Mark 3 Pre-Engineered Baseplates

Flowserve offers a family of five types of pre-engineered baseplate designs to extend pump life and reduce costs.

Mark 3 Pre-Engineered Baseplate Designs

Extend Pump and Seal Life at Reduced Cost

Flowserve offers five pre-engineered baseplate designs to improve pump performance and reduce costs. Flowserve pre-engineered baseplates extend pump and seal life by reducing internal pump stress and vibrations. That is why Flowserve recommends reinforced rigid baseplates.

Plus, customers who know the value of pre-engineered and reinforced baseplates help avoid potential confusion in specification interpretation, delays in shipments and added costs.

Flowserve offers a broad range of metal and non-metallic, grout and stilt mounted designs and standard options. This provides broad flexibility in choosing the baseplate that best meets application needs and operating budget.

Reducing Internal Stress and Vibration Extends Life of Pump and Motor Packages

Pump users specify rigid baseplate designs to:

- Provide torsional lateral and longitudinal rigidity
- Improve vibration dampening
- Protect against transit damage
- Resist twisting during installation
- Maintain shaft alignment
- Reduce installation and shaft alignment time
- Reduce diaphragming or separation from grout
- Improve pump, motor and seal reliability
- Reduce total life cycle pump, motor and seal costs

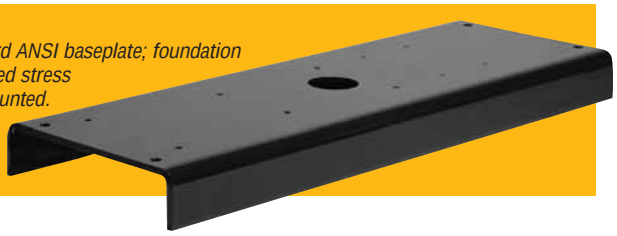
Rigid Design Begins With Thick Plate Construction

Metal baseplate sizes:

- 139 to 258 feature 13 mm (1/2 in) steel plate construction
- 264 to 280 feature 16 mm (5/8 in) steel plate construction
- 368 to 398 feature 19 mm (3/4 in) steel plate construction

Polybase baseplates are constructed of 76 mm (3 in) to 102 mm (4 in) thick solid polymer concrete. Baseplate types B, C, D and E are reinforced with added structural support for improved rigidity.

Type A
Standard ANSI baseplate; foundation or limited stress stilt mounted.



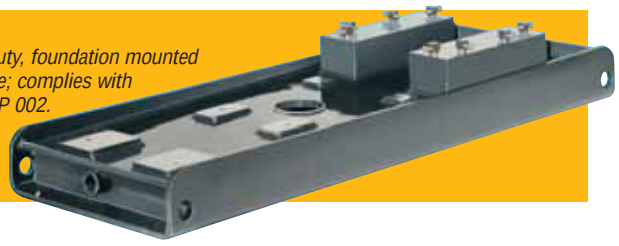
Type C
Reinforced baseplate; stilt mounted.

Type A - Group 3
Designed for grout installations with 4 in diameter holes.

Type D
Reinforced baseplate; foundation mounted; with optional drip rim.

Type B
Polybase™ baseplate; foundation or stilt mounted.

Type E
Heavy-duty, foundation mounted baseplate; complies with PIP RESP 002.



Item No.	Standard Options	Type A Gp 1 & 2	Type A Gp 3	Type B	Type C	Type D	Type D with Rim	Type E
1	Machined coplanar mounting surfaces to 0.17 mm/m (0.002 in/ft) with 3.2 micron (125 µ in) finish	O	O	O*	O	O	O	Y
2	Added structural (cross member) support	N	N	Y	Y	Y	Y	Y
3	Added torsional support with end caps	NR	Y	Y	D	O	O	Y
4	Tapped holes for four (4) motor adjuster bolts	O	O	NA	O	O	O	Y
5	Four (4) - SS transverse jack bolts - motor adjusters	O	O	NA	O	O	O	Y
6	Sloped surface to an integral drain	N	N	C	N	N	N	Y
7	Integral sloped drip rim around base	N	N	N	N	N	Y	Y
8	102 mm (4 in) diameter grout holes - max. 762 mm (30 in) run to vent	Y	Y	Y	N	Y	Y	Y
9	13 mm (1/2 in) vent holes at corner of each chamber	NR	O	NR	NA	Y	Y	Y
10	Lower surface shaped to anchor in grout	N	N	N	NA	Y	Y	Y
11	Integral lifting eyes at four (4) corners	O	Y	N	O	Y	Y	Y
12	Tapped leveling holes four (4) corners	Y	O	Y	S	Y	Y	Y
13	Continuous seam weld construction	NA	Y	NA	O	Y	Y	Y
14	Welded raised lip around grout hole(s)	NR	NR	NA	NA	NR	NR	Y
15	Stilt mounting options with floor cups	NR	NA	O	Y	D	D	NA
16	Spring mounted load designs	NA	NA	O	O	D	D	NA
17	Catch basin (304SS or other materials)	O	O	NA	O	O	NR	NA
18	Option for eight (8) total motor adjusters	O	O	O	O	O	O	Y
19	Dimensions to ANSI B73.1	Y	Y	Y	Y	Y	Y	Y

Y = Standard
O = Optional
N = Not available
NA = Not applicable
NR = Not recommended
C = Sloped catch basin with 25 mm (1 in) drain (option)
D = Needs design time
S = Stilts for leveling
*Coplanar to 0.42 mm/m (0.005 in/ft)

Polybase™ and Polybloc™ Solid Polymer Concrete Adjustment System

Type B – Polybase baseplate

Baseplates are Fundamental to Extending Pump Life

The test stand provided three corner support of the ungrouted baseplates. The addition of weights on the unsupported fourth corner caused baseplate distortion. This distortion resulted in measurable shaft movement that can cause problems with field installations and negatively affect pump reliability and life.

The twist test is a means of comparing rigid baseplate designs. Correctly installed rigid baseplates should not experience these twist effects. For more information about the results of baseplate testing, contact your local Flowserve sales representative.

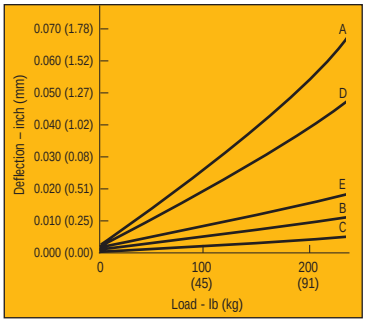
Polybloc – Motor Mounting Block

- Corrosion resistant
- Superior vibration dampening
- Full foot support (no overhang)
- Shown with optional bloc-lock and fastener support
- Available for other pump and motor or alternate equipment applications

Polybase

- Low installed cost
- Superior vibration dampening
- Corrosion resistant
- Superior resistance to twisting or diaphragming
- Standard catch basin and grout holes
- Inserts available for alternate equipment configuration requirements

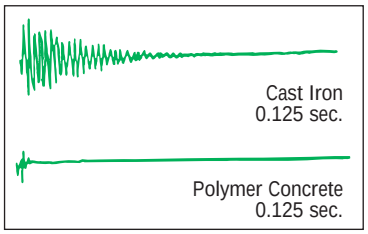
Baseplate Rigidity Test – Twist Mode



Maximum Parallel Shaft Deflection at Applied Force

Type A	0.022 in (0.56 mm)
Type B	0.004 in (0.01 mm)
Type C	0.003 in (0.08 mm)
Type D	0.016 in (0.41 mm)
Type E	0.005 in (0.13 mm)

Vibration Damping of Polymer Concrete Versus Cast Iron



8-Point Adjuster

- Allows precise motor adjustment to reduce alignment time
- Used with recessed bloc-lock device

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