INFO

PY-11/3/20/4 M

PY-07/3/10/3 E

PYE and PY
Electric hydraulic power packs

Single-stage and two-stage

Power packs are easy to operate as they are fully assembled and easy to control.

The use of power packs is always recommended when jobs have to be done in a time-saving and efficient way, when repeating jobs have to be finished off, quick cylinder cycles have to be achieved or if large oil volumes in connection with high-tonnage cylinders have to be transmitted.

Two-stage output

The standard power packs are equipped with two-stage pumps, which means that a low pressure stage fills the connected hydraulic cylinder quickly up to a pressure of 80 bar. The high pressure stage is activated automatically from 80 bar up to 700 bar, while the low pressure stage is discharged back to the reservoir. This economic solution avoids heating-up, saves energy and keeps the power packs compact.

Single-stage output model PYE

The hydraulic packs have single-stage pumps. These packs deliver between 0 and 700 bar with the same volume (high-pressure stage).

Control/Operation

The motion control of the connected hydraulic cylinder is done by operating the directional valve.

Do you have a single-acting or a double-acting hydraulic cylinder?

The directional control valve has to correspond to the a.m. functional principle of the hydraulic cylinder to be operated. Depending on these principles the power packs are equipped with a:

- 3/3-way valve to operate single-acting hydraulic cylinders (connection with one hydraulic hose)
- 4/3-way valve to operate double-acting hydraulic cylinders (connection with two hydraulic hoses

The directional control valves are available either as manual or solenoid operated valves.

Operation of the directional valves

Depending on the way of operation, there are manual or solenoid operated valves. Manual valves are controlled by shifting the operating lever and represent the economic way of control.

These valves have 3 lever positions:
– advance – hold – return –

Solenoid valves

Solenoid valves have the advantage that they are controlled by a pendant remote control box which makes the operator independent from the power pack, making it easier for him to monitor the job.

The solenoid valves are controlled by two push-buttons
– advance – return –
In neutral position **– hold –** the valves rest in pressureless circuit. Pressure and force of the connected cylinder are held without pressure drop. The complete electrical set-up (with 24 V control) belongs to the scope of delivery. Solenoid valves allow a very ergonomic operation and offer a quick and precise switching (millimeterwise) of the connected hydraulic cylinder.

Pressureless circuit

In neutral position all directional valves rest in pressureless circuit which means that the oil flow coming from the rotating pump is guided back to the reservoir without creating any pressure build-up.

Special solenoid valve configurations

Some applications require a special valve configuration, e.g. the independent control of several hydraulic cylinders from a single power pack. In such cases the complete valve build-up and electrical control is designed according to customer‘s requirements.

Pressure-Guard power packs

By using an electro-hydraulic pressure switch and a special electric control, power packs automatically control their pre-adjusted pressure. In applications where the pressure (load) should be applied over a very long period, the connected power pack is switched on and off automatically and replaces the pre-set pressure in case a pressure drop has occured.

Trolleys

For all power packs we offer a cart-frame for flexible movement from job to job. Cart-frames are equipped with 2 fixed and 2 swivel castors.

Oil cooler

For certain applications, especially when power packs are continuously operated and the oil temperature could exceed 60 °C, the use of an oil cooler is recommended.

Hydraulic oil

All power packs are designed for an operation with standard hydraulic oil (specification ISO VG 32).
For certain operating conditions the viscosity class of the hydraulic fluid can be varied.
All power packs are supplied including oil.

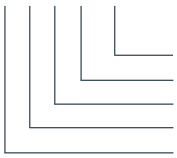
Features

- Robust packs, also capable for contiuous applications.
- Suitable for all jobs in workshops and on construction sites where hydraulic force is required; supplied ready to use.
- On-off motor switch and 3 m motor connecting cable.
- With carrying handles, oil level gauge, oil filler/resevoir ventilation plug.
- Incl. pressure gauge GGY-631.
- Two-stage displacement, which means a rapid advance without load, as well as an automatic switch into the 2. phase by a congruous load.
- Low noise level due to standard motors with 1450 rpm.
- Futher motor voltage and oil resevoirs on request.
- With manual or solenoid operated directional valves.
- Solenoid valves with 3 m remote control box (with 2 push-buttons) and pressure set valve as standard. Adjustable from 0 - 700 bar.
- 24 V - low voltage control includes a sturdy metal electric control box and ready to use set up.

INFO

Two-stage electric hydraulic power packs, 700 bar

Model	Reservoir size				Control valve (directional valve)				Motor-power	Displacement, two-stage	
					manual valve		solenoid valve			approx. l/min	approx. l/min
	10 l	20 l	30 l	50 l	3/3-way	4/3-way	3/3-way	4/3-way	kw	0 - 80 bar	80 - 700 bar
PY-07/3/10/3 M	•	–	–	–	•	–	–	–	0.75	6.0	0.6
PY-07/3/10/4 M	•	–	–	–	–	•	–	–	0.75	6.0	0.6
PY-07/3/20/3 M	–	•	–	–	•	–	–	–	0.75	6.0	0.6
PY-07/3/20/4 M	–	•	–	–	–	•	–	–	0.75	6.0	0.6
PY-07/3/20/3 E	–	•	–	–	–	–	•	–	0.75	6.0	0.6
PY-07/3/20/4 E	–	•	–	–	–	–	–	•	0.75	6.0	0.6
PY-11/3/20/3 M	–	•	–	–	•	–	–	–	1.1	8.5	1.0
PY-11/3/20/4 M	–	•	–	–	–	•	–	–	1.1	8.5	1.0
PY-11/3/30/3 M	–	–	•	–	•	–	–	–	1.1	8.5	1.0
PY-11/3/30/4 M	–	–	•	–	–	•	–	–	1.1	8.5	1.0
PY-11/3/20/3 E	–	•	–	–	–	–	•	–	1.1	8.5	1.0
PY-11/3/20/4 E	–	•	–	–	–	–	–	•	1.1	8.5	1.0
PY-11/3/30/3 E	–	–	•	–	–	–	•	–	1.1	8.5	1.0
PY-11/3/30/4 E	–	–	•	–	–	–	–	•	1.1	8.5	1.0
PY-22/3/30/3 M	–	–	•	–	•	–	–	–	2.2	18.0	2.1
PY-22/3/30/4 M	–	–	•	–	–	•	–	–	2.2	18.0	2.1
PY-22/3/50/3 M	–	–	–	•	•	–	–	–	2.2	18.0	2.1
PY-22/3/50/4 M	–	–	–	•	–	•	–	–	2.2	18.0	2.1
PY-22/3/30/3 E	–	–	•	–	–	–	•	–	2.2	18.0	2.1
PY-22/3/30/4 E	–	–	•	–	–	–	–	•	2.2	18.0	2.1
PY-22/3/50/3 E	–	–	–	•	–	–	•	–	2.2	18.0	2.1
PY-22/3/50/4 E	–	–	–	•	–	–	–	•	2.2	18.0	2.1



Code explanation

Directional valve : 3 = for single-acting, 4 = for double-acting cylinder, M = manual valve, E = solenoid valve
Reservoir size : in liters (other reservoir sizes on request)
Motor voltage : 3 = 380-420 V, 3-phase (Euro-voltage), 2 = 230 V, 1-phase, (other voltages on request)
Hoist motor : 07 = 0.75 kW, 11 = 1.1 kW, 22 = 2.2 kW, 30 = 3 kW, 55 = 5.5 kW, 75 = 7.5 kW, 110 = 11 kW
Type of motor : PY = electric motor, PAY = air motor, PGY = petrol driven motor (4 cycle)

Single-stage electric hydraulic power packs, 700 bar

Model	Reservoir size				Control valve (directional valve)				Motor-power	Displacement
					manual valve		solenoid valve			l/min
	10 l	20 l	30 l	50 l	3/3-way	4/3-way	3/3-way	4/3-way	kw	0 - 700 bar
PYE-03/3/10/3 M	•	–	–	–					0.35	0.3
PYE-03/3/10/4 M	•	–	–	–					0.35	0.3
PYE-07/3/10/3 M	•	–	–	–					0.75	0.6
PYE-07/3/10/4 M	•	–	–	–					0.75	0.6
PYE-07/3/20/4 M	–	•	–	–					0.5	0.6
PYE-11/3/20/3 M	–	•	–	–					1.1	1.0
PYE-11/3/20/4 M	–	•	–	–					1.1	1.0
PYE-11/3/30/4 M	–	–	•	–					1.1	1.0
PYE-22/3/20/3 M	–	•	–	–					2.2	2.1
PYE-22/3/20/4 M	–	•	–	–					2.2	2.1
PYE-22/3/30/4 M	–	–	•	–					2.2	2.1
PYE-22/3/50/4 M	–	–	–	•					2.2	2.1

All valve and reservoir combinations available.

High-performance electric hydraulic power packs, 700 bar, single-stage

Model	Reservoir size				Control valve (directional valve)				Motor-power	Displacement
					manual valve		solenoid valve			l/min
	50 l	70 l	100 l	150 l	3/3-way	4/3-way	3/3-way	4/3-way	kw	0 - 700 bar
PYE-40/3/50/4 M	•	–	–	–					4.0	2.7
PYE-55/3/70/4 M	–	•	–	–					5.5	4.0
PYE-75/3/100/4 M	–	–	•	–					7.5	6.0
PYE-110/3/150/4 M	–	–	–	•					11.0	8.0
PYE-180/3/150/4 M	–	–	–	•					18.0	12.0

All valve and reservoir combinations available.

Hydraulic power pack with protection cage

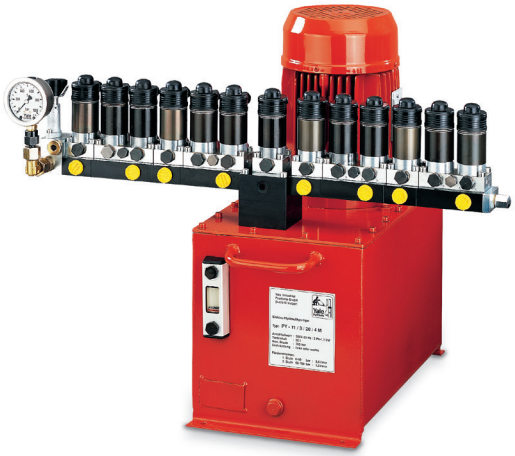
This power pack is specially designed for general lifting applications in construction areas. Equipped with an optimized valve configuration, including 4-way manual directional valve VHP-4/3-1, safety-check valve VSM-21, pressure relief valve VPR-1 and two pressure gauges for permanent load control.

Hydraulic power pack with 4-way manifold MY-44-GYA

The most economic way for a pressure-independent and individual control of four single-acting hydraulic cylinders. The additionally mounted safety-check valve VSM-21 avoids uncontrolled pressure drops, and the built-in throttle valve allows a precise (millimeterwise) lowering even of the highest loads. Four pressure gauges allow a permanent reading of the individual loads. On request, the power packs can be equipped with a handy cart-frame to make the operation flexible. This type of power pack can be supplied in all sizes of the PY and PYE series.

Hydraulic power pack with 4-times solenoid valve

The quadruple solenoid valve block ensures a pressure-independent and individual control of four double-acting hydraulic cylinders. Solenoid valves offer several well-known advantages such as: ergonomic and safe control by pendant remote control, exact load hold, precise and quick switch characteristics and many more.



Double-hydraulic power pack

In order to realise very high oil flows, two independent pump systems can be combined in one large reservoir. A gear pump ensures an extremely high oil flow up to 250 bar while the high-pressure stage is generated by a high-performance radial piston pump. Each pump is equipped with its own solenoid control valve so that the individual oil flows can be generated or discharged on request.