



INSTALLATION AND
OPERATION MANUAL





Table II: Weight of Pipe (Column)



1 to 50

15

15



Here is an example of current readings at maximum pump loads on each leg of a three wire hookup. Make calculations for all three possible hookups.

A. For each hookup, add the readings for the three legs:

Ex.: Hookup #1	Hookup #2	Hookup #3
L1 = 51Amps	L1 = 50 Amps	L1 = 50 Amps
L2 = 46 Amps	L2 = 48 Amps	L2 = 49 Amps
L3 = 53 Amps	L3 = 52 Amps	L3 = 51 Amps
Total 150 Amps	Total 150 Amps	Total 150 Amps

B. Divide each total by three to get average amps:

Example: $150/3 = 50$
 Example: $150/3 = 50$
 Example: $150/3 = 50$

C. For each hookup, find current value farthest from average (Calculate the greatest current difference from the average).

Ex. #1	Ex. #2	Ex. #3
50 Amps	50 Amps	50 Amps
-46 Amps	-48 Amps	-49 Amps
= 4 Amps	= 2 Amps	= 1 Amps

D. Divide this difference by the average and multiply by 100 to obtain the percentage of unbalance. Example:

Ex. 1: $4/50 = .08 \times 100 = 8\%$
 Ex. 2: $2/50 = .04 \times 100 = 4\%$
 Ex. 3: $1/50 = .02 \times 100 = 2\%$

Use smallest percentage unbalance, in this case Ex. 3.

Use this worksheet to calculate current unbalance for your installation.

A. Add the readings for the three legs:

Ex.: Hookup #1	Hookup #2:	Hookup #3		
L1 =	AmpsL1 =	AmpsL1 =	Amps	
L2 =	AmpsL2 =	AmpsL2 =	Amps	
L3 =	AmpsL3 =	AmpsL3 =	Amps	
Total	Amps Total	AmpsTotal	Amps	

B. Divide each total by three to get average amps:

Hookup #1: $/3 =$
 Hookup #2: $/3 =$
 Hookup #3: $/3 =$

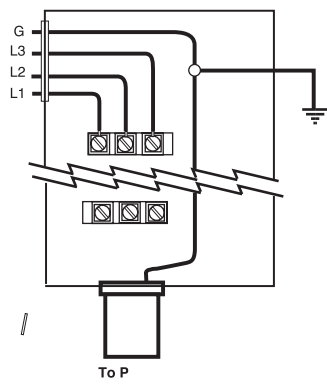
115	3.738 (89.30)	1.356 (34.44)	2.896 (73.56)	4.37 (111.00)	0.620 (15.74)	1.749 (44.40)
155	3.687 (93.65)	1.407 (35.74)	2.845 (72.28)	4.37 (111.00)	0.671 (17.04)	1.749 (44.40)
230	3.789 (96.24)	1.295 (32.90)	2.957 (75.10)	4.37 (111.00)	0.577 (14.66)	1.749 (44.40)
300	3.967 (100.75)	0.860 (21.85)	3.3917 (86.15)	4.37 (111.00)	0.400 (10.16)	1.749 (44.40)

Table VI: 6TS-Mixed Flow Shaft Spacer and Bearing Journal Lengths in Inches (mm)
(See Exploded View, Page 14)

Before pulling pump, make all possible above ground electrical tests. Most submersible pump problems are above ground, not in the pump itself.

Motor failure can result from starting a sandlocked pump. Do not bypass overload circuit or exceed electrical rating when trying to start a siezed pump.

Remove a sandlocked pump from well for cleaning. To prevent pump from locking again when reinstalled, clean the well thoroughly before reinstalling the pump.



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Pentair BERKELEY® warrants to the original consumer purchaser (“Purchaser” or “You”) of the products listed in the table below, that they will be free from defects in material and workmanship for the Warranty Period shown in the table below.

Water Systems Products – jet pumps, small centrifugal pumps, submersible pumps and related accessories	<i>whichever occurs first:</i> 12 months from date of original installation, or 18 months from date of manufacture
Pentair Pro-Source® Composite Tanks	5 years from date of original installation
Pentair Pro-Source Steel Pressure Tanks	5 years from date of original installation
Pentair Pro-Source Epoxy-Lined Tanks	3 years from date of original installation
Centrifugals – close-coupled motor drive, frame mount, SAE mount, engine drive, VMS, SSCX, SSHM	12 months from date of original installation, or 24 months from date of manufacture
Submersible Turbines, 6’ diameter and larger	12 months from date of original installation, or 24 months from date of manufacture

Our warranty will not apply to any product that, in our sole judgement, has been subject to negligence, misapplication, improper installation, or improper maintenance. Examples that may result in denial of a warranty claim (this list is not all inclusive):

- Damage caused by careless handling, improper repackaging, or shipping.
- Damage due to misapplication, misuse, abuse, or failure to operate equipment as specified in the owner’s manual.
- Damage caused by failure to install products as specified in the owner’s manual.
- Damage due to unauthorized product modifications or failure to use Pentair original replacement parts.
- Damage caused by negligence, or failure to properly maintain products as specified in the owner’s manual.
- Damage caused by water freezing inside the product.
- Accidental damage, fire, acts of God, or other circumstances outside the control of Pentair.

Without limiting the foregoing, operating a three phase motor with single phase power through a phase converter will void the warranty. Note also that three phase motors must be protected by three-leg, ambient compensated, extra-quick trip overload relays of the recommended size or the warranty is void.

All impeller diameters specified in the BEC2 pump sizing program have been tested and determined to not exceed the service factor of the specified motor. Oversized impeller diameters can be requested, however, use of an oversized impeller will void any warranty claims.

Your only remedy, and BERKELEY’s only duty under this warranty, is that BERKELEY repair or replace defective products (at BERKELEY’s choice). THE REMEDIES DESCRIBED HERE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND OUR ENTIRE LIABILITY FOR ANY BREACH OF THIS WARRANTY.

You must pay all labor and shipping charges associated with the warranty and must request warranty service through the installing dealer as soon as a problem is discovered. No request for service will be accepted if received after the Warranty Period has expired. This warranty is not transferable.

BERKELEY’S LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE PRODUCT AT ISSUE. BERKELEY SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE, OR CONTINGENT DAMAGES OR LOSSES WHATSOEVER, WHETHER DIRECT OR INDIRECT. THE FOREGOING WARRANTY IS EXCLUSIVE. EXCEPT FOR THE WARRANTY SET FORTH HEREIN, BERKELEY MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO THE PRODUCTS, INCLUDING, BUT NOT TO ANY WARRANTIES OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE.

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This Warranty is effective July 14, 2020 and replaces all undated warranties and warranties dated before July 14, 2020.

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