

INFO

The Yale Electric power pack PYB

Hand pumps are the most common power source within the area of "High-Pressure Hydraulic Tools". Using a hand pump can require a higher force. The new cordless power pack PYB is a highly efficient replacement for a standard hydraulic hand pump.

Adding this pump to our sales programme enables us to offer four pump types - giving the user more flexible options to choose from.

Relief valve

The fine-adjustment relief valve in connection with the lever allows millimeter increments when lifting and lowering even the highest loads. The fact that sometimes hundreds of tons are controlled by this hand wheel underlines the importance of this feature.

Robust aluminium/metal construction

The aluminium die-cast housing ensures low weight and protects the battery. Plastic reservoirs filled with oil may present a fire risk in connection with welding or similar hot work!

Shoulder belt

A shoulder belt can be attached to the lifting eyes making it easier to carry the pump.

Pressure relief valves

The electric power packs PYB are equipped with two internal pressure relief valves. The high pressure stage is set to a maximum operating pressure of 700 bar, to avoid over-pressurization of the system.

NEW DEVELOPMENT
CORDLESS TECHNOLOGY
FOR MOBILE OPERATION



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Rubber tank bladder

The rubber tank bladder of the PYB enables the pump to be used in any position. The total available oil volume can be used.

Two-stage output

Both PYB power packs have a two-stage design. This allows increased speeds and efficient working during unloaded conditions of the hydraulic cylinder. The switch-over from the low pressure to the high pressure stage is done automatically.

Both pumps PYB are “identical”.

Except for the reservoir and the cover both units are identical. Which means that nearly all parts are interchangeable.

So keeping spare parts can be minimized, e.g. only one seal kit has to be stocked to service both pumps

Excellent suction properties

Hand pumps draw and displace 100% of their volume per stroke. This results both in a high efficiency as well as a rapid cylinder movement.

Interchangeability

All hydraulic cylinders, hand pumps and other components are fully interchangeable and can be combined with all other 700 bar hydraulic lines. The PYB is equipped with a female coupler half CFY-1

Pressure gauge

Appropriate pressure gauges with the corresponding adaptors are shown in this catalogue.



Cordless power pack: PYB-1,0 c/w optional gauge adaptor set GYA-63.

Battery and charger

The batteries and chargers are HIKOKI original parts and are commercially available. Which means every customer can decide if and how many batteries and chargers they want to order with Columbus McKinnon or if they want to purchase the necessary parts locally.



Possible applications and devices to be combined



Lifting wedges
HK-16T
16t



Spreading wedges
YSW-14T
14t



Low-profile and flat cylinders
YLS and YFS
10 - 100t



Spreaders
YHS
0.5 - 1.5t



Nut splitters
YNS/YNS-AH
SW 11 - 89mm



PYB-1,0
with optional
pressure gauge
GYA-63

PYB-0,6

PYB Elektric power pack, battery driven

Operating pressure max. 700 bar

The Yale PYB cordless power pack provides a flexible edition to the Yale hydraulic programme.

This extremely compact and lightweight power pack gives the user the freedom to operate in areas where there is no power source, increasing productivity over the conventional hand pump and all at the push of a button.

The power pack utilises a standard HiKOKI LH-ION battery and charger to maximize operation.

Ideal for a range of applications using small to mid size single-acting cylinders, hydraulic spreaders, lifting wedges nut splitters and much more.

Features

- Operating pressure max. 700 bar
- One-Hand-Operation. Push-button integrated into ergonomic handle.
- Two-stage operation with automatic switch-over.
- With internal pressure relief valve.
- Reservoir made from aluminium, extreme low weight.
- Protective cover to prevent inadvertent switch on of pump.
- Rubber tank bladder enables the pump to be used in any position.

Options/Accessories

Standard HiKOKI batteries (Typ BSL36A18x2) and chargers are exclusively used.

- Battery model PYB-BAT, 18V, weight 0.7 kg
Art.-No. 192043950
- Quick-charger model PYB-CHARG,
230V and 12V (car plug socket incl.)
Art.-No. 192043961
- Pressure gauge set model GYA-63 consisting of:
gauge GGY 632, Ø 63 mm, 0 - 1000 bar and adaptor.
Art.-No. N14200497
- Hydraulic hose model HHC (to complete the connection a male coupler half CMY-1 is required)

Scope of delivery

- Electric power pack, battery driven
- Oil filled ready for work
- Female coupler half CFY-1
- Shoulder belt



Ideal application in combination with compact, portable hydraulic tools like spreaders, lifting wedges, low profile and flat cylinders as well as nut splitters.

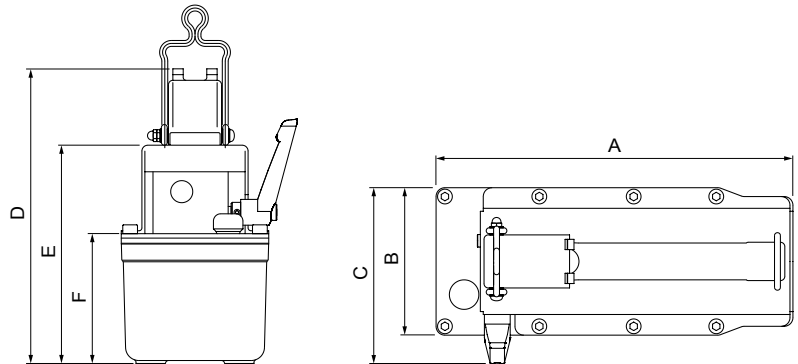
Technical data PYB

Model	Art.-No.	Displacement	Reservoir volume	Displacement 1 st stage	Displacement 2 nd stage	Weight without battery	Operational weight c/w battery
			cm ³	l/min	l/min	kg	kg
PYB-0,6	192043421	two-stage	600	0.7	0.06	4.8	5.5
PYB-1,0	192043988	two-stage	1000	0.7	0.06	5.7	6.4

Dimensions PYB

Model	PYB-0,6	PYB-1,0
A, mm	245	290
B, mm	100	100
C, mm	120	120
D, mm	200	229
E, mm	148	166
F, mm	88	106

Dimensions approx.



INFO

Battery and charger are not supplied in the standard scope of delivery. These items must be ordered separately.

Comparison

Cylinder size t	Hand pump		Electric power pack PYB	
	No. of pump strokes for 10 mm stroke		Piston travel speed	
	HPS-2/0,7 A up to HPS-2/10 A LP	HPS-1/0,7 A up to HPS-2/10 A HP	in mm/s	
	LP	HP	LP	HP
5	1	4	16.2	1.4
10	1	7	8.2	0.7
15	2	11	5.4	0.5
20	2	14	4.1	0.35
21	2	15	3.8	0.33
23	3	17	3.5	0.3
30	3	22	2.7	0.23

LP = Low-pressure stage (unloaded stroke)
HP = High-pressure stage (loaded stroke)



Shoulder belt



Hydraulic hose
HHC



Optional pressure gauge set
GYA-63



Quick-charger
PYB-CHARG



Battery
PYB-BAT



One-Hand-Operation
push-button integrated into ergonomic handle.



PY-04/2/5/2M

PY-04/2/5/4M

Operation of the power pump

PY-04/2/5/2E:

By activating push-button number 1, the motor starts and the cylinder advances. In the neutral position the pressure is held. By activating push-button number 2, the solenoid valve is activated, the pressure decreases and the hydraulic cylinder retracts.

PY-04

Electric motor pumps, portable

Operating pressure max. 700 bar

These light-weight but powerful two-stage pumps are particularly designed for maintenance and repair jobs. Depending on their type, they can either operate single-acting or double-acting hydraulic cylinders.

The ideal combination of manually operated valve and remote pendant control provides the operator with ample freedom of motion and ensures a safe “holding of the load”.

The remote pendant control (1.5 m) is used to start the motor even under full load. The function for both manual valves is as follows: – advance – hold – return – With their light weight and convenient carrying handle, these pumps can be easily transported. Pumps are equipped with thermal overload protection and are supplied with hydraulic oil.

Operation of the power pump

PY-04/2/5/2M:

The 2/2-way manual valve operates together with a pilot operated unloading valve, so that the two valve positions result in the following two control possibilities:

Valve handle position 1:

Cylinder holds pressure after motor stop.

Valve handle position 2:

Cylinder automatically retracts after motor stop.

Technical data PY-04

Model	Art.-No.	Control valve	Operating pressure max. bar	No load stroke l/min up to 30 bar	Under load stroke l/min up to 700 bar	Useable reservoir volume l	Connecting value	Cable remote control m	Speed rpm	Protection standard	Weight, without oil, approx. kg
PY-04/2/5/2 M	N12300132	2/2-way manual valve	700	40	0.23	5.0	0.37 kW - 230 V-1Ph	1.5	2800	IP 50	24
PY-04/2/5/4 M	N12300193	4/3-way manual valve	700	4.0	0.23	5.0	0.37 kW - 230 V-1Ph	1.5	2800	IP 50	26
PY-04/2/5/2 E	N12300043	2/2-way solenoid	700	4.0	0.23	5.0	0.37 kW - 230 V-1Ph	1.5	2800	IP 50	28

PAY Mini hydraulic pumps, with compressed air driven motor

Operating pressure max. 700 bar

These mini-pumps are driven by an air-powered motor and can be connected to any supply source of compressed air. These compact low-cost pumps can operate all single-acting or double-acting hydraulic cylinders up to a max. operating pressure of 700 bar.

Due to large reservoirs, large cylinders or multiple cylinders can be operated. The use of an inline air filter-lubricator is recommended.

The hydraulic pressure can be infinitely adjusted on the regulator of the air-lubricator unit. The air-driven motor guarantees 100% explosion protection.

Pumps for double-acting hydraulic cylinders are equipped with an additional 4-way control valve type VHH-4/3. The connected hydraulic cylinder is controlled – advance – hold – return – by the universal pedal, which can be either hand or foot-operated.



Control of cylinder motion

- Pedal in neutral position – motor stands still, cylinder stands, pressure is held.
- Pedal depressed – motor starts, cylinder advances, pressure is built-up.
- Pedal pushed forward – motor stands still, pressure is released, cylinder retracts.

Technical data PAY

Model	Art.-No.	For cylinders	Reservoir volume l	Oil pressure max. bar	Oil displacement l/min	Required air pressure bar	Air consumption l/min	Oil port	Air port	Weight kg
PAY-6	N12300133	single-acting	1.5	700	1.28 - 0.14	7	560	3/8 NPT	1/4 NPT	6.3
PAY-6-5	N12300715	single-acting	5.0	700	1.28 - 0.14	7	560	3/8 NPT	1/4 NPT	12.0
PAY-64	N12300279	double-acting	1.5	700	1.28 - 0.14	7	560	3/8 NPT	1/4 NPT	7.5
PAY-64-5	N12300006	double-acting	5.0	700	1.28 - 0.14	7	560	3/8 NPT	1/4 NPT	13.0