



**TAK-BOK
HYDRAULICS**

MINI POWER PACKS

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HOW TO ORDER

CENTRE MANIFOLD

TKU2

ELECTRIC MOTORS

A38.22B

PUMP

R37

TANK

H08
horizontal
vertical

CARTRIDGE

A2Y

Centre Manifold



Code	Description
HPU2	Standart center manifold

External Manifolds



Code	Description
HPM10	Spacer manifold
HPM11A	NG6 parallel vertical manifold lateral ports
HPM11S	NG6 parallel vertical end manifold lateral ports
HPM12A	NG6 serial vertical manifold lateral ports
HPM12S	NG6 serial vertical end manifold lateral ports
HPM11HB	NG6 parallel horizontal starting manifold lateral ports
HPM11HA	NG6 parallel horizontal middle manifold lateral ports
HPM11HS	NG6 parallel horizontal end manifold lateral ports
HPM12HB	NG6 serial horizontal starting manifold lateral ports
HPM12HA	NG6 serial horizontal middle manifold lateral ports
HPM12HS	NG6 serial horizontal end manifold lateral ports
HPM20	Double single acting manifold
HPM25	Hand pump application manifold
HPM82	SAE8-2 cavity manifold
HPM83	SAE8-3 cavity manifold

Spare Parts



Code	Description
F82	Foot flange
KPLNAC	Coupling for AC motor
KPLNDC	Coupling for DC motor
DK0312A	12VDC-150A Relay starter
DK0324M	24VDC-150A Relay Starter
DK0324M	24VDC-200A Relay Starter
OC02	Oil cap 1/4"
OC03	Oil cap 3/8"
OC04	Oil cap 1/2"
OC06	Oil cap 3/4"
FIL05	Suction filter 3/8"
TDAH	Horizontal suction pipe 3/8"
TDA***	Vertical suction pipe 3/8"
TDR***	Return line pipe

Electric Motors



12V DC Motors

Code	Power KW	Speed - rpm	Duty
D12.05	0.5	2400	S2=2 min
D12.08	0.8	3400	S2=2.5 min
D12.16	1.6	2300	S2=2.5 min
D12.20	2.0	2800	S2=7.5 min
D12.25	2.5	2300	S2=5 min



Code	Power KW	Speed - rpm	Duty
D24.05	0.5	2500	S2=2 min
D24.08	0.8	3400	S2=2.5 min
D24.13	1.3	4500	S2=6.5 min
D24.22	2.2	2600	S2=2 min
D24.30	3.0	2600	S2=5 min
D24.24	3.3	3000	S2=5 min
D24.25	4.5	2700	S2=5 min



Code	Power KW	Speed - rpm	Duty
A22.07B	0.75	1420	S2=30 min
A22.15B	1.5	1420	S2=30 min
A22.15C	1.5	2850	S2=30 min
A22.22B	2.2	1420	S2=30 min
A22.22C	2.2	2850	S2=30 min
A22.30C	3.0	2850	S2=30 min

220/380V AC Motors - 3 Phase

Code	Power KW	Speed - rpm	Duty
A38.07B	0.75	1420	S2=30 min
A38.11B	1.1	1420	S2=30 min
A38.11C	1.1	2850	S2=30 min
A38.15B	1.5	1420	S2=30 min
A38.15C	1.5	2850	S2=30 min
A38.22B	2.2	1420	S2=30 min
A38.22C	2.2	2850	S2=30 min
A38.30C	3.0	2850	S2=30 min
A38.40C	4.0	2850	S2=30 min



B14 Montage Kit



Code	Description
B14071	B14 Montage kit for 71 frame
B14080	B14 Montage kit for 80 frame
B14090	B14 Montage kit for 90 frame
B14100	B14 Montage kit for 100 frame



Please contact with us for plastic oil tank request

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PUMP

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TANK

H08
horizontal
vertical

CARTRIDGE

A2Y

Gear Pumps

Standart Pumps - Group 1 CCW

Code	Displacement cc/rev	Max. Speed rpm	Pressure - Bar	
			Operating	Maximum
R05	0.5	6000	230	270
R06	0.65	6000	230	270
R08	0.8	6000	230	270
R11	1.1	6000	230	270
R13	1.3	6000	230	270
R16	1.6	6000	230	270
R18	1.8	6000	230	270
R21	2.1	6000	230	270
R27	2.7	6000	230	270
R32	3.2	5000	210	250
R37	3.7	4500	210	250
R42	4.2	4000	210	250
R48	4.8	3500	190	210
R58	5.8	3000	190	210
R70	7.0	2500	160	180
R80	8.0	2000	160	180



Oil Tanks

Steel Tank Q200 mm

Code	Capacity Lt	Length mm
05	4	225
06	5	270
08	6	290
10	8	370
12	10	440
14	12	545



Square Tank

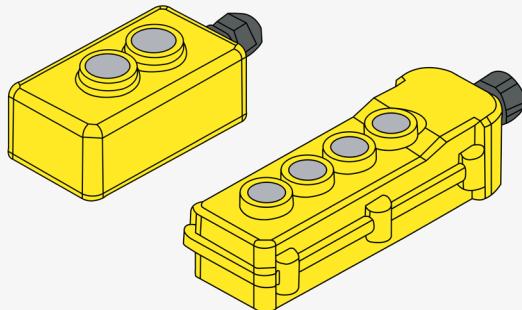
Code	Capacity Lt	Length mm
S15	15	300x260x260
S20	20	350x300x300
S30	30	350x300x425



Tank Neck

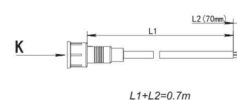
Code	Diameter mm
N120	120
N123	123

Button Remotes 2/4

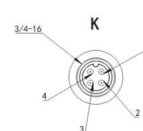
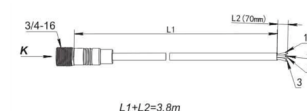


Wiring Harness 3.8m

Code 390014

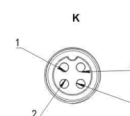


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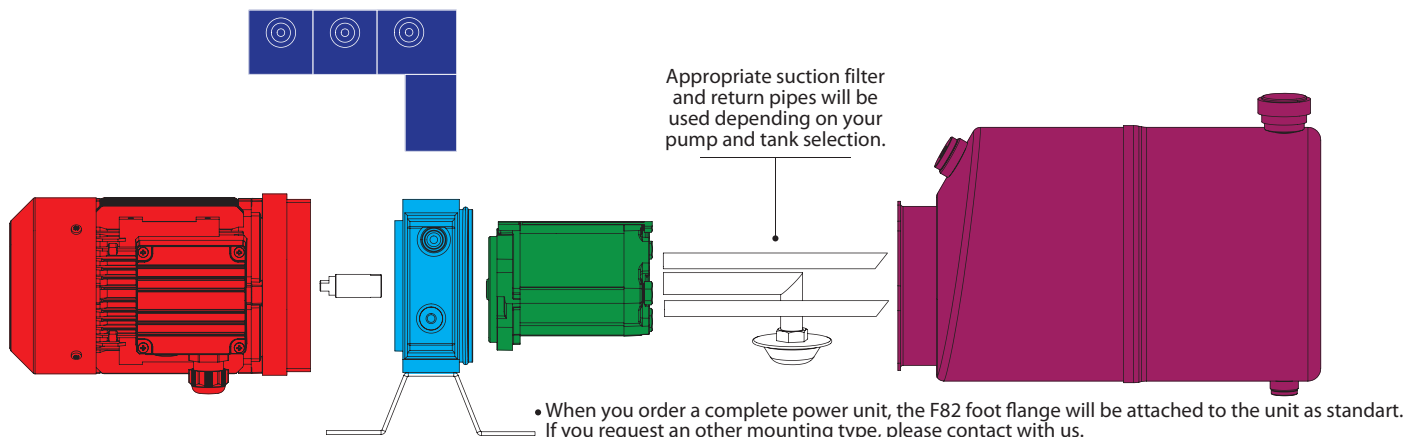
CABLE COLOR

1 = Brown
2 = Blue
3 = Green
4 = Black



CABLE COLOR

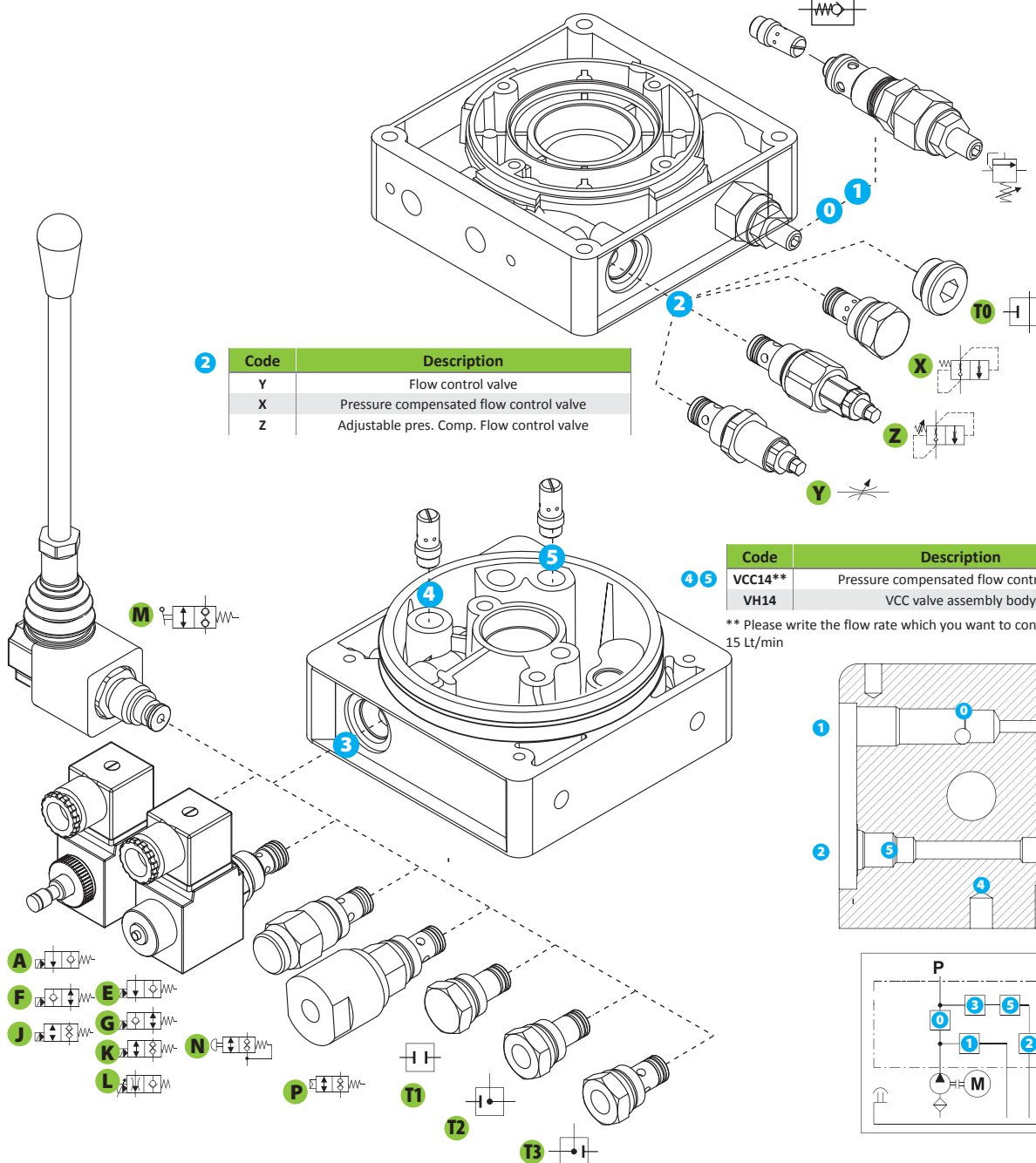
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Cartridges

Code	Description
0	CV
1	RV

Relief and check valves are standard and mounted to the center manifold.



Code	Description
Y	Flow control valve
X	Pressure compensated flow control valve
Z	Adjustable pres. Comp. Flow control valve

Code	Description
VCC14**	Pressure compensated flow control valve
VH14	VCC valve assembly body

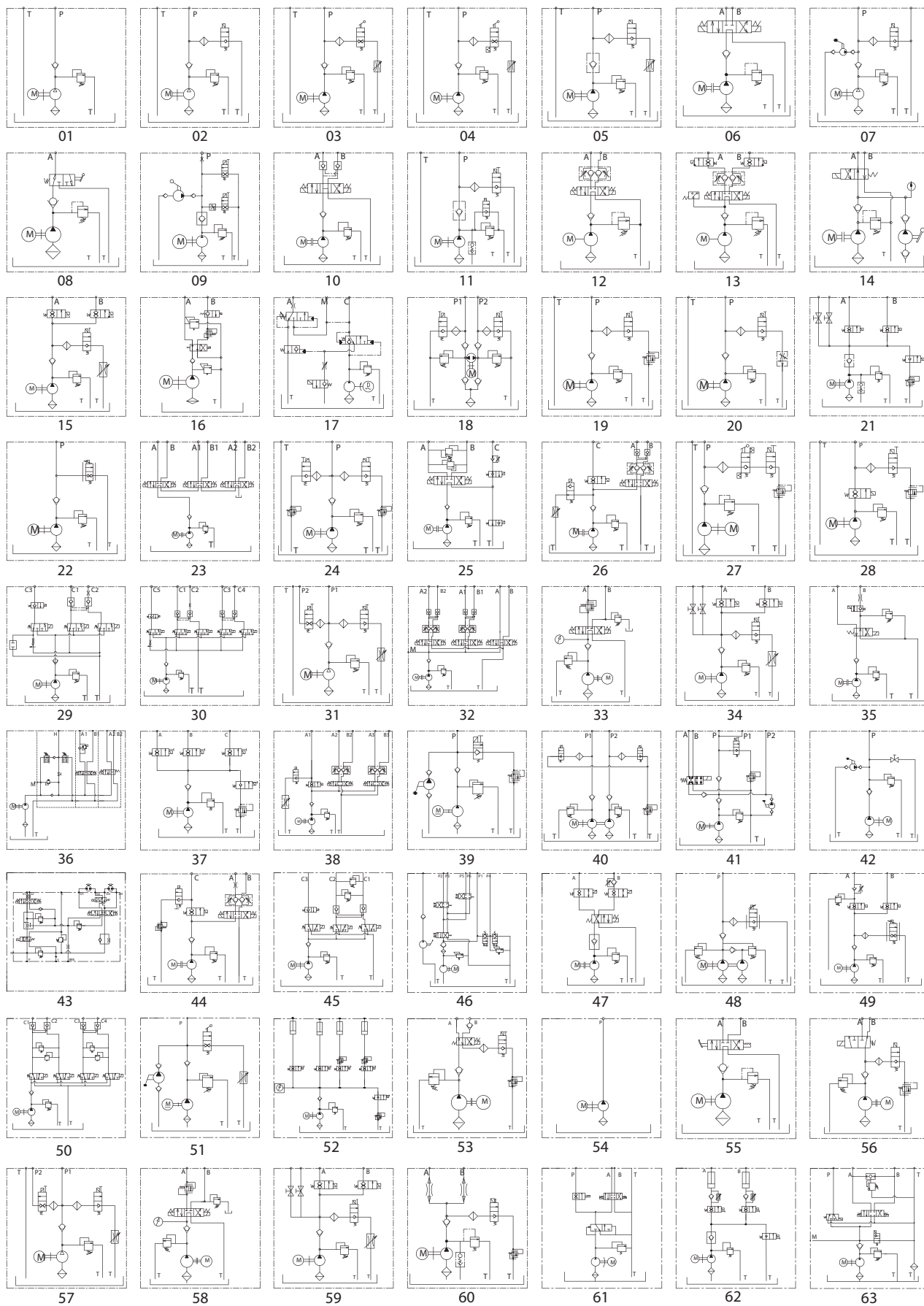
** Please write the flow rate which you want to control from 1 to 15 Lt/min

Code	Description	Voltage
A	2/2 NC solenoid valve with emergency	1-2-3-4-5-6 Please chose coil voltage from the adjacent coil table
E	2/2 NC solenoid valve	
F	2/2 NO solenoid valve with emergency	
G	2/2 NO solenoid valve	
J	2/2 NC double check solenoid valve with emerg.	
K	2/2 NC double check solenoid valve	8-9 Please chose coil voltage from the adjacent coil table
L	2/2 NC propotional solenoid valve	
M	2/2 NC manual operated valve	
N	2/2 NC emergency button valve	-
P	2/2 NC pneumatic operated valve	-

Code	Description
1	12VDC Coil
2	24VDC Coil
3	24VAC Coil
4	110VAC Coil
5	220VAC Coil
6	220VRAC Coil
8	12VDC Propotional Coil
9	24VDC Propotional Coil

DIN type LED connector will be attached to the coil as standart.
Please contact with us for other connector type.

HYDRAULIC SCHEMATIC



QUICK REFERENCE CHART

FORCE ; in Kgf x 1000 = 1Metric Ton

CYLINDER Bore Sizes ; 1-

Working Area	Imperial	Metric	Force	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar	Bar
Diameters	Sizes	Sizes		1	25	50	75	100	125	150	175	200	225	250
Cylinder Piston	1-1/2"	38.1mm	Push	11.6Kgf	290Kgf	581Kgf	871Kgf	116Kgf	1453Kgf	1743Kgf	2034Kgf	2325Kgf	2615Kgf	2906Kgf
Minus Shaft Rod	1"	25.4mm	Pull	6.45Kgf	161Kgf	322Kgf	484Kgf	645Kgf	807Kgf	968Kgf	1130Kgf	1291Kgf	1453Kgf	1614Kgf
Cylinder Piston	2"	50.4mm	Push	20.3Kgf	508Kgf	1017Kgf	1525Kgf	2034Kgf	2524Kgf	3051Kgf	3560Kgf	4068Kgf	4577Kgf	5085Kgf
Minus Shaft Rod	1-1/16"	26.9mm	Pull	14.5Kgf	363Kgf	727Kgf	1091Kgf	1454Kgf	1818Kgf	2182Kgf	2545Kgf	2909Kgf	3273Kgf	3637Kgf
Cylinder Piston	3"	76.2mm	Push	46.5Kgf	1162Kgf	2325Kgf	3484Kgf	4650Kgf	5812Kgf	6975Kgf	8137Kgf	9300Kgf	1046Kgf	11620Kgf
Minus Shaft Rod	1-1/2"	38.1mm	Pull	34.8Kgf	876Kgf	1743Kgf	2615Kgf	3487Kgf	4359Kgf	5231Kgf	6103Kgf	6975Kgf	7847Kgf	8719Kgf
Cylinder Piston	4"	101.8mm	Push	82.99Kgf	2074Kgf	4149Kgf	6224Kgf	8299Kgf	10370Kgf	12440Kgf	14520Kgf	16590Kgf	18670Kgf	2074Kgf
Minus Shaft Rod	2"	50.4mm	Pull	62.65Kgf	1566Kgf	3132Kgf	4699Kgf	6265Kgf	78310Kgf	93980Kgf	10960Kgf	12530Kgf	14090Kgf	1566Kgf

CYLINDER 1-1/2" Bore

TIME ; in mm / Seconds

Working Area	Imperial	Metric	Force	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Flow
Diameters	Sizes	Sizes	Imp	0.03937"	4"	6"	8"	12"	16"	20"	30"	36"	48"	in
			Metric	1mm	101.6mm	152.4mm	203.2mm	304.8mm	406.4mm	508mm	762mm	914.4mm	1219.2mm	Liters
Cylinder Piston	1-1/2"	38.1mm	Push	0.137 sec	13.9 sec	20.8 sec	27.8 sec	41.7 sec	55.6 sec	69.5 sec	104.2 sec	125.1 sec	166.8 sec	0.5
Minus Shaft Rod	1"	25.4mm	Pull	0.0759 sec	7.7 sec	11.5 sec	15.4 sec	23.1 sec	30.8 sec	38.6 sec	57.9 sec	69.5 sec	92.6 sec	0.5
Cylinder Piston	1-1/2"	38.1mm	Push	0.0684 sec	6.95 sec	10.4 sec	13.9 sec	20.85 sec	27.8 sec	34.7 sec	52.1 sec	62.55 sec	83.4 sec	1
Minus Shaft Rod	1"	25.4mm	Pull	0.038 sec	3.86 sec	5.7 sec	7.7 sec	11.5 sec	15.4 sec	19.3 sec	28.9 sec	34.7 sec	46.3 sec	1

CYLINDER 2" Bore

Working Area	Imperial	Metric	Force	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Flow
Diameters	Sizes	Sizes	Imp	0.03937"	4"	6"	8"	12"	16"	20"	30"	36"	48"	in
			Metric	1mm	101.6mm	152.4mm	203.2mm	304.8mm	406.4mm	508mm	762mm	914.4mm	1219.2mm	Liters
Cylinder Piston	2"	50.8mm	Push	0.242 sec	24.7 sec	37 sec	49.4 sec	74.1 sec	98.8 sec	123 sec	188.8 sec	222.4 sec	296 sec	0.5
Minus Shaft Rod	1-1/16"	26.9mm	Pull	0.175 sec	17.7 sec	26.6 sec	35.5 sec	53.3 sec	71.1 sec	88.9 sec	133.1 sec	160 sec	213 sec	0.5
Cylinder Piston	2"	50.8mm	Push	0.121 sec	12.3 sec	18.5 sec	24.7 sec	37 sec	49.4 sec	61.7 sec	91.4 sec	111.2 sec	148 sec	1
Minus Shaft Rod	1-1/16"	26.9mm	Pull	0.087 sec	8.89 sec	13.3 sec	17.7 sec	26.6 sec	35.5 sec	44.4 sec	66.6 sec	80 sec	106 sec	1

CYLINDER 3" Bore

Working Area	Imperial	Metric	Force	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Flow
Diameters	Sizes	Sizes	Imp	0.03937"	4"	6"	8"	12"	16"	20"	30"	36"	48"	in
			Metric	1mm	101.6mm	152.4mm	203.2mm	304.8mm	406.4mm	508mm	762mm	914.4mm	1219.2mm	Liters
Cylinder Piston	3"	76.2mm	Push	0.547 sec	55.6 sec	83.4 sec	111.2 sec	166.8 sec	222.4 sec	278 sec	417 sec	500.4 sec	667.2 sec	0.5
Minus Shaft Rod	1-1/2"	38.1mm	Pull	0.410 sec	41.7 sec	62.5 sec	83.4 sec	125.1 sec	166.8 sec	208.5 sec	312.7 sec	375.3 sec	500.4 sec	0.5
Cylinder Piston	3"	76.2mm	Push	0.274 sec	27.8 sec	41.7 sec	55.6 sec	83.4 sec	111.2 sec	139 sec	208.5 sec	250.2 sec	333.6 sec	1
Minus Shaft Rod	1-1/2"	38.1mm	Pull	0.205 sec	20.85 sec	31.2 sec	41.7 sec	62.5 sec	83.4 sec	104.2 sec	156 sec	187.6 sec	250.2 sec	1

CYLINDER 4" Bore

Working Area	Imperial	Metric	Force	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Stroke	Flow
Diameters	Sizes	Sizes	Imp	0.03937"	4"	6"	8"	12"	16"	20"	30"	36"	48"	in
			Metric	1mm	101.6mm	152.4mm	203.2mm	304.8mm	406.4mm	508mm	762mm	914.4mm	1219.2mm	Liters
Cylinder Piston	4"	101.8mm	Push	0.976 sec	99.2 sec	148.7 sec	198.3 sec	297.5 sec	396.6 sec	495.8 sec	743.7 sec	892.5 sec	1189.9 sec	0.5
Minus Shaft Rod	2"	50.4mm	Pull	0.737 sec	74.9 sec	112.3 sec	149.8 sec	224.6 sec	299.5 sec	374.4 sec	561.6 sec	673.9 sec	898.6 sec	0.5
Cylinder Piston	4"	101.8mm	Push	0.488 sec	49.6 sec	74.4 sec	99.2 sec	148.7 sec	198.3 sec	247.9 sec	371.9 sec	446.2 sec	595 sec	1
Minus Shaft Rod	2"	50.4mm	Pull	0.368 sec	37.4 sec	56.1 sec	74.8 sec	112.2 sec	149.6 sec	186.9 sec	280.4 sec	336.5 sec	448.7 sec	1



QUICK REFERENCE CHART

POWER ; in Kw required to run Powerpack

MOTOR Kw

			Flow liters	Bar 1	Bar 25	Bar 50	Bar 75	Bar 100	Bar 125	Bar 150	Bar 175	Bar 200	Bar 225	Bar 250
Electric Motor	AC	DC	0.5	0.00098Kw	0.025Kw	0.049Kw	0.074Kw	0.098Kw	0.123Kw	0.147Kw	0.172Kw	0.196Kw	0.221Kw	0.245Kw
Electric Motor	AC	DC	0.75	0.00147Kw	0.037Kw	0.074Kw	0.110Kw	0.147Kw	0.184Kw	0.221Kw	0.257Kw	0.294Kw	0.331Kw	0.368Kw
Electric Motor	AC	DC	1	0.00196Kw	0.049Kw	0.098Kw	0.147Kw	0.196Kw	0.245Kw	0.294Kw	0.343Kw	0.392Kw	0.441Kw	0.490Kw
Electric Motor	AC	DC	1.25	0.00245Kw	0.061Kw	0.123Kw	0.184Kw	0.245Kw	0.306Kw	0.368Kw	0.429Kw	0.490Kw	0.551Kw	0.613Kw
Electric Motor	AC	DC	2	0.00392Kw	0.098Kw	0.196Kw	0.294Kw	0.392Kw	0.490Kw	0.588Kw	0.686Kw	0.784Kw	0.882Kw	0.980Kw
Electric Motor	AC	DC	2.5	0.00490Kw	0.123Kw	0.245Kw	0.368Kw	0.490Kw	0.613Kw	0.735Kw	0.858Kw	0.980Kw	1.103Kw	1.225Kw
Electric Motor	AC	DC	3	0.00588Kw	0.147Kw	0.294Kw	0.441Kw	0.588Kw	0.735Kw	0.882Kw	1.029Kw	1.176Kw	1.323Kw	1.470Kw
Electric Motor	AC	DC	4	0.00784Kw	0.196Kw	0.392Kw	0.588Kw	0.784Kw	0.980Kw	1.176Kw	1.372Kw	1.568Kw	1.764Kw	1.960Kw
Electric Motor	AC	DC	5	0.00980Kw	0.245Kw	0.490Kw	0.735Kw	0.980Kw	1.225Kw	1.470Kw	1.715Kw	1.960Kw	2.205Kw	2.450Kw
Electric Motor	AC	DC	6	0.01176Kw	0.294Kw	0.588Kw	0.882Kw	1.176Kw	1.470Kw	1.764Kw	2.058Kw	2.352Kw	2.646Kw	2.940Kw
Electric Motor	AC	DC	8	0.01568Kw	0.392Kw	0.784Kw	1.176Kw	1.569Kw	1.96Kw	2.352Kw	2.744Kw	3.136Kw	3.528Kw	3.920Kw
Electric Motor	AC	DC	10	0.01960Kw	0.490Kw	0.980Kw	1.470Kw	1.961Kw	2.450Kw	2.940Kw	3.430Kw	3.920Kw	4.410Kw	4.900Kw
Electric Motor	AC	DC	12	0.02352Kw	0.588Kw	1.176Kw	1.764Kw	2.353Kw	2.940Kw	3.528Kw	4.116Kw	4.704Kw	5.292Kw	5.880Kw

VOLUME ; In Liters of Cylinder Bore Sizes ; 1-1/2" , 2" , 3" , 4"

TANK SIZE LITERS

Working Area	Imperial Sizes	Metric Sizes	Force Imp	Stroke 0.03937"	Stroke 4"	Stroke 6"	Stroke 8"	Stroke 12"	Stroke 16"	Stroke 20"	Stroke 30"	Stroke 36"	Stroke 48"	
Diameters	Cylinder	Cylinder	Metric	1mm	101.6mm	152.4mm	203.2mm	304.8mm	406.4mm	508mm	762mm	914.4mm	1219.2mm	
Cylinder Piston	1-1/2"	38.1mm	Push	0.0011 Liters	0.11 Liters	0.17 Liters	0.23 Liters	0.34 Liters	0.46 Liters	0.57 Liters	0.86 Liters	1.04 Liters	1.382 Liters	
Minus Shaft Rod	1"	25.4mm	Pull	0.0006 Liters	0.06 Liters	0.09 Liters	0.12 Liters	0.19 Liters	0.25 Liters	0.32 Liters	0.48 Liters	0.57 Liters	0.76 Liters	
Cylinder Piston	2"	50.4mm	Push	0.002 Liters	0.2 Liters	0.30 Liters	0.41 Liters	0.61 Liters	0.82 Liters	1.0 Liters	1.5Liters	1.85 Liters	2.47 Liters	
Minus Shaft Rod	1-1/16"	26.9mm	Pull	0.001 Liters	0.14 Liters	0.22 Liters	0.29 Liters	0.44 Liters	0.59 Liters	0.74 Liters	1.1 Liters	1.33 Liters	1.77 Liters	
Cylinder Piston	3"	76.2mm	Push	0.0045Liters	0.46Liters	0.69Liters	0.92Liters	1.39Liters	1.85Liters	2.31Liters	3.47Liters	4.17Liters	5.5 Liters	
Minus Shaft Rod	1-1/2"	38.1mm	Pull	0.0034Liters	0.34Liters	0.52Liters	0.69Liters	1.0Liters	1.39Liters	1.73Liters	2.60Liters	3.12Liters	4.17 Liters	
Cylinder Piston	4"	101.8mm	Push	0.008 Liters	0.82 Liters	1.24 Liters	1.65 Liters	2.48 Liters	3.3 Liters	4.1 Liters	6.2 Liters	7.4 Liters	9.9 Liters	
Minus Shaft Rod	2"	50.4mm	Pull	0.006 Liters	0.62 Liters	0.93 Liters	1.24 Liters	1.87 Liters	2.9 Liters	3.1 Liters	4.7 Liters	5.6 Liters	7.5 Liters	

PRESSURE CONVERSION CHART

1 kPa = 0,01 bar 1 Mpa = 10,00 bar					1 kPa = 0,145 P.S.I. 1 kg/cm² = 14,223 P.S.I.					Kg/cm² = 1,00 at 1 P.S.I. = kPa				
kPa	Mpa	bar	kg/cm²	P.S.I.	kPa	Mpa	bar	kg/cm²	P.S.I.	kPa	Mpa	bar	kg/cm²	P.S.I.
5	0,005	0,05	0,05	0,73	15000	15	150	152	2175	43000	43	430	438	6235
10	0,01	0,1	0,10	1,45	16000	16	160	163	2320	44000	44	440	449	6380
25	0,025	0,25	0,25	3,63	17000	17	170	173	2465	45000	45	450	459	6525
50	0,05	0,5	0,51	7,25	18000	18	180	183	2610	46000	46	460	469	6670
75	0,075	0,75	0,76	10,88	19000	19	190	194	2755	47000	47	470	479	6815
100	0,1	1	1,02	14,5	20000	20	200	204	2900	48000	48	480	489	6960
200	0,2	2	2,04	29,0	21000	21	210	214	3045	49000	49	490	500	7105
300	0,3	3	3,06	43,5	22000	22	220	224	3190	50000	50	500	510	7250
400	0,4	4	4,08	58	23000	23	230	235	3335	51000	51	510	520	7395
500	0,5	5	5,10	72,5	24000	24	240	245	3480	52000	52	520	530	7540
600	0,6	6	6,12	87	25000	25	250	255	3625	53000	53	530	540	7685
700	0,7	7	7,14	102	26000	26	260	265	3770	54000	54	540	551	7830
800	0,8	8	8,16	116	27000	27	270	275	3915	55000	55	550	561	7975
900	0,9	9	9,18	131	28000	28	280	286	4060	56000	56	560	571	8120
1000	1	10	10,2	145	29000	29	290	296	4205	57000	57	570	581	8265
2000	2	20	20,4	290	30000	30	300	306	4350	58000	58	580	591	8410
3000	3	30	30,6	435	31000	31	310	316	4495	59000	59	590	602	8555
4000	4	40	40,8	580	32000	32	320	326	4640	60000	60	600	612	8700
5000	5	50	51,0	725	33000	33	330	337	4705	61000	61	610	622	8845
6000	6	60	61,2	870	34000	34	340	347	4930	62000	62	620	632	8990
7000	7	70	71,4	1015	35000	35	350	357	5075	63000	63	630	642	9135
8000	8	80	81,6	1160	36000	36	360	367	5220	64000	64	640	653	9280
9000	9	90	91,8	1305	37000	37	370	377	5365	65000	65	650	663	9425
10000	10	100	102	1450	38000	38	380	387	5510	66000	66	660	673	9570
11000	11	110	112	1595	39000	39	390	398	5655	67000	67	670	683	9715
12000	12	120	122	1740	40000	40	400	408	5800	68000	68	680	693	9860
13000	13	130	133	1885	41000	41	410	418	5945	69000	69	690	704	10005
14000	14	140	143	2030	42000	42	420	428	6090	70000	70	700	714	10150



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**TAK-BOK
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MINI POWER PACKS

Popular application examples

- Agricultural tip trailer
- Electric stacker
- Electric forklift
- AGV
- Aerial work platform
- Scissor aerial platform
- Car lift
- Tyre changer
- Wheelchair lift
- Trailer
- Skip trailer
- Dock leveller
- Medical bed
- Tail gate
- Emergency steering



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