

# Waste Water Treatment

## Archimedean Water Screw Pumps PA



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### Description ▼

The PA Archimedean Screw Pump is a special type of volumetric pump, able to satisfy users requirements as regards favourable investment and running costs, flexibility and reliability.

### Function ▼

Originally designed as machines for maintaining the water level in reclaimed land, screw pumps are today used for lifting up waters in the Waste Water Treatment Plants, in the management of industrial waters and generally whenever water (even containing suspended solids) has to be lifted.



### Application ▼

- Waste Water treatment
- Irrigation
- Drainage
- Rain water management
- Process water management

### Benefits ▼

- ✓ Possibility of use in contaminated waters even containing solids;
- ✓ Resistant machine due to lack of wear by cavitation and low speed;
- ✓ Constant efficiency over time;
- ✓ Efficiency almost constant with change of flow rate;
- ✓ Minimum maintenance;
- ✓ Wide range of flow rates.



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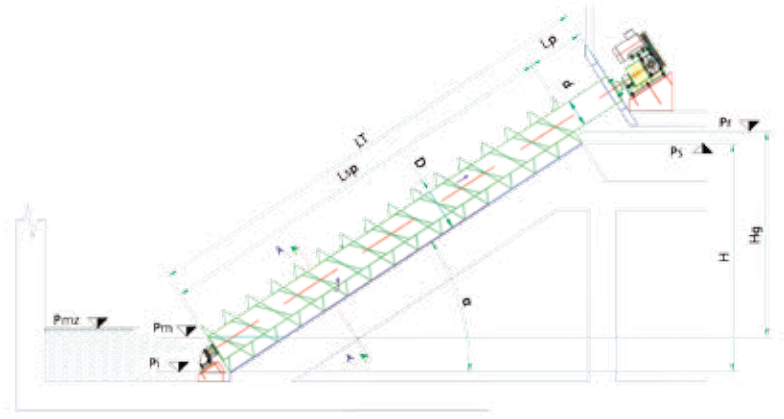


### Technical Features / Performance

- ▶ Outside diameters up to 4m
- ▶ Flow rates up to 6,000 l/s
- ▶ Internal pipe length up to 28m
- ▶ Lifting water head up to 8m
- ▶ Drive power installed up to 500kW

### Overall Dimensions

| SCREW PUMP TECHNICAL SPECIFICATION |          |      |
|------------------------------------|----------|------|
| Description                        | Symbol   | Unit |
| Angle of installation              | $\alpha$ | °    |
| Screw Length                       | Lsp      | mm   |
| Building Height                    | H        | mm   |
| Touch Point                        | Pi       | mm   |
| Filling point                      | Pm       | mm   |
| Chute point                        | Ps       | mm   |
| Delivery point                     | Pr       | mm   |
| Delivery Head                      | Hg       | mm   |



| TYPE   | Screw |       | Installation 30°  |                    |                    | Installation 33°  |                    |                    | Installation 35°  |                    |                    | Installation 38°  |                    |                    |
|--------|-------|-------|-------------------|--------------------|--------------------|-------------------|--------------------|--------------------|-------------------|--------------------|--------------------|-------------------|--------------------|--------------------|
|        | D mm  | p mm  | 1 flight Qmax l/s | 2 flights Qmax l/s | 3 flights Qmax l/s | 1 flight Qmax l/s | 2 flights Qmax l/s | 3 flights Qmax l/s | 1 flight Qmax l/s | 2 flights Qmax l/s | 3 flights Qmax l/s | 1 flight Qmax l/s | 2 flights Qmax l/s | 3 flights Qmax l/s |
| PA300  | 300   | 300   | 8                 | 11                 | 13                 | 6                 | 10                 | 12                 | 5                 | 9                  | 11                 | 4                 | 8                  | 10                 |
| PA400  | 400   | 400   | 16                | 22                 | 26                 | 12                | 19                 | 24                 | 10                | 18                 | 23                 | 9                 | 16                 | 20                 |
| PA500  | 500   | 500   | 27                | 36                 | 44                 | 19                | 32                 | 40                 | 17                | 30                 | 38                 | 15                | 27                 | 33                 |
| PA600  | 600   | 600   | 42                | 56                 | 68                 | 30                | 50                 | 62                 | 26                | 47                 | 59                 | 23                | 41                 | 52                 |
| PA700  | 700   | 700   | 63                | 84                 | 103                | 45                | 75                 | 92                 | 40                | 71                 | 88                 | 34                | 62                 | 77                 |
| PA800  | 800   | 800   | 86                | 115                | 140                | 62                | 102                | 126                | 54                | 96                 | 121                | 47                | 84                 | 106                |
| PA900  | 900   | 900   | 113               | 152                | 185                | 81                | 135                | 166                | 71                | 127                | 159                | 62                | 111                | 139                |
| PA1000 | 1,000 | 1,000 | 144               | 194                | 236                | 104               | 172                | 213                | 91                | 162                | 203                | 79                | 142                | 178                |
| PA1100 | 1,100 | 1,100 | 180               | 243                | 295                | 129               | 215                | 266                | 114               | 203                | 253                | 98                | 177                | 222                |
| PA1200 | 1,200 | 1,200 | 220               | 297                | 361                | 159               | 263                | 325                | 140               | 248                | 310                | 120               | 217                | 272                |
| PA1300 | 1,300 | 1,300 | 251               | 338                | 411                | 181               | 300                | 371                | 159               | 283                | 353                | 137               | 247                | 310                |
| PA1400 | 1,400 | 1,400 | 316               | 426                | 518                | 227               | 377                | 466                | 200               | 356                | 445                | 173               | 311                | 390                |
| PA1500 | 1,500 | 1,500 | 388               | 523                | 636                | 279               | 463                | 572                | 246               | 437                | 546                | 212               | 382                | 479                |
| PA1600 | 1,600 | 1,600 | 432               | 582                | 708                | 311               | 516                | 637                | 274               | 486                | 607                | 236               | 425                | 533                |
| PA1700 | 1,700 | 1,700 | 517               | 697                | 847                | 372               | 618                | 763                | 328               | 582                | 727                | 283               | 509                | 639                |
| PA1800 | 1,800 | 1,800 | 568               | 766                | 931                | 409               | 679                | 838                | 360               | 639                | 799                | 310               | 559                | 702                |
| PA1900 | 1,900 | 1,900 | 667               | 900                | 1,094              | 480               | 797                | 985                | 423               | 751                | 939                | 365               | 657                | 824                |
| PA2000 | 2,000 | 2,000 | 726               | 979                | 1,190              | 523               | 867                | 1,072              | 460               | 817                | 1,022              | 397               | 715                | 897                |
| PA2100 | 2,100 | 2,100 | 840               | 1,132              | 1,377              | 604               | 1,003              | 1,240              | 533               | 946                | 1,182              | 459               | 827                | 1,038              |
| PA2200 | 2,200 | 2,200 | 962               | 1,297              | 1,576              | 692               | 1,149              | 1,419              | 610               | 1,083              | 1,353              | 526               | 946                | 1,188              |
| PA2300 | 2,300 | 2,300 | 1,036             | 1,397              | 1,698              | 746               | 1,238              | 1,529              | 657               | 1,166              | 1,458              | 566               | 1,020              | 1,280              |
| PA2400 | 2,400 | 2,400 | 1,111             | 1,497              | 1,820              | 799               | 1,327              | 1,639              | 704               | 1,250              | 1,562              | 607               | 1,093              | 1,372              |
| PA2500 | 2,500 | 2,500 | 1,188             | 1,602              | 1,947              | 855               | 1,419              | 1,753              | 753               | 1,337              | 1,671              | 649               | 1,169              | 1,468              |
| PA2600 | 2,600 | 2,600 | 1,340             | 1,806              | 2,196              | 964               | 1,601              | 1,977              | 850               | 1,508              | 1,885              | 732               | 1,319              | 1,655              |
| PA2700 | 2,700 | 2,700 | 1,500             | 2,022              | 2,459              | 1,080             | 1,792              | 2,214              | 951               | 1,689              | 2,110              | 820               | 1,476              | 1,853              |
| PA2800 | 2,800 | 2,800 | 1,594             | 2,149              | 2,612              | 1,147             | 1,904              | 2,352              | 1,011             | 1,794              | 2,243              | 871               | 1,569              | 1,969              |
| PA2900 | 2,900 | 2,900 | 1,770             | 2,387              | 2,902              | 1,274             | 2,115              | 2,613              | 1,123             | 1,993              | 2,491              | 968               | 1,742              | 2,187              |
| PA3000 | 3,000 | 3,000 | 1,870             | 2,521              | 3,065              | 1,346             | 2,234              | 2,760              | 1,186             | 2,105              | 2,631              | 1,022             | 1,841              | 2,310              |
| PA3100 | 3,100 | 3,100 | 1,973             | 2,660              | 3,234              | 1,420             | 2,358              | 2,912              | 1,251             | 2,221              | 2,776              | 1,079             | 1,942              | 2,438              |
| PA3200 | 3,200 | 3,200 | 2,175             | 2,932              | 3,564              | 1,565             | 2,598              | 3,210              | 1,379             | 2,448              | 3,060              | 1,189             | 2,140              | 2,687              |
| PA3300 | 3,300 | 3,300 | 2,286             | 3,082              | 3,747              | 1,645             | 2,731              | 3,374              | 1,450             | 2,574              | 3,216              | 1,250             | 2,250              | 2,824              |
| PA3400 | 3,400 | 3,400 | 2,400             | 3,235              | 3,933              | 1,727             | 2,867              | 3,542              | 1,522             | 2,701              | 3,376              | 1,312             | 2,362              | 2,965              |
| PA3500 | 3,500 | 3,500 | 2,626             | 3,541              | 4,305              | 1,890             | 3,138              | 3,876              | 1,666             | 2,957              | 3,695              | 1,436             | 2,585              | 3,245              |

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