



## Peerless Pump Company

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# TECHNICAL INFORMATION *Bulletin*

## NUMBER TWELVE

### PUMP BASES

The more we know about our products, and about our customers needs, the better we are able to give quality products and service to our customers. One item that is continually being discussed is the best base required for any particular job. The attached pictures illustrate how strongly Peerless feels that a heavy rigid base is required on all installations.

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#### 1 — CAST IRON BASES

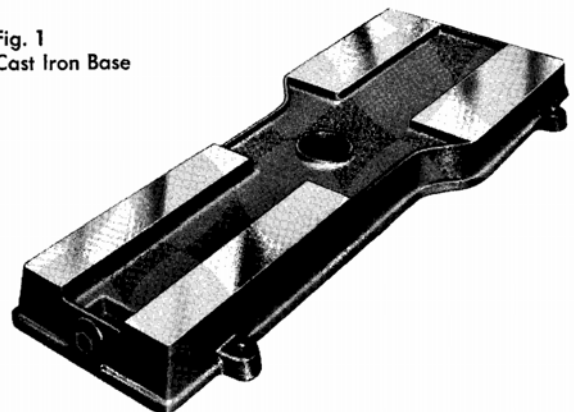
The best base support for a centrifugal pump and driver is a cast iron base. A cast iron base such as Peerless furnishes, is rigid, self-supporting, distortion free, and provides a dampening effect on vibration and noise. It insures the minimum deflection of the pump and maintains coupling alignment longer than any other base. It is important that the base be of sufficient mass to support pump and driver; Peerless- made bases are your assurance of this.

Fig. #1 shows clearly the Peerless cast iron drip rim base. Notice that the drip rim is around the top of the base. It channels all leakage to a collection basin underneath the pump. This basin is tapped for easy pipe-off to a sump. The base is equipped with a large grout hole that allows easy grouting of the base when necessary on the job site. This base is symmetrical and has good eye appeal.

Cast iron drip rim bases of this type are furnished as standard with Peerless type A Pumps with NEMA rated motors. This means 150 HP, 3600 RPM frame 445US and smaller. On larger pump drivers the factory must be contacted to determine the availability of a cast iron base.

Cast iron bases are normally more expensive to make. That is, unless considerable effort has been given to utilization of the same base on as many pump models as possible. Peerless has managed to standardize on 12 sizes of cast iron bases and with new pattern equipment, can furnish these bases for less money than any other type of base. Competition must add considerable for a cast iron base and therefore Peerless should specify cast iron on the building trade, industrial pumps with NEMA size drivers, etc. This certainly is an advantage to the customer as it helps to insure better value.

Fig. 1  
Cast Iron Base



Aqua Line pumps are furnished as standard with cast iron bases, and the new TUAP-TUAS pump is furnished as standard with cast iron bases. PB pumps may be obtained with cast iron base. In the multi-stage pump line, cast iron bases may be used, however, the factory must be consulted to determine what size pumps and motors can be fitted with the cast iron bases.

## 2 — STEEL BASES

The words “steel base” mean different things to different people. A recent poll of many of our field representatives indicated that when the word steel was used, they thought of fabricated steel, channel type steel, structural steel, and bent steel plate. Two of our major competitors believe in using bent steel plate and they openly state in their literature that the base must be supported by a rigid pedestal and grout. They say that the purpose of a baseplate is merely to tie the equipment together and support must come from either the pedestal or the grout. PEERLESS FEELS THAT REGARDLESS OF WHAT TYPE OF BASE IS USED, THE BASE MUST BE CAPABLE OF SUPPORTING BOTH THE PUMP AND DRIVER WITHOUT ANY ADDITIONAL SUPPORT.

When Peerless in the sales manual says, “fabricated steel base” we are referring to base as shown in illustration #2. This is a bent steel base with closed ends. Please note that it is made of heavy steel stock and where necessary, it will be reinforced by welding, as can be seen in the grout hole of this picture. This base is designed so that it can support the pump and driver by means of vibration springs underneath the tiedown lugs. It is heavy, however, since it is made from fabricated steel. This base is used on all sizes of pumps that will not accommodate the cast iron base.

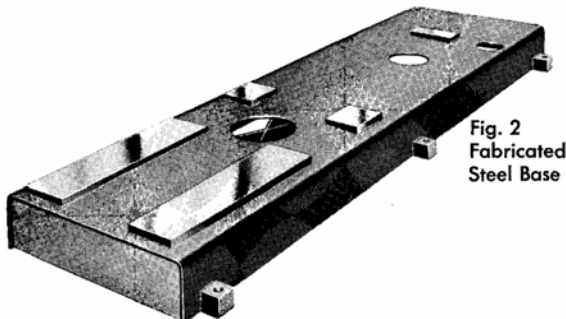


Fig. 2  
Fabricated  
Steel Base

## 3— FABRICATED STEEL, DRIP RIM TYPE

When a fabricated steel drip rim type base is required, then we will furnish the base as shown in Figure #3. Please notice that this has an outside drip rim. The rim is designed to channel all leakage to one end of the pump where threaded pipe connections are available for lead off of waste water. In both types of fabricated steel bases we use two types of foundation lugs. These drawings show an external type of foundation lug that is welded to the base. We also furnish these bases where foundation bolt holes have been drilled through the bed of the baseplate. This will permit tie down without use of the foundation lugs.

Please notice that while these are fabricated steel bases, they are of extremely heavy design. It is very obvious that it is not Peerless' intention to furnish flimsy sheet steel and expect the customer to rigidly grout the pumps in place to support the base.

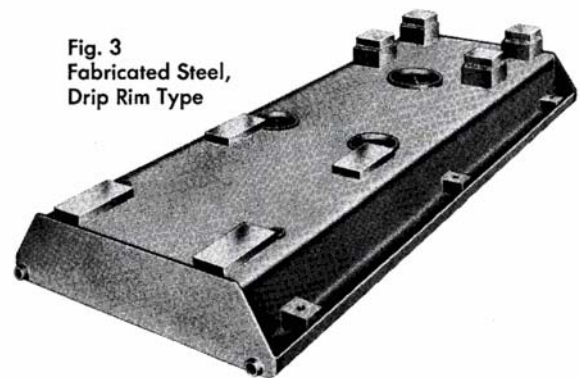


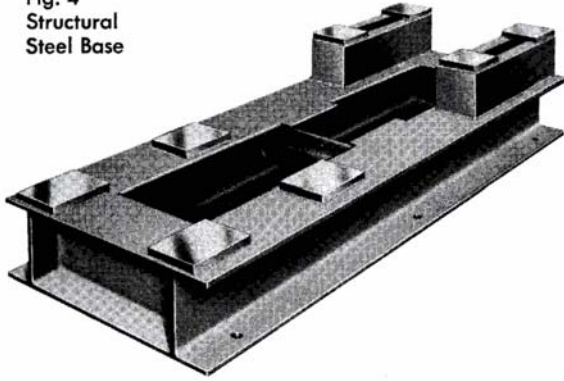
Fig. 3  
Fabricated Steel,  
Drip Rim Type

Peerless believes in heavy massive bases at all times to protect the customer's equipment and certainly our standard fabricated steel bases illustrate this concept of base design.

## 4 — STRUCTURAL STEEL BASE

Where job requirements are such that extreme stress or weight is involved, then a heavy structural base will be used. This base is not as attractive as the fabricated base but it does illustrate extreme ruggedness. These bases would normally be used where large engine drives are required on big heavy pumps. This base is expensive to build and therefore the customer should be aware that when he specifies a structural steel base, it will cost a great deal more than the cast iron or the fabricated steel base.

Fig. 4  
Structural  
Steel Base



Many specifications ask for a structural steel base where it is very obvious that this is not needed. The purpose of this letter is to inform our customers of the types of bases furnished on horizontal split case pumps. This should indicate that the cast iron drip rim base should be used

and specified wherever possible. On sizes larger than will accommodate the cast iron base, then the fabricated steel base should be used. Only in cases where extreme weight or torque is involved, should the structural steel base be used. The structural steel base is by far the most expensive of any of the bases. Good customer relationship should permit the use of the fabricated steel base whenever a steel base is required.

It is the sincere wish that this information and these pictures will aid in gaining the confidence of the customer. Once again, Peerless is emphatic that any base should be heavy enough, rigid enough, to take and support the pump at all times without the need of external grout or support. With a thorough understanding of this basic belief, customers can place their confidence in Peerless.