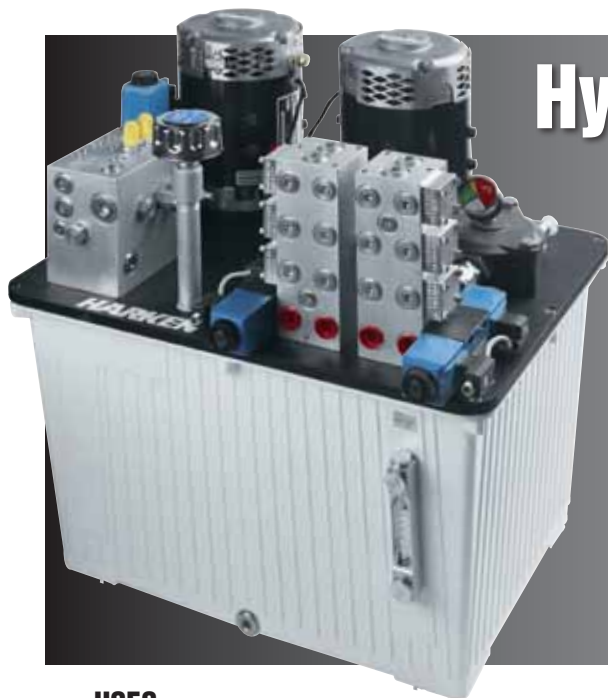


Hydraulic Power Systems



Harken hydraulic power units are the complete package. They can power up to 13 functions and 3 simultaneous functions, ranging from winches and backstay cylinders to keels and windlasses. Preinstalled double-flow capabilities feed power-hungry functions. Power units include labeled prewired control boxes and can act as stand-alone, central, or supplemental units.

USES

Harken power units supply hydraulic power to winches, furlers, keel cylinders, windlasses, davits, and other functions on boats up to approximately 80 feet.

FEATURES

Run up to 13 functions and 3 simultaneous functions at full power.

Use the built-in double-flow, function to supply more oil to power-intensive equipment.

Manifolds and pumps are preplumbed, saving space, installation time, and additional hardware.

Fan-cooled, series-wound motors are energy-efficient at all speeds.

Electrical motor contactors meet the IP67 waterproof specification.

The control box terminals, valve wire sets, and motor contactors are all sealed, labeled, and prewired—just connect the functions you need.

The elevated reservoir cap keeps oil from spilling, filters the air exchange, and removes moisture from the tank to ensure a healthy unit.

Drop-in return line filters with status gauges provide a no-mess alternative to typical spin-on styles.

MATERIALS

Coated aluminum tanks have Hardkote-anodized 6061-T6 top plates.

Manifolds are made with clear-anodized aluminum.

Prewired and waterproofed control boxes are molded from extremely tough polycarbonate.

OPTIONS

Harken power units come with 4000 watt 24V DC motors. 12V DC motors and valves are available by special order. Contact Harken for lead time and pricing.

A pressure booster manifold is an optional addition for large powered systems with multiple cylinders that carry low system pressure. The manifold features an integrated pressure intensifier that multiplies low inlet pressure to an efficient 5000 psi. By increasing pressure, smaller cylinders can carry a higher load, saving weight and reducing cost. Anodized-aluminum box comes in 2.5 L/min and 5 L/min sizes.

INSTALLATION

The owner's manual contains detailed installation instructions. Professional installation may not be necessary if you are mechanically inclined and possess basic knowledge of hydraulic systems.

MAINTENANCE

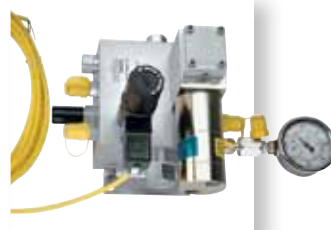
Monitor your system via the integrated temperature and oil-level gauge. Regularly inspect visible components for leaks and material imperfections. Standard DO3 industrial-grade replacement valves are available worldwide. All service and repair of internal components should be done by a certified hydraulic technician.



Drop-in filters and filter status gauges make maintenance fast and easy



The control box terminals, valve wire sets, and motor contactors are all sealed, labeled, and prewired

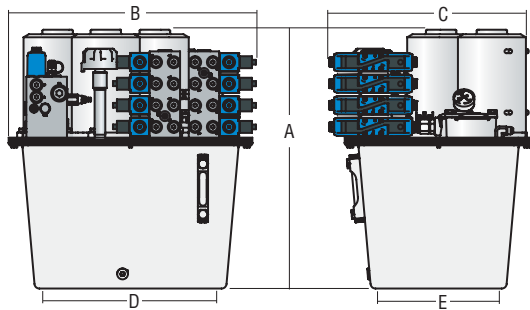


Pressure booster manifold: 5000 psi factory-set pressure relief, built-in filter, analog pressure gauge, electric on-off switch, and a manual override

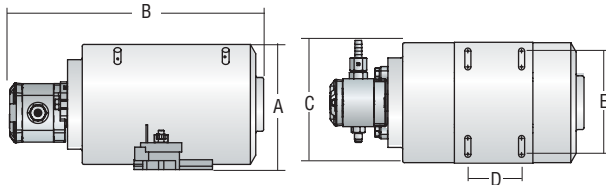
Hydraulic Power Systems

Power Unit Part Number

HYDRO3CA22R2XXX



HYDRO 1/2/3



HYDRO HP

The Hydro HP includes a motor with pump that has high pressure output to 5000 psi at 2.5 L/min. It can link to either a manual or electric system for push-button cylinder operation. The Hydro HP includes a motor contactor but no switches. The same control boxes can be used.

Hydraulic Power Unit

Number of Motors

Control Box

C = With control box

N = No control box

Manifold Options

A = Attached manifold

R = Remote manifold

Valves on Attached Manifold 1

X = No valves (use this option for remote manifolds)

0 - 4 = Number of valves on attached manifold 1

Valves on Attached Manifold 2

X = No valves (use this option for remote manifolds and Hydro 1)

0 - 4 = Number of valves on attached manifold 2

Optional Additional Remote Manifold*

R = With remote manifold

(all digits following refer to remote manifold options)

Valves on Additional Remote Manifolds 1 - 4**

X = No manifold

1 - 4 = Number of valves on each additional manifold

(add a number for each additional manifold)

*One remote manifold is included with Hydro 3

**Hydro 1 only available with one additional remote manifold. Use X for last three digits

Hydraulic Power Unit Control Boxes & Pressure Booster Manifold

Power unit	Height		Width		Depth	
	in	mm	in	mm	in	mm
HYDRO 1 / HYDRO 2	16.5	419	12.5	318	6.0	152
HYDRO 3	19.5	495	17.5	445	10.0	254

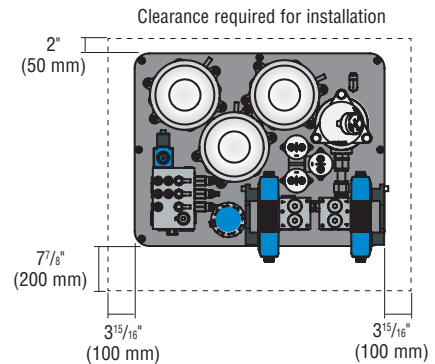
Pressure Booster Manifold

HYDROBOOST2.5L	8.1	205	8.3	210	8.4	214
HYDROBOOST5.0L	10.4	265	8.3	210	8.4	214

Power Unit Dimensions

Power unit	A		B		C		D		E	
	in	mm	in	mm	in	mm	in	mm	in	mm
HYDRO 1	22.5	568	19.4	493	14.8	376	12.9	328	7.0	178
HYDRO 2 / HYDRO 3	25.5	648	24.4	619	20.0	509	16.6	423	11.1	283
HYDRO HP	7.0	178	14.1	359	6.8	171	3.0	76	5.0	127

Dimensions subject to change



Hydraulic Power Units

Power unit	Max number of functions	Max simultaneous functions	24V DC Motor	Max current drain amps	Tank capacity gal	L	Max continuous output pressure @ flow rate psi @ gpm bar @ L/min	Weight				
								Without manifolds lb	kg	With attached manifolds lb	kg	Fasteners
HYDRO 1	4	1	1 x 4 kW	210	7.9	30	2000 @ 4 140 @ 15	89	40.5	102	46.1	M10
HYDRO 2	9*	2**	2 x 4 kW	2 x 210	18.5	70	2000 @ 8 140 @ 30	182	82.6	194	88.2	M10
HYDRO 3	13*	3**	3 x 4 kW	3 x 210	18.5	70	2000 @ 12 140 @ 45	233	105.9	246	111.4	M10
HYDRO HP	—	—	1 x 4 kW	210	—	—	5000 @ .66 345 @ 2.5	53	24.1	—	—	M8
Pressure Booster Manifold												
HYDROBOOST2.5L	—	—	—	2	—	—	5000 @ .66 345 @ 2.5	18	8.2	—	—	M8
HYDROBOOST5.0L	—	—	—	2	—	—	5000 @ 1.32 345 @ 5.0	25	11.1	—	—	M8

*One function delivers double flow output (8 gpm) using 2 motors

** This number is reduced by one when a double flow function is in use

Hydraulic Power Systems



HYDRO 1 with attached manifold



HYDRO 1 with remote manifold



HYDRO 2 with attached manifold



HYDRO 2 with remote manifold



HYDRO 3 with attached manifold