

## Series: WA6 Self-Priming Centrifugal Pumps

### INSTALLATION

The pump should be located in a clean dry area on a solid surface. It does not necessarily need to be bolted down. New pipe of the proper size must be used on the pump suction and discharge to reduce friction losses. All piping must be air tight and properly supported to reduce strains and stresses on the pump. Install a strainer on end of suction line if there are any solids in the pumpage. A check valve or foot valve may be installed if it is necessary to maintain the system full of liquid.



**WARNING!** Failure to connect the motor to the power supply equipment grounding conductor by using the grounding cord, green screw or green wire provided may result in serious electrical shock.

Electrical connections to the motor should be made by a competent electrician. Wiring diagrams shown on the motor nameplate should be followed for connecting power supply. Electrical characteristics of supply power must be the same as that shown on the motor nameplate. Minimum wire sizes are shown in the table below. A fused switch should be installed in the circuit leading to the pump motor. In wiring 3 phase motors, make sure the shaft rotation is clockwise when looking at the motor end of the pump. All pumps with 3 phase motors must be installed with a magnetic starter which provides full 3 leg overload protection. Failure to use the correct starter and overloads will void the warranty.

### STANDARD TABLE OF PUMP WIRING USING COPPER CONDUCTORS DISTANCE FROM MOTOR TO METER IN FEET

SINGLE PHASE						
MOTOR HP	VOLTS	#14	#12	#10	#8	#6
1/2	115	80	130	195	310	---
1/2	230	315	490	775	1230	---
3/4	115	60	95	150	240	380
3/4	230	190	300	475	760	1205
1	115	45	70	110	175	280
1	230	165	260	415	660	1050
1½	115	---	55	90	145	225
1½	230	130	200	315	500	800
2	115	---	45	75	120	195
2	230	95	150	240	380	600
3	230	---	100	155	245	395

THREE PHASE						
MOTOR HP	VOLTS	#14	#12	#10	#8	#6
1	220	350	560	890	---	---
1	440	1400	2250	---	---	---
1½	220	185	290	460	735	1160
1½	440	765	1160	---	---	---
2	220	155	250	400	625	985
2	440	620	980	1570	---	---
3	220	135	215	340	540	850
3	440	535	855	1360	2160	---

### OPERATION

Prime the pump by filling the pump case with clean water. Close disconnect switch to start pump.

### MAINTENANCE

**LUBRICATION:** No lubrication is required for the liquid end of the pump.

**SHAFT SEAL:** The mechanical shaft seal should be replaced if liquid is noticed around the motor shaft. Remove case and impeller. Using two screw drivers to pry on each side, remove seal stationary seat. Clean seat area of frame, install new stationary seat with ceramic surface facing out and slide new rotating element over shaft with hard carbon surface against ceramic seat. Be sure to keep all surfaces clean. Lubricating seal parts with water will help the installation of the seal. Reinstall impeller and pump case.

**DRAINING THE PUMP:** To drain pump, remove 3/4" pipe plug from bottom of pump case. After pump has drained, start pump to discharge liquid from impeller. Always protect the pump, piping, etc., from freezing - or drain the system when there is a chance of freeze-up.

**MOTOR:** Keep motor clean and dry. It is drip-proof when installed horizontally and the windings are protected from excess humidity, but extreme conditions should be avoided when possible. If motor fails to run, be sure power is on, all switches or electrical controls are closed, fuses are in order and all electrical controls are tight. (Motor must be repaired by Authorized Repair Station under terms of warranty.)

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## *Limited 24 Month Warranty*

Crane Pumps & Systems warrants that products of our manufacture will be free of defects in material and workmanship under normal use and service for twenty-four (24) months after manufacture date, when installed and maintained in accordance with our instructions. This warranty gives you specific legal rights, and there may also be other rights which vary from state to state. In the event the product is covered by the Federal Consumer Product Warranties Law (1) the duration of any implied warranties associated with the product by virtue of said law is limited to the same duration as stated herein, (2) this warranty is a LIMITED WARRANTY, and (3) no claims of any nature whatsoever shall be made against us, until the ultimate consumer, his successor, or assigns, notifies us in writing of the defect, and delivers the product and/or defective part(s) freight prepaid to our factory or nearest authorized service station. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply. **THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY AND ALL WARRANTIES WITH RESPECT TO ANY PRODUCT SHALL BE TO REPLACE OR REPAIR AT OUR ELECTION, F.O.B. POINT OF MANUFACTURE OR AUTHORIZED REPAIR STATION, SUCH PRODUCTS AND/OR PARTS AS PROVEN DEFECTIVE. THERE SHALL BE NO FURTHER LIABILITY, WHETHER BASED ON WARRANTY, NEGLIGENCE OR OTHERWISE.** Unless expressly stated otherwise, guarantees in the nature of performance specifications furnished in addition to the foregoing material and workmanship warranties on a product manufactured by us, if any, are subject to laboratory tests corrected for field performance. Any additional guarantees, in the nature of performance specifications must be in writing and such writing must be signed by our authorized representative. Due to inaccuracies in field testing if a conflict arises between the results of field testing conducted by or for user, and laboratory tests corrected for field performance, the latter shall control. **RECOMMENDATIONS FOR SPECIAL APPLICATIONS OR THOSE RESULTING FROM SYSTEMS ANALYSES AND EVALUATIONS WE CONDUCT WILL BE BASED ON OUR BEST AVAILABLE EXPERIENCE AND PUBLISHED INDUSTRY INFORMATION. SUCH RECOMMENDATIONS DO NOT CONSTITUTE A WARRANTY OF SATISFACTORY PERFORMANCE AND NO SUCH WARRANTY IS GIVEN.**

This warranty shall not apply when damage is caused by (a) improper installation, (b) improper voltage (c) lightning (d) excessive sand or other abrasive material (e) scale or corrosion build-up due to excessive chemical content. Any modification of the original equipment will also void the warranty. We will not be responsible for loss, damage or labor cost due to interruption of service caused by defective parts. Neither will we accept charges incurred by others without our prior written approval.

This warranty is void if our inspection reveals the product was used in a manner inconsistent with normal industry practice and/or our specific recommendations. The purchaser is responsible for communication of all necessary information regarding the application and use of the product. **UNDER NO CIRCUMSTANCES WILL WE BE RESPONSIBLE FOR ANY OTHER DIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO TRAVEL EXPENSES, RENTED EQUIPMENT, OUTSIDE CONTRACTOR FEES, UNAUTHORIZED REPAIR SHOP EXPENSES, LOST PROFITS, LOST INCOME, LABOR CHARGES, DELAYS IN PRODUCTION, IDLE PRODUCTION, WHICH DAMAGES ARE CAUSED BY ANY DEFECTS IN MATERIAL AND/OR WORKMANSHIP AND/OR DAMAGE OR DELAYS IN SHIPMENT. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

No rights extended under this warranty shall be assigned to any other person, whether by operation of law or otherwise, without our prior written approval.

**CRANE**<sup>®</sup>

PUMPS & SYSTEMS

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**IMPORTANT!  
WARRANTY REGISTRATION**

Your product is covered by the enclosed Warranty.  
To complete the Warranty Registration Form go to:

<http://www.cranepumps.com/ProductRegistration/>

If you have a claim under the provision of the warranty, contact your local  
Crane Pumps & Systems, Inc. Distributor.

**RETURNED GOODS**

**RETURN OF MERCHANDISE REQUIRES A "RETURNED GOODS AUTHORIZATION".  
CONTACT YOUR LOCAL CRANE PUMPS & SYSTEMS, INC. DISTRIBUTOR.**



**Products Returned Must Be Cleaned, Sanitized,  
Or Decontaminated As Necessary Prior To Shipment,  
To Insure That Employees Will Not Be Exposed To Health  
Hazards In Handling Said Material. All Applicable Laws  
And Regulations Shall Apply.**

