



Email:  
enquiry @aceflo.com



Website:  
www.amegagr.com



Address:  
No.611.19th Street .Watervliet New York 12189. USA

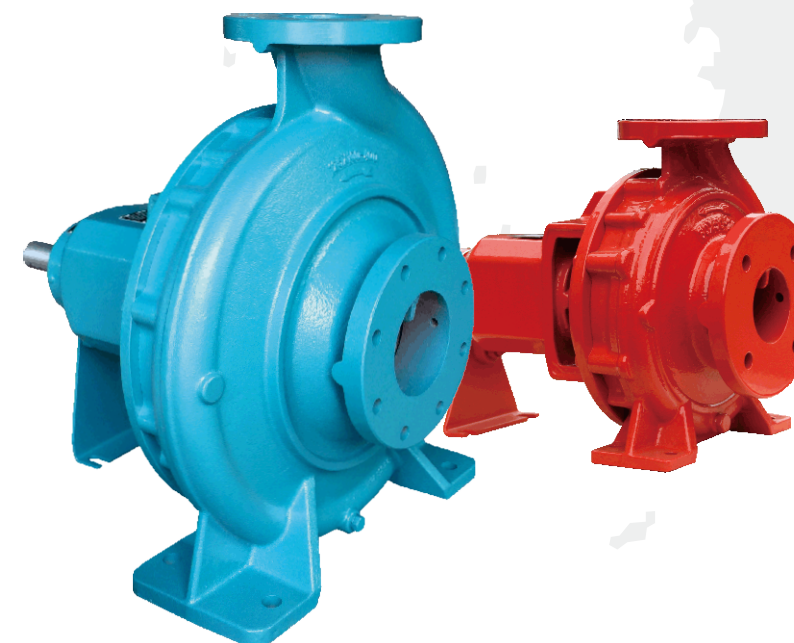


**AMEGA PUMPS**

© Reliability

© Energy Saving

© Environmental Protection



# PISO SERIES

ISO2858/5199 Std End Suction Back Pull-Out Centrifugal Pump



**AMEGA GROUP**

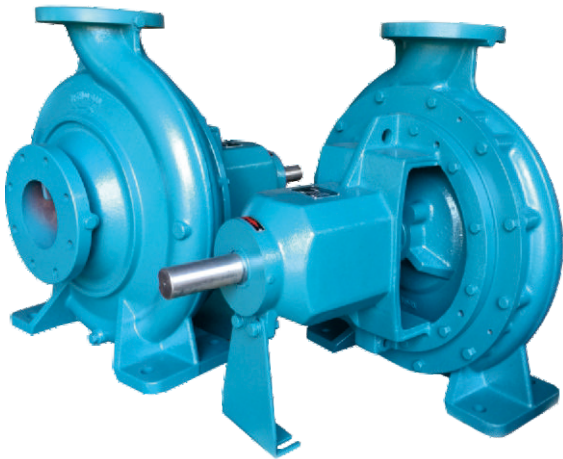
Partnership:  
ACEFLO ENGINEERING PTE LTD  
www.aceflo.com



**AMEGA GROUP**

No.611.19th Street .Watervliet New York  
12189.USA www.amegagr.com

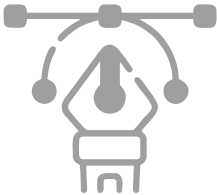
DESIGNED BY AMEGA  
**PUMPS - MOTORS - SYSTEMS**



**Design & Features**

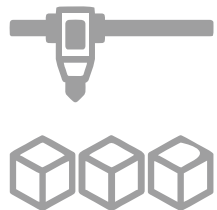
PISO design is in accordance with international standards of ISO2858/5199, which means PISO Series pumps are interchangeable with other similar pumps, conforming to the same standards. This ensures a robust, long lasting, high performing product consumers have come to depend on from Preeminence.

**Design**



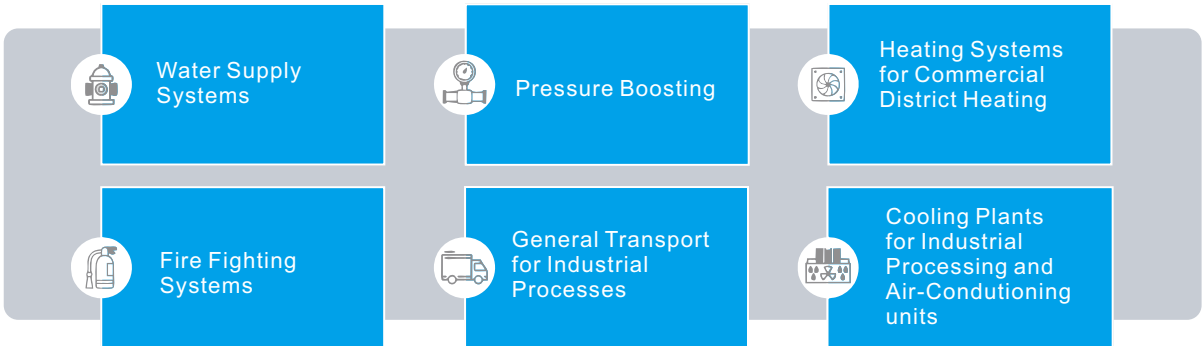
|           |   |
|-----------|---|
| Design    | Performance and dimension as per ISO 2858/5199        |
| Structure | Horizontal ,End suction, Single suction,Volute casing |
| DN(mm)    | Suction size: 50~350, Discharge size: 32~300          |
| Flange    | DIN 2501,PN16   |

**Material**



|                     |                           |
|---------------------|---------------------------|
| Pump parts          | Material                  |
| Casing / Impeller   | Cast iron/Stainless steel |
| Shaft               | Stainless steel           |
| Shaft seal          | Mechanical Seal           |
| Bearing lubrication | Grease Life               |
| Bearing Brand       | NTN                       |

**Applications**



**Model Designation(Examples): PISO 300X250-500**

|        |             |               |                                |
|--------|-------------|---------------|--------------------------------|
| PISO   | 300         | 250           | 500                            |
| Series | Suction(mm) | Discharge(mm) | Impeller Norminal Diameter(mm) |

**Operating Data**



|                    |  |
|--------------------|--|
| Speed              | Up to 3600rpm                              |
| Flow Rate(Q)       | Up to 1900m3/h-1450rpm<br>2430m3/h-1750rpm |
| Head(H)            | Up to 160m                                 |
| Pressure           | PN16 as standard                           |
| Liquid Temperature | Up to 105 C                                |

## Pump Casing

highly efficient cast iron volute casings, with flanges rated to PN1.6MPa (16bar), drilled to ISO7005.2 : 1988).

## Enlarge Shaft

reduces shaft deflection.  
Standard in 420SS, **304SS&316SS** as an option.  
Tapered & keyed shaft design allowing ease of removal in maintenance & positive locking whilst in operation

## Bearings

Heavy duty NTN or approved equivalent, greased for life, reducing maintenance. Protected by a quality manufactured lip seal reducing ingress of moisture or foreign matter. Housed within removable bearing cap cover assembly

## Bearing housing

Robust / heavy duty, manufactured in high strength cast iron providing trouble-free life complete with lifting provision and support foot.

## Shaft seal

single, high quality John Crane or approved equivalent mechanical seal with **carbon vs ceramic/viton** fitted as standard to all PISO Series pumps with other options such as Silicone vs Silicone or high temp also available.

## Wear Ring

Cast Iron **wear rings** - fitted as standard, replaceable front & rear wear rings with optional materials, for a trouble-free lifecycle.

## Casing O-Ring

Re-usable o-rings in Nitrile for ease of re-assembly

## Tappings

Convenient suction & discharge pressure gauge tappings plus volute drain, fitted as standard to all **PISO** Series pumps.

## Painting

Prior to painting, the pump is thoroughly cleaned of foreign material. The pump is then painted with a high quality/ undercoat/ primer and industrial enamel paint.

## Accessories

### Drive

The pump is only recommended for direct drive via a flexible spacer coupling. Spacer couplings enable the utilization of the back pull out feature.

Where belt drives are necessary a separate jack (intermediate) shaft with bearings to carry the belt loads may be required.

All drive systems, where supplied by **PASON PUMP** are appropriately protected by suitable guards.

## Pump Selection

For pump selection the hydraulic performance curves should be used. These curves are based on water at 15°C and SG equal to 1.0.

NPSH values are indicated on the performance curves. At least 0.5m should be added as a safety margin

To overcome variations between actual and design requirements it is recommended that the driver power exceeds the absorbed pump shaft power.

| Absorbed Pump Shaft kW | Driver Power Reserve |
|------------------------|----------------------|
| up to 7.5              | Approx. 20%          |
| 7.5~40                 | Approx. 15%          |
| Above 40               | Approx. 10%          |

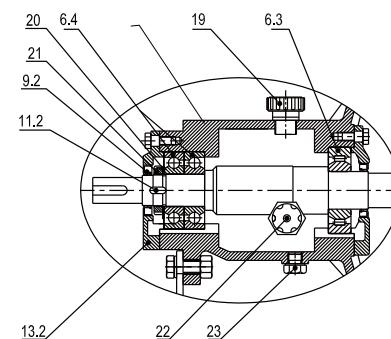
## Impeller

Cast Iron/SS304/SS316 impeller-fitted as standard, in a closed design is fitted as standard to prevent corrosion in stationary or inactive situations. The use of 3-D solid model (CAD) Computer Aided Design and (CFD) Computational Fluid Dynamics ensures **high efficiencies**, reducing overall running costs. Impeller diameters can be trimmed to suit specified performance. PISO impellers are dynamically balanced, providing smooth, vibration free operation, preventing premature bearing failure.

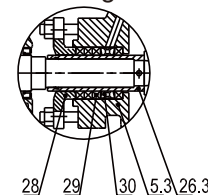
**Back pull-out design** - allowing for easy removal of rotating element without disturbing the pipework, lagging or pump volute casing. This is proven to reduce downtime whilst performing routine maintenance.

## Section Drawing

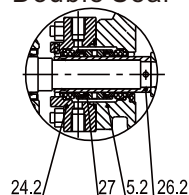
### Optional-Heavy Duty



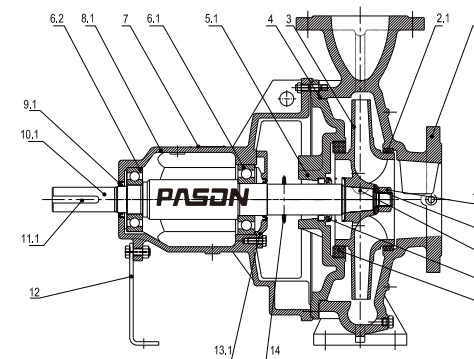
### Packing Seal



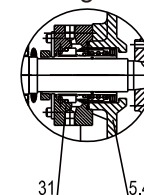
### Double Seal



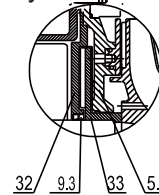
### Standard--Single seal



### Cartridge Seal



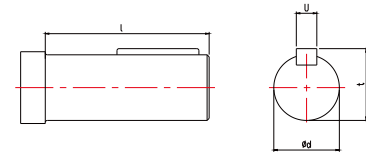
### Dynamic Seal



| S/N     | Part Name                       |
|---------|---------------------------------|
| 1       | Pump Casing                     |
| 2.1/2.2 | Wear Ring                       |
| 3       | Impeller                        |
| 4       | O-Ring                          |
| 5.1     | Casing Cover                    |
| 5.2     | Casing Cover (Double Mech seal) |
| 5.3     | Casing Cover (Gland Packing)    |
| 5.4     | Casing Cover (Cartridge seal)   |
| 5.5     | Casing Cover (Dynamic seal)     |
| 6.1/6.2 | Deep groove ball bearing        |
| 6.3     | Cylindrical roller bearing      |
| 6.4     | Angular contact ball bearing    |
| 7       | Nameplate                       |
| 8       | Bearing Housing                 |
| 9       | Oil Seal                        |
| 10      | Shaft                           |
| 11      | Impeller Key                    |
| 12      | Support Foot                    |
| 13      | Bearing cover                   |
| 14      | Slinger                         |

| S/N  | Part Name              |
|------|------------------------|
| 15   | Single mechanical seal |
| 16   | Woodruff key           |
| 17   | Impeller Washer        |
| 18   | Impeller Nut           |
| 19   | Oil hole cover         |
| 20   | Tab washer             |
| 21   | Nut                    |
| 22   | Oil indicator          |
| 23   | Drain plug             |
| 24.2 | seal Gland             |
| 26.2 | Mech.shaft sleeve      |
| 26.3 | Packing. Shaft Sleeve  |
| 27   | Double mechanical seal |
| 28   | Packing Gland          |
| 29   | Gland Packing          |
| 30   | Lantern Ring           |
| 31   | Cartridge seal         |
| 32   | Seal plate             |
| 33   | Vice impeller          |

Intalling Dimensions-1



Drive Shaft Dimensions

| Shaft No | ød | l   | u  | t    |
|----------|----|-----|----|------|
| 1        | 24 | 50  | 8  | 27   |
| 2        | 32 | 80  | 10 | 35   |
| 3        | 42 | 110 | 12 | 45   |
| 4        | 48 | 110 | 14 | 51.5 |
| 5        | 65 | 140 | 18 | 69   |
| 6        | 75 | 170 | 20 | 79.5 |

Flange Connecting Dimension( ISO 2084,PN16)

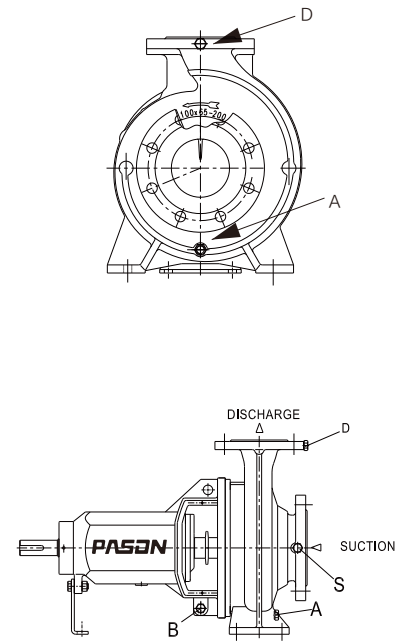
| DN  | ød  | øk  | ØD  | n  | øS |
|-----|-----|-----|-----|----|----|
| 32  | 76  | 100 | 140 | 4  | 18 |
| 40  | 84  | 110 | 150 | 4  | 18 |
| 50  | 99  | 125 | 165 | 4  | 18 |
| 65  | 118 | 145 | 185 | 4  | 18 |
| 80  | 132 | 160 | 200 | 8  | 18 |
| 100 | 156 | 180 | 220 | 8  | 18 |
| 125 | 184 | 210 | 250 | 8  | 18 |
| 150 | 211 | 240 | 285 | 8  | 22 |
| 200 | 266 | 295 | 340 | 12 | 22 |
| 250 | 319 | 355 | 405 | 12 | 26 |
| 300 | 370 | 410 | 460 | 12 | 26 |
| 350 | 429 | 470 | 520 | 16 | 26 |

Notes: 1. Optional Flange: AS2129-1982, ANSI 16.1-1975, JISB 2210-1984

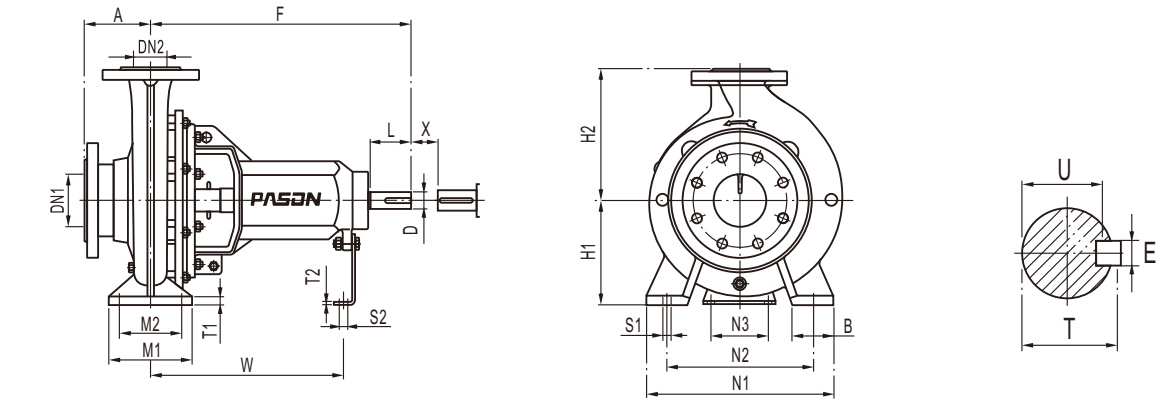
Service Connections

| Pump Model  | A<br>Casing Drain | B<br>Housing Drain | D<br>Gauge Drain | ς<br>Gauge Drain |
|-------------|-------------------|--------------------|------------------|------------------|
| 50X32-160   | 1/4               | 3/8                | 1/4              | 1/4              |
| 50X32-200   | 1/4               | 3/8                | 1/4              | 1/4              |
| 65X40-200   | 1/4               | 3/8                | 1/4              | 1/4              |
| 65X40-250   | 1/4               | 3/8                | 1/4              | 1/4              |
| 65X40-315   | 1/4               | 3/8                | 1/4              | 1/4              |
| 65X50-160   | 1/4               | 3/8                | 1/4              | 1/4              |
| 80X50-200   | 1/4               | 3/8                | 1/4              | 1/4              |
| 80X50-250   | 1/4               | 3/8                | 1/4              | 1/4              |
| 80X50-315   | 1/4               | 3/8                | 1/4              | 1/4              |
| 80X65-160   | 1/4               | 3/8                | 1/4              | 1/4              |
| 100X65-200  | 1/4               | 3/8                | 1/4              | 1/4              |
| 100X65-250  | 1/4               | 3/8                | 1/4              | 1/4              |
| 100X65-315  | 1/4               | 3/8                | 1/4              | 1/4              |
| 100X80-160  | 1/4               | 3/8                | 1/4              | 1/4              |
| 125X80-400  | 1/4               | 3/8                | 1/4              | 1/4              |
| 125X100-200 | 1/4               | 3/8                | 1/4              | 1/4              |
| 125X100-250 | 1/4               | 3/8                | 1/4              | 1/4              |
| 125X100-315 | 1/4               | 3/8                | 1/4              | 1/4              |
| 125X100-400 | 1/4               | 3/8                | 1/4              | 1/4              |

| Pump Model  | A<br>Casing Drain | B<br>Housing Drain | D<br>Gauge Drain | ς<br>Gauge Drain |
|-------------|-------------------|--------------------|------------------|------------------|
| 125X100-500 | 3/8               | 3/8                | 3/8              | 3/8              |
| 150X125-250 | 1/4               | 3/8                | 1/4              | 1/4              |
| 150X125-315 | 1/4               | 3/8                | 1/4              | 1/4              |
| 150X125-400 | 1/4               | 3/8                | 1/4              | 1/4              |
| 150X125-500 | 3/8               | 3/8                | 3/8              | 3/8              |
| 200X150-315 | 3/8               | 3/8                | 3/8              | 3/8              |
| 200X150-400 | 3/8               | 3/8                | 3/8              | 3/8              |
| 200X150-500 | 3/8               | 3/8                | 3/8              | 1/4              |
| 250X200-200 | 3/8               | 3/8                | 3/8              | 3/8              |
| 250X200-315 | 1/2               | 3/8                | 1/2              | 1/2              |
| 250X200-400 | 3/8               | 3/8                | 3/8              | 3/8              |
| 250X200-500 | 1/2               | 3/8                | 1/2              | 1/2              |
| 300X250-250 | 1/2               | 3/8                | 1/2              | 1/2              |
| 300X250-315 | 3/8               | 3/8                | 3/8              | 3/8              |
| 300X250-400 | 1/2               | 3/8                | 1/2              | 1/2              |
| 300X250-500 | 1/2               | 3/8                | 1/2              | 1/2              |
| 350X300-400 | 1/2               | 3/8                | 1/2              | 1/2              |
| 350X300-500 | 1/2               | 3/8                | 1/2              | 1/2              |



Intalling Dimensions-2



| Pump Model  | Shaft No. | Flange Size |     | Pump Dimensions |     |     |     | Foot Dimensions |     |     |     |     |     |     |    | Bolt Holes |     | Shaft End |    |     |      |    |      | Spacer | Net. Weight |
|-------------|-----------|-------------|-----|-----------------|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|----|------------|-----|-----------|----|-----|------|----|------|--------|-------------|
|             |           | DN1         | DN2 | A               | F   | H1  | H2  | B               | M1  | M2  | N1  | N2  | N3  | W   | T1 | T2         | S1  | S2        | D  | L   | T    | E  | U    | X ≥    |             |
| 50X32-160   | 1         | 50          | 32  | 80              | 385 | 132 | 160 | 50              | 100 | 70  | 240 | 190 | 110 | 285 | 12 | 6          | M12 | M12       | 24 | 50  | 27   | 8  | 20   | 100    | 38          |
| 50X32-200   | 1         | 50          | 32  | 80              | 385 | 160 | 180 | 50              | 100 | 70  | 240 | 190 | 110 | 285 | 12 | 6          | M12 | M12       | 24 | 50  | 27   | 8  | 20   | 100    | 46          |
| 65X40-200   | 1         | 65          | 40  | 100             | 385 | 160 | 180 | 50              | 100 | 70  | 265 | 212 | 110 | 285 | 13 | 6          | M12 | M12       | 24 | 50  | 27   | 8  | 20   | 100    | 48          |
| 65X40-250   | 2         | 65          | 40  | 100             | 500 | 180 | 225 | 65              | 125 | 95  | 320 | 250 | 110 | 370 | 14 | 6          | M12 | M12       | 32 | 80  | 35   | 10 | 27   | 100    | 70          |
| 65X40-315   | 2         | 65          | 40  | 125             | 500 | 200 | 250 | 65              | 125 | 95  | 345 | 280 | 110 | 370 | 16 | 6          | M12 | M12       | 32 | 80  | 35   | 10 | 27   | 100    | 80          |
| 65X50-160   | 1         | 65          | 50  | 80              | 385 | 132 | 160 | 50              | 100 | 70  | 240 | 190 | 110 | 285 | 11 | 6          | M12 | M12       | 24 | 50  | 27   | 8  | 20   | 100    | 40          |
| 80X50-200   | 1         | 80          | 50  | 100             | 385 | 160 | 200 | 50              | 100 | 70  | 265 | 212 | 110 | 285 | 13 | 6          | M12 | M12       | 24 | 50  | 27   | 8  | 20   | 100    | 52          |
| 80X50-250   | 2         | 80          | 50  | 125             | 500 | 180 | 225 | 65              | 125 | 95  | 320 | 250 | 110 | 370 | 15 | 6          | M12 | M12       | 32 | 80  | 35   | 10 | 27   | 100    | 72          |
| 80X50-315   | 2         | 80          | 50  | 125             | 500 | 225 | 280 | 65              | 125 | 95  | 345 | 280 | 110 | 370 | 18 | 6          | M12 | M12       | 32 | 80  | 35   | 10 | 27   | 100    | 87          |
| 80X65-160   | 1         | 80          | 65  | 100             | 385 | 160 | 180 | 50              | 100 | 70  | 265 | 212 | 110 | 285 | 11 | 6          | M12 | M12       | 24 | 50  | 27   | 8  | 20   | 100    | 46          |
| 100X65-200  | 2         | 100         | 65  | 100             | 500 | 180 | 225 | 65              | 125 | 95  | 320 | 250 | 110 | 370 | 14 | 6          | M12 | M12       | 32 | 80  | 35   | 10 | 27   | 140    | 70          |
| 100X65-250  | 2         | 100         | 65  | 125             | 500 | 200 | 250 | 80              | 160 | 120 | 360 | 280 | 110 | 370 | 16 | 6          | M16 | M12       | 32 | 80  | 35   | 10 | 27   | 140    | 80          |
| 100X65-315  | 3         | 100         | 65  | 125             | 530 | 225 | 280 | 80              | 160 | 120 | 400 | 315 | 110 | 370 | 18 | 6          | M16 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 142         |
| 100X80-160  | 2         | 100         | 80  | 100             | 500 | 160 | 200 | 65              | 125 | 95  | 280 | 212 | 110 | 370 | 14 | 6          | M12 | M12       | 32 | 80  | 35   | 10 | 27   | 100    | 68          |
| 125X80-400  | 3         | 125         | 80  | 125             | 530 | 280 | 355 | 80              | 160 | 120 | 435 | 355 | 110 | 370 | 20 | 6          | M16 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 165         |
| 125X100-200 | 2         | 125         | 100 | 125             | 500 | 200 | 280 | 80              | 160 | 120 | 360 | 280 | 110 | 370 | 17 | 6          | M16 | M12       | 32 | 80  | 35   | 10 | 27   | 140    | 85          |
| 125X100-250 | 3         | 125         | 100 | 140             | 530 | 225 | 280 | 80              | 160 | 120 | 400 | 315 | 110 | 370 | 18 | 6          | M16 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 126         |
| 125X100-315 | 3         | 125         | 100 | 140             | 530 | 250 | 315 | 80              | 160 | 120 | 400 | 315 | 110 | 370 | 19 | 6          | M16 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 135         |
| 125X100-400 | 3         | 125         | 100 | 140             | 530 | 280 | 355 | 100             | 200 | 150 | 500 | 400 | 110 | 370 | 20 | 6          | M20 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 175         |
| 125X100-500 | 4         | 125         | 100 | 160             | 670 | 355 | 450 | 100             | 200 | 150 | 550 | 450 | 110 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 338         |
| 150X125-250 | 3         | 150         | 125 | 140             | 530 | 250 | 355 | 80              | 160 | 120 | 400 | 315 | 110 | 370 | 19 | 6          | M16 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 140         |
| 150X125-315 | 3         | 150         | 125 | 140             | 530 | 280 | 355 | 100             | 200 | 150 | 500 | 400 | 110 | 370 | 20 | 6          | M20 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 150         |
| 150X125-400 | 3         | 150         | 125 | 140             | 530 | 315 | 400 | 100             | 200 | 150 | 500 | 400 | 110 | 370 | 21 | 6          | M20 | M12       | 42 | 110 | 45   | 12 | 37   | 140    | 186         |
| 150X125-500 | 4         | 150         | 125 | 160             | 670 | 355 | 450 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 350         |
| 200X150-315 | 4         | 200         | 150 | 160             | 670 | 315 | 400 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 222         |
| 200X150-400 | 4         | 200         | 150 | 160             | 670 | 315 | 450 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 300         |
| 200X150-500 | 4         | 200         | 150 | 160             | 670 | 400 | 500 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 382         |
| 250X200-200 | 4         | 250         | 200 | 180             | 670 | 315 | 450 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 22 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 345         |
| 250X200-250 | 5         | 250         | 200 | 180             | 885 | 315 | 450 | 100             | 200 | 150 | 550 | 450 | 180 | 670 | 25 | 12         | M24 | M16       | 65 | 140 | 69   | 18 | 58   | 250    | 490         |
| 250X200-315 | 4         | 250         | 200 | 180             | 670 | 315 | 450 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 277         |
| 250X200-400 | 4         | 250         | 200 | 180             | 670 | 355 | 500 | 100             | 200 | 150 | 550 | 450 | 140 | 500 | 25 | 10         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 340         |
| 250X200-500 | 5         | 250         | 200 | 225             | 885 | 400 | 580 | 150             | 315 | 250 | 760 | 630 | 180 | 670 | 28 | 12         | M24 | M16       | 65 | 140 | 69   | 18 | 58   | 250    | 600         |
| 300X250-250 | 5         | 300         | 250 | 225             | 885 | 355 | 560 | 125             | 250 | 190 | 630 | 500 | 180 | 670 | 24 | 12         | M24 | M16       | 65 | 140 | 69   | 18 | 58   | 250    | 450         |
| 300X250-315 | 4         | 300         | 250 | 225             | 670 | 355 | 500 | 125             | 250 | 190 | 690 | 560 | 180 | 500 | 24 | 12         | M20 | M16       | 48 | 110 | 51.5 | 14 | 42.5 | 180    | 350         |
| 300X250-400 | 5         | 300         | 250 | 225             | 885 | 450 | 560 | 150             | 250 | 190 | 690 | 560 | 180 | 670 | 28 | 12         | M24 | M16       | 65 | 140 | 69   | 18 | 58   | 250    | 480         |
| 300X250-500 | 5         | 300         | 250 | 225             | 885 | 450 | 630 | 150             | 315 | 250 | 760 | 630 | 180 | 670 | 28 | 12         | M24 | M16       | 65 | 140 | 69   | 18 | 58   | 250    | 690         |
| 350X300-400 | 6         | 350         | 300 | 250             | 975 | 450 | 600 | 180             | 315 | 250 | 760 | 630 | 180 | 730 | 24 | 12         | M24 | M16       | 75 | 170 | 79.5 | 20 | 67.5 | 250    | 780         |
| 350X300-500 | 6         | 350         | 300 | 250             | 975 | 500 | 650 | 225             | 360 | 270 | 900 | 750 | 180 | 730 | 32 | 12         | M30 | M16       | 75 | 170 | 79.5 | 20 | 67.5 | 250    | 910         |

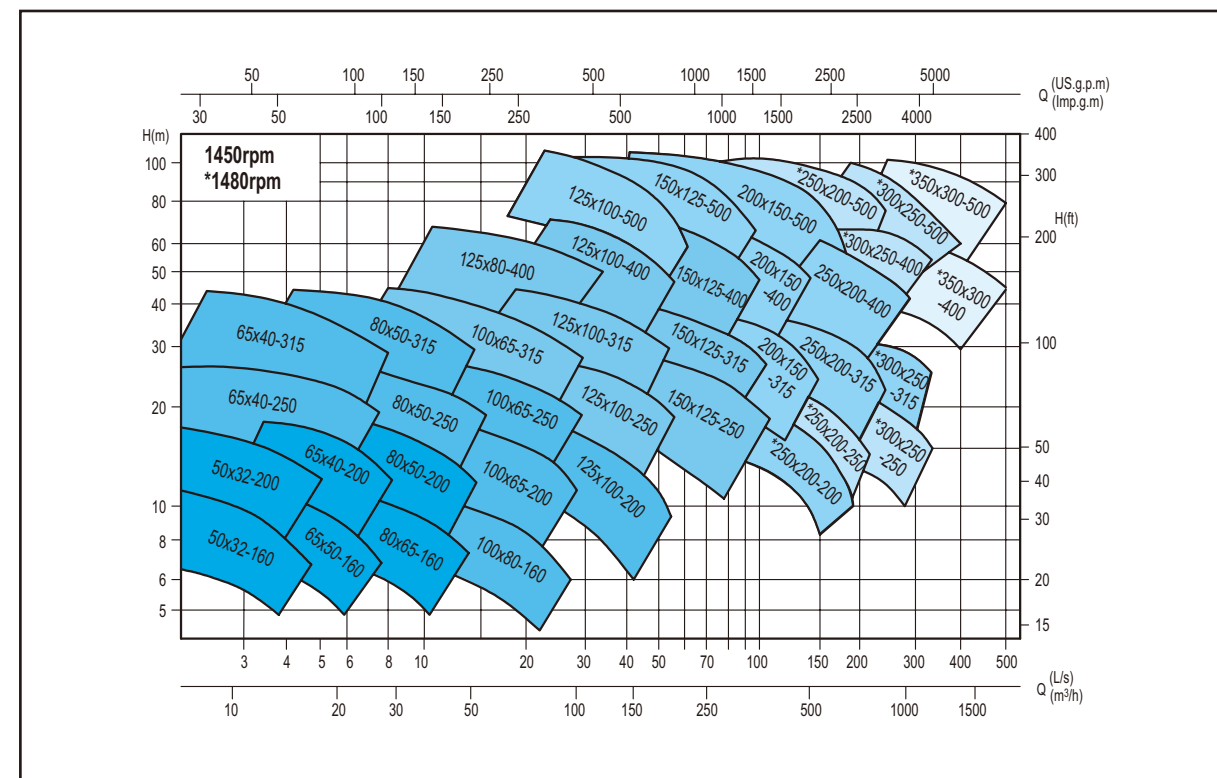




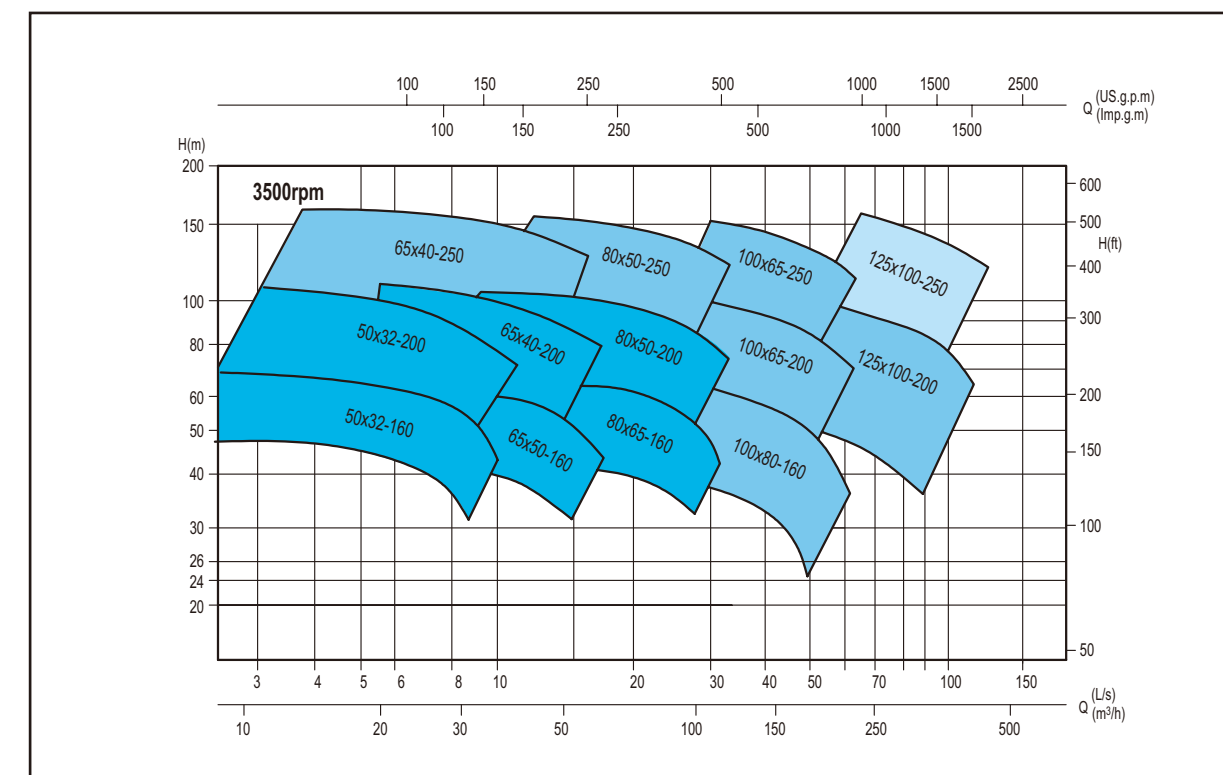
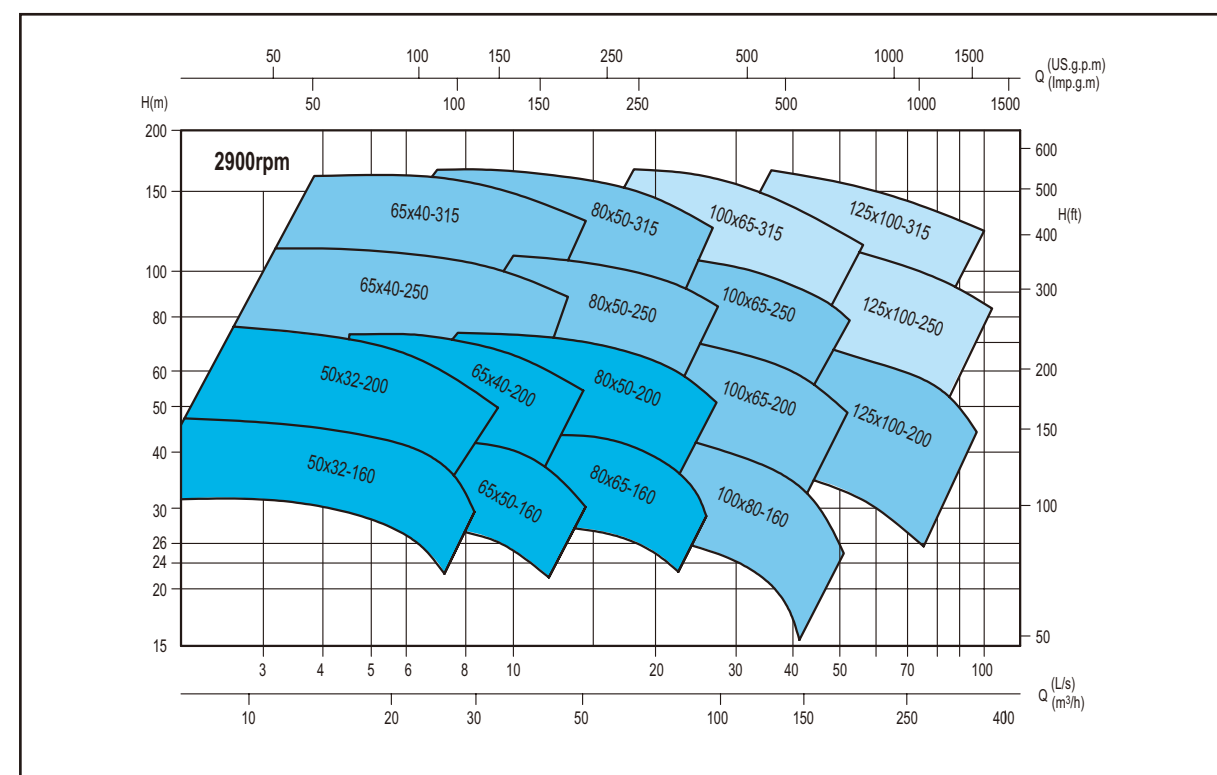
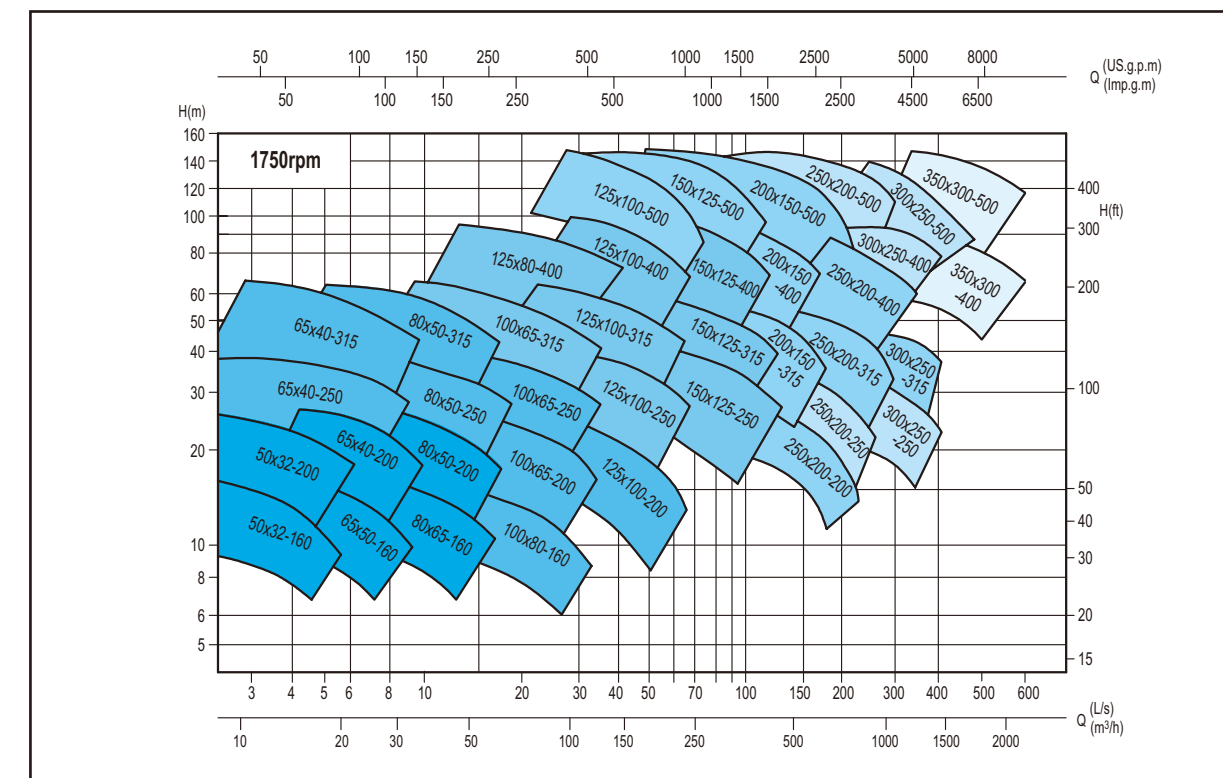


AMEGA PUMPS

Performance Chart (50Hz)



Performance Chart (60Hz)







OUR PURSUIT OF QUALITY  
IS ALWAYS THE SAME.

