LAKOS
Separators and Filtration Solutions

# Sizing Guide

Specifying Your Customer's PPS Series Pump Protection Separators

## Identify Flow Range & Minimum Well I.D. Requirements

Use **CHART A** to select a model according to the pump's actual flow rate. If two or more models are applicable, select the model with the lowest maximum flow rate. Note also the minimum required well I.D. If the well is not large enough, select another available model which accommodates the flow rate and well I.D. Circle the appropriate model on this worksheet.

## CHART A

The following data applies only to the basic separator. Since the pump enclosure shell for submersible separators is predicated on the actual pump's dimensions, standard specifications cannot be published.

| Model | Minimum Well I.D. in./mm | Flow Range U.S. gpm $m^3$/hr | Outside Diameter in./mm | Length with Riser & Flapper Valve in./mm | Riser Size N.P.T. | Weight lbs./kg | Required Minimum Submergence ft/m | Optional Tail Pipe Diameter in. | Optional Tail Pipe Length ft/m |
|---|---|---|---|---|---|---|---|---|---|
| PPS-100-D | 6<br>153 | 100-175<br>23-40 | 5⅝<br>143 | 88⅜<br>2245 | 2½-inch | 93<br>42 | 30<br>9.2 | 0.75 | 20<br>6.1 |
| PPS-125-E | 7<br>178 | 125-250<br>28-57 | 5 9/16<br>141 | 106<br>2692 | 3-inch | 142<br>64 | 30<br>9.2 | 1 | 20<br>6.1 |
| PPS-150-F | 8<br>204 | 150-325<br>34-74 | 6⅝<br>168 | 120¼<br>3054 | 4-inch | 220<br>100 | 30<br>9.2 | 1 | 20<br>6.1 |
| PPS-325-GSA | 9¾<br>248 | 325-520<br>74-118 | 8⅝<br>219 | 124<br>3150 | 6-inch | 191<br>87 | 60<br>18.4 | 1.25 | 40<br>12.2 |
| PPS-520-GGA | 9¾<br>248 | 520-710<br>118-161 | 8⅝<br>219 | 130<br>3302 | 6-inch | 213<br>97 | 60<br>18.4 | 1.25 | 40<br>12.2 |
| PPS-325-G | 10¾<br>273 | 325-650<br>74-148 | 8⅝<br>219 | 132½<br>3366 | 6-inch | 267<br>121 | 30<br>9.2 | 1.25 | 20<br>6.1 |
| PPS-600-HSA | 12<br>305 | 600-910<br>136-207 | 10⅝<br>270 | 141½<br>3594 | 8-inch | 281<br>128 | 60<br>18.4 | 1.5 | 60<br>18.3 |
| PPS-880-HHA | 12<br>305 | 880-1375<br>200-312 | 10⅝<br>270 | 145¾<br>3702 | 8-inch | 315<br>143 | 60<br>18.4 | 1.5 | 60<br>18.3 |
| PPS-550-H | 13¼<br>337 | 550-1110<br>125-252 | 10¾<br>273 | 147<br>3734 | 8-inch | 390<br>177 | 30<br>9.2 | 1.5 | 20<br>6.1 |
| PPS-1290-ISA | 13¼<br>337 | 1290-1700<br>293-386 | 10¾<br>273 | 150½<br>3823 | 8-inch | 393<br>178 | 60<br>18.4 | 1.5 | 60<br>18.3 |
| PPS-825-I | 15¼<br>388 | 825-1450<br>187-329 | 12¾<br>324 | 154<br>3912 | 8-inch | 454<br>206 | 30<br>9.2 | 1.5 | 20<br>6.1 |
| PPS-1460-JSA | 15¼<br>388 | 1460-2040<br>332-463 | 12¾<br>324 | 158<br>4013 | 10-inch | 492<br>223 | 60<br>18.4 | 2 | 60<br>18.3 |
| PPS-1010-J | 17¼<br>438 | 1010-1800<br>229-409 | 14<br>356 | 163<br>4140 | 10-inch | 526<br>239 | 30<br>9.2 | 2 | 20<br>6.1 |
| PPS-1780-KSA | 17¼<br>438 | 1780-2420<br>404-550 | 14<br>356 | 170<br>4318 | 10-inch | 575<br>261 | 60<br>18.4 | 2 | 60<br>18.3 |
| PPS-1640-K | 19¼<br>489 | 1640-2560<br>372-581 | 16<br>406 | 185<br>4699 | 10-inch | 703<br>319 | 30<br>9.2 | 2 | 20<br>6.1 |
| PPS-2520-KKA | 19¼<br>489 | 2520-3180<br>572-722 | 16<br>406 | 204<br>5182 | 12-inch | 754<br>342 | 60<br>18.4 | 2 | 60<br>18.3 |

Complete the LAKOS **PPS Worksheet (LS-423)** when placing your order to ensure correct sizing.




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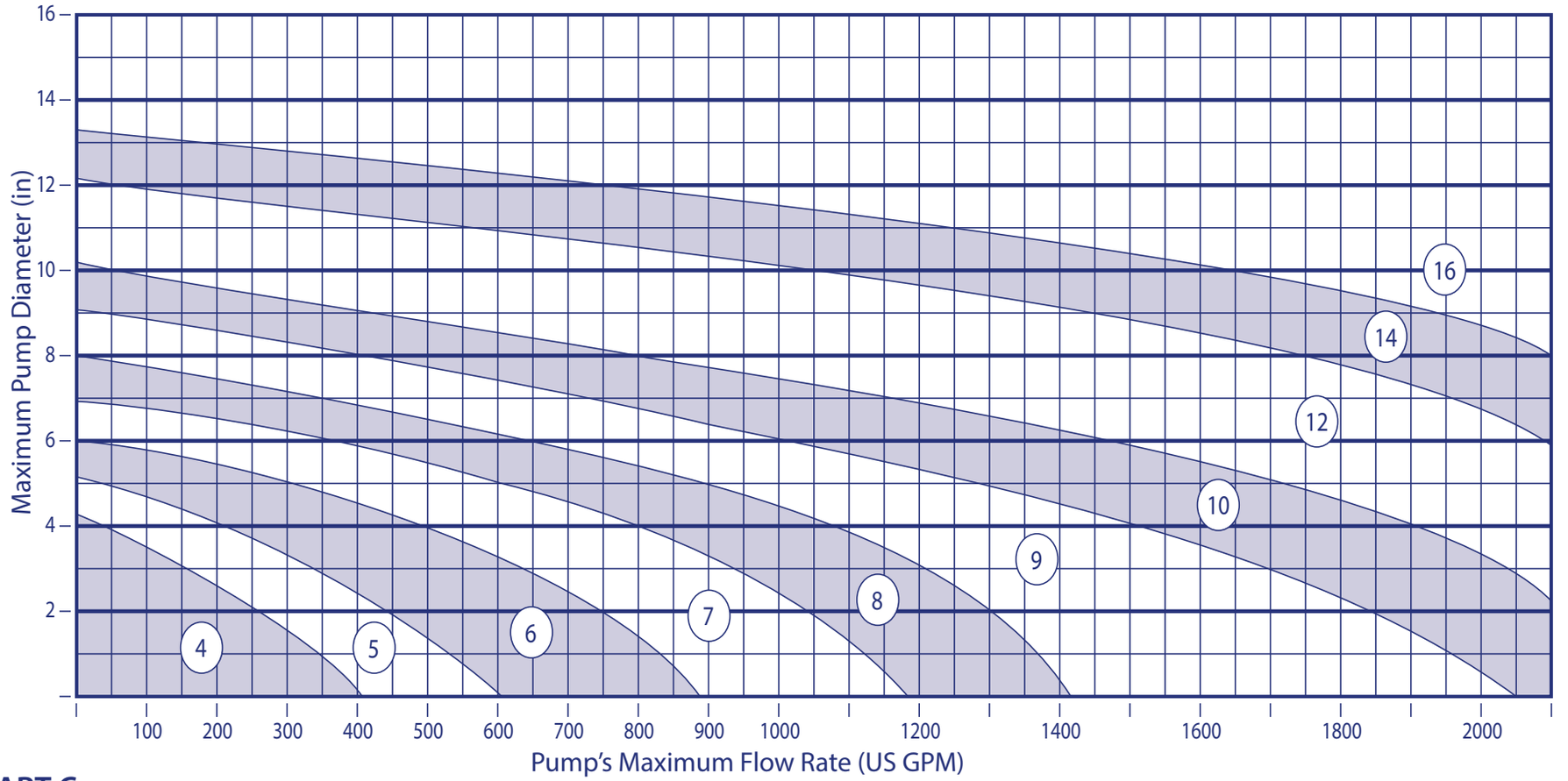


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## Determine Pump Enclosure Shell Size
### (Submersible Pumps Only)

The submersible pump must fit into this shell. Using **CHART B**, locate the pump's maximum flow rate (in U.S. gpm) along the horizontal scale and the maximum diameter of your pump or motor (whichever is larger) along the vertical scale. Find the intersection point of these two values. The "range" it lies within dictates the required pump shell size (indicated in the circle).
NOTE: If the intersecting point is directly on the line between two "ranges," you must select the larger shell size. Circle the appropriate shell size on this worksheet.
Use **CHART C** to determine if the well I.D. is large enough to accommodate the required pump enclosure shell. Required pump shell sizes are shown in the circles.

### CHART B




### CHART C

| Pump Enclosure Shell Size | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Well I.D. (inches) | 5 ½ | 6 ½ | 7 ¾ | 8 ¾ | 10 | 11 | 12 | 14 | 16 | 18 |



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## Select A Pump Enclosure Shell Kit

Use **CHART D** below to determine proper sizing for optional shell kits. For 9", 12", 14" and 16" shells, select a custom pump enclosure shell.

## CHART D

| | Pump Riser | Separator | Shell Weld Kit Part Numbers | | Description |
|---|---|---|---|---|---|
| 6 inch shell | 2.5 | D | Top | 135161 | 2.5" NPT Riser, 6" Diameter |
| | | | Bottom | 135168 | PPS-D, 6" Diameter |
| | 3 | D | Top | 135162 | 3" NPT Riser, 6" Diameter |
| | | | Bottom | 135168 | PPS-D, 6" Diameter |
| | 3 | E | Top | 135162 | 3" NPT Riser, 6" Diameter |
| | | | Bottom | 135169 | PPS-E, 6" Diameter |
| | 3 | F | Top | 135162 | 3" NPT Riser, 6" Diameter |
| | | | Bottom | 135170 | PPS-F, 6" Diameter |
| | 4 | D | Top | 135163 | 4" NPT Riser, 6" Diameter |
| | | | Bottom | 135168 | PPS-D, 6" Diameter |
| | 4 | E | Top | 135163 | 4" NPT Riser, 6" Diameter |
| | | | Bottom | 135169 | PPS-E, 6" Diameter |
| | 4 | F | Top | 135163 | 4" NPT Riser, 6" Diameter |
| | | | Bottom | 135170 | PPS-F, 6" Diameter |
| 8 inch shell | 3 | D | Top | 135164 | 3" NPT Riser, 8" Diameter |
| | | | Bottom | 135171 | PPS-D, 8" Diameter |
| | 3 | E | Top | 135164 | 3" NPT Riser, 8" Diameter |
| | | | Bottom | 135172 | PPS-E, 8" Diameter |
| | 3 | F | Top | 135164 | 3" NPT Riser, 8" Diameter |
| | | | Bottom | 135173 | PPS-F, 8" Diameter |
| | 3 | G | Top | 135164 | 3" NPT Riser, 8" Diameter |
| | | | Bottom | 135174 | PPS-G, 8" Diameter |
| | 4 | D | Top | 135165 | 4" NPT Riser, 8" Diameter |
| | | | Bottom | 135171 | PPS-D, 8" Diameter |
| | 4 | E | Top | 135165 | 4" NPT Riser, 8" Diameter |
| | | | Bottom | 135172 | PPS-E, 8" Diameter |
| | 4 | F | Top | 135165 | 4" NPT Riser, 8" Diameter |
| | | | Bottom | 135173 | PPS-F, 8" Diameter |
| | 4 | G | Top | 135165 | 4" NPT Riser, 8" Diameter |
| | | | Bottom | 135174 | PPS-G, 8" Diameter |
| 10 inch shell | 4 | G | Top | 135166 | 4" NPT Riser, 10" Diameter |
| | | | Bottom | 135175 | PPS-G, 10" Diameter |
| | 6 | G | Top | 135167 | 6" NPT Riser, 10" Diameter |
| | | | Bottom | 135175 | PPS-G, 10" Diameter |
| | 6 | H | Top | 135167 | 6" NPT Riser, 10" Diameter |
| | | | Bottom | 135176 | PPS-H, 10" Diameter |

## Optional Shell Weld Kit



Top with Pump Riser Connection



Bottom with Separator Connection

## Selecting A Custom Pump Enclosure Shell

Use **CHART E** below to determine standard shell sizes.

## CHART E

**Please consult factory for availability and part number*

| Shell Diameter | Separator Size | Riser Size (MNPT) | Overall Pump and Motor Length Plus 8" | | | | |
|---|---|---|---|---|---|---|---|
| | | | Up to 72" | 73" to 96" | 97" to 120" | 121" to 144" | 145" to 168" |
| 6 inch | D | 2.5 | 128385 | 128386 | 128387 | 128388 | 128389 |
| | | 3 | 128413 | 128414 | 128415 | 128416 | 128417 |
| | | 4 | 128418 | 128419 | 128420 | 128421 | 128422 |
| | E | 3 | 128423 | 128424 | 128425 | 128426 | 128427 |
| | F | 2 | * | 136512 | * | * | * |
| | | 3 | 128428 | 128429 | 128430 | 128431 | 128432 |
| | | 4 | 104136 | * | 113264 | * | * |
| 7 inch | D | 3 | 128433 | 128434 | 128435 | 128436 | 128437 |
| | | 4 | 128438 | 128439 | 128440 | 128441 | 128442 |
| | E | 3 | 128443 | 128444 | 128445 | 128446 | 128447 |
| | | 4 | 128448 | 128449 | 128450 | 128451 | 128452 |
| | F | 3 | 128453 | 128454 | 128455 | 128456 | 128457 |
| | | 4 | 128458 | 128459 | 128460 | 128461 | 128462 |
| 8 inch | D | 3 | 128463 | 128464 | 128465 | 128466 | 128467 |
| | | 4 | 128468 | 128469 | 128470 | 128471 | 128472 |
| | E | 3 | 128473 | 128474 | 128475 | 128476 | 128477 |
| | | 4 | 128478 | 128479 | 128480 | 128481 | 128482 |
| | F | 3 | 128483 | 128484 | 128485 | 128486 | 128487 |
| | | 4 | 128488 | 128489 | 128490 | 128491 | 128492 |
| | | 5 | 120615 | * | * | * | * |
| | G | 4 | 128493 | 128494 | 128495 | 128496 | 128497 |
| | | 5 | * | * | 115953 | * | * |
| | | 6 | * | 136203 | * | * | * |
| 9 inch | F | 4 | 128498 | 128499 | 128500 | 128501 | 128502 |
| | | 6 | * | * | * | 114465 | * |
| | G | 4 | 128503 | 128504 | 128505 | 128506 | 128507 |
| | | 5 | * | * | 115921 | * | * |
| | | 6 | 128508 | 128509 | 128510 | 128511 | 128512 |
| 10 inch | F | 4 | * | * | 136214 | * | * |
| | G | 4 | 128513 | 128514 | 128515 | 128516 | 128517 |
| | | 5 | * | * | 136787 | * | * |
| | | 6 | 128518 | 128519 | 128520 | 128521 | 128522 |
| | H | 6 | 128523 | 128524 | 128525 | 128526 | 128527 |
| | | 8 | * | * | 136165 | * | * |
| 12 inch | Any | Any | * | * | * | * | * |
| 14 inch | Any | Any | * | * | * | * | * |
| 16 inch | Any | Any | * | * | * | * | * |



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