

Hydraulic Pump Unit



for detensioning precast concrete elements
using single-acting hydraulic cylinders

Function

Power is supplied to the motor as long as a rotary switch (spring-loaded) (1) is actuated. When the motor is running, oil flows from the pump to the stop valves (2). If one or several of these valves are opened, the pistons of the cylinders concerned will extend. The working pressure is limited to max. 450 bar and can be read on the associated pressure gauges.

As soon as the rotary switch is released, it returns to its zero position and the motor comes to a stop. The pistons remain in their extended position and will not retract until the drain valves (3) are opened and the cylinders are subjected to external forces (tensile forces of the prestressing steel).

The uniform retraction of the detensioning cylinders can be monitored by an optional synchronized stroke indicator.

Drive

3-phase motor, 1500 rpm, standard voltage 400 V/50 Hz (other voltages and frequencies on inquiry).

Pump

High-pressure radial-piston pump, max. working pressure 450 bar (for hydraulic oil, see Sheet B541.01/2).

Connection

Max. 4 hydraulic detensioning cylinders. Piping 12 mm dia. with union nut M 12-S / M 20 x 1.5 and sealing cone DKO.



Fig. 1:
Mobile hydraulic
pump unit

Ordering data

Mobile hydraulic pump unit

Electrical equipment	Hydraulic pump (ltr/min)	Oil tank (liters) Useful volume/Tank	Tyres	dimensions (mm) L x W x H	Weight* (kg)	Order No.
3.0 kW 400 V/50 Hz	5.8 (78-057.01)	100/130	pneumatic	1486 x 700 x 1064	150	78-070.24
3.0 kW 400 V/50 Hz	5.8 (78-057.01)	100/130	standard	1486 x 700 x 1064	150	78-070.25
3.0 kW 400 V/50 Hz	5.8 (78-057.00)	50/90	pneumatic	1486 x 700 x 984	140	78-070.26
3.0 kW 400 V/50 Hz	5.8 (78-057.00)	50/90	standard	1486 x 700 x 984	140	78-070.27
3.0 kW 575 V/60 Hz	7.0 (78-057.01)	100/130	standard	1486 x 700 x 1064	150	78-070.30
3.0 kW 400 V/50 Hz	5.8 (78-057.01)	160/200	pneumatic	1486 x 1300 x 984	200	78-070.28
3.0 kW 400 V/50 Hz	5.8 (78-057.01)	160/200	standard	1486 x 1300 x 984	200	78-070.29

* without oil filling, unpacked

Accessories

Order No.		
13-069.51	Connection hoses for detensioning cylinders:	ND 8 x 2500
13-069.52		ND 8 x 3500
13-069.53		ND 8 x 5000
13-069.54		ND 8 x 6000
13-069.55		Nd 8 x 10000

Oil volume required by single-acting 225 mm stroke detensioning cylinders as per brochure B562.01/1:

200 kN 1.3 ltr	1000 kN 5.7 ltr	4000 kN 20.4 ltr
350 kN 1.8 ltr	1500 kN 8.2 ltr	5000 kN 25.5 ltr
500 kN 2.8 ltr	2000 kN 11.0 ltr	7000 kN 42.9 ltr
700 kN 3.7 ltr	3000 kN 15.9 ltr	10000 kN 59.6 ltr

Please note the useful oil capacity of the hydraulic unit! A casting bed for the production of roof beams, designed for a prestressing force of 4000 kN in the main reinforcement and 1000 kN in the transport reinforcement would require 28 litres of oil. In this case one pump unit would be sufficient to supply two beds.