

Hy-ProDrive

*Marine Steering Technology
By Hydraulic Projects Ltd*

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Marine Hydraulic Steering Components

Hydraulics Engineering Quality and Manufacturing Excellence

Who are we?

Since 1967 Hydraulic Projects has been designing and manufacturing hydraulic marine autopilot steering equipment and hydraulic control valves from our UK base. With our own in-house design team using the latest 3d software and CNC machines, we control the complete process from initial concept through manufacture, assembly and test.

We guarantee the product is manufactured to the very highest quality and delivered on time.

What do we do?

We manufacture range of marine autopilot hydraulic steering equipment. Additionally, we produce a large range of hydraulic directional control valves supplemented by ancillary valves such as pilot check, service line relief's etc. We can also tailor our designs to suit your requirements.

Who are our customers?

Our marine equipment is used by the worlds leading autopilot manufacturers. You will find our valves on a vast range of equipment from recovery vehicles to refuse wagons, industrial jigs and fixtures, agricultural machinery, construction and plant equipment, boat winches and many other applications.

Now what do you do?

Just look through this catalogue or browse our web site – www.hypro.co.uk –for your Motion control requirements. Or call us to discuss your needs and we will be happy to help you choose the right product for your application.

So how can we help you?

Our contact details are shown on the back cover of this catalogue and our dedicated sales team are waiting to take your call.

Ordering

We are happy to accept orders by phone, fax email or post. Please use the catalogue order codes where possible. If you can't see what you want in the catalogue please contact us as our range goes beyond what is printed here. Please check and confirm availability of items before ordering.

Shipping

We use a national carrier for most orders or 1st class post for smaller items where appropriate. Alternatively you may arrange your own collection but there will be a small packing charge.

Payment

Payment can be made by credit/debit card, cheque or bank transfer. New accounts are strictly on a proforma basis. Credit accounts are available on application and subject to the usual credit checks.

A copy of our full terms and conditions is available on request or alternatively can be viewed or downloaded from our website.

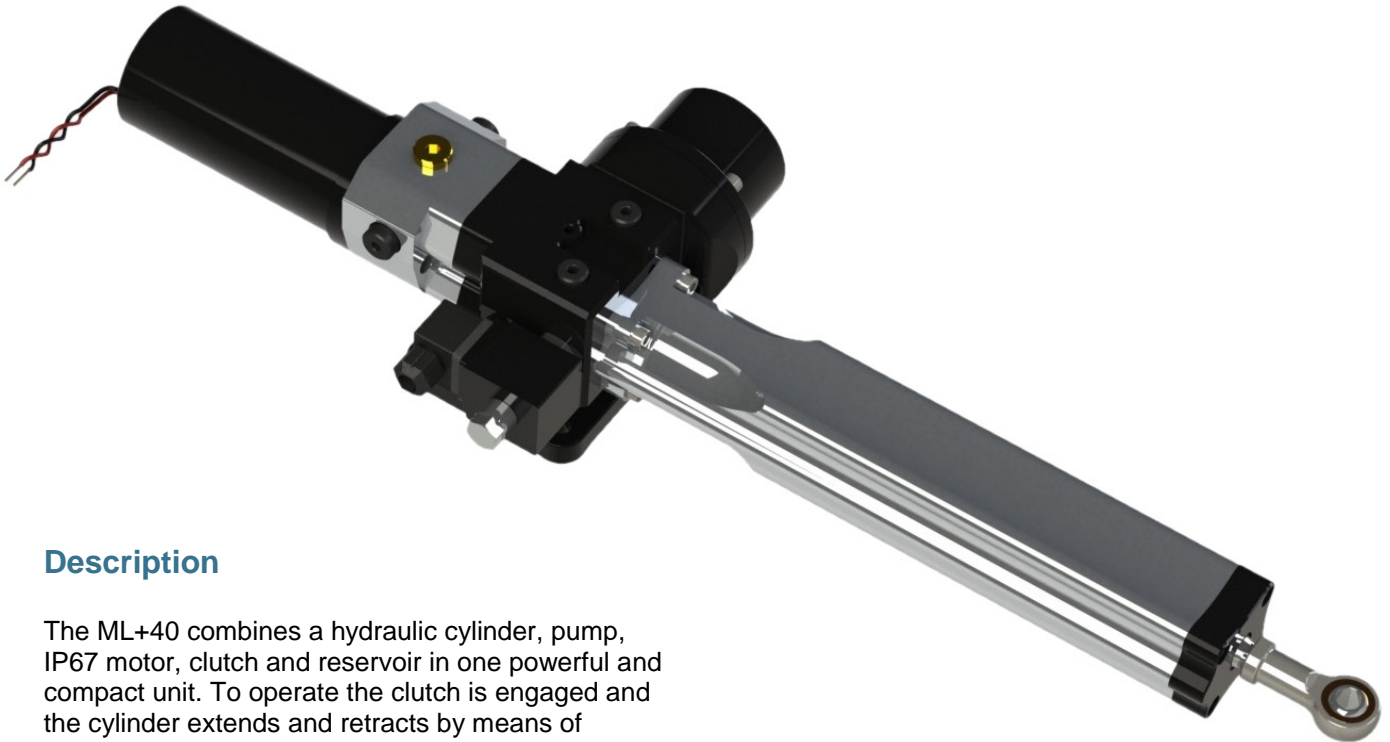
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ML+40 LINEAR ACTUATOR

The ML+40 Electro Hydraulic Linear Actuator combines all the elements of an hydraulic circuit in one compact unit. Designed for ease of installation, the unit is supplied with a quick release mounting and tiller bolt. An optional rudder reference/feedback unit can be mounted directly onto the actuator. Integral relief valves protect the unit and its mountings from being overloaded.



Description

The ML+40 combines a hydraulic cylinder, pump, IP67 motor, clutch and reservoir in one powerful and compact unit. To operate the clutch is engaged and the cylinder extends and retracts by means of reversing the motor polarity. Integral relief valves protect the unit and its mounting from being overloaded. Anti-cavitation valves are also incorporated to allow full stroke speeds of up to 2 seconds when back-driven by the helm.

Designed for ease of servicing with a motor that can be removed from the unit without affecting the hydraulic circuit.

A full range of spares, seal kits and servicing tools are available.

The ML+40 is supplied pre-filled and ready to install.

Application

Ruggedly designed specifically for the marine auto-pilot market where they are widely used on sailboats and power craft with displacement or fast planing hulls. They are ideal where space is limited as there is no separate pipe-work or reservoirs to fit. The unit can be mounted in any attitude.

Outside of the marine market it has found many industrial applications including gate and door opening and mechanical lifts.

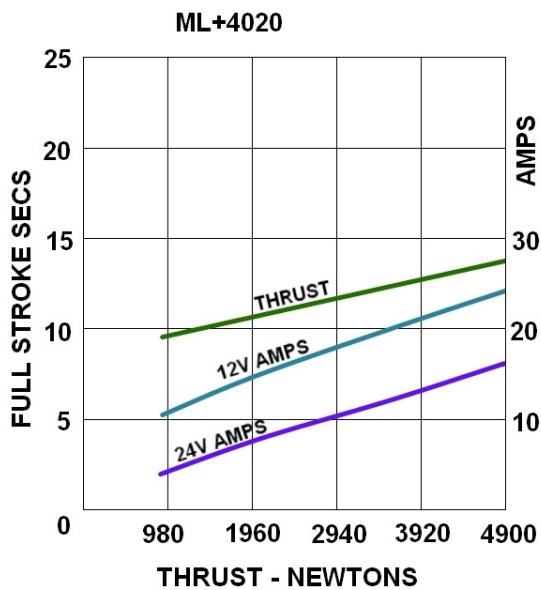
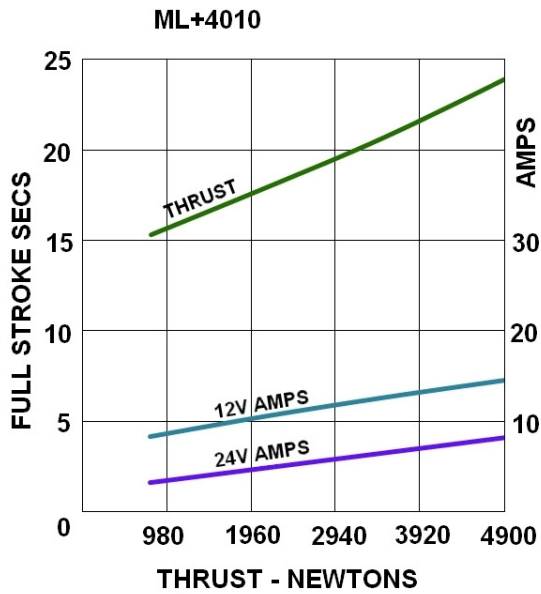
The ML+40 is suitable anywhere a high thrust is required from a 12 or 24v DC supply.

Features

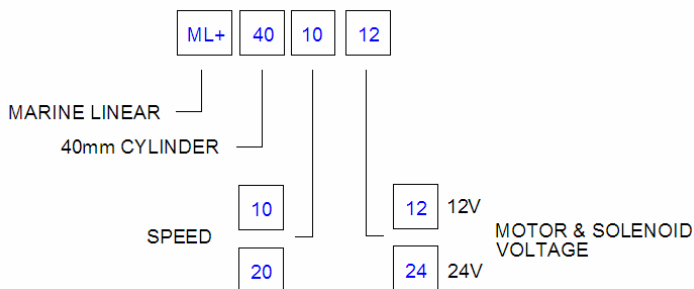
- Ease of installation.
- Low profile
- Low power consumption.
- IP67 motors
- 2 speed options.
- Integral relief valves.
- Rudder/feedback option.
- Low maintenance.
- User serviceable.
- Quick release mounting.
- 12 or 24v DC option.
- Service kits available.
- Low back-drive
- Marine environment protective finish.
- Interchangeable with ML40

Performance Graphs

Typical characteristics
Dynobear 10 oil at 25°C

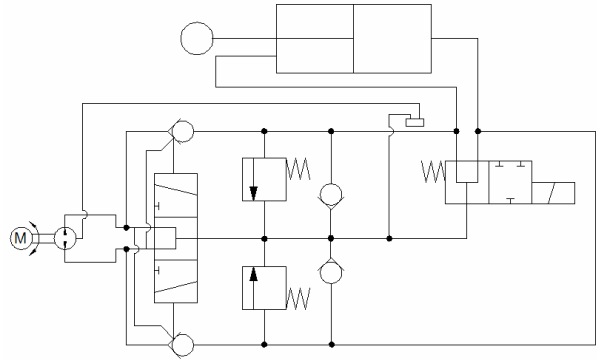


Order Codes



OTHER SPEED OPTIONS ARE AVAILABLE
PLEASE CONTACT US FOR DETAILS

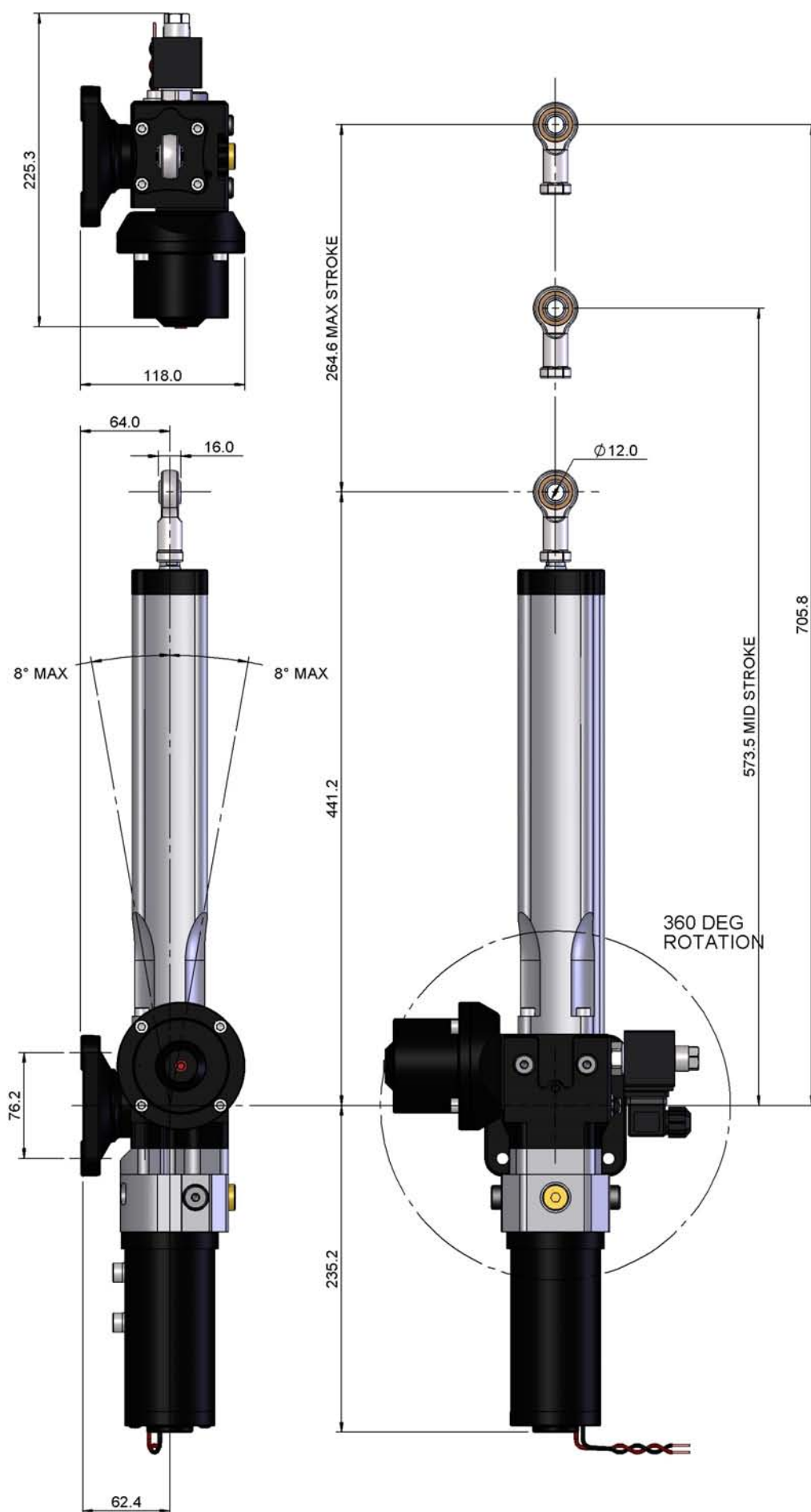
Circuit Diagram



Technical Data

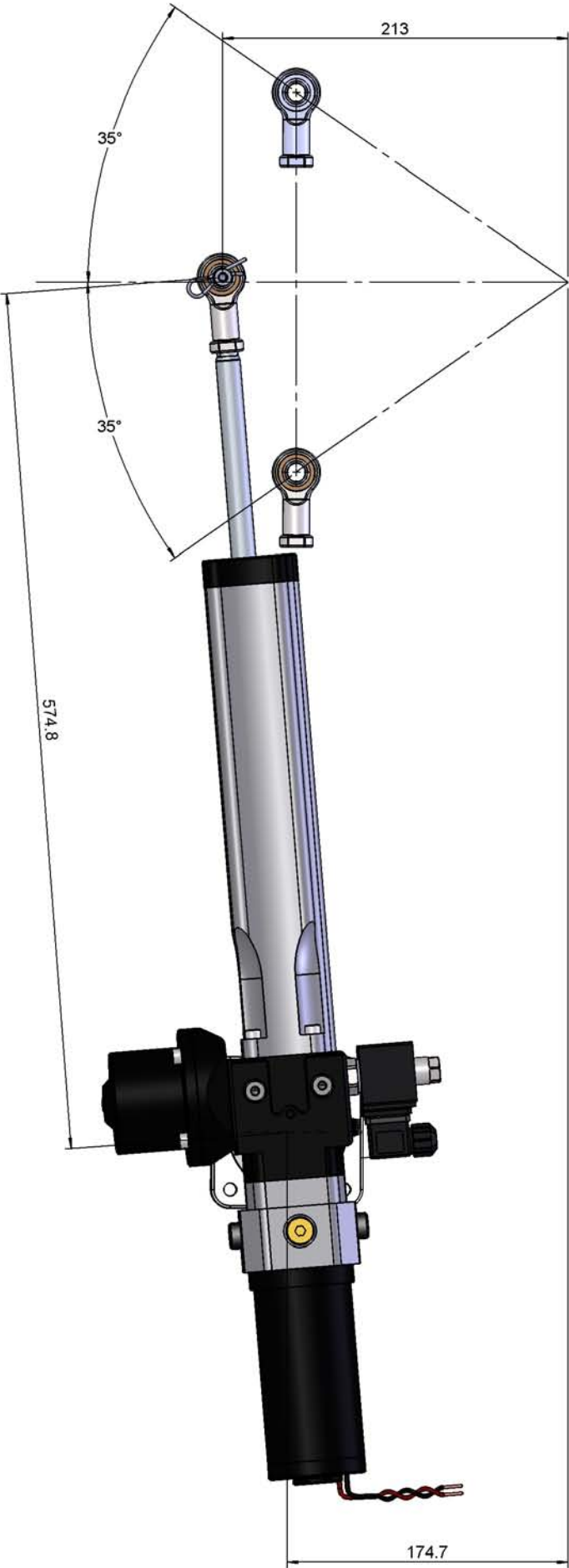
Voltage	12 / 24 VDC			
Current	Typical Amp-hour 580N at 25% duty		Typical Current Intermittent 6350N	
	12v	24v	12v	24v
ML+4010	2.0	1.0	19.0	9.0
ML+4020	2.5	1.3	25.0	12.0
Ingress protection	IP67			
EMC Protection	S EN 60945:2002 (DC)			
Ignition Protection	BS EN 28846:1993			
Ambient operating Temperature	-15 to + 55 deg C			
Max Operating Thrust	6900N (Intermittent)			
Relief Valve setting	62 bar (7800N)			
Orientation	Red lead to positive - Extends Black lead to positive - Retracts			
Clutch coil	12 watt			
Clutch connection	DIN 43650 (6-8 mm cable)			
Fluid	ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV			
Weight	8 kg			

Installation Details



Quadrant

Typical installation
for an 8.4" (213mm)



HS+40 HYDRAULIC STEERING SYSTEM

The HS+40 hydraulic steering systems are designed specifically for marine secondary steering applications. They combine a hydraulic cylinder with clutch, reversing pump and reservoir in a compact installation. The solenoid clutch disengages the hydraulic circuit allowing manual mechanical steering to be used in conjunction with the hydraulic system.



Description

A pre-filled hydraulic system comprising a cylinder with clutch, pump and reservoir. The cylinder is free to float until the solenoid clutch is engaged, the reversing pump is then used to extend and retract it. Integral relief valves protect the installation from damage.

Application

Designed specifically for the marine autopilot market where they can be used on sailboats and power-craft with displacement and fast planing hulls. The pumps and cylinders can be matched to give the hard-over times and thrusts to suit the application. Further combinations using our 5 reversing pump sizes are also possible. Please refer to our data sheet PR-d for details of the reversing pump range.

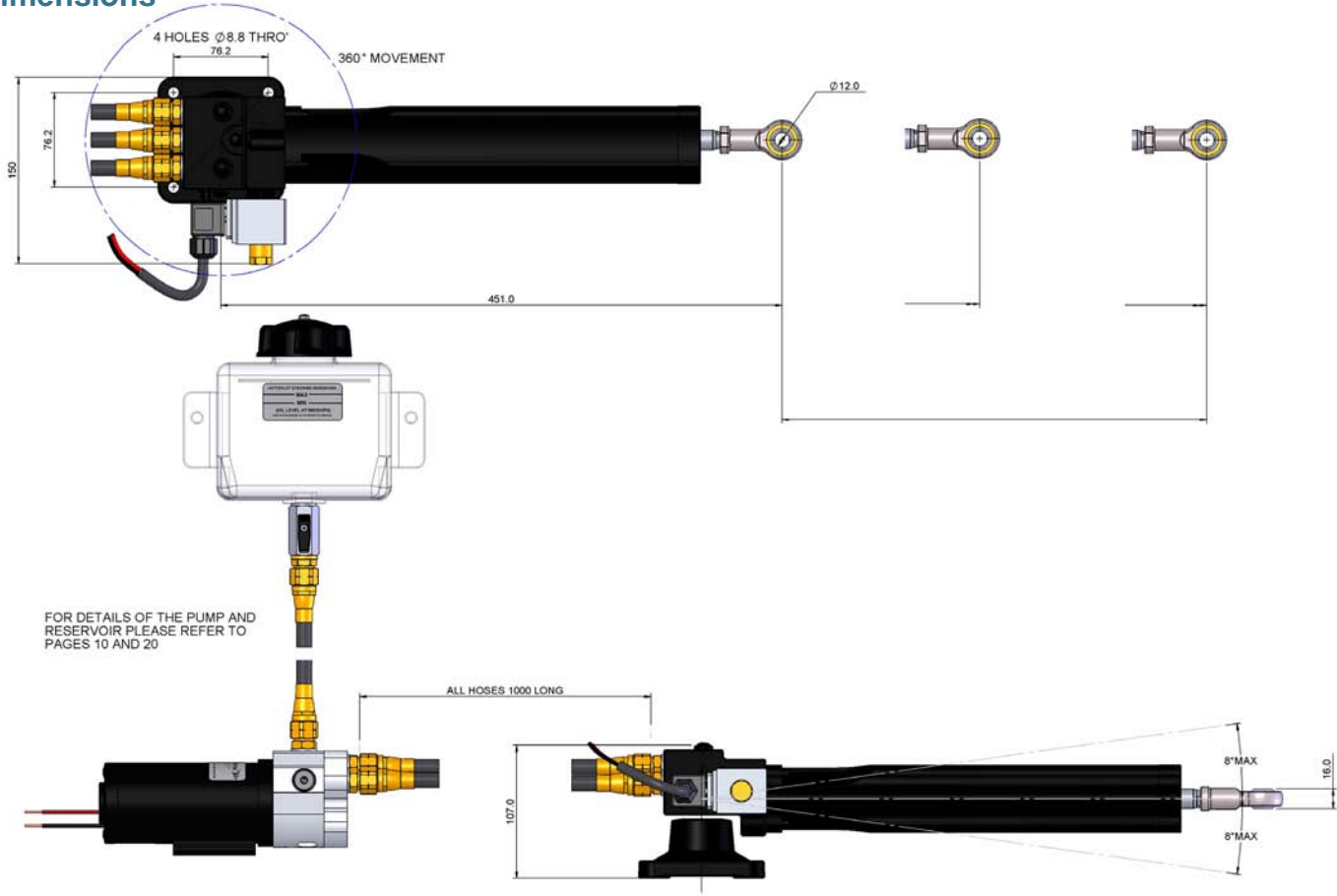
Features

- Shorter than conventional cylinders.
- Integral solenoid bypass valve and relief valves.
- Fully serviceable.
- Quiet operation.
- A number of pump sizes with 12 or 24v options.
- Marine environment protected (under-deck).
- Low power consumption.
- Fitting kit included.
- Rudder reference/feedback option.
- Low back-drive.
- Quick release mounting.
- Low profile.

Technical Data

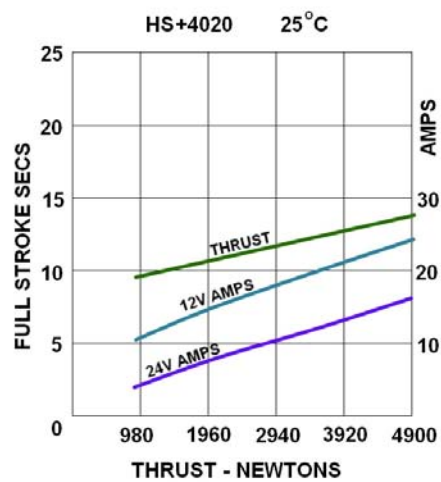
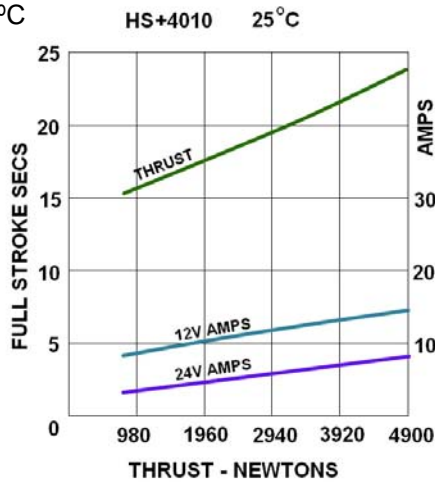
Voltage	12 / 24 VDC			
Current	Typical Amp-hour 580N at 25% duty		Typical Current Intermittent 6350N	
	12v	24v	12v	24v
HS+4010	2.0	1.0	19.0	9.0
HS+4020	2.5	1.3	25.0	12.0
Ingress protection	IP67			
EMC Protection	S EN 60945:2002 (DC)			
Ignition Protection	BS EN 28846:1993			
Ambient operating Temperature	-15 to + 55 deg C			
Max Operating Thrust	6900N (Intermittent)			
Relief Valve setting	62 bar (7800N)			
Orientation	Red lead to positive - Extends Black lead to positive - Retracts			
Clutch coil	12 watt			
Clutch connection	DIN 43650 (6-8 mm cable)			
Fluid	ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV			
Weight	11kg			

Installation Dimensions

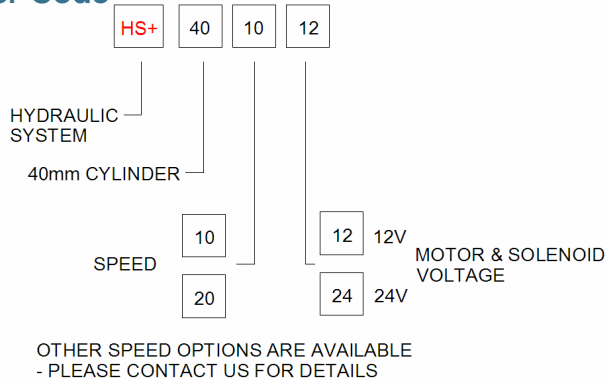


Performance Graphs

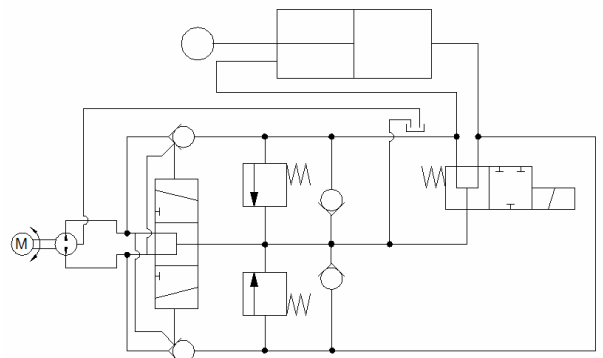
Typical characteristics
Dynobear 10 oil at 25°C



Order Code



Circuit Diagram



HS50 HYDRAULIC STEERING SYSTEM

The HS hydraulic steering systems are designed specifically for marine secondary steering applications. They are available with either a 2.5lpm reversing pump or two sizes of constant running pumps. The systems are protected by integral relief valves. A solenoid clutch is also fitted so that manual mechanical steering can be used.



Description

The hydraulic steering systems comprise of a compact cylinder which includes the relief valves and solenoid clutch, a reversing or constant running pump, marine hoses, fittings and a reservoir. The system comes filled ready for installation. A choice of pump sizes can be selected with single or twin cylinders to give a range of hard-over times and thrusts.

Application

Designed specifically for the marine autopilot market where they can be used on sailboats and power-craft with displacement and fast planing hulls. The pumps and cylinders can be matched to give the hard-over times and thrusts to suit the application.

Features

- Pre-filled ready to fit.
- Installation kit included.
- Shorter than conventional cylinders.
- Quiet operation.
- Low maintenance.
- Low power consumption.
- Replaceable brushes.
- Integral solenoid bypass valve.
- Integral relief valves.
- Marine environment protected (under deck)
- Fully serviceable.
- 12 or 24V options.
- Reversing or constant running pump options.
- Adjustable or non adjustable rod-ends
- Twin opposed cylinder option.

Technical Data

Voltage 12 / 24 VDC

Current	Typical Amp-hour		Typical Current	
	910N at 25% duty	Intermittent 9970N	12v	24v
HS50 S	2.7	1.4	34.0	15.5
HS50 SA	2.7	1.4	34.0	15.5

Ingress protection	IP67
EMC Protection	S EN 60945:2002 (DC)
Ignition Protection	BS EN 28846:1993

Ambient operating Temperature	-15 to + 55 deg C
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Max Operating Thrust	10840N (Intermittent)
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Relief Valve setting	62 bar (7800N)
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Orientation	Red lead to positive - Extends Black lead to positive - Retracts
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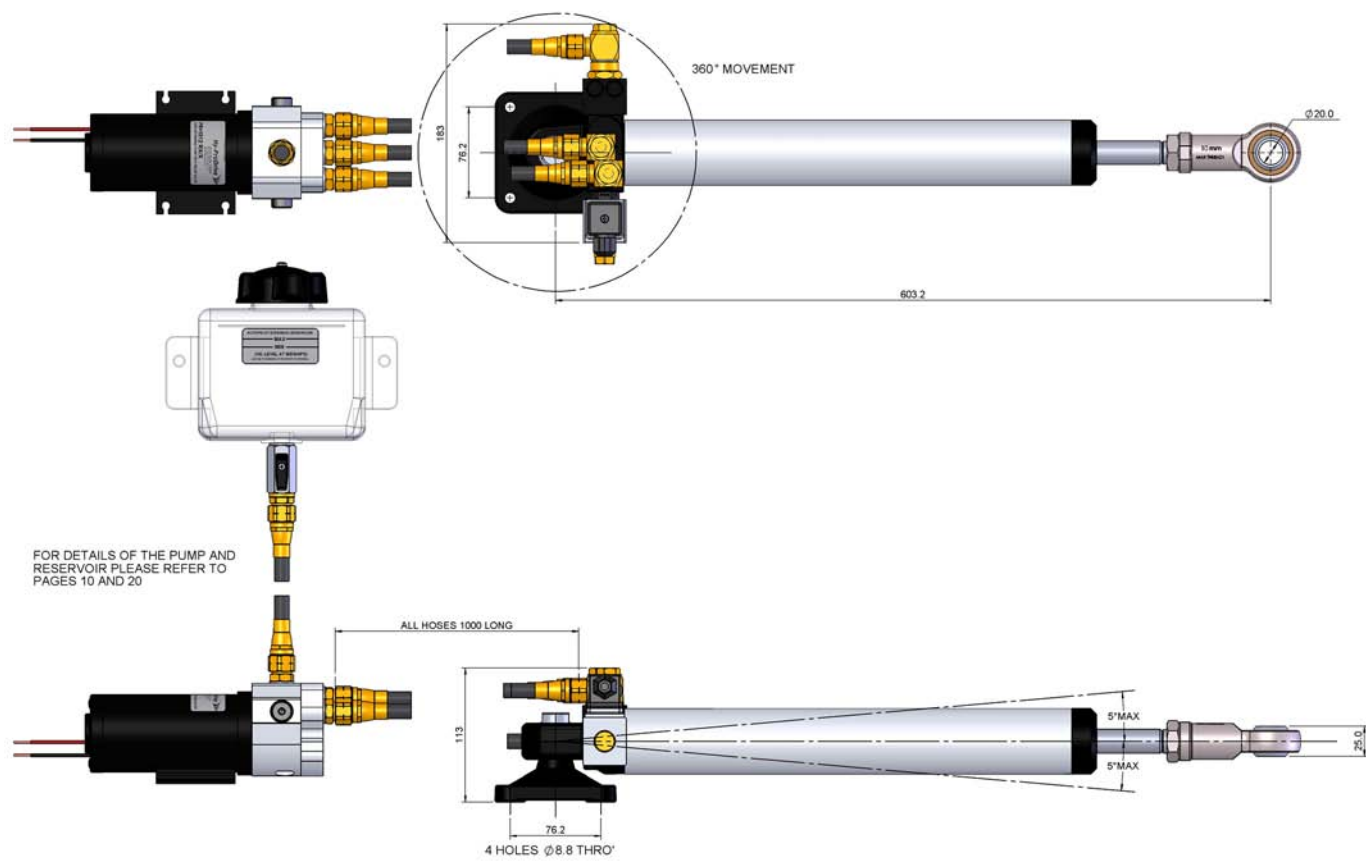
Clutch coil	12 watt
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Clutch connection	DIN 43650 (6-8 mm cable)
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Fluid	ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV
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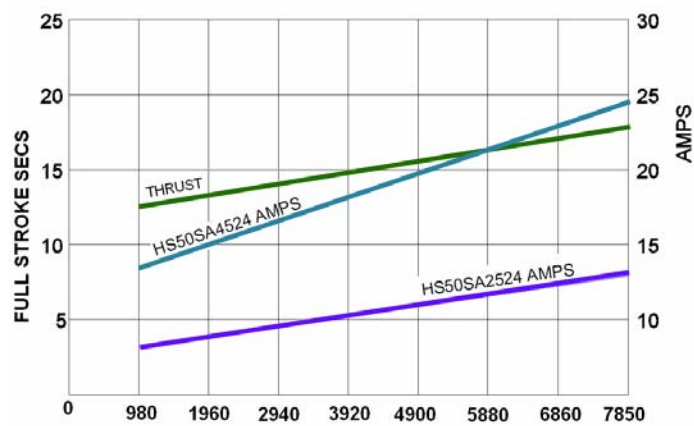
Weight	14 kg
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Installation Details



Performance Graphs

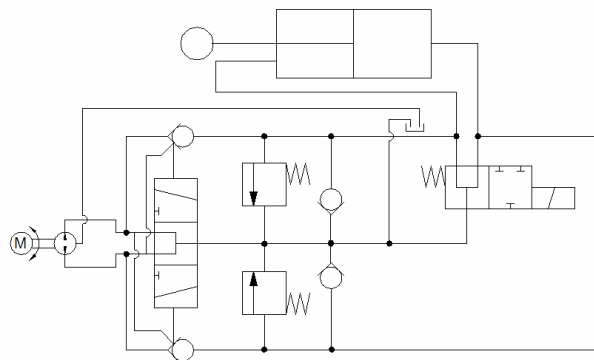
Typical characteristics
Dynobear 10 oil at 25°C



Order Code

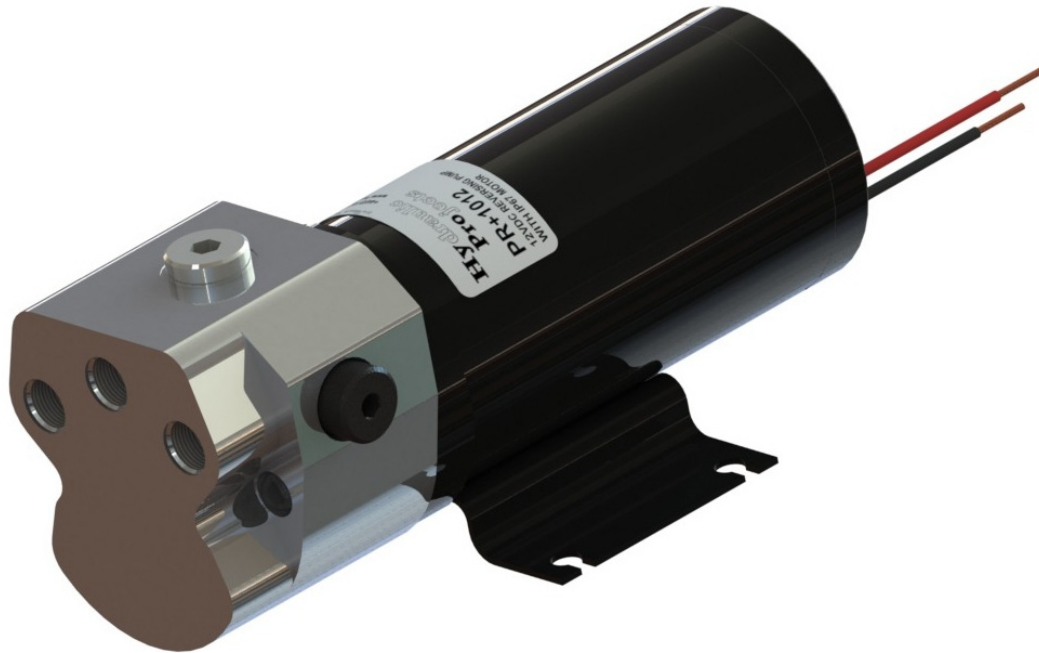
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ADJUSTABLE ROD-END	<input type="text" value="A"/>			
FIXED ROD-END	<input type="text" value=""/>			
PUMP TYPE				
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2.5LPM CONSTANT RUNNING	<input type="text" value="25C"/>			
4.5LPM CONSTANT RUNNING WITH TWIN CYLINDERS	<input type="text" value="45C2"/>			
MOTOR AND SOLENOID VOLTAGE			<input type="text" value="12"/>	<input type="text" value="24"/>

Circuit Diagram



PR+ REVERSING DC HYDRAULIC POWER UNIT

Backed with over 30 years of continuous development the new PR+ range of reversing pumps presents the ultimate in quiet and smooth operation. Unlike noisy piston pump designs the precision gear form delivers smooth flow in all conditions and with minimal noise. Now with IP67 motors that have a 4000 hour brush life these latest generation of Hydraulic Projects power units are the best available.



Description

A DC motor driven precision gear pump available with a range of flows from 0.6 to 2.5 L/min. Each pump is fitted with zero-leakage pilot check valves for positive locking of attached cylinders. The two service ports and reservoir port are mounted on the front of the pump. The threads are G1/4 (BSP) parallel. There is an optional second reservoir port on the top face accessed via a removable plug. Relief valves to limit the maximum pressure generated are available as an option.

The motors are maintenance free with internal brushes giving typically a 4000+ hour life. The front and rear bearings are sealed ball races for smooth and quiet operation. They have an Ingress Protection rating of IP67.

The pumps are sealed on the driven gear journal allowing the motors to be removed without air entering the hydraulic circuit. This feature also facilitates the fitting of users own motors with a suitable adaptor.

Application

Designed specifically for the marine autopilot market they are used by the worlds leading autopilot manufacturers. They can be used with balanced or unbalanced cylinders.

A selection guide for matching the drives to hydraulic steering cylinders is available on our website.

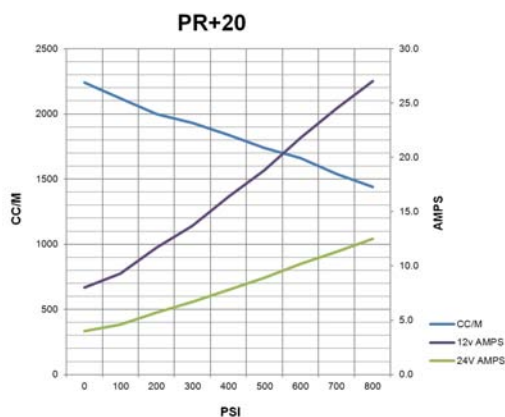
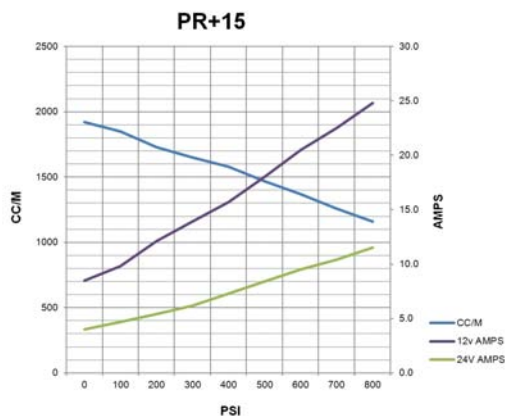
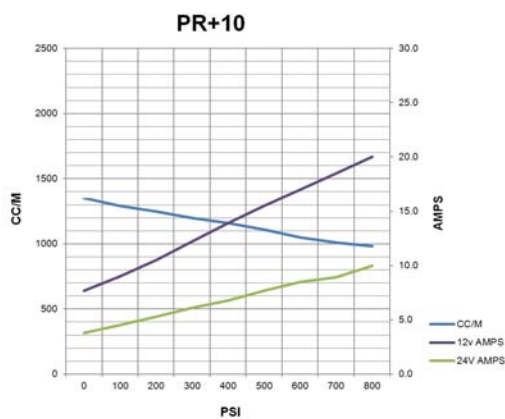
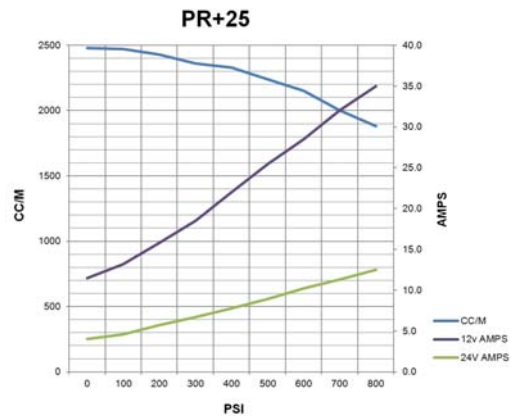
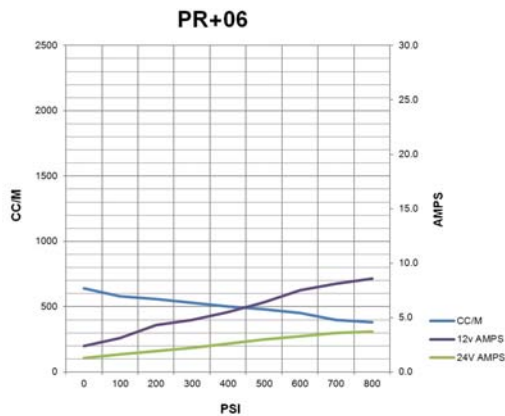
Due to their low noise and excellent performance they have found uses in many other and varied applications from window openers to sports car suspension lifters.

Features

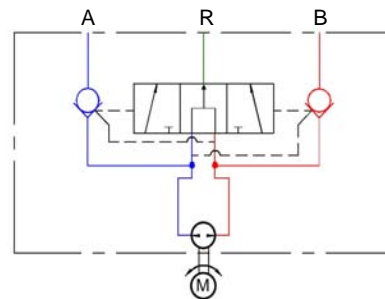
- Quiet and smooth operation
- Low power consumption.
- Zero back drive check valves.
- 5 output options
- 12 and 24v D.C options.
- Relief Valve option.
- Port options.
- Compact size.
- Easy installation.
- G1/4 (BSP) ports (with NPTF adapter kits available).
- Service kits available.
- Cylinders and hose kits supplied to suit.

Performance Graphs

Typical characteristics
Q8 Auto 15 oil @ 25°C



Circuit Diagram



Technical data

Voltage	12 / 24 VDC			
Current	Typical amp-hour		Typical current	
	5 bar at 25% duty		Intermittent 55 bar max	
	12v	24v	12v	24v
PR+06	0.9	-	9.0	-
PR+10	2.2	1.0	19.0	9.0
PR+15	2.4	1.2	24.0	11.0
PR+20	2.5	1.3	25.0	12.0
PR+25	2.7	1.4	34.0	15.5

Ingress Protection	IP67
EMC Protection	BS EN 60945:2002 (DC)
Ignition protection	BS EN 28846:1993

Ambient operating Temperature	-15 to +55 deg C
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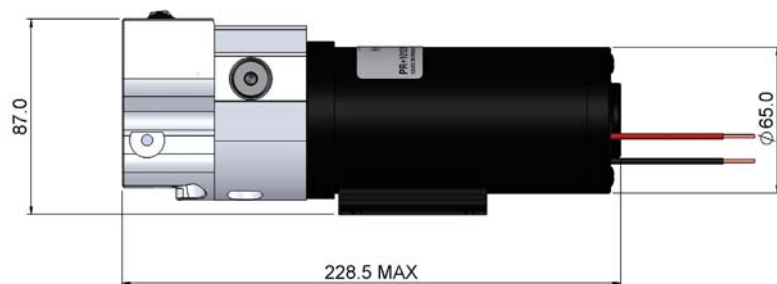
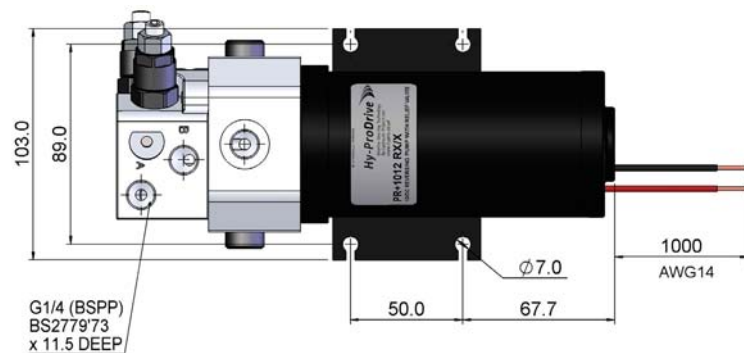
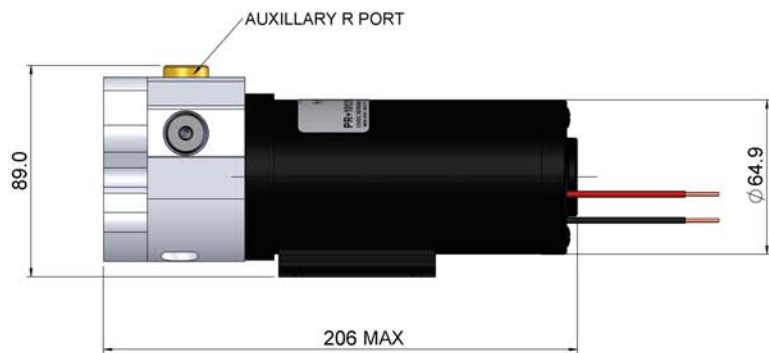
Max Pressure	55 bar (intermittent operation)
Reservoir line	2 bar Max

Ports	G1/4 (BSPP) Parallel
	A = ram port
	B = ram port
	R = reservoir port

Rotation	Red lead to - positive Pressure to A port
	Black lead to positive - Pressure to B port

Hoses	Suitable for working pressure 55 bar.
	Minimum burst pressure 100 bar.

Fluid	ISO VG10 to VG40 Hydraulic mineral fluid meeting ISO 6743-4 HV
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The diagram illustrates the control panel for the 1000 Series Pump. It features several interconnected components and settings:

- REVERSING PUMP:** A label connected to the **P R+** button.
- OUTPUT CC/M:** A vertical column of buttons labeled 06, 10, 15, 20, and 25, corresponding to flow rates of 600, 1000, 1500, 2000, and 2500 respectively.
- RELIEF VALVES:** A section containing:
 - A button labeled **NO RELIEF VALVE**.
 - A button labeled **RX/X**.
 - Text indicating **RELIEF-VALVE SETTING 15-60 BAR** and **A PORT / B PORT STATE REQ'D SETTING**.
- MOTOR VOLTAGE:** A section with buttons for **12VDC** and **24VDC**.
- Top Row Buttons:** A row of four buttons at the top, labeled **P R+**, **10**, **24**, and an unlabeled button.

Connections are shown as lines between these components, indicating their functional relationships within the pump's control system.

Drive Selection

It is important to select the correct size pump as it directly influences the ability of the Autopilot to steer the vessel.

An Autopilot Drive will need to give a nominal **“Hard over time” of 10 to 12 seconds** (Or as specified by the Autopilot manufacturer).

The type of vessel to be steered must be considered. The “Hard over time” may be faster on lightweight Planing Craft/ Modern yachts and slower on displacement power boats/ long keel yachts.

Note if the pump is too large, the vessel may over steer and will use more power;
Too small and the Autopilot may struggle to maintain a course.

To use the table below you will need to know the volume of your steering cylinder, Select the Hard over time you require. Follow the column down until you approximately match your cylinder volume. Then select the pump on that row.

Note if your cylinder has a smaller volume, it will have a faster “Hard Over Time”

But if it is larger, it will have a slower “Hard Over Time”

“Hard Over Time” Is the time that the pump takes to drive the rudder from port to starboard stops. “Dock side” (no flow over the rudder).

Cylinder Volume (CC)	HARD OVER TIME (SECONDS)						
	6 to 8	8 to 10	10 to 12	12 to 14	14 to 16	16 to 18	18 to 20
75	PR+06						
100	PR+10	PR+06	PR+06				
125	PR+10			PR+06			
150	PR+15	PR+10			PR+06		
175	PR+15		PR+10		PR+06		
200	PR+20	PR+15		PR+10			PR+06
225	PR+20	PR+15		PR+10			
250	PR+20		PR+15		PR+10		
275	PR+25	PR+20	PR+15			PR+10	
300	PR+25	PR+20		PR+15		PR+10	
325	PR+25	PR+20		PR+15			PR+10
350		PR+25	PR+20		PR+15		
375		PR+25	PR+20		PR+15		
450			PR+25	PR+20			PR+15
475			PR+25		PR+20		PR+15
500				PR+25	PR+20		
525				PR+25	PR+20		
550				PR+25		PR+20	
575				PR+25		PR+20	
600					PR+25	PR+20	
625					PR+25		PR+20
650					PR+25		PR+20
675						PR+25	
700						PR+25	
725						PR+25	
750							PR+25

CONSTANT RUNNING DC HYDRAULIC POWER UNIT 2.5LPM

Manufactured specifically for marine autopilot steering applications the versatile PC25 constant running pumps use a powerful fan-cooled 4 brush motor to deliver up to 2.5 litres per minute. Designed to be used for heavy duty applications on larger yachts or commercial craft these units come fitted with pressure compensated flow controls, relief valves and cylinder lock valves as standard.

Description

Once the hard-over time has been set via the speed control, steering is achieved by switching a double acting solenoid valve. The motor and precision gear pump are protected by a pre-set relief valve and toughened check valve components positively lock the steering on course. The unit comes fitted with an 0.75 litre aluminium oil tank.

Application

Designed specifically for the marine autopilot market, these 12V and 24V D.C. pumps are used on the larger sailing craft or commercial vessels. They can be used with single or twin double acting rams. They can also be used with balanced or unbalanced cylinders and pressurized systems.

Features

12V 405 watt and 24V 550 watt fan cooled motors.

Adjustable pressure compensated flow control.

Integral Relief valve

Low power consumption for size.

Quiet operation.

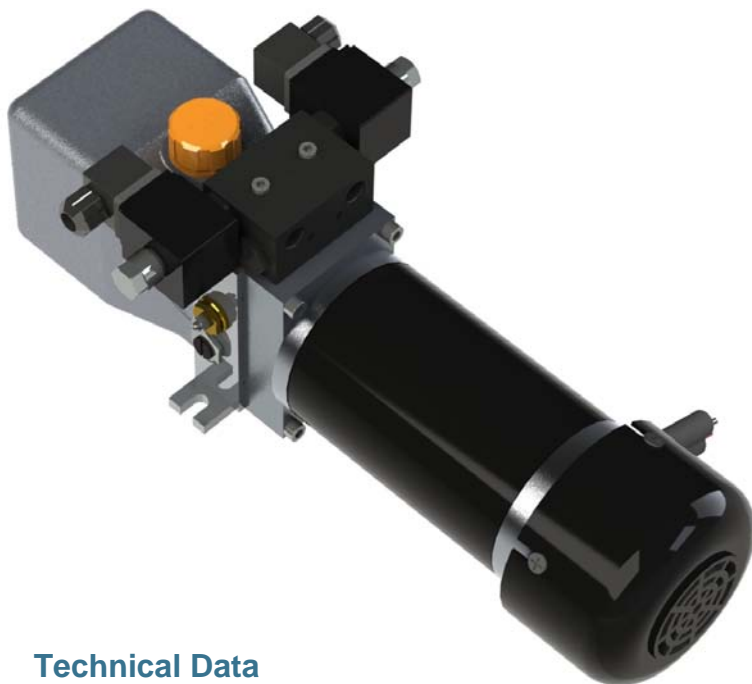
Compact.

Replaceable brushes.

Service kits.

Easy installation.

Cylinder and hose kits supplied to suit.



Technical Data

Voltage 12 / 24 Vdc

Pump output (variable) 0 to 2.5 lpm

Ambient operating temperature -15 to +55 deg C

Motor voltage nominal	12Vdc	24Vdc
Motor output watts	405w	550w
Max continuous current	34 amps	23 amps

Ingress protection IP44
(Suitable only for 'under-deck', dry environment mounting.)

Relief valve setting 58 bar

Orientation Solenoid A energized Pump to A port
Solenoid B energized Pump to B port

Coils 21 watt

Coil connection DIN 43650 (6-8mm cable)

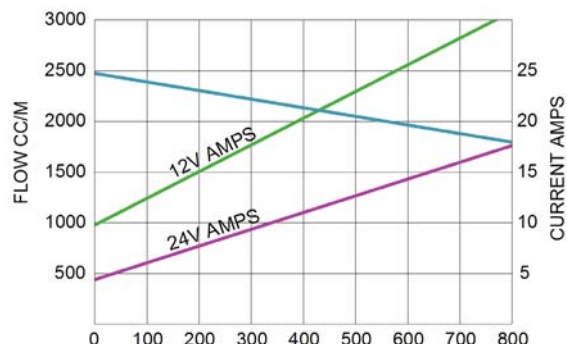
Fluid ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV

Capacity 0.75 litres

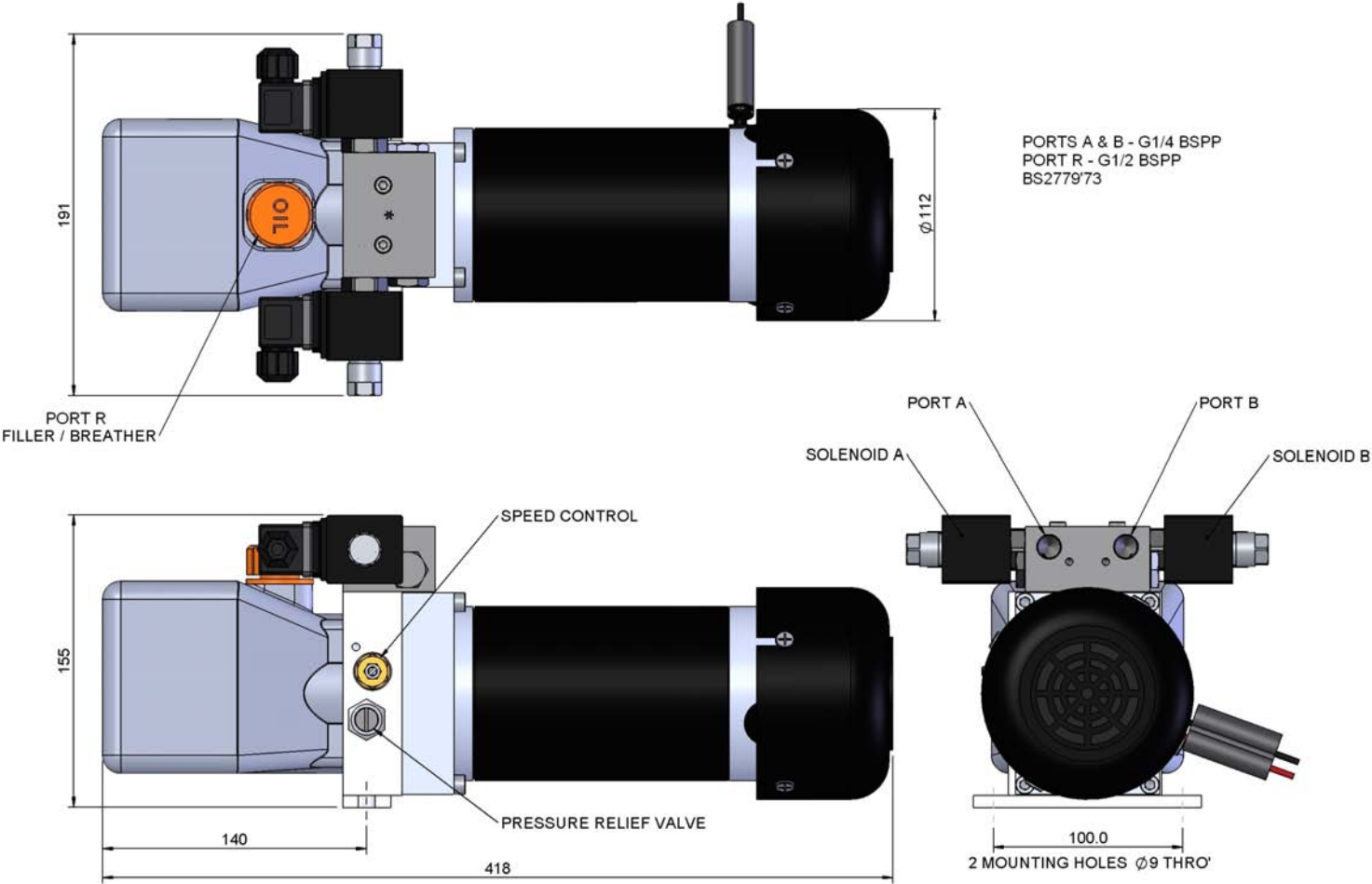
Weight 8.2 Kg

Performance Graphs

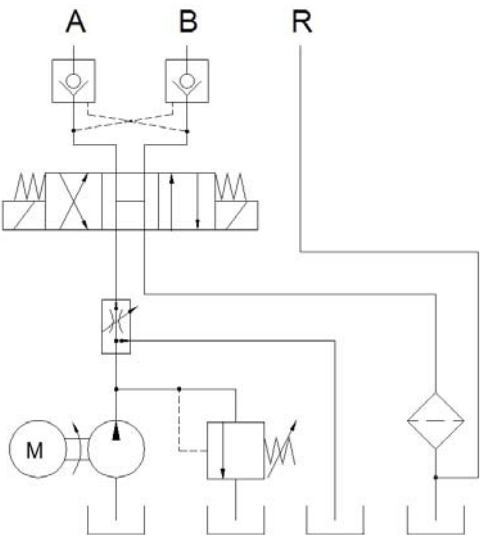
Typical characteristics
Q8 Auto 15 oil @ 25°C



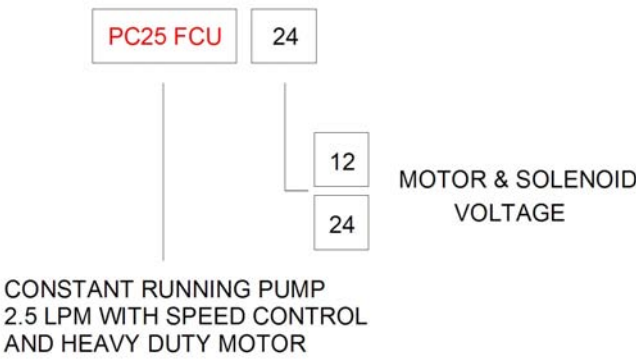
Installation Details



Circuit Diagram



Order Codes



CONSTANT RUNNING DC HYDRAULIC POWER UNIT 4.5LPM

Manufactured specifically for marine autopilot steering applications the versatile PC45 constant running power unit uses a heavy-duty 4 brush, fan cooled, 550 watt motor to deliver 4.5 lpm. Designed to be used for heavy duty applications on larger yachts or commercial craft these units come fitted with pressure compensated flow controls, relief valves and cylinder lock valves as standard.

Description

Once the hard-over time has been set via the speed control, the steering action is achieved by switching a damped heavy duty double acting solenoid valve. The motor and precision gear pump are protected by a pre-set relief valve, and check valves with toughened components positively lock the steering on course. A stainless steel clamp retains the stove enameled steel oil tank, and inside is a large capacity replaceable 15 micron return line filter to maintain system cleanliness. A heavy duty motor starting relay is also supplied, as are the rubber noise absorbing mounts.

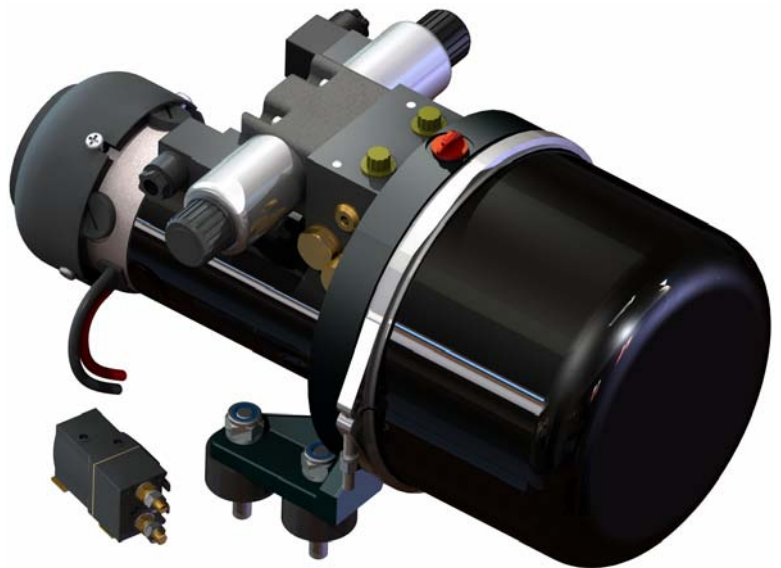
Application

Designed and developed specifically for marine autopilot applications in the commercial and larger pleasure boat market the PC45 can be used with single or twin ram systems. The design of the unit also makes it compatible with unbalanced rams and pressurized reservoir type systems.

Features

- Heavy duty fan cooled motor
- 12v & 24v D.C. options.
- Low power consumption.
- 4.5 litre per minute variable flow
- Integral relief valve
- Quiet operation.
- Compact construction.
- Replaceable brushes.
- Service kits.
- Easy installation.
- Cylinder and hose kits supplied to suit.
- Adjustable pressure compensated flow control.

Industrial Spec. Relay included.

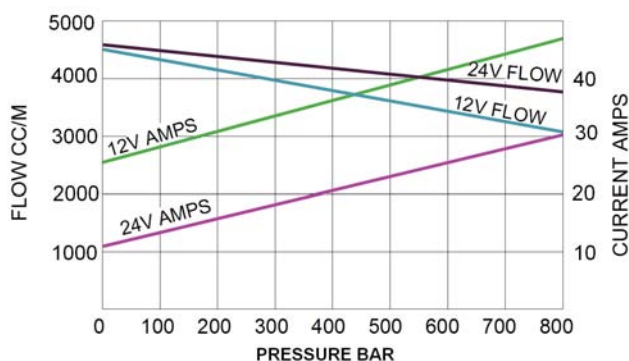


Technical Data

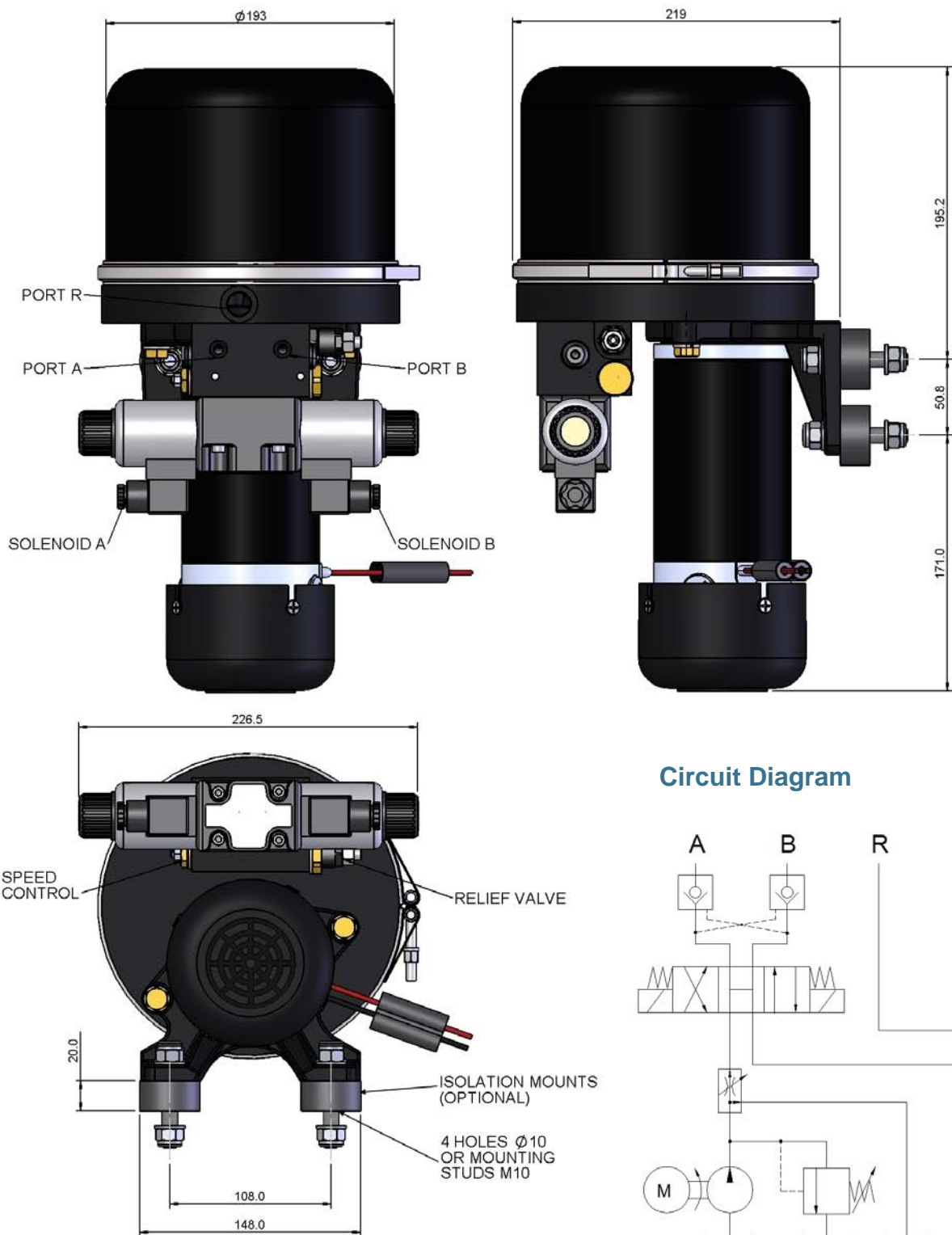
Voltage	12 / 24 Vdc	
Pump output (variable)	0 to 4.5 lpm	
Ambient operating temperature	-15 to +55 deg C	
Motor voltage nominal	12Vdc	24Vdc
Motor output watts	405w	550w
Max continuous current	34 amps	23 amps
Ingress protection	IP44 (Suitable only for 'under-deck', dry environment mounting.)	
Relief valve setting	58 bar	
Orientation	Solenoid A energized Pump to A port Solenoid B energized Pump to B port	
Coils	31 watt	
Coil connection	DIN 43650 (6-8mm cable)	
Relay	12 watt	
Fluid	ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV	
Capacity	4 litres	
Tank pressure	3.5 bar max	
Weight	12 Kg	

Performance Graphs

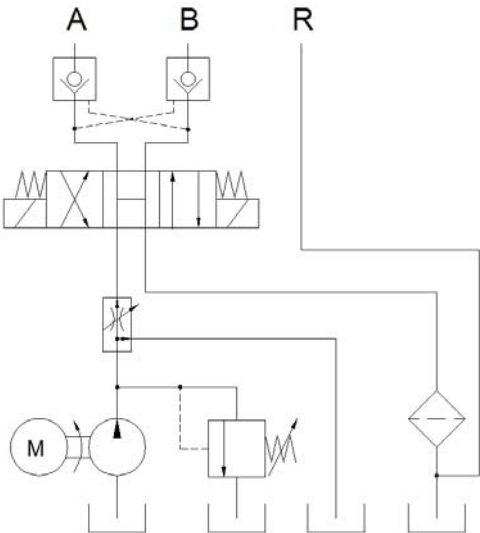
Typical characteristics
Q8 Auto 15 oil @ 25°C



Installation Details



Circuit Diagram



Order Codes

PC45 FCU 24

12
24

MOTOR & SOLENOID
VOLTAGE

CONSTANT RUNNING PUMP
4.5 LPM WITH SPEED CONTROL
AND HEAVY DUTY MOTOR

MARINE AUTOPILOT CYLINDER UNLOADER VALVE

The Autopilot Cylinder Unloader valve is a line mounted valve that is used to bypass the hydraulic steering cylinder to enable the boat to be steered manually. This 12 watt solenoid operated valve is available in 12 and 24 Vdc and can be used in systems up to 72 bar. Can be used with balanced and unbalanced cylinders.

Description

The solenoid operated unloader valve is a compact line mounted G1/4 ported manifold. The low power consumption 12 watt coils are available in 12 and 24Vdc variants.

With an anodized body and an IP55 rating this valve has been designed for the harsh marine environment.

Application

Designed to be used in autopilot steering applications, this valve is used to bypass the hydraulic steering cylinder so that manual steering can be used. It can be used with balanced cylinders or by connecting the additional port to a reservoir for unbalanced cylinders.

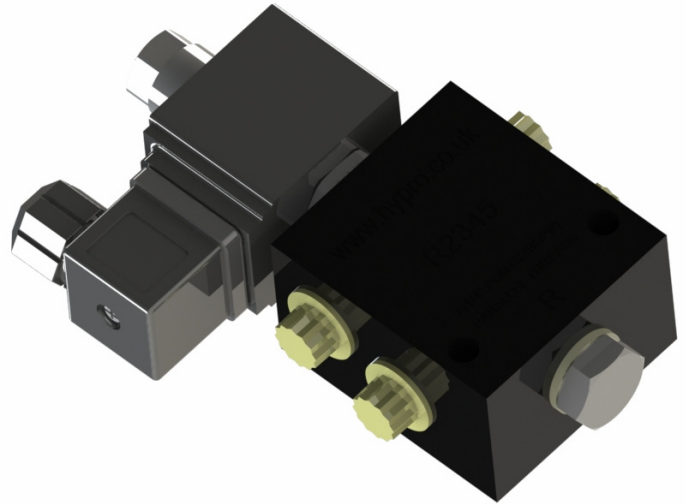
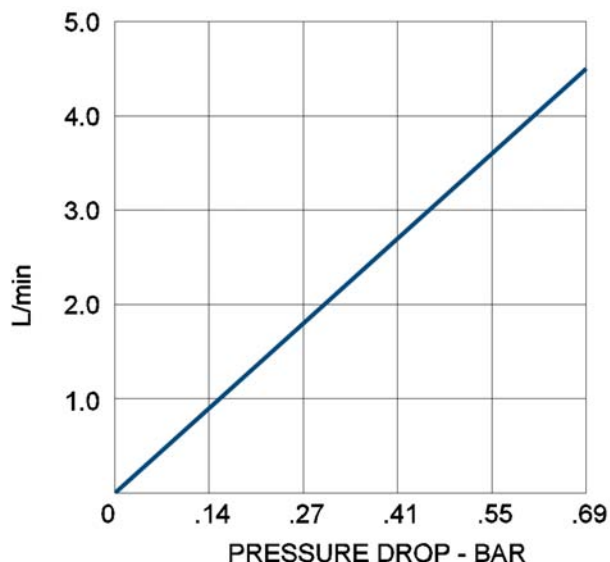
The design has been optimized to enable the coil to be energized for very long periods of time.

Features

- Marine environment protected
- Compact size.
- 12 or 24Vdc variants.
- Low power consumption.
- Used for balanced/unbalanced cylinders.
- Line mounted.
- Long energizing capacity.

Performance Graphs

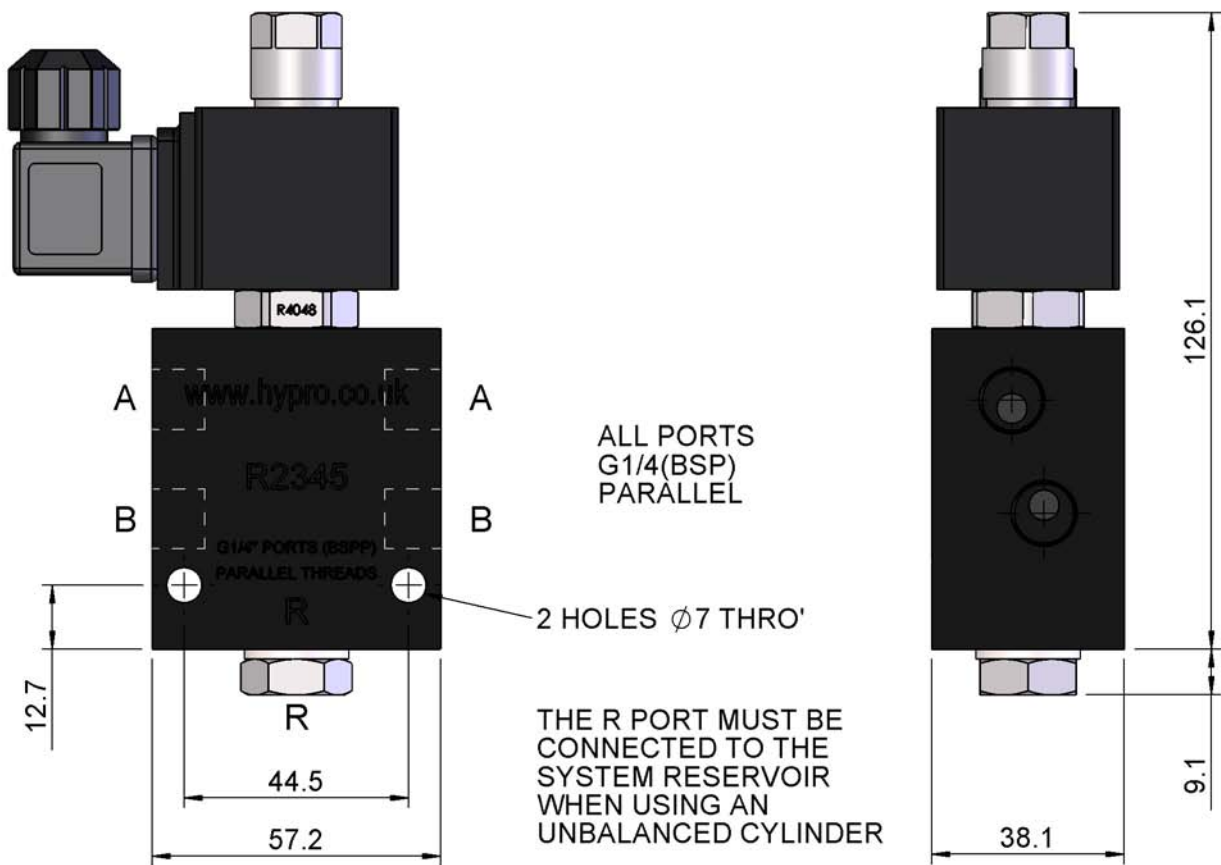
Typical characteristics
Q8 Auto 15 oil @ 25°C



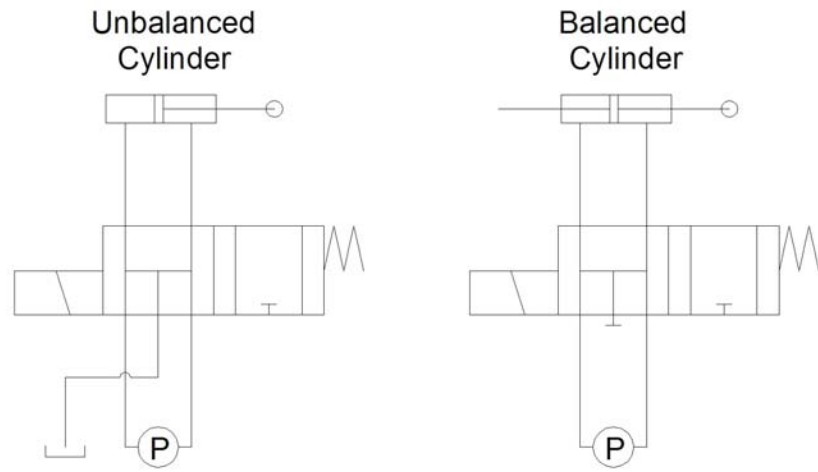
Technical Data

Voltage	12 / 24 Vdc
Rated Flow	4.5 l/min
Maximum pressure	72 bar
Ambient operating Temperature	-15 to + 55 deg C
Power	12 Watt
Protection	IP65
Cable Ø (not supplied)	6 - 8mm
Fluid	ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV
Weight	0.66 Kg

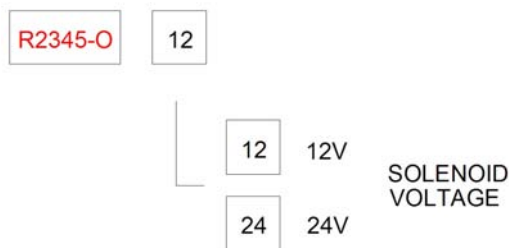
Installation Details



Circuit Diagram



Order Code



MARINE AUTOPILOT PILOT OPERATED CHECK VALVE

The marine autopilot pilot operated check valve is a line mounted valve that is used to lock steering cylinders. The G1/4 valve can also be used when a helm pump is without check valves to prevent the autopilot pump back driving the helm wheel.

Description

This G1/4 (BSP) in-line check valve is designed to close the service ports until a pilot pressure is applied to move the check valve piston and so open the port. The body is made from anodized aluminium for protection against the harsh marine environment whilst the internal components are made from hardened and toughened steels for extended life.

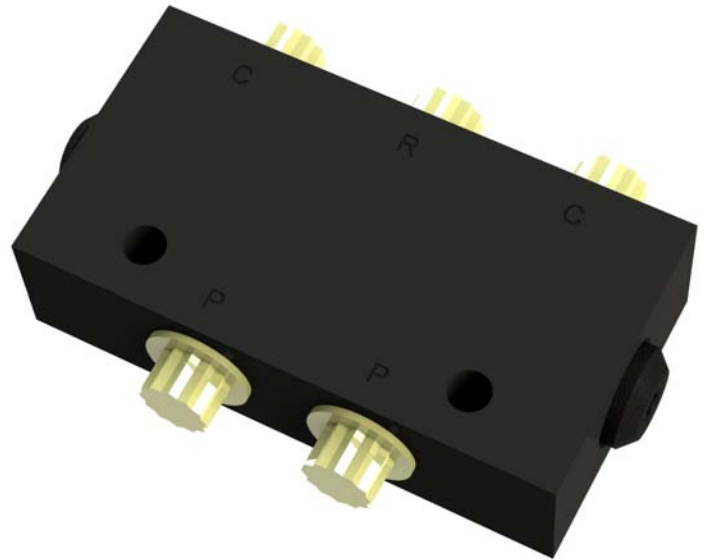
Application

Designed to be used to positively lock steering cylinders or to prevent the back drive of the helm steering wheel by the autopilot pump should the helm pump not have its own check valves.

It is designed for use with both balanced and unbalanced cylinders. Where an unbalanced cylinder is used the additional 'R' port is connected to an external reservoir.

Features

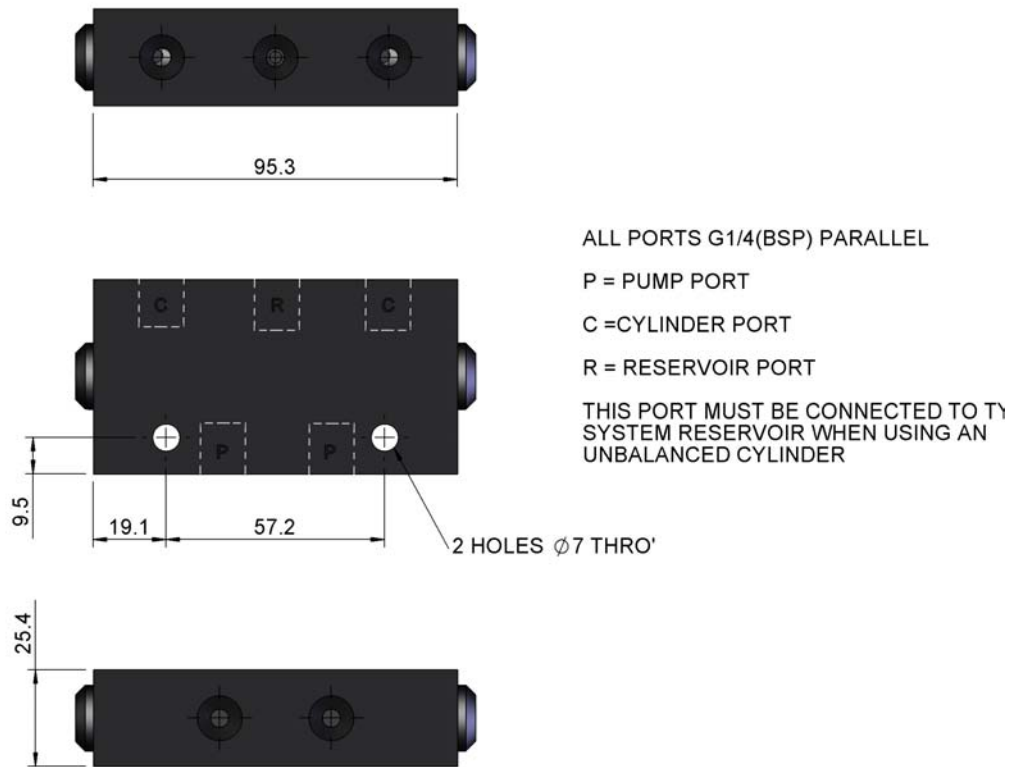
- Positive locking of the ports.
- Hardened check piston.
- Toughened check seats.
- High grade chromium balls.
- Suitable for balanced and unbalanced cylinders.
- Mounting holes.
- Port identification.



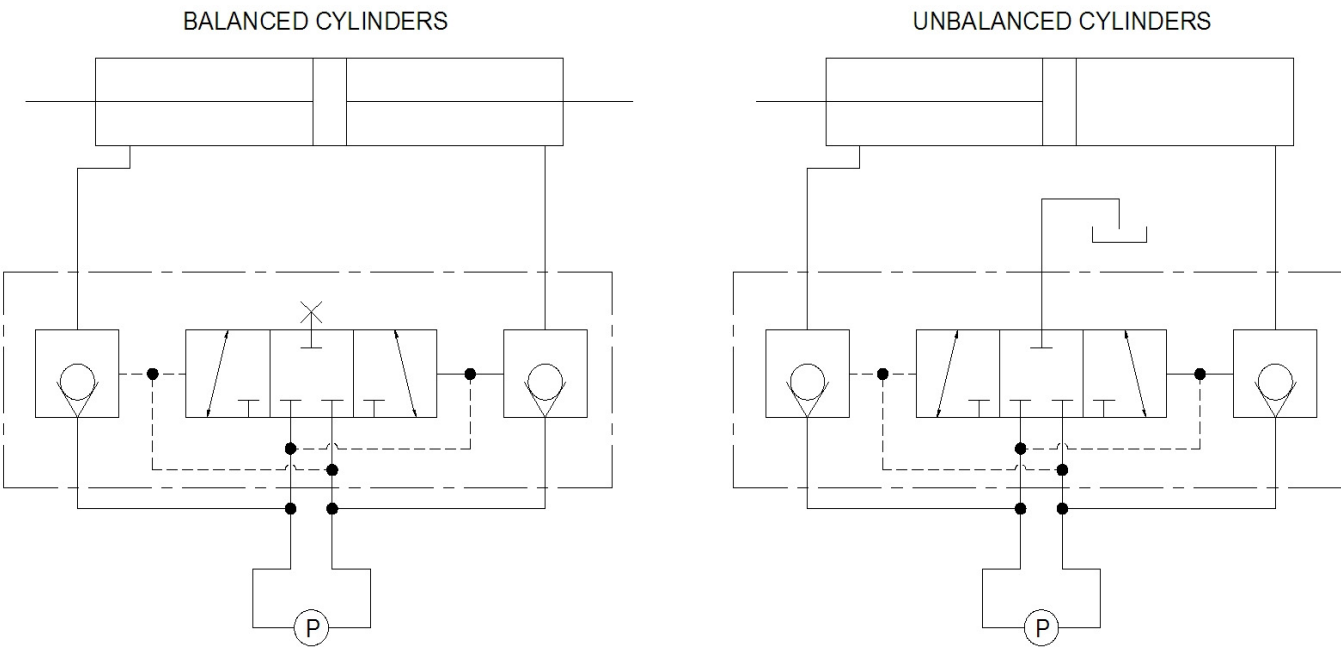
Technical Data

Rated flow	4.5 l/min
Maximum pressure	72 bar
Pilot ratio	2.25:1
Port size	G1/4
Ambient operating Temperature	-15 to + 55 deg C
Fluid	ISO VG10 to VG40 hydraulic mineral fluid to ISO 6743-4 HV
Weight	0.31 Kgs

Installation Details



Circuit Diagram



Order Code

R2254

R4306 HYDRAULIC STEERING FLUID RESERVOIR

Specifically developed for hydraulic steering systems this robust reservoir comes complete with marine grade isolator tap, tethered filler / breather cap and a pick up that allows extreme heel angles without spillage or air ingress into the system. Manufactured from high-density translucent polyethylene for 'at a glance' checking of fluid level.

Technical Data

Capacity

Maximum 0.94 Litre
Recommended 0.70 Litre
(ref. 70° heel angle)

Performance

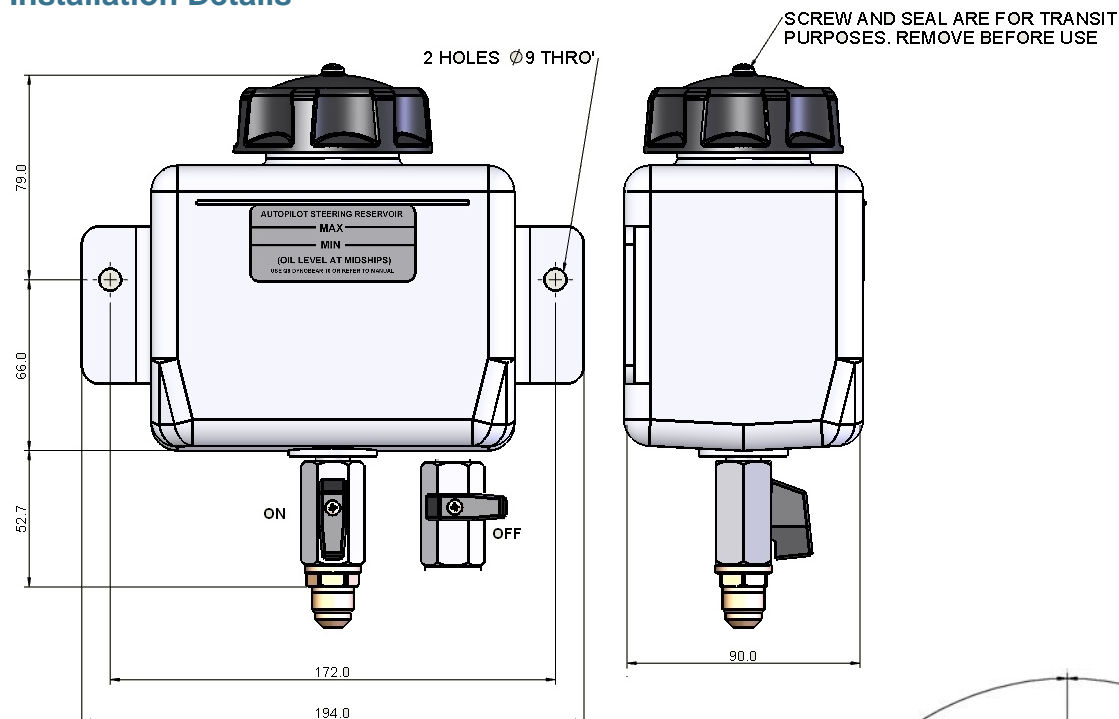
Temp min -20°C
Temp max +55°C
Max pressure Not applicable

Materials

Body HDPE
Tap Chrome plated brass
Fittings Brass
Seals Nitrile
Weight empty 0.48kg
Connection 5/8 SAE male
(G1/4 option available)

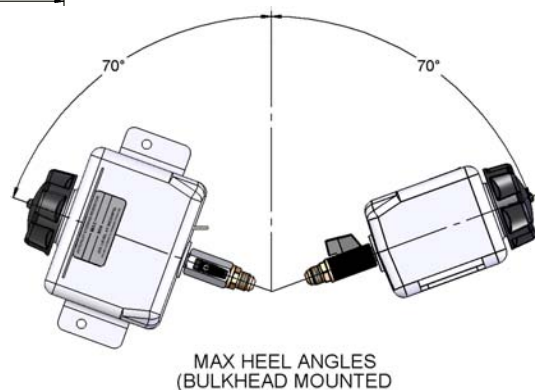


Installation Details



Order Code

R4306



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