

Water Submersible Option

Innovative Solutions from
Parker Industrial Cylinder Division



Customer Value Proposition:

Parker Hannifin Industrial Cylinder Division Water Submersible Option for Series 2H and 3H Hydraulic Cylinders is the right choice for your underwater application. With options for a submersible depth of up to 5,000 feet, corrosion resistant materials and surface treatments these cylinders will stand up to the challenge.

Standard options include 17-4 PH stainless steel tie rods, Bumax 88 stainless steel tie rod nuts and chrome plated body ID. Surface treatments for corrosion protection consist of electroless nickel plated exterior, inorganic zinc primer and epoxy undercoat and topcoat. Custom options like end-of-stroke switches and all stainless steel construction are available by special order.

Optional 17-4 stainless steel tie rods and Bumax 88 stainless steel nuts resist corrosion.

Optional: Dual Cylinder Body Seals resist external pressure. Required for depths over 25 feet and up to 5000 feet.



Several surface treatment options are available for protection against operating environments.

Standard 17-4 Heat-Treated, Chrome-Plated, High Tensile Stainless Steel Piston Rod Material resists corrosion.

Optional: Polypak Inner and Outer Rod Seals resist internal and external pressure. Required for depths over 25 feet and up to 5000 feet.



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Product Features:

- Submersion Depth – up to 5000 feet
- Heavy Duty Service – ANSI (NFPA) T3.6.7R2 – 1996 Specifications and Mounting Dimension Standards
- Nominal Pressure – 3000 psi
- Operating Temperature – -10°F to +165°F
- 17-4 PH chrome plated stainless steel piston rod
- Stainless steel name tag affixed with stainless steel wire around tie rod
- Standard Rod Seal and Body Seal Construction
 - Up to 25 feet
- Subsea Seal Packages for over 25 feet to 5000 feet
 - Subsea rod seal package that includes a Polypak oil seal and an outward facing Polypak wiper to seal against water intrusion.
 - Subsea body seal package with ID oil seal and body-end o-ring to seal against water intrusion.

ENGINEERING YOUR SUCCESS.

Water Submersible Option

How to order:

1. Specify the complete Parker Cylinder Model Number.
2. Put an "S" in the model number to indicate a special cylinder.
3. Include the 3 digit Submersible Code.
4. For custom options, such as switches, provide a complete description or drawing of your requirements.

Submersible Code

When selecting the submersible option, an S must be placed in the Model Number. Select Submersible Code values for the required Submersion Depth, Cylinder Body, and Corrosion Protection. See the example Model Number below:

Feature	Code	Specification	For
Submersion Depth	1	Conventional rod gland and body seal design	Depths to 25 feet
	2	Submersible rod gland & dual cylinder body seals	Depths to 5000 feet
	3	Other	Specify depth / requirements
Cylinder Body	P	Plain ID	
	C	Chrome plated ID	
Corrosion Protection	1	Inorganic zinc primer	Splash & short term immersion service where equipment is top coated by the customer
	2	Inorganic zinc primer with stainless steel tie rods, nuts, & fasteners	
	3	Electroless nickel plated exterior with stainless steel tie rods, nuts, & fasteners	
	4	Inorganic zinc primer, epoxy undercoat, & anacrylic topcoat	Splash & short term immersion service
	5	Inorganic zinc primer, epoxy undercoat, & anacrylic topcoat with stainless steel tie rods, nuts, & fasteners	
	6	Epoxy base & top coat.	Long term immersion service
	7	Epoxy base & top coat with stainless steel tie rods, nuts, & fasteners	
	9	Other	Specify requirements

Example: **4.00 BB 2HK T S 14 X 24.00**
S=Submersible Code: 2P1

(describes a 4" x 24" cylinder for submersion up to 5000 ft, with a plain cylinder body ID and Inorganic Zinc Primer corrosion protection.)

Water Submersible Codes and Features Supplied

Depths to 5000 feet¹

Submersible Cylinder Feature	Water Submersible Code ¹													
	2P1	2P2	2P3	2P4	2P5	2P6	2P7	2C1	2C2	2C3	2C4	2C5	2C6	2C7
17-4 PH piston rod	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Stainless steel tag	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Submersible rod gland	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dual cylinder body seals	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chrome plated cylinder ID								X	X	X	X	X	X	X
SS tie rods, nuts, & fasteners		X	X		X		X		X	X		X		X
Electroless nickel plated exterior			X							X				
Inorganic zinc primer	X	X						X	X					
Inorganic zinc primer with topcoats				X	X						X	X		
Epoxy base & topcoat						X	X						X	X

¹ Corresponding submersible codes for depths to 25 feet begin with 1 (e.g. 1P1, 1P2, etc.) and include all of the features marked for 5000 feet depth **except** Submersible Rod Gland and Dual Cylinder Body Seals.

