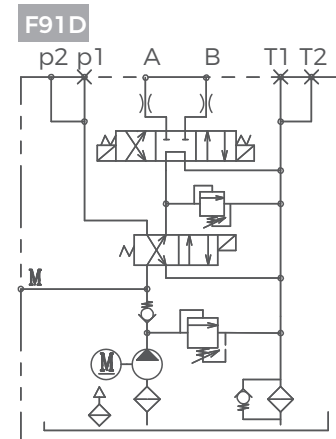
## Aerial Working Platform Power Pack 7

### Introduction

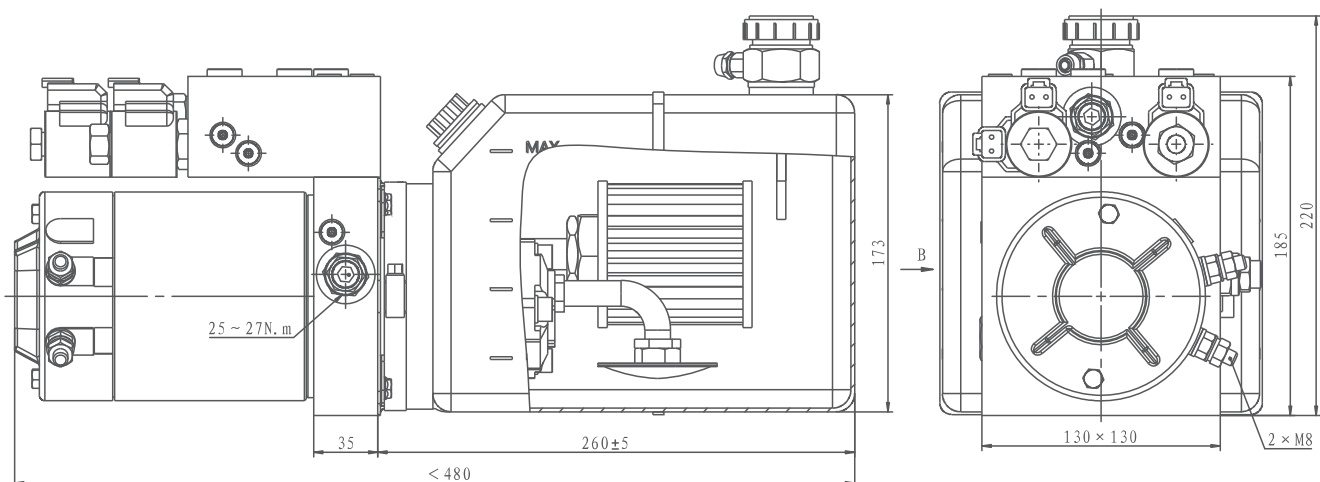
1. High-pressure gear pump / DC motor/Extended tank
2. Internal filter element
3. Multiple oil return ports

### Technical Data

Model	DC-F91D-3.2/E-2.2/24/20-6PH-C
Voltage	DC24V
Power	2.2kW
Speed	2750rpm
Disp.	3.2cc/r
Pressure	15MPa
Volume	6L
Size	A, B, P1, P2, T1, T2, M: G1/4



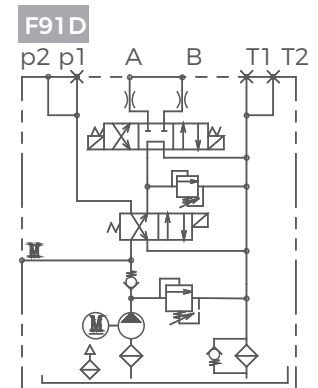
### Drawing



## Aerial Working Platform Power Pack 8

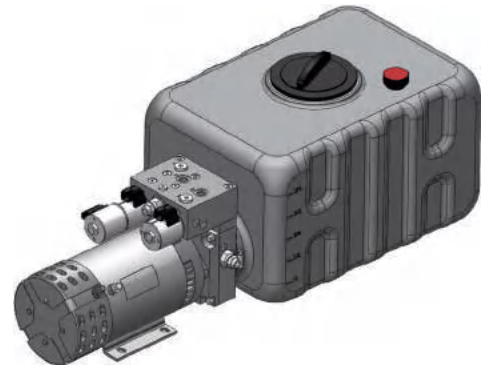
### Introduction

1. High-pressure gear pump / DC motor/Extended tank
2. Internal filter element
3. Large capacity oil tank with large opening cap

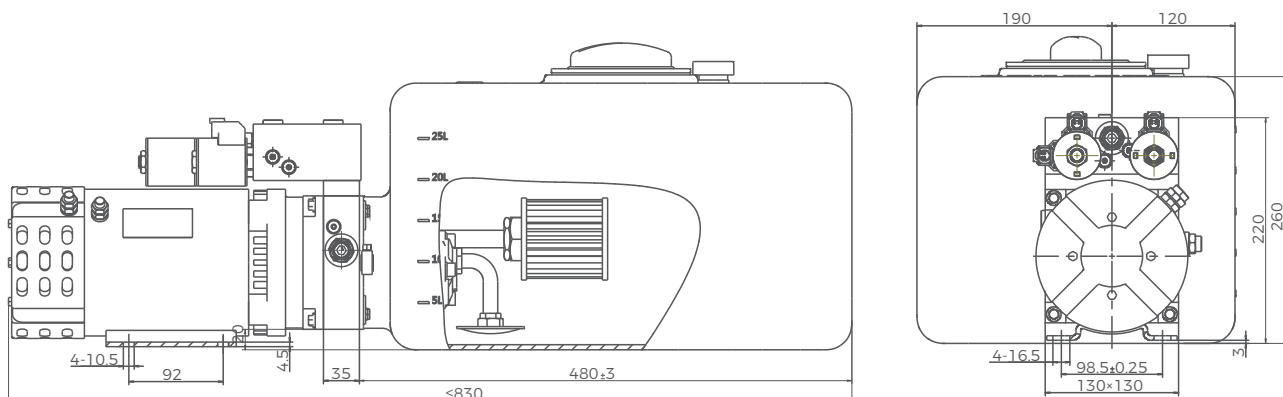


### Technical Data

Model	DC-F91D-4.8/E-4.5/48/24-28PH-C
Voltage	DC48V
Power	4.5kW
Speed	2750rpm
Disp.	4.8cc/r
Pressure	15MPa
Volume	28L
Size	A, B, P1, P2, T1, T2, M: G1/4



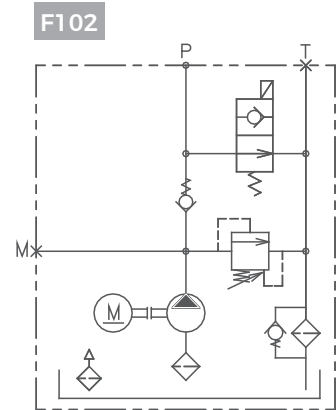
### Drawing



## Aerial Working Platform Power Pack 9

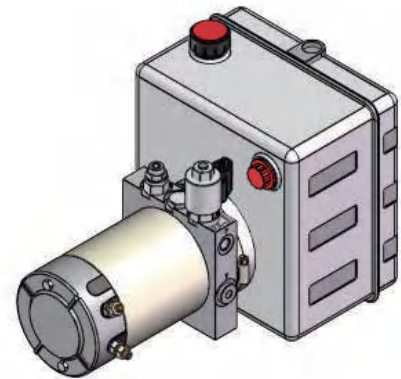
### Introduction

1. High-pressure gear pump / DC motor/Extended tank
2. Internal filter element

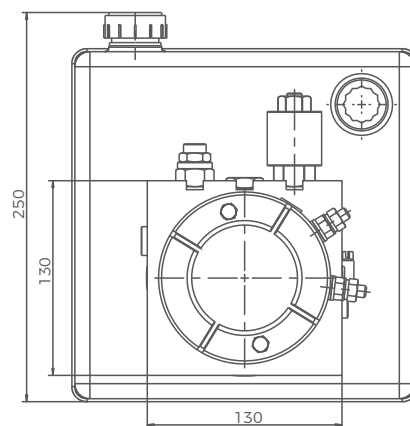
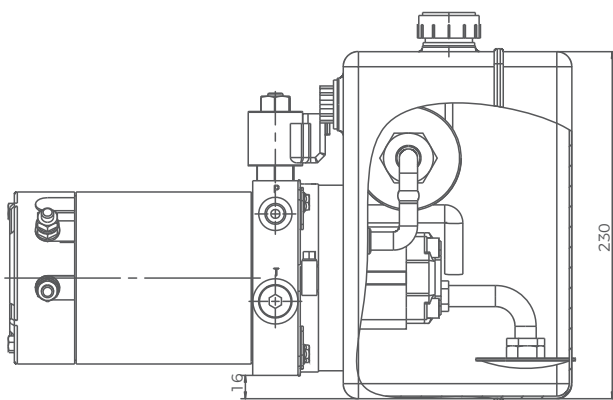


### Technical Data

Model	DC-F102-3.2/F-2.2/24/24-7PBH-C
Voltage	DC24V
Power	2.2kW
Speed	2750rpm
Disp.	3.2cc/r
Pressure	18MPa
Volume	7L
Size	P, M: G1/4; T: G3/8



### Drawing



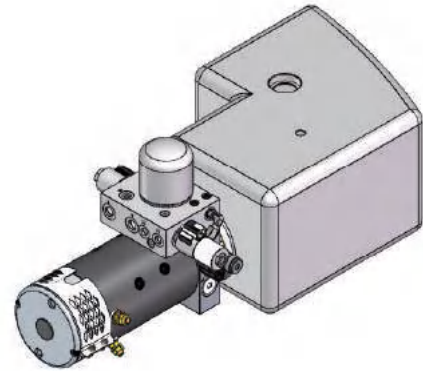
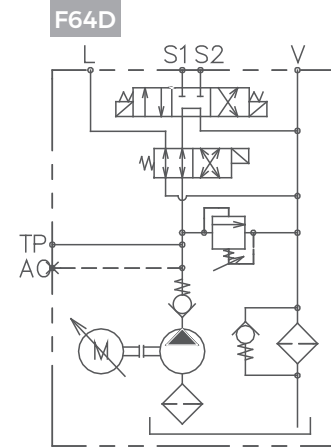
## Aerial Working Platform Power Pack 10

### Introduction

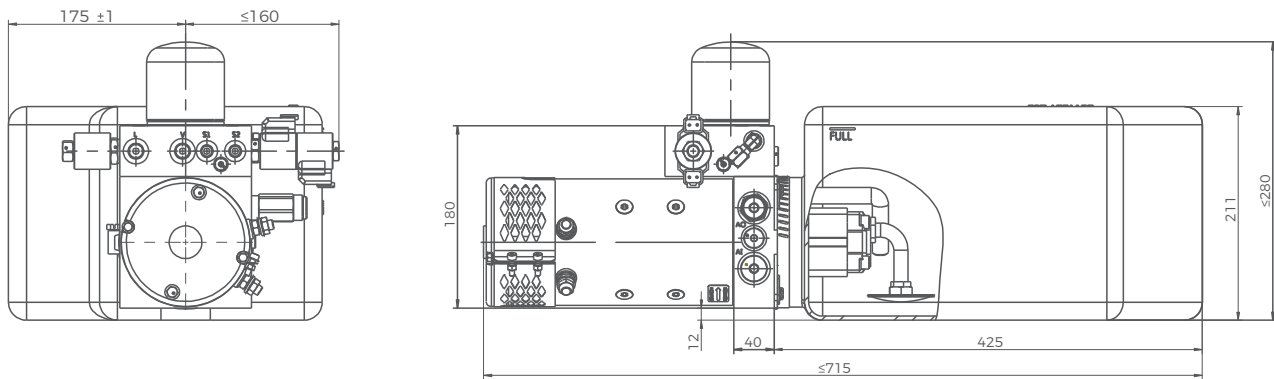
1. High-pressure gear pump / DC motor/Extended tank
2. Internal filter element
3. Shaped oil tank

### Technical Data

Model	DC-F64D-3.8/F-2.8/24/20-22PH-FK
Voltage	DC24V
Power	2.8kW
Speed	2700rpm
Disp.	3.8cc/r
Pressure	21MPa
Volume	21.6L
Size	S1, S2, T, P: SAE4; L, V: SAE6



### Drawing



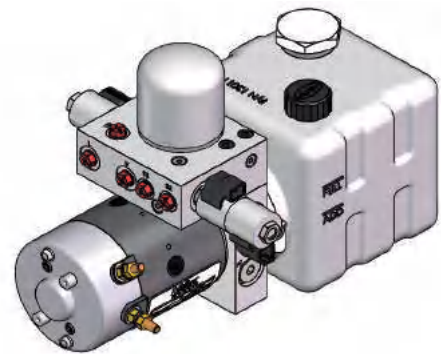
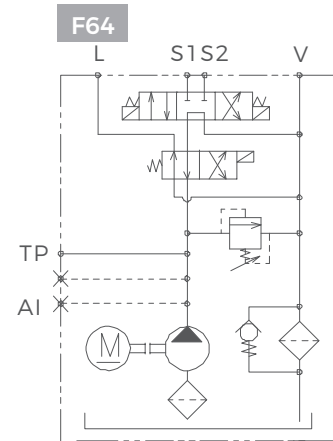
## Aerial Working Platform Power Pack 11

### Introduction

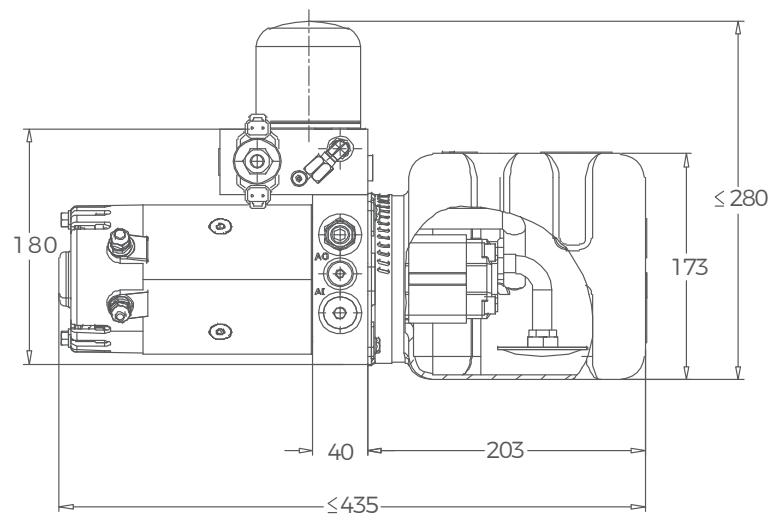
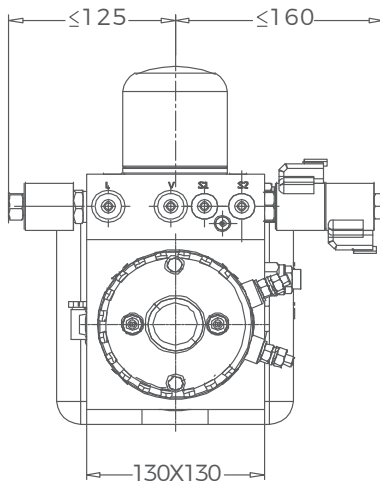
1. High pressure gear pump / DC motor / Multipurpose integrated valve block / Hydraulic valve / Tank
2. 3-position 4-way solenoid valve / 2-position 4-way solenoid valve
3. External oil return filter

### Technical Data

Model	DC-F64-1.5/F-2.0-24/20-4PH-FK
Voltage	DC24V
Power	2.0kW
Speed	3100rpm
Disp.	1.5cc/r
Pressure	24.5MPa
Volume	4L
Size	SAE4, SAE6



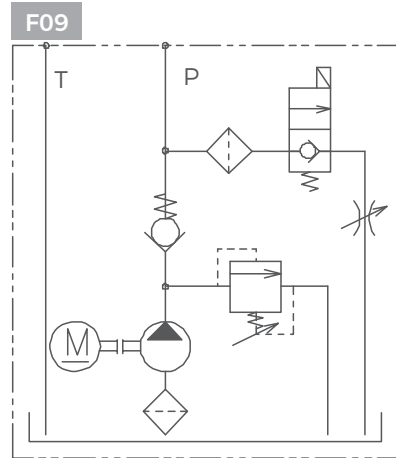
### Drawing



## Stacker Power Pack 1

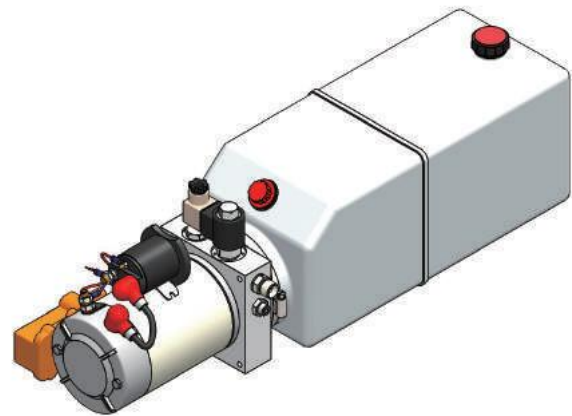
### Introduction

1. High pressure gear pump / DC Motor / Multipurpose integrated valve block / Hydraulic valve / Tank
2. Normally closed type solenoid relief valve
3. Descent speed controlled by adjustable throttle valve

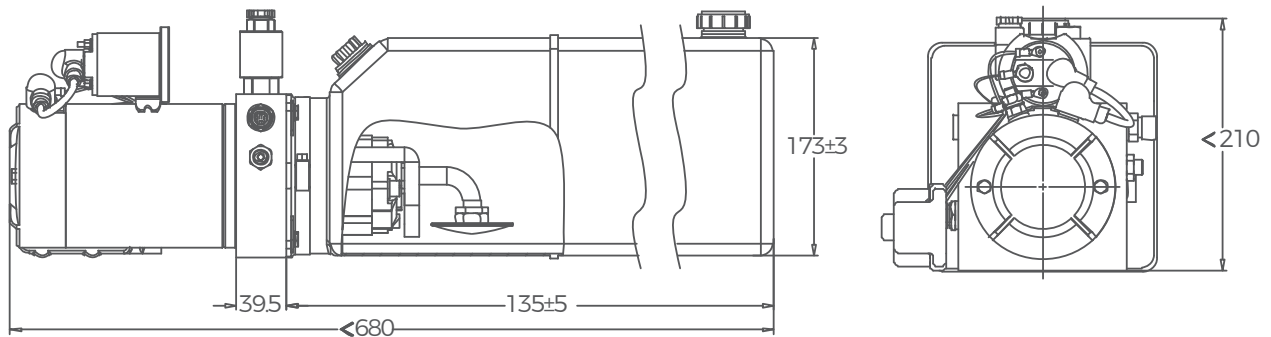


### Technical Data

Model	DC-F09-1.1/F-1.6-12/12-10PH-A
Voltage	DC12V
Power	1.6kW
Speed	2600rpm
Disp.	1.1 cc/r
Pressure	21MPa
Volume	10L
Size	M14X1.5



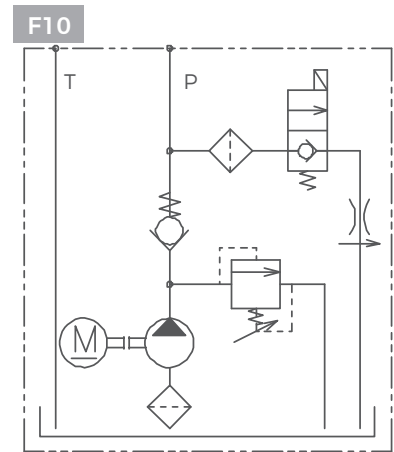
### Drawing



## Stacker Power Pack 2

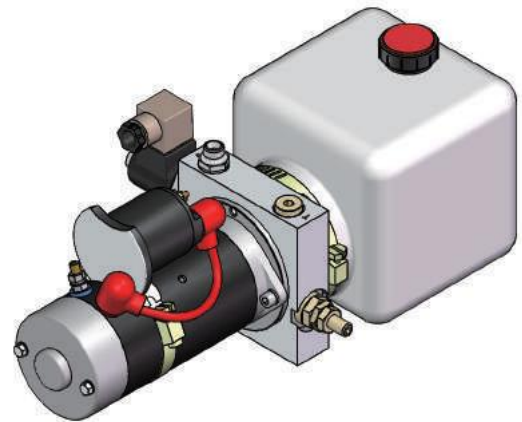
### Introduction

1. High pressure gear pump / DC Motor / Multipurpose integrated valve block Hydraulic valve / Tank
2. Normally closed type solenoid relief valve
3. Descent speed of descent does not vary with the load

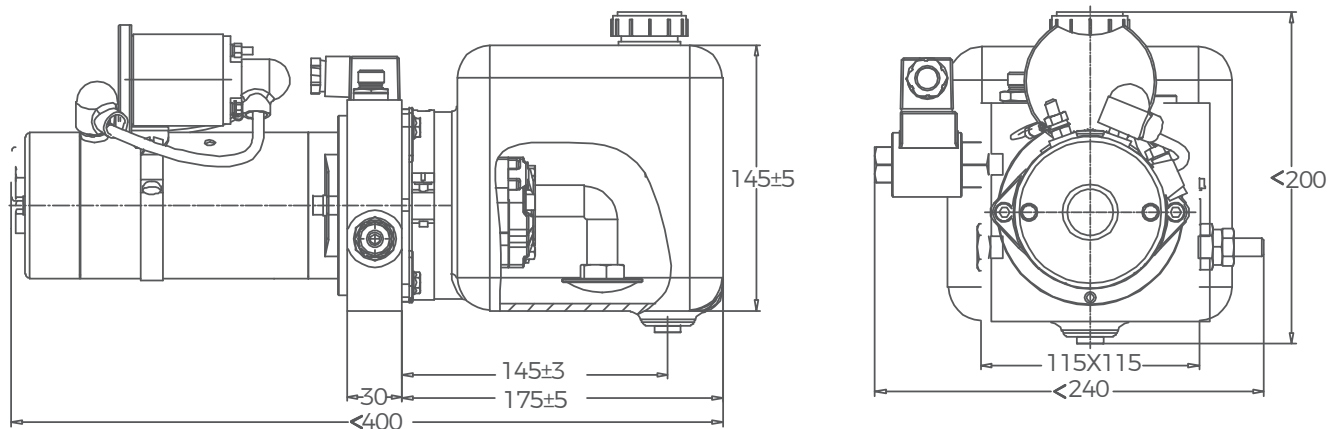


### Technical Data

Model	DC-F10-1.25/F-1.2-12/12-2.5PH-C
Voltage	DC12V
Power	1.2kW
Speed	3000rpm
Disp.	1.25cc/r
Pressure	17MPa
Volume	2.5L
Size	G1/4



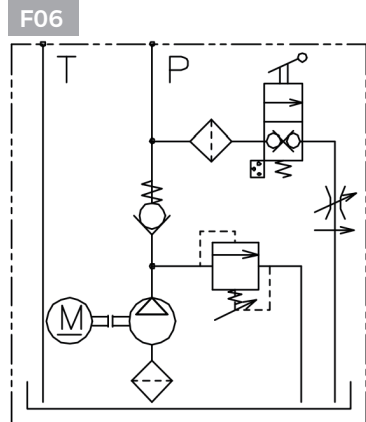
### Drawing



## Semi-electric Stacker Power Pack

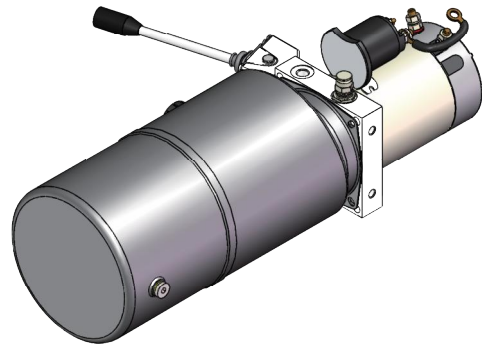
### Introduction

1. High-pressure gear pump / DC motor / Manual switch
2. Pressure limiting relief valve
3. The descent speed is adjustable

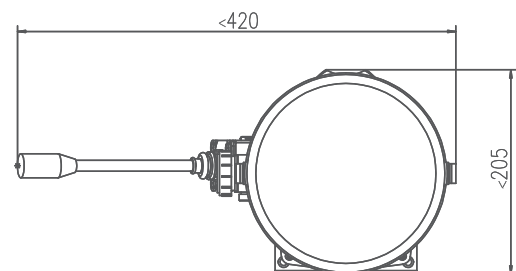
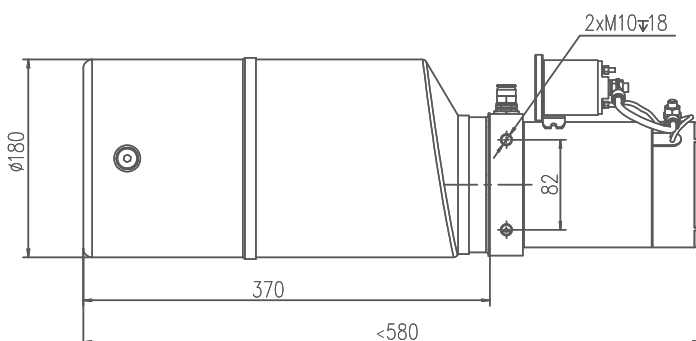


### Technical Data

Model	DC-F06-2.6/E-2.2/24/**-8HS-A
Voltage	DC24V
Power	2.2kW
Speed	2500rpm
Disp.	2.6cc/r
Pressure	16MPa
Volume	8L
Size	P, T: M14x1.5



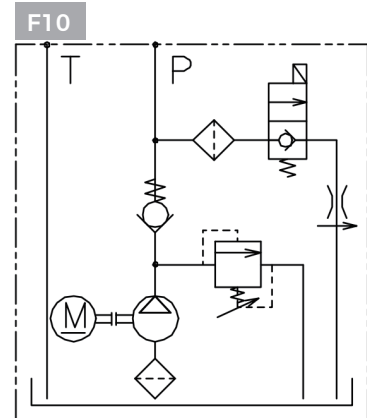
### Drawing



## Electric Stacker Power Pack

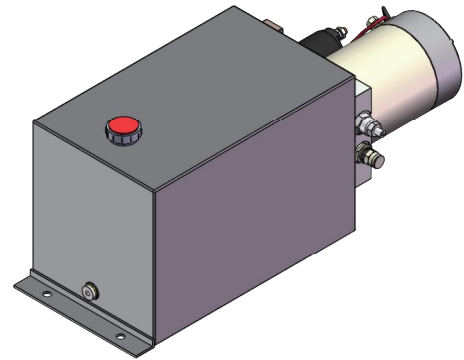
### Introduction

1. High pressure gear pump / DC motor / Single acting
2. All electric

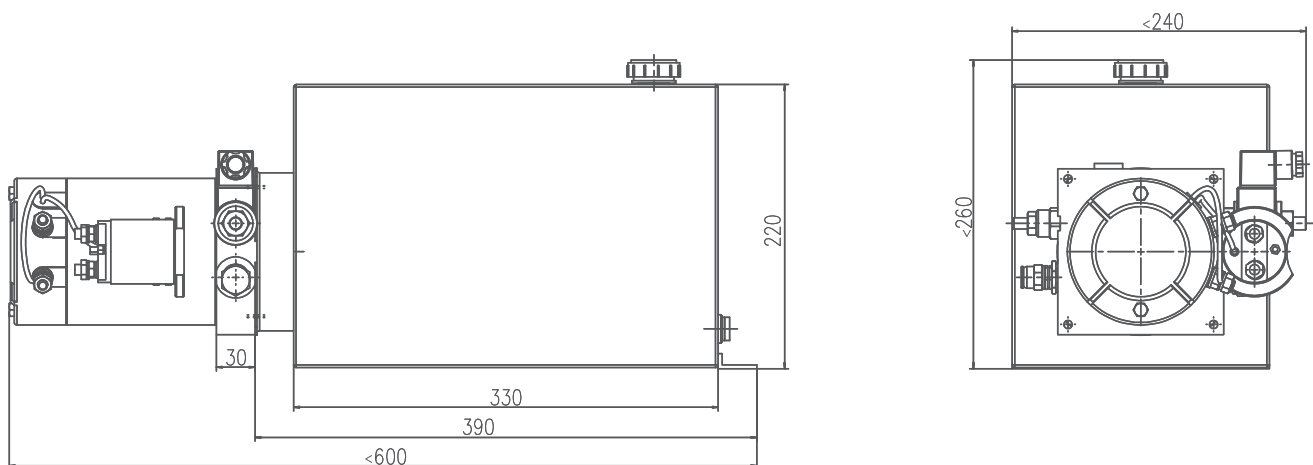


### Technical Data

Model	DC-F10-3.7/E-2.2/24/2900-14H-D
Voltage	DC24V
Power	2.2kW
Speed	2900rpm
Disp.	3.7cc/r
Pressure	16MPa
Volume	14L
Size	P, T: G3/8



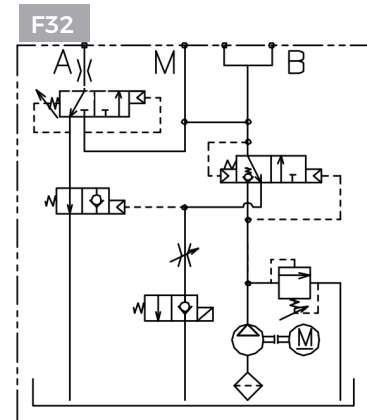
### Drawing



## Dock Leveler Power Pack 1

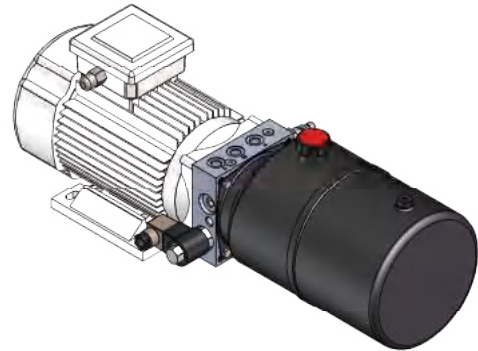
### Introduction

1. High-pressure gear pump / AC motor / Multi-valve control
2. Iron tank

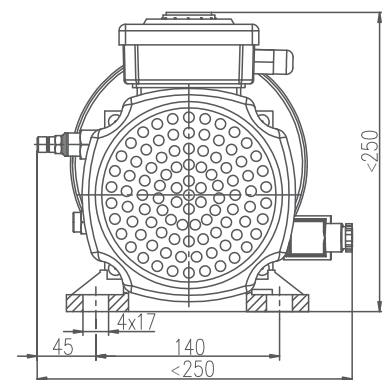
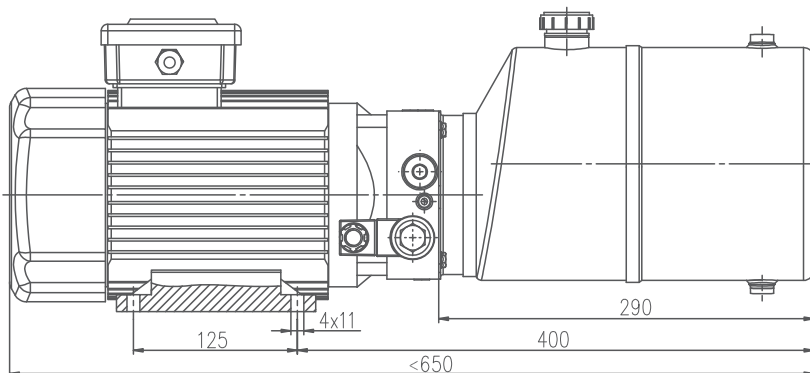


### Technical Data

Model	AC-F32-3.2/D-1.5/240/1440/**-6H-C
Voltage	AC240V
Power	1.5kW
Speed	1440rpm
Disp.	3.2cc/r
Pressure	10MPa
Volume	6L
Size	A, B, M: G1/4



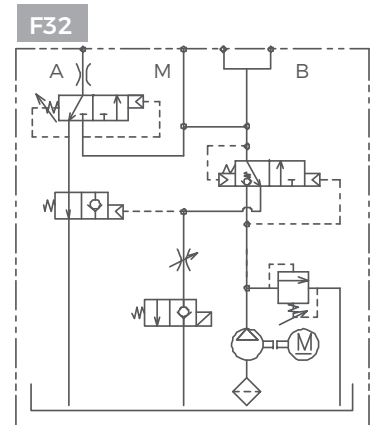
### Drawing



## Dock Leveler Power Pack 2

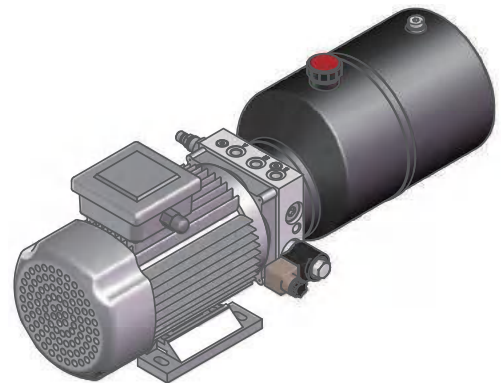
### Introduction

The hydraulic power pack is composed of high-pressure gear pump, AC motor, hydraulic valve, tank and other parts. It provides the lifting and closing functions of large and small dock levelers, it can control two groups of single-acting cylinders.

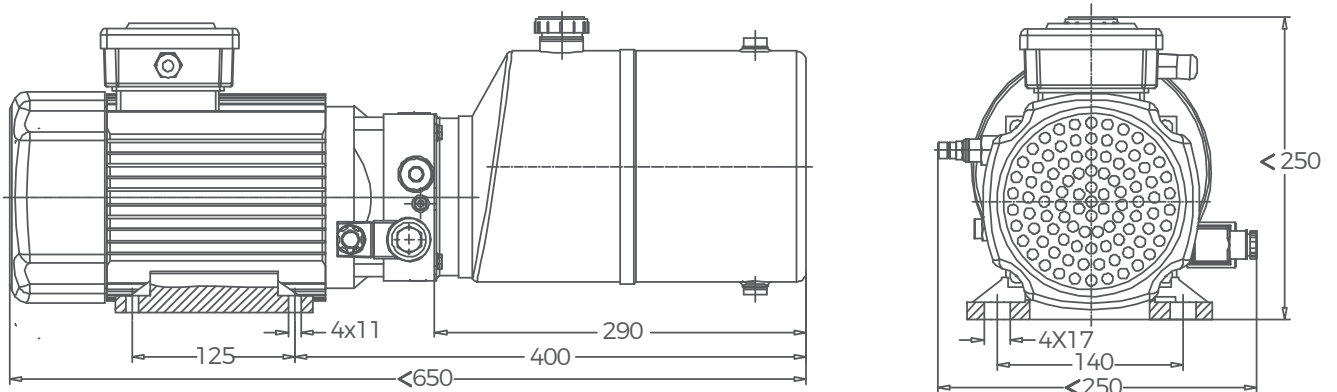


### Technical Data

Model	AC-F32-3.2/D-1.5-240/1440/**-6H-C
Voltage	AC240V
Power	1.5kW
Speed	1440rpm
Disp.	3.2cc/r
Pressure	18MPa
Volume	6L
Size	G1/4



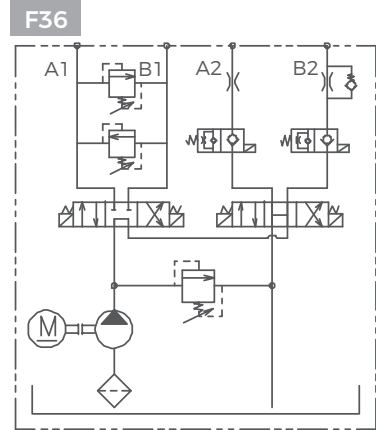
### Drawing



## Snow Sweeper Power Pack 1

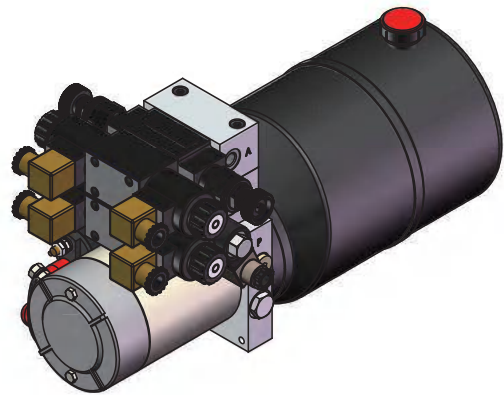
### Introduction

The hydraulic power pack is composed of high-pressure DC motor, multi-purpose integrated block, hydraulic valve, oil tank and other parts. Providing lifting and angle adjustment functions for snow sweepers. It can control one double-acting cylinder and two single-acting cylinders at the same time.

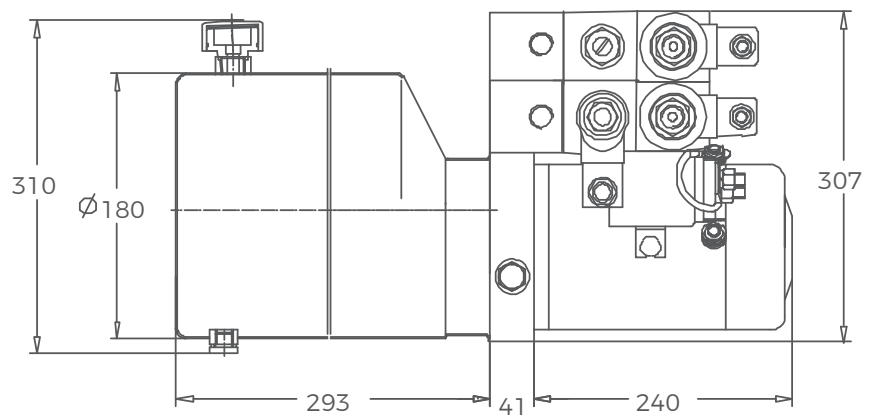
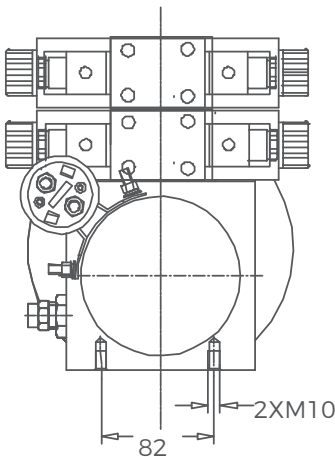


### Technical Data

Model	DC-F36-1.6/F-1.6-12/**-5H-C
Voltage	DC12V
Power	1.6kW
Speed	2600rpm
Disp.	1.6cc/r
Pressure	20MPa
Volume	5L
Size	G1/4



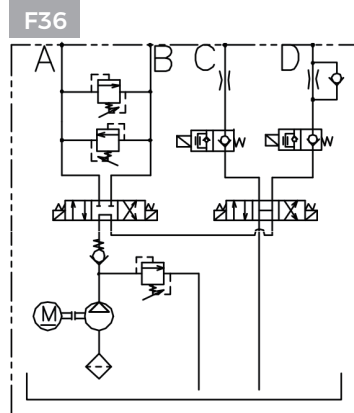
### Drawing



## Snow Sweeper Power Pack 2

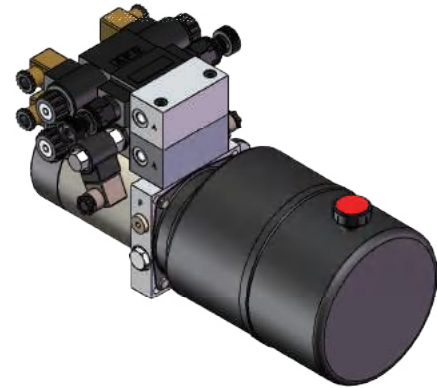
### Introduction

1. High-pressure gear pump / DC motor / Multi-channel control
2. Internal filter element

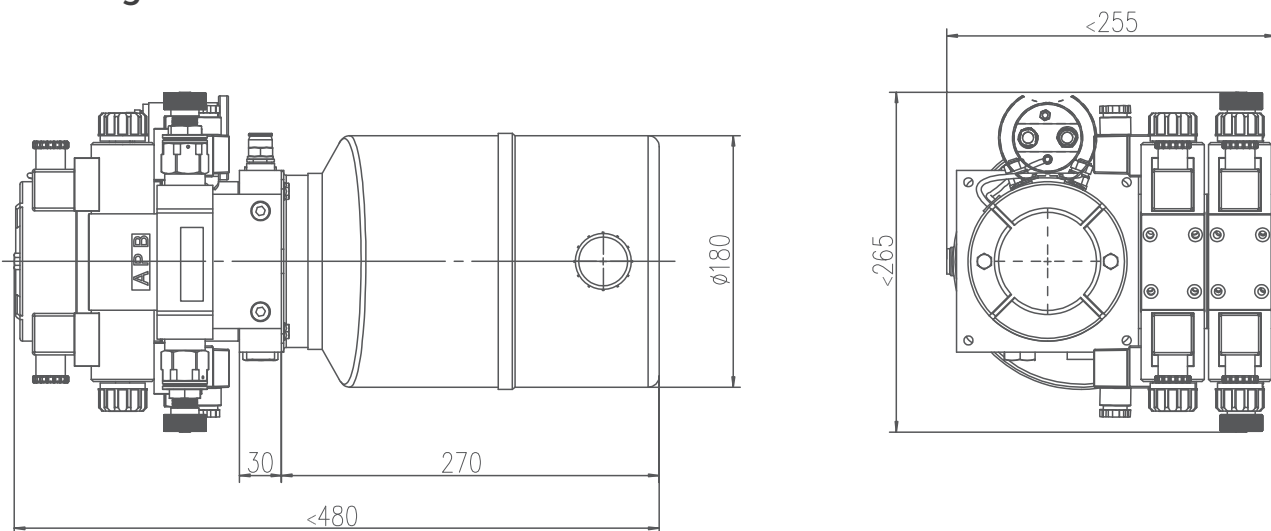


### Technical Data

Model	DC-F36-1.6/F-1.6/12/**-5H-C
Voltage	DC12V
Power	1.6kW
Speed	2500rpm
Disp.	1.6cc/r
Pressure	20MPa
Volume	5L
Size	A, B: G1/4



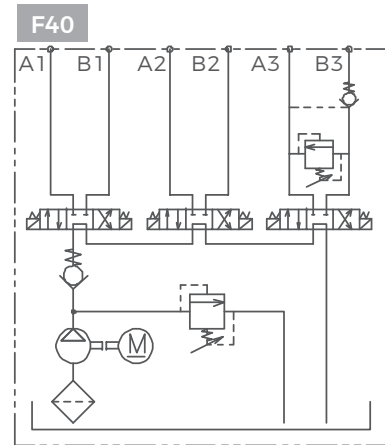
### Drawing



## Tyre Changer Power Pack

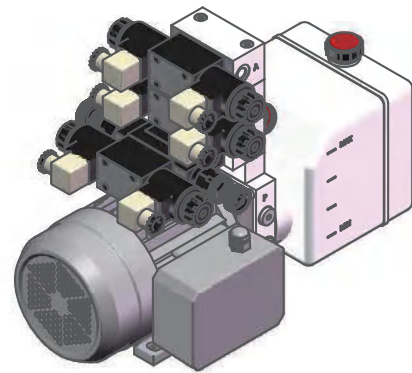
### Introduction

The hydraulic power pack is composed of high-pressure gear pump, AC motor, multi-purpose integrated block, hydraulic valve, oil tank and other parts. It is designed for the auto tyre changer machine and controls three groups of double-acting cylinders.

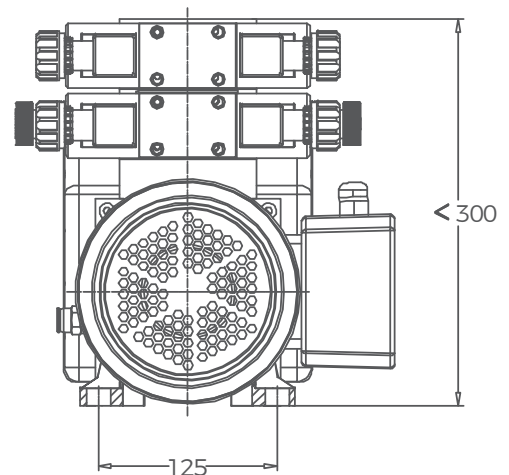
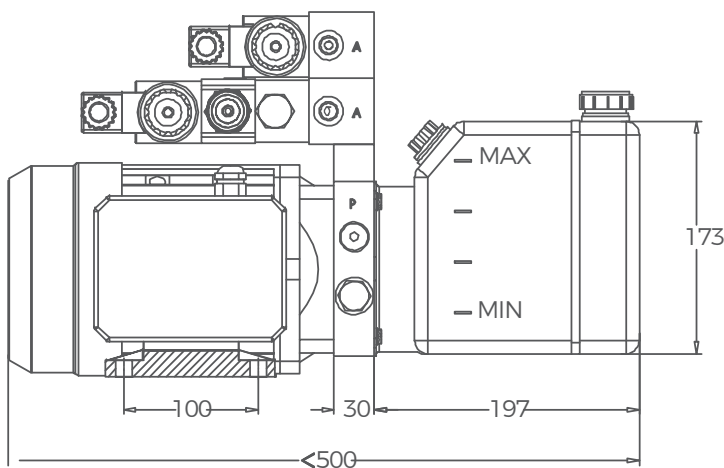


### Technical Data

Model	AC-F40-3.2/F-1.5-380/1440/**-4PH-C
Voltage	AC380V
Power	1.5kW
Speed	1440rpm
Disp.	3.2cc/r
Pressure	18MPa
Volume	4L
Size	G1/4



### Drawing

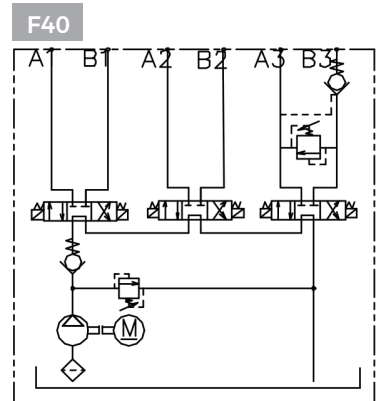




## Tyre Changer Power Pack 2

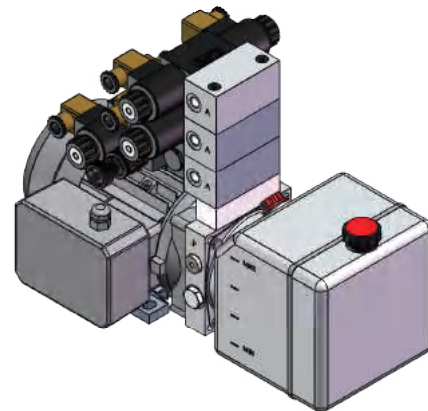
### Introduction

1. High-pressure gear pump / AC motor / three-valve control
2. Internal filter element

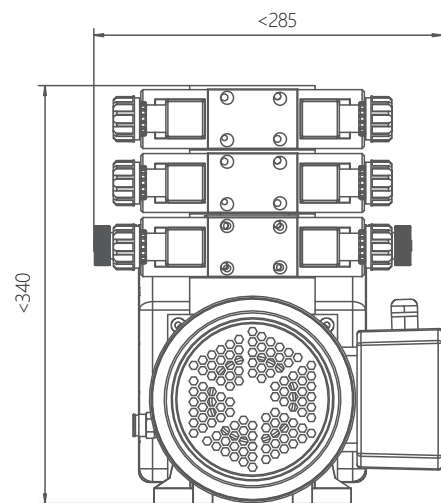
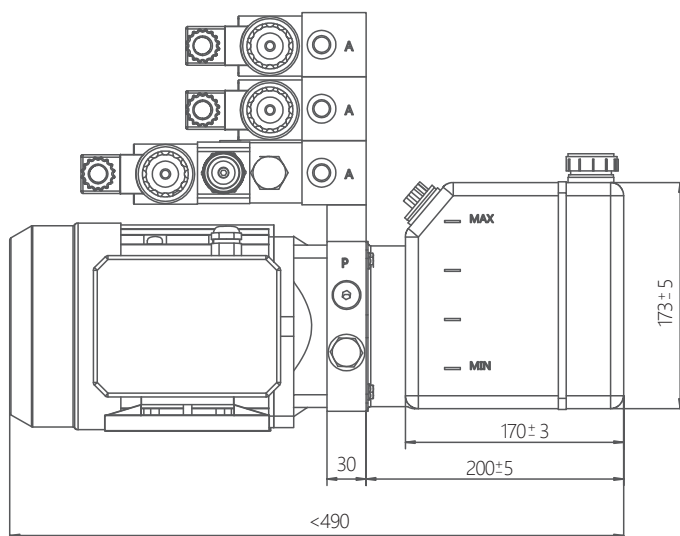


### Technical Data

Model	AC-F40-1.25/E-0.75/24/1800-4H-A
Voltage	AC120V
Power	0.75kW
Speed	1800rpm
Disp.	1.25cc/r
Pressure	14MPa
Volume	4L
Size	A, B: M14x1.5



### Drawing

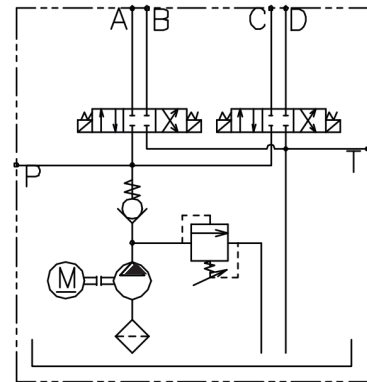


## Van Truck Power Pack

### Introduction

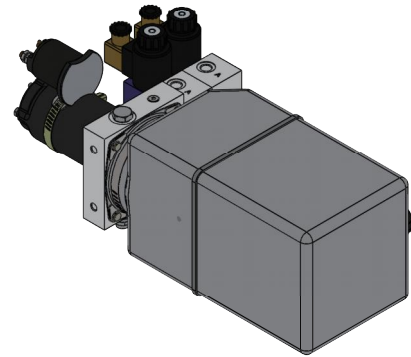
High-pressure gear pump / DC motor / Double valve control

F39

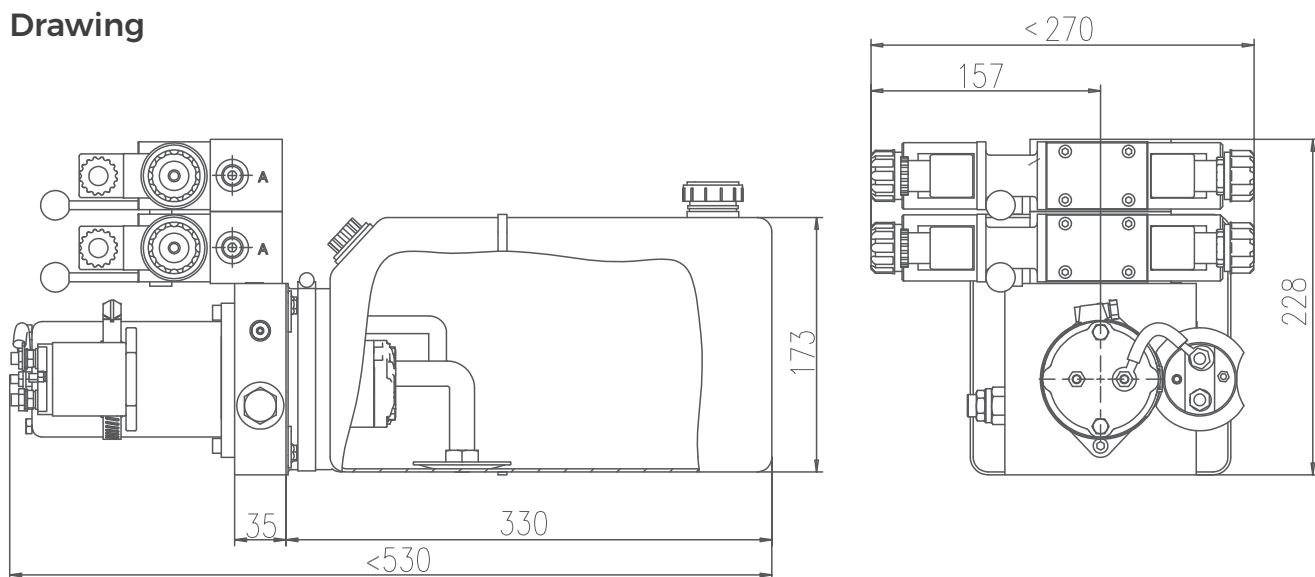


### Technical Data

Model	DC-F39-0.75/E-0.8/24/3200-8H-A
Voltage	DC24V
Power	0.8kW
Speed	3200rpm
Disp.	0.75cc/r
Pressure	16MPa
Volume	8L
Size	A, B: M14x1.5



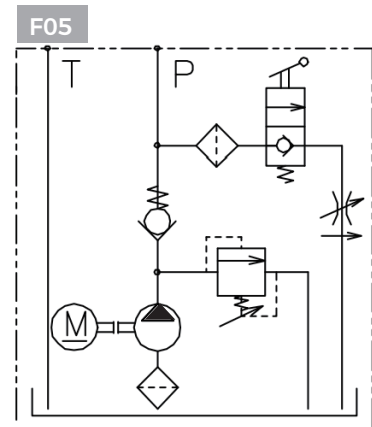
### Drawing



## Vehicle Lift Power Pack

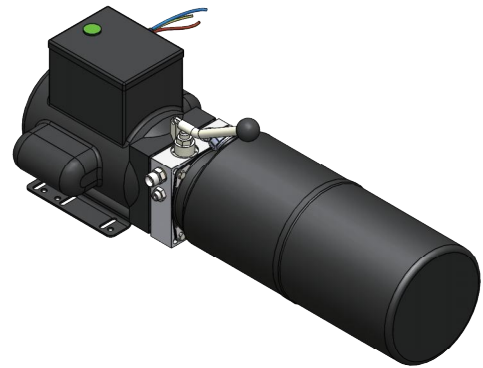
### Introduction

1. High-pressure gear pump / AC motor / Button unloading
2. Manual unloading, adjustable speed

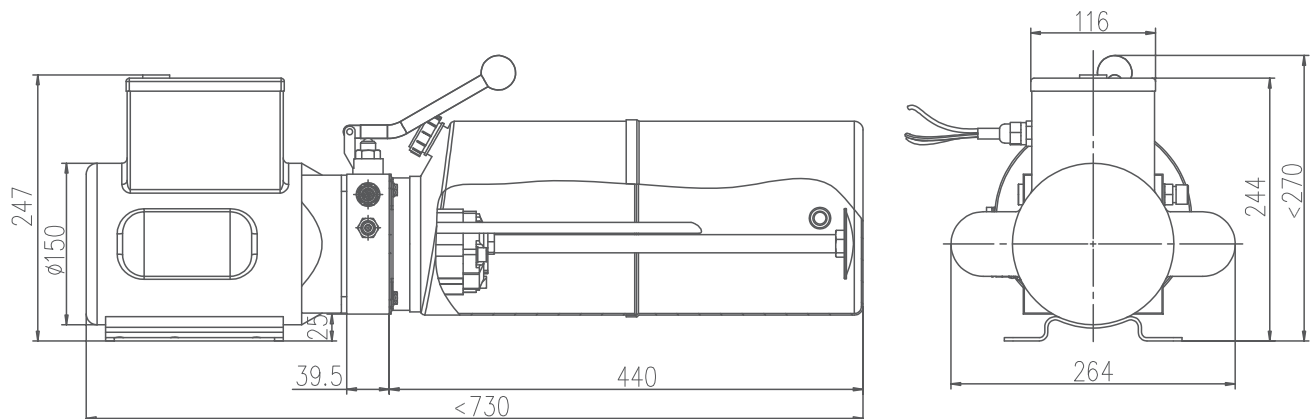


### Technical Data

Model	AC-F05-2.1/G-2.2/110/3400/**-10V-A
Voltage	AC110V
Power	2.2kW
Speed	3400rpm
Disp.	2.1cc/r
Pressure	21MPa
Volume	10L
Size	P1, P2: M14x1.5



### Drawing

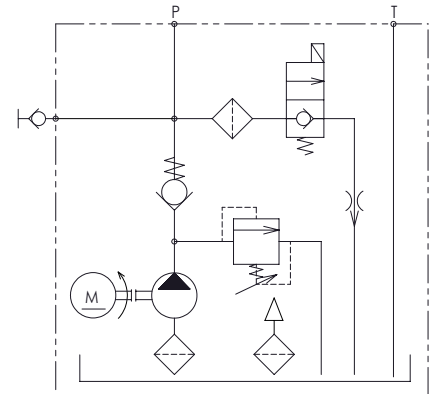


## Tail Gate Power Packs 1

### Introduction

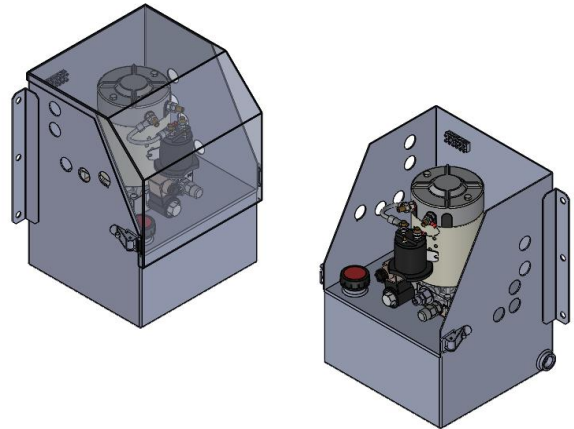
1. Integrates high-efficiency motor, high-pressure gear pump, relief valve, return oil filter, and oil tank and protective shield
2. 1.6-3 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor
3. Optional gear pump displacement
4. Applied in tail gates.

F10

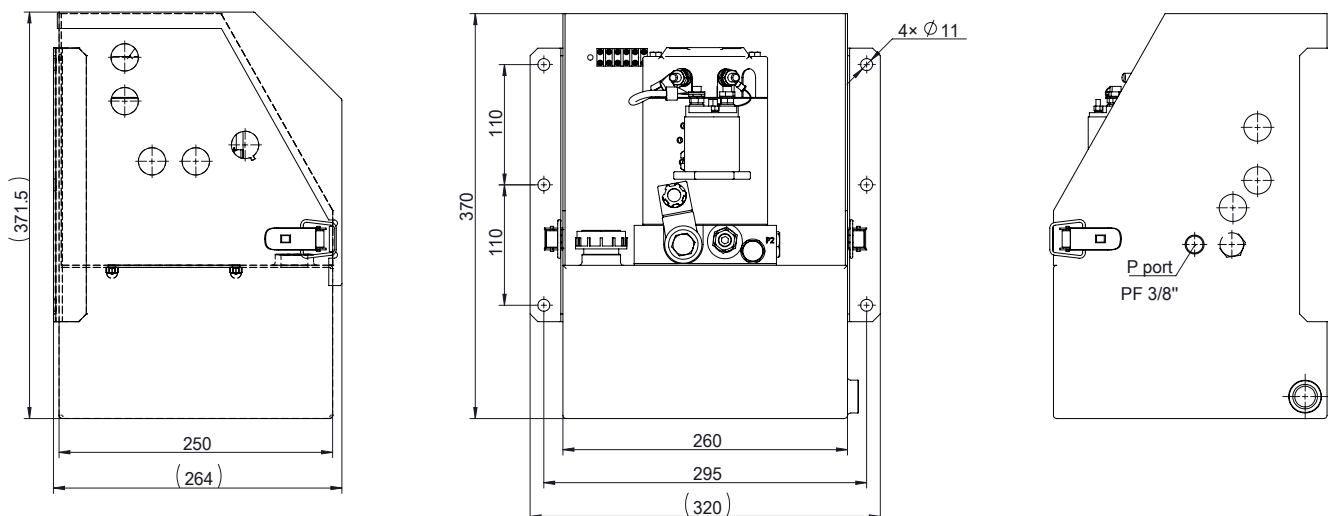


### Technical Data

Model	DC-F10-2.1/F-2.2/24/24-8V-D
Voltage	24VDC
Power	2.2kW
Speed	2500rpm
Disp.	2.1 cc
Pressure	190bar
Volume	8L
Size	G3/8



### Drawing



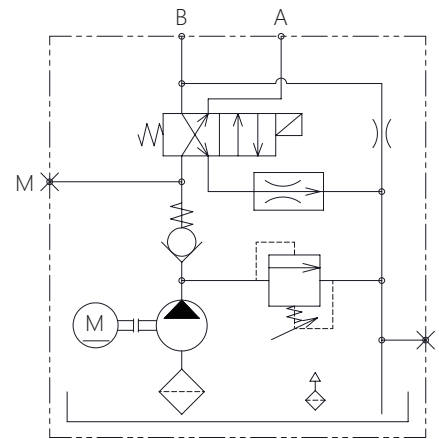


## Tail Gate Power Packs 2

### Introduction

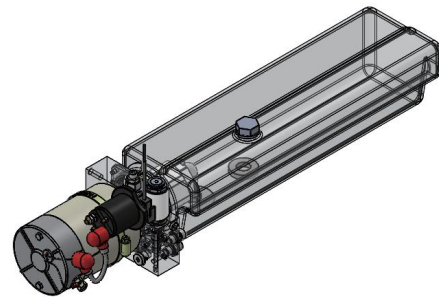
1. Integrates motor, high-pressure gear pump, throttle valve, relief valve and oil tank.
2. Optional 0.5-2.2 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor
3. Optional gear pump displacement
4. Whole unit IP protection level IP54
5. Applied in tail gates.

F179

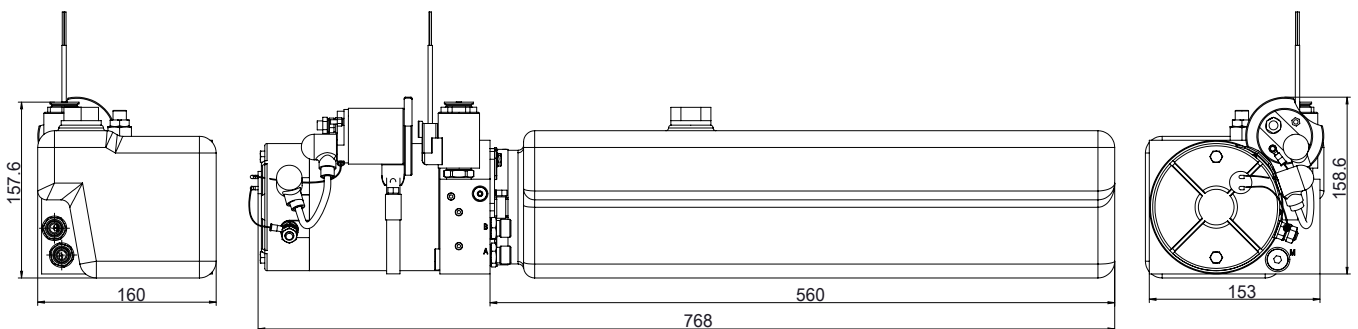


### Technical Data

Model	DC-F179-2.1/F-2.2/24/24-8PH C
Voltage	4VDC
Power	2.2kW
Disp.	2.1 cc
Pressure	210bar
Volume	8L
Size	G1/4



### Drawing

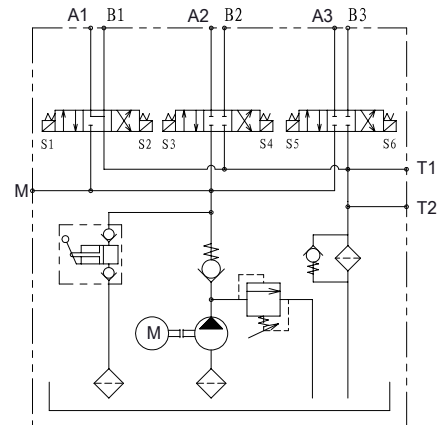


## Mast-type Aerial Work Platform Power Packs

### Introduction

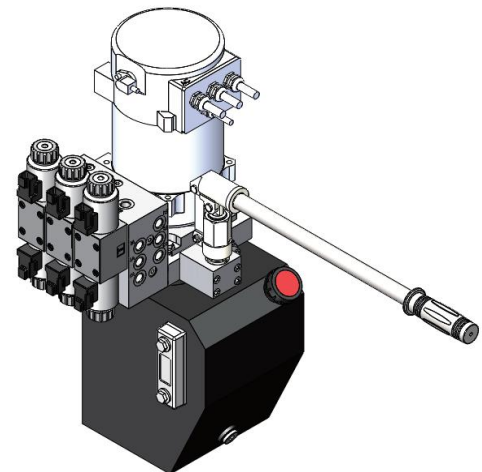
1. Integrates high-efficiency motor, high-pressure gear pump, relief valve, return oil filter, and oil tank and emergency manual module
2. Optional 2-5 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor
3. Optional gear pump displacement
4. Optional electric proportional valve control
5. Applied in mast-type aerial work platforms. with 8-12 meters .

F42

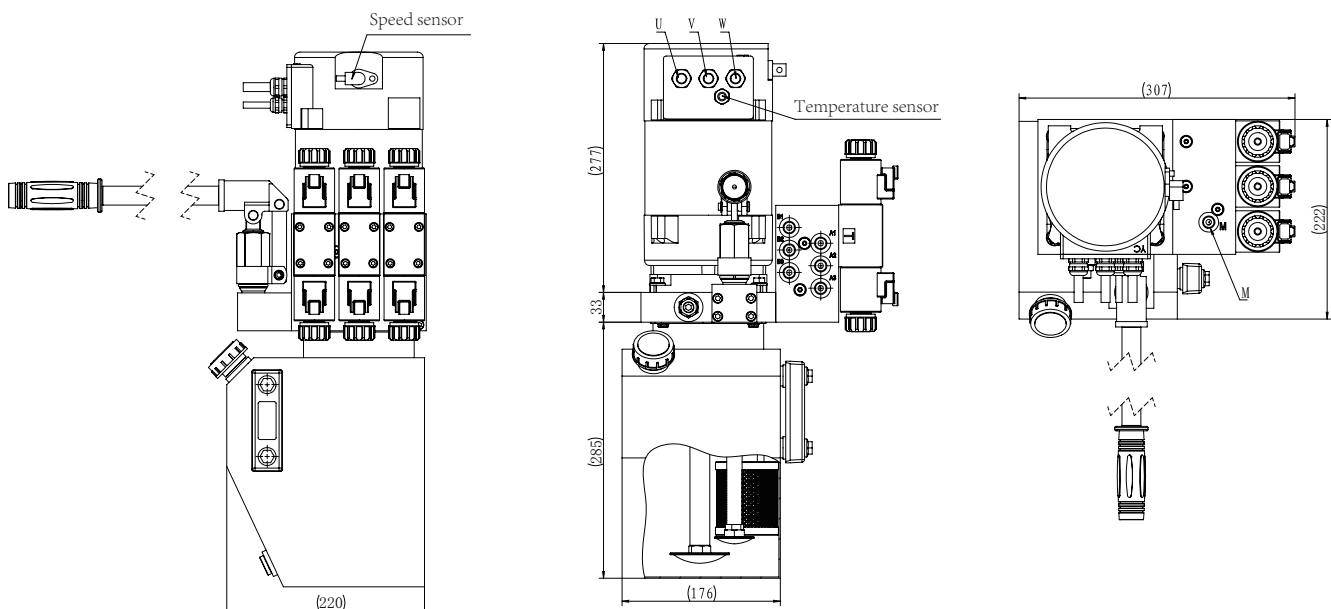


### Technical Data

Model	AC-F42-2.0/F-3.3/17/3000/24-8V-C
Voltage	17VAC
Power	3.3kW
Speed	3000rpm
Disp.	2.0cc
Pressure	200bar
Volume	8L
Size	G1/4



### Drawing



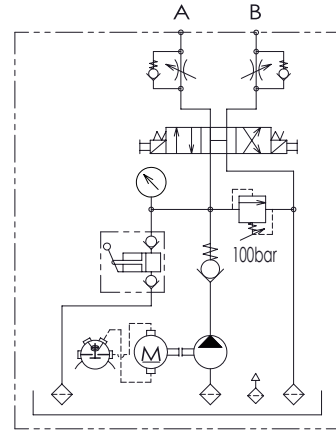


## Hydraulic Power Station

### Introduction

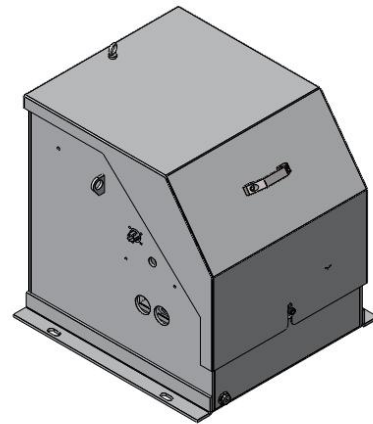
1. Integrates IP67 electric motor, high-pressure gear pump, relief valve, return oil filter, and oil tank and emergency manual module
2. Optional 2-5 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor.
3. Optional gear pump displacement
4. Applied in lifting control of escalators in super-large excavators.

F74

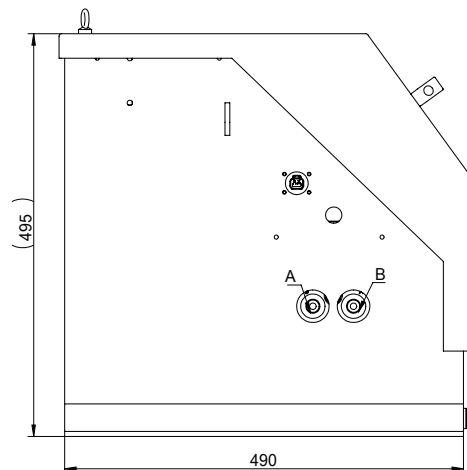
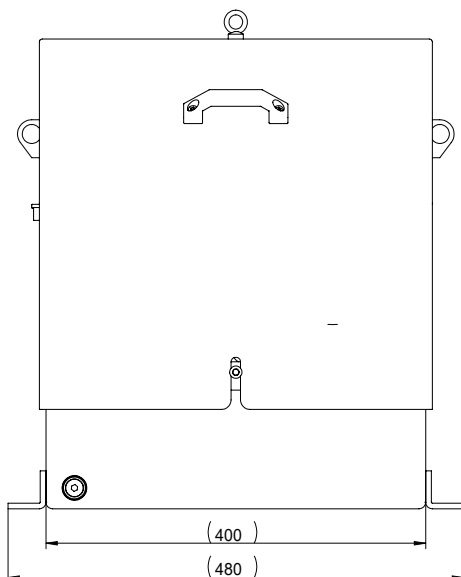


### Technical Data

Model	DC-F74-5.8/D-3.0/24/24-40V-D
Voltage	24VDC
Power	3.0kW
Speed	2500rpm
Disp.	5.8cc
Pressure	100bar
Volume	40L
Size	G3/8



### Drawing

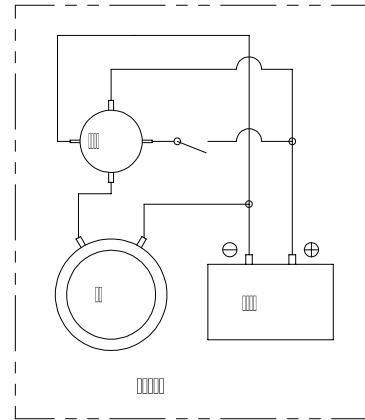


## Emergency Power Units

### Introduction

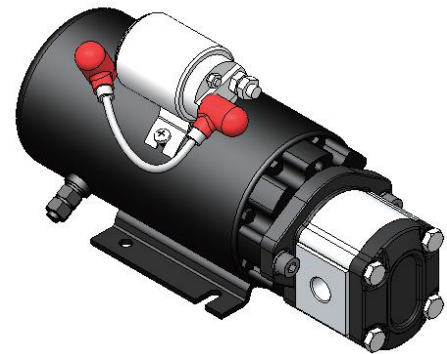
1. Integrates IP67 electric motor, IP67 connector and high pressure gear pump.
2. Optional 3-5 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor.
3. Optional gear pump displacement
4. Applied widely in emergency system of heavy duty construction machines.

F00

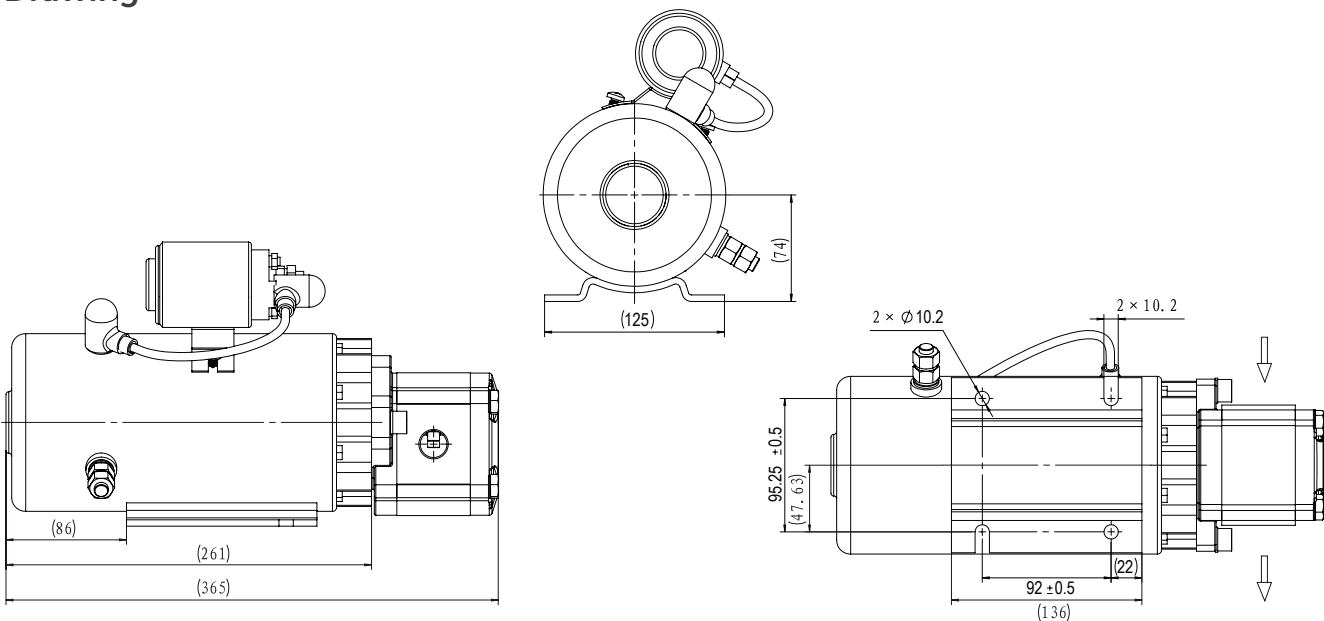


### Technical Data

Model	DC-F00-5.0/F-L04-IP67
Voltage	24VDC
Power	4.0kW
Disp.	2500rpm
Pressure	5.0cc
Volume	190bar
Size	G1/2



### Drawing

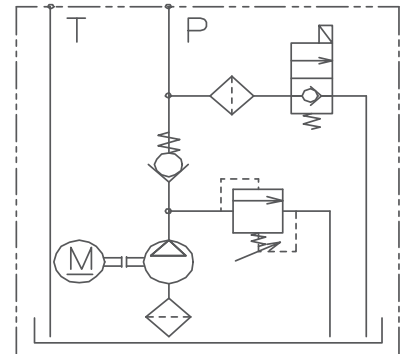


## Dump Truck Power Packs

### Introduction

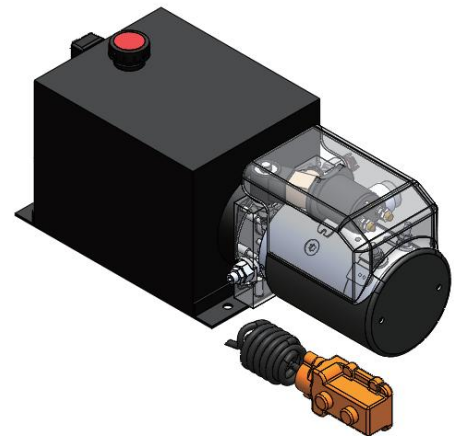
1. Integrates high-efficiency motor, high-pressure gear pump, relief valve, return oil filter, oil tank and warning device;
2. Optional 2-5 kW DC brushed motor, AC asynchronous motor, or permanent magnet synchronous motor.
3. Optional gear pump displacement
4. Applied in dump trailers;

F08

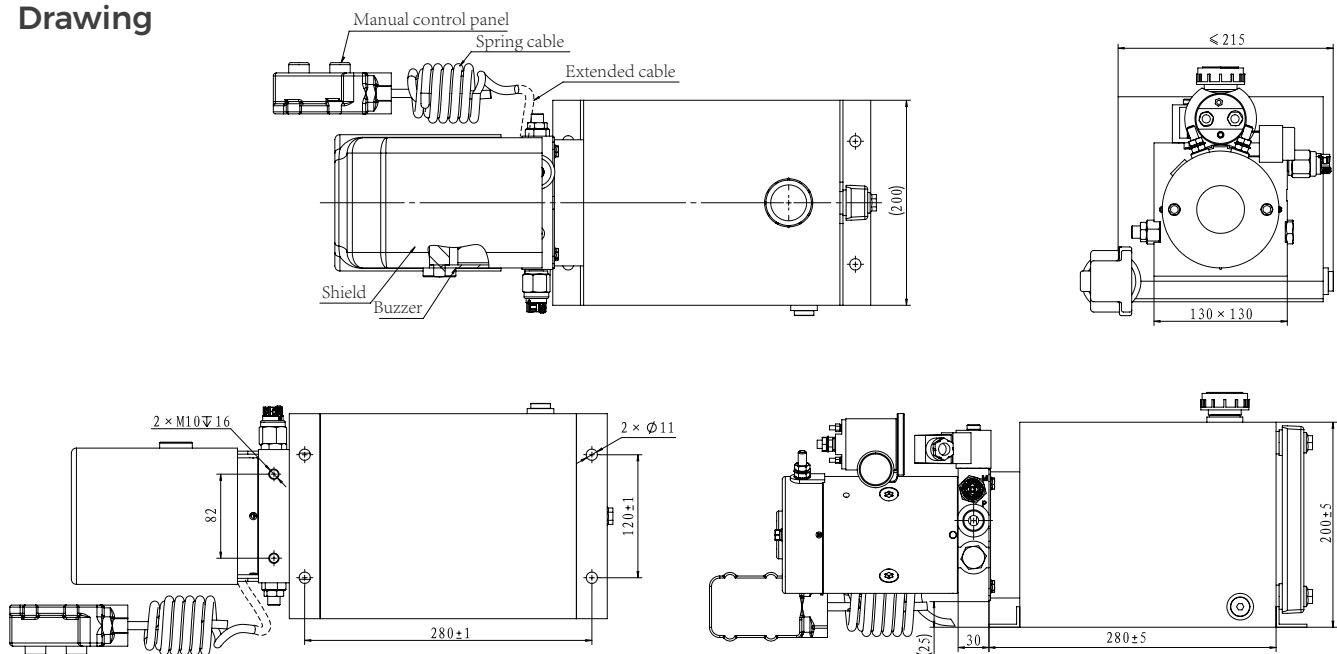


### Technical Data

Model	DC-F08-2.1/F-2.0/12/12-10H-C
Voltage	12VDC
Power	2.0kW
Speed	2500rpm
Disp.	2.1cc
Pressure	210bar
Volume	10L
Size	G1/4



### Drawing

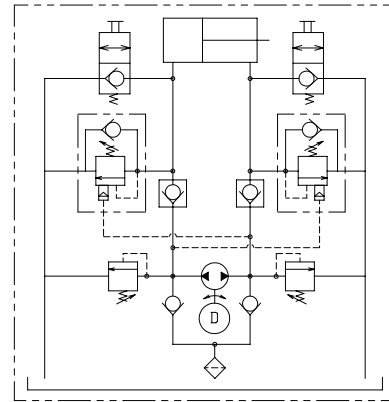


## Electric Hydraulic Actuator

F79

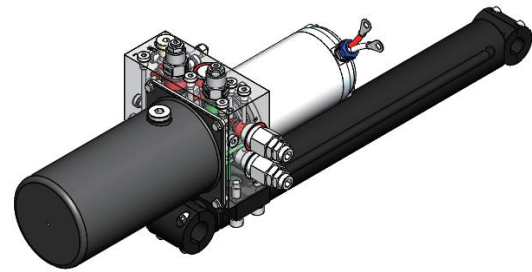
### Introduction

1. Integrates electric motor, bidirectional pump, hydraulic lock, counterbalance valve, relief valve, oil tank and cylinder.
2. Optional 0.25-1.2 kW DC brushed motors and brushless motors
3. The stroke of the cylinder 305mm, maximum thrust 15,800N
4. Overall protection grade of the machine IP66.
5. Overall machine noise <67dB
6. Widely applied in medical stretchers and scissor lifts.

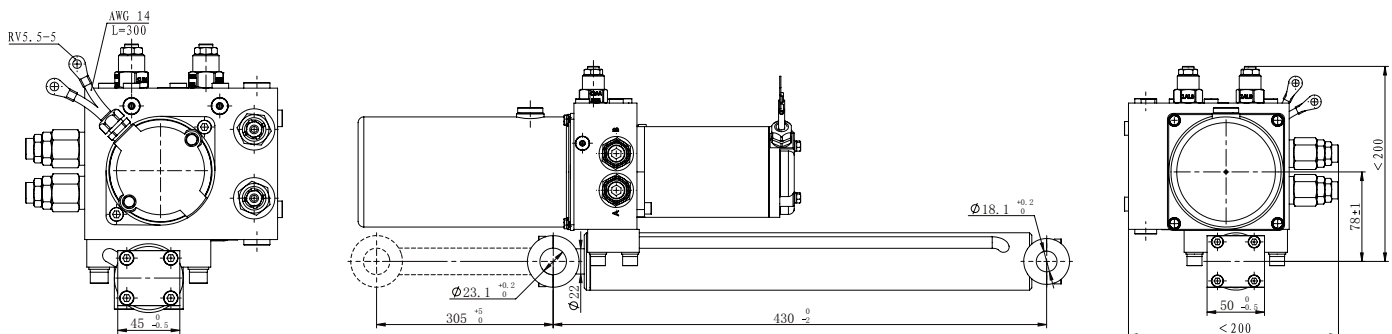


### Technical Data

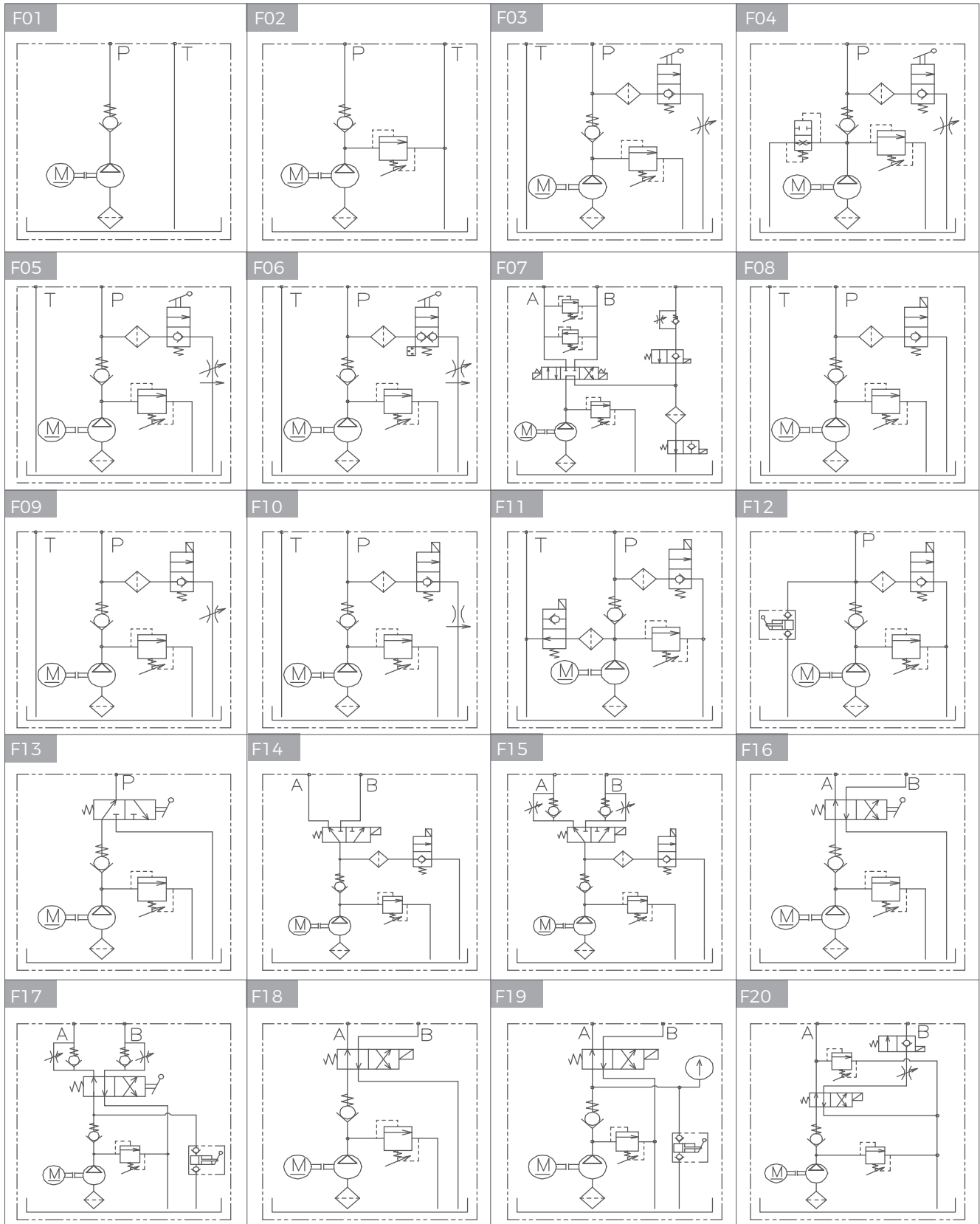
Model	DC-F179-2.1/F-2.2124/24-8PHC
Voltage	4VDC
Power	2.2kw
Disp.	2.1 cc
Pressure	210bar
Volume	8L
Size	G1/4



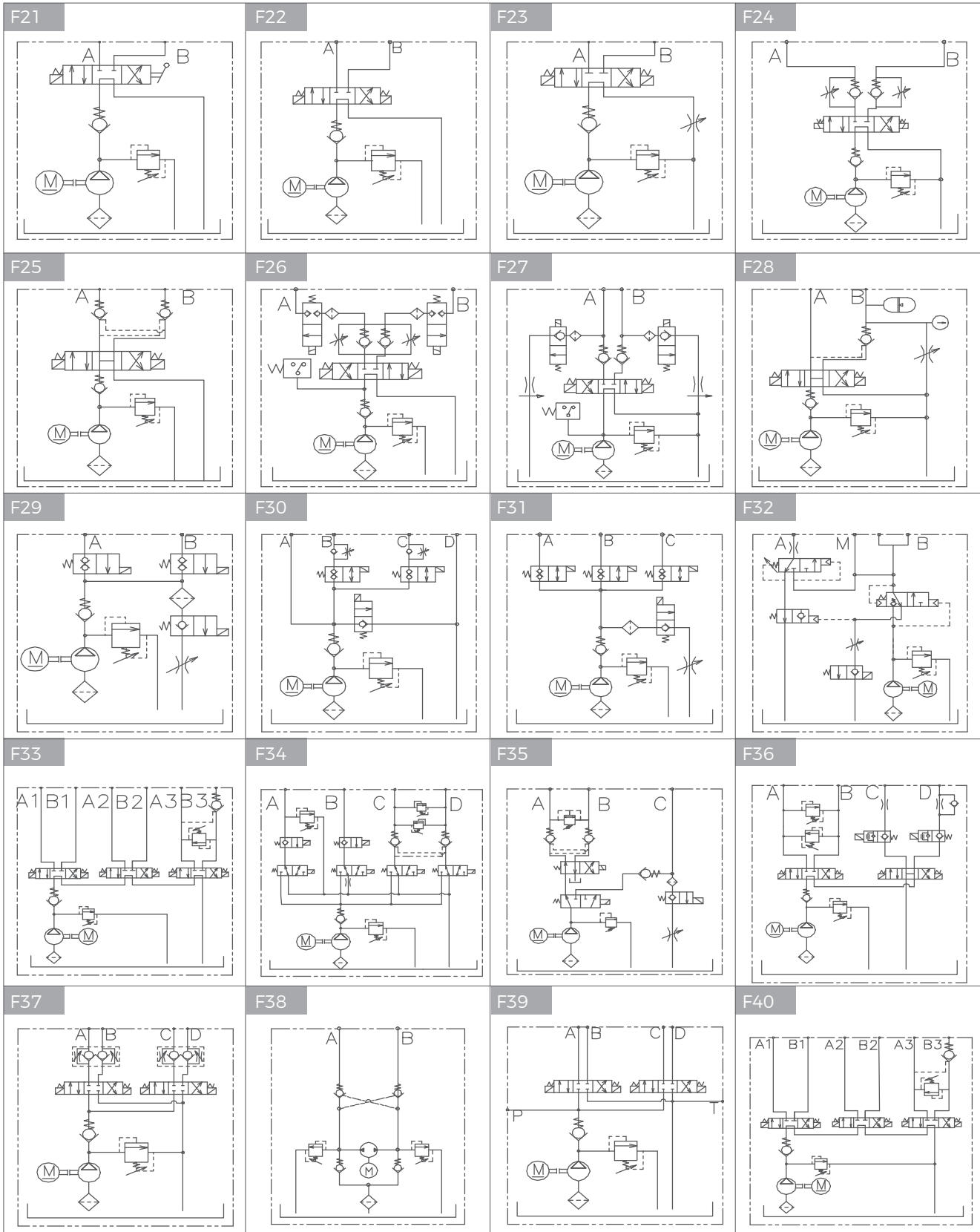
### Drawing



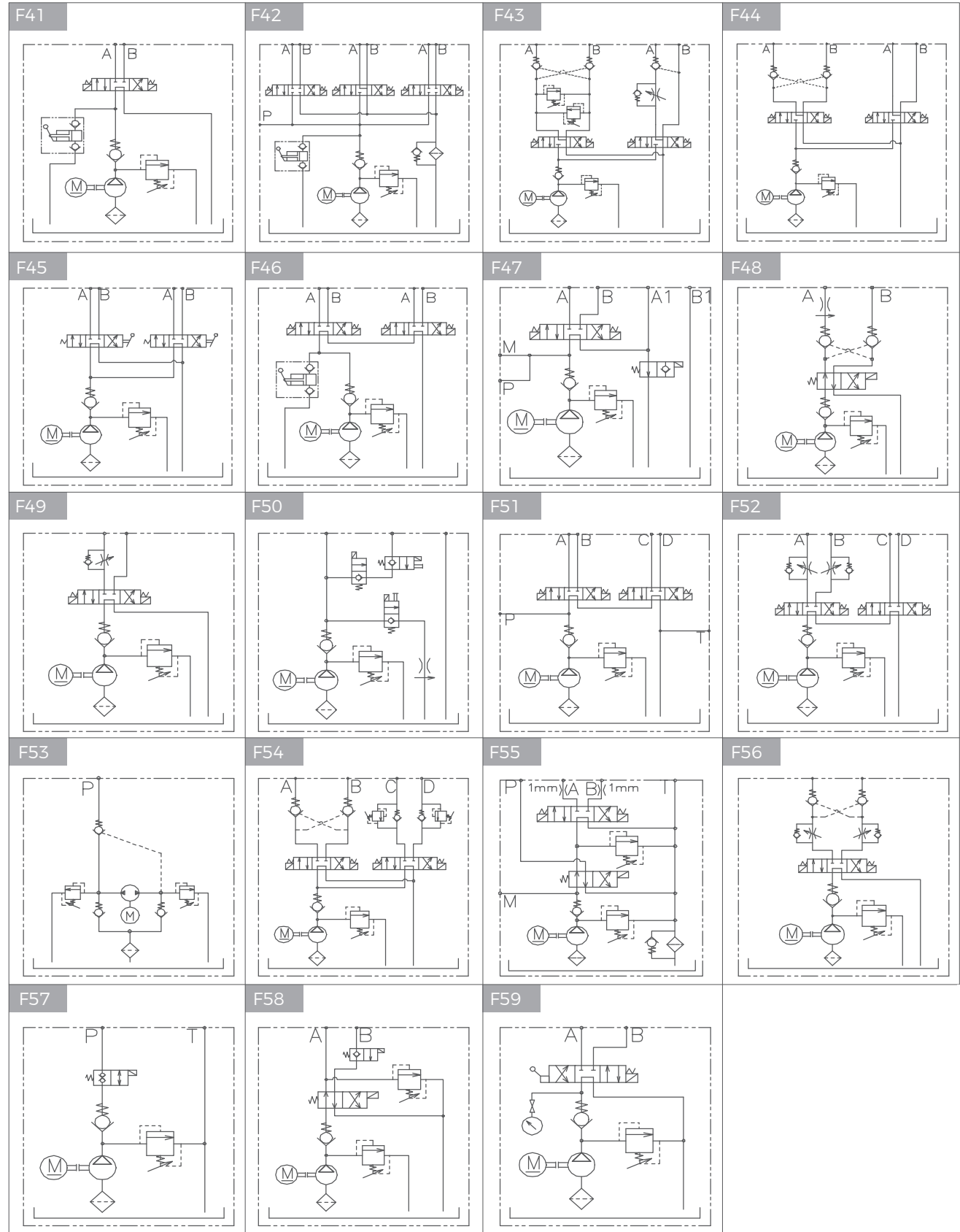
### Hydraulic Schematics



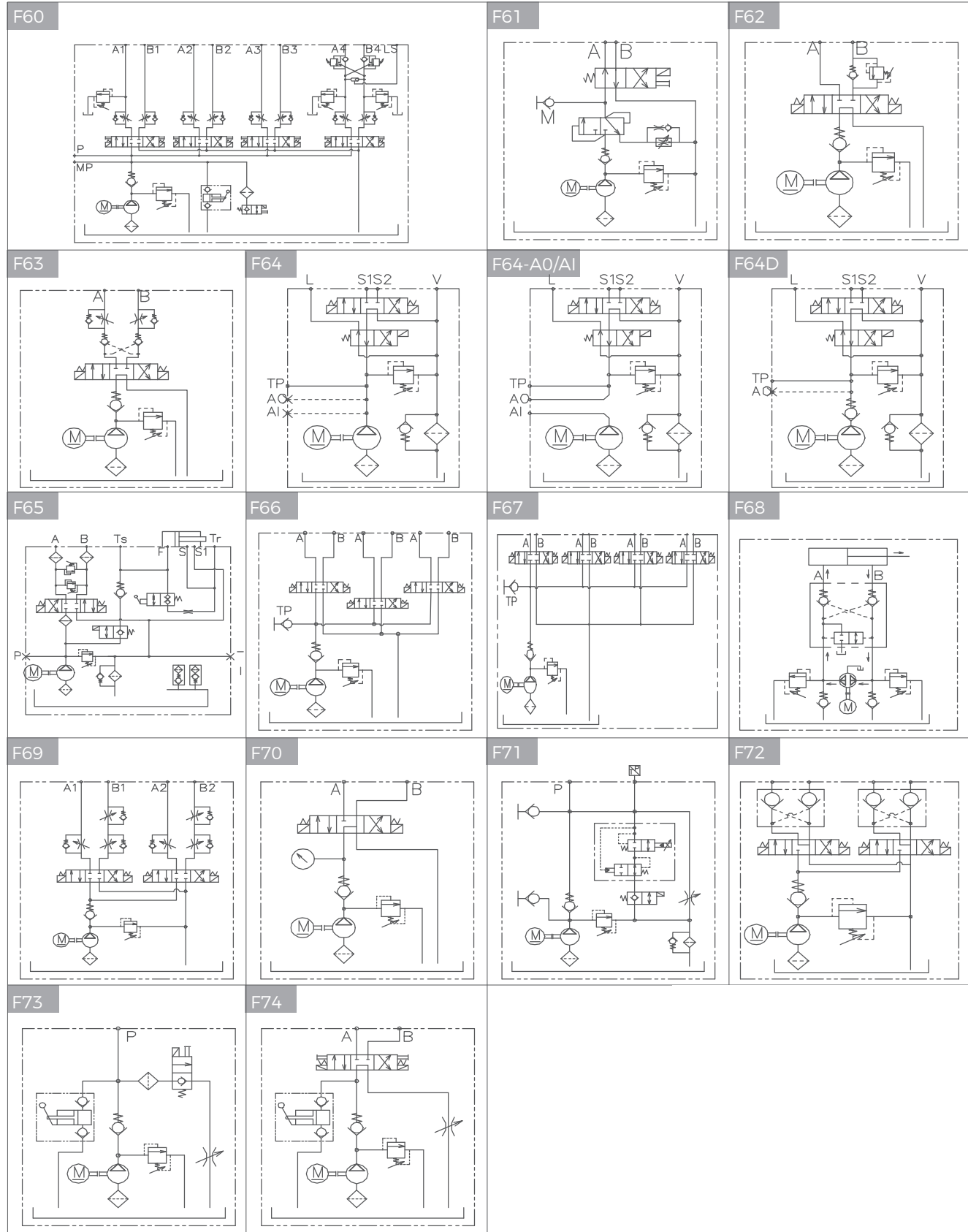
### Hydraulic Schematics



### Hydraulic Schematics



### Hydraulic Schematics





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