

Replacement Solutions for your Split-Case and End Suction Pumps

- Exact replacement of iconic ranges of existing pumps
- The following shall remain identical to the existing installation for fast and economical replacement:
 - Foot-print
 - Interface dimensions
 - Driver
 - Foundation
 - Piping

PUMPSENSE FLUID ENGINEERING PVT. LTD 5/F, Hastings Court, Tower A, 96, Garden Reach Road, Kolkata - 700023



Are you looking for an exact replacement of your existing pump?

You have been a loyal and satisfied user of split-case pumps manufactured by some of the iconic names in the pump industry – Worthington, Weir, Mather & Platt, etc. Your pumps have given you years of trouble-free service. Time has now come to replace some of them. You are looking for a "drop-in" replacement so that the new pump fits into the existing base without requiring any civil, structural, or piping modifications. Ideally, you want the same pump again but your efforts to locate the same model of pump have not been successful.

You need not despair. Pumpsense will try and provide a perfect solution to your problem. We will build a pump for you with identical footprint and interface dimensions while the hydraulics will be optimally designed to take care of your new system's requirement with highest achievable energy efficiency.

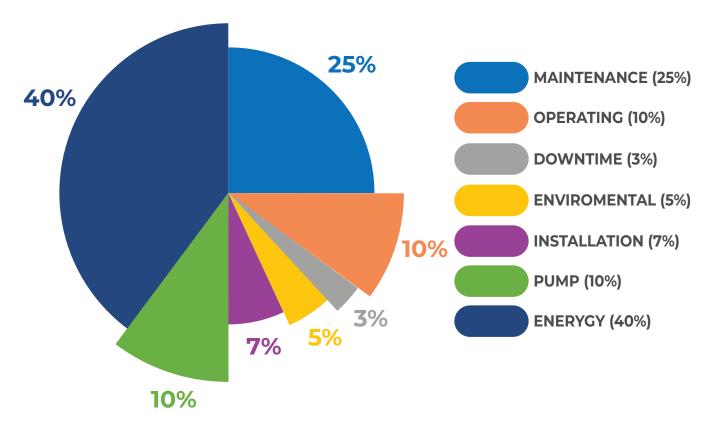
Drop-in replacements that can be offered include, but not limited to the following iconic ranges : Mather & Platt – Lonovane and Medivane Worthington – LN & LR Weir – Uniglide & Duoglide





Drop-in With Retrofit & Upgrade Improves Efficiency & Reliability

TYPICAL LIFE CYCLE COSTS (LCC) ANALYSIS OF A PUMPING SYSTEM



N.B. Percentages denote fraction of total project cost incurred under each category

CAPITALIZED COST OF ONE UNIT DIFFERENCE IN EFFICIENCY IS EQUAL TO THE COST OF THE PUMP



Retrofitting in Replacement Pumps

- New pump will be designed based on the accumulated experience of the existing installation
 - Altered duty due to change in the system can be accommodated.
 - Material specifications can be changed.
 - Sealing system can be modernized.
- New hydraulic design shall be done by Pumpsense. In most cases, the efficiency of the replaced pump will be higher - this can be proved by "before" and "after" power measurement at the site.
- These Factors shall lead to a reduction in life-cycle-cost and improvement in reliability low pay back period.

Benefits Of Retrofitting

- Optimizes energy consumption.
- Reduces chances of hydraulic & mechanical problems (such as noise & vibration).
- Widens the life of pump components (bearings, seal units, etc.). Thus, enhancing the pump's life span.
- Diminishes the chance of sudden pump failure.
- Improves pump's ability to serve user's need in an optimum manner.



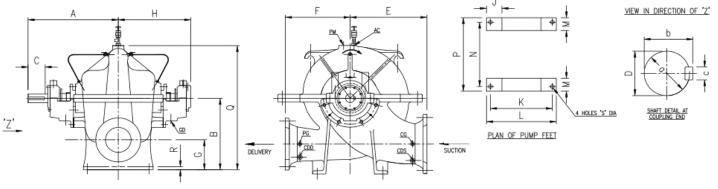
Faro Arm (Co-ordinate measuring machine)



High accuracy dimensional measurement using Faro Arm to check conformance with existing installation



Dimensions of Single Stage Horizontal Split Case Pumps -WHS (Weir Uniglide Series Replacement)



| | WEIR EQUIVALENT | DELIVERY FLANGE | | | | | SUCTION FLANGE | | | | | |
|------------|-----------------|-----------------|-------|-------|------|-------|----------------|-------|-------|------|-------|---------------|
| PUMPSENSE | | | | Holes | | | | | Holes | | | Net Weight |
| MODEL NAME | MODEL NAME | O.D | Width | No. | Dia. | P.C.D | O.D | Width | No. | Dia. | P.C.D | |
| 6WHS12 | SDA 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 202 |
| 6WHS14 | SDB 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 249 |
| 6WHS12L | SDBA 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 240 |
| 6WHS15 | SDBB 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 250 |
| 6WHS21 | SDC 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 318 |
| 6WHS17 | SDCB 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 337 |
| 6WHS15L | SDCC 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 340 |
| 6WHS12S | SDCH 150/200 | 285 | 26 | 8 | 22 | 240 | 340 | 30 | 12 | 22 | 295 | 377 |
| 8WHS14 | SDA 200/200 | 340 | 30 | 12 | 22 | 295 | 340 | 30 | 12 | 22 | 295 | 390 |
| 8WHS16 | SDB 200/200 | 340 | 30 | 12 | 22 | 295 | 340 | 30 | 12 | 22 | 295 | 309 |
| 8WHS21 | SDC 200/200 | 340 | 30 | 12 | 22 | 295 | 340 | 30 | 12 | 22 | 295 | 499 |
| 8WHS18 | SDB 200/250 | 340 | 30 | 12 | 22 | 295 | 406 | 32 | 12 | 26 | 355 | 474 |
| 8WHS21L | SDD 200/250 | 340 | 30 | 12 | 22 | 295 | 406 | 32 | 12 | 26 | 355 | 711 |
| 10WHS12 | SDA 250/250 | 406 | 32 | 12 | 26 | 355 | 406 | 32 | 12 | 26 | 355 | 601 |
| 10WHS15L | SDB 250/250 | 406 | 32 | 12 | 26 | 355 | 406 | 32 | 12 | 26 | 355 | 436 |
| 10WHS14 | SDBA 250/250 | 406 | 32 | 12 | 26 | 355 | 406 | 32 | 12 | 26 | 355 | 450 |
| 10WHS22 | SDC 250/250 | 406 | 32 | 12 | 26 | 355 | 406 | 32 | 12 | 26 | 355 | 965 |
| 10WHS15 | SDA 250/300 | 406 | 32 | 12 | 26 | 355 | 480 | 32 | 12 | 26 | 410 | 697 |
| 10WHS17 | SDB 250/300 | 406 | 32 | 12 | 26 | 355 | 480 | 32 | 12 | 26 | 410 | 1000 |
| 10WHS26 | SDD 250/300 | 444 | 48 | 12 | 26 | 355 | 510 | 51 | 12 | 26 | 410 | 809 |
| 10WHS22L | SDC 250/350 | 406 | 32 | 12 | 26 | 355 | 527 | 36 | 16 | 26 | 470 | 1250 |
| 10WHS27 | SDD 250/350 | 444 | 47 | 12 | 30 | 370 | 555 | 48 | 16 | 33 | 490 | 1100 |

| Shaft DIA | Coupling | Bore & k | Shaft Keyway | | |
|-----------|----------|----------|--------------|-------|--------|
| D | а | b | С | е | f |
| 25.009 | 24.996 | 28.5 | 8.018 | 21.00 | 8.000 |
| 24.996 | 24.983 | 28.3 | 7.982 | 20.80 | 7.964 |
| 30.009 | 29.996 | 33.5 | 8.018 | 26.00 | 8.000 |
| 29.996 | 29.983 | 33.3 | 7.982 | 25.80 | 7.964 |
| 35.018 | 35.003 | 38.5 | 10.018 | 30.00 | 10.000 |
| 35.002 | 34.987 | 38.3 | 9.982 | 29.80 | 9.964 |
| 45.018 | 45.003 | 49.00 | 14.021 | 39.50 | 14.000 |
| 45.002 | 44.987 | 48.80 | 13.979 | 39.30 | 13.957 |
| 50.018 | 50.003 | 54.0 | 14.021 | 44.50 | 14.000 |
| 50.002 | 49.987 | 53.8 | 13.979 | 44.30 | 13.957 |
| 55.030 | 55.013 | 59.5 | 16.021 | 49.00 | 16.00 |
| 55.011 | 54.994 | 59.3 | 15.979 | 48.80 | 15.957 |
| 62.030 | 62.013 | 66.6 | 18.021 | 55.00 | 18.000 |
| 62.002 | 61.994 | 64.4 | 17.979 | 54.80 | 17.957 |
| 65.030 | 65.013 | 69.6 | 18.021 | 58.80 | 18.000 |
| 65.011 | 64.994 | 69.4 | 17.979 | 57.80 | 17.957 |

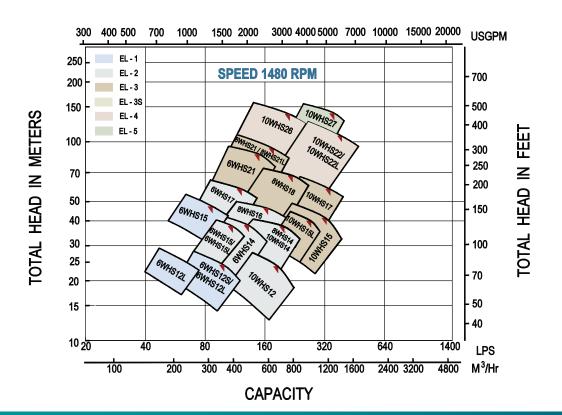
VIEW IN DIRECTION OF 'Z'



Range Chart of Axially Split-Case Pumps - WHS Range

SINGLE STAGE SPLIT-CASE PUMPS WITH DOUBLE ENTRY IMPELLER RANGE CHART 50Hz, 4Pole

HORIZONTAL/VERTICAL



Experience





Experience



Original: KSB Omega 350-430B Replacement: Pumpsense model 16HS19 for an Australian Customer



Original: Flowmore Model 5822-400x350 Replacement: Pumpsense model 14HS21 for Tata Steel





Original: WILO/ M&P 6/8 CME Replacement: Pumpsense model 6HS17S for an UK based Customer



Experience



Original: Aurora Pump Model Series 410 - 3x4x14 Replacement: Pumpsense Model V3HS13 for an UAE based Customer

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5/F, Hastings Court, Tower A, 96, Garden Reach Road, Kolkata - 700023 Tel: +91 33 2459 1861/1862 | Mob: +91 98301 09422 | Web: www.worldofpumps.com Email: enquiries@worldofpumps.com