



**RPS**  
WATER PUMPS

TECHNICAL BROCHURE  
RPSWP-ST-2021

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# RPS WATER PUMPS

## ST Pump Series

SUBMERSIBLE PUMP SERIES | 5 - 100 GPM, ½ - 5 HP, 60 Hz

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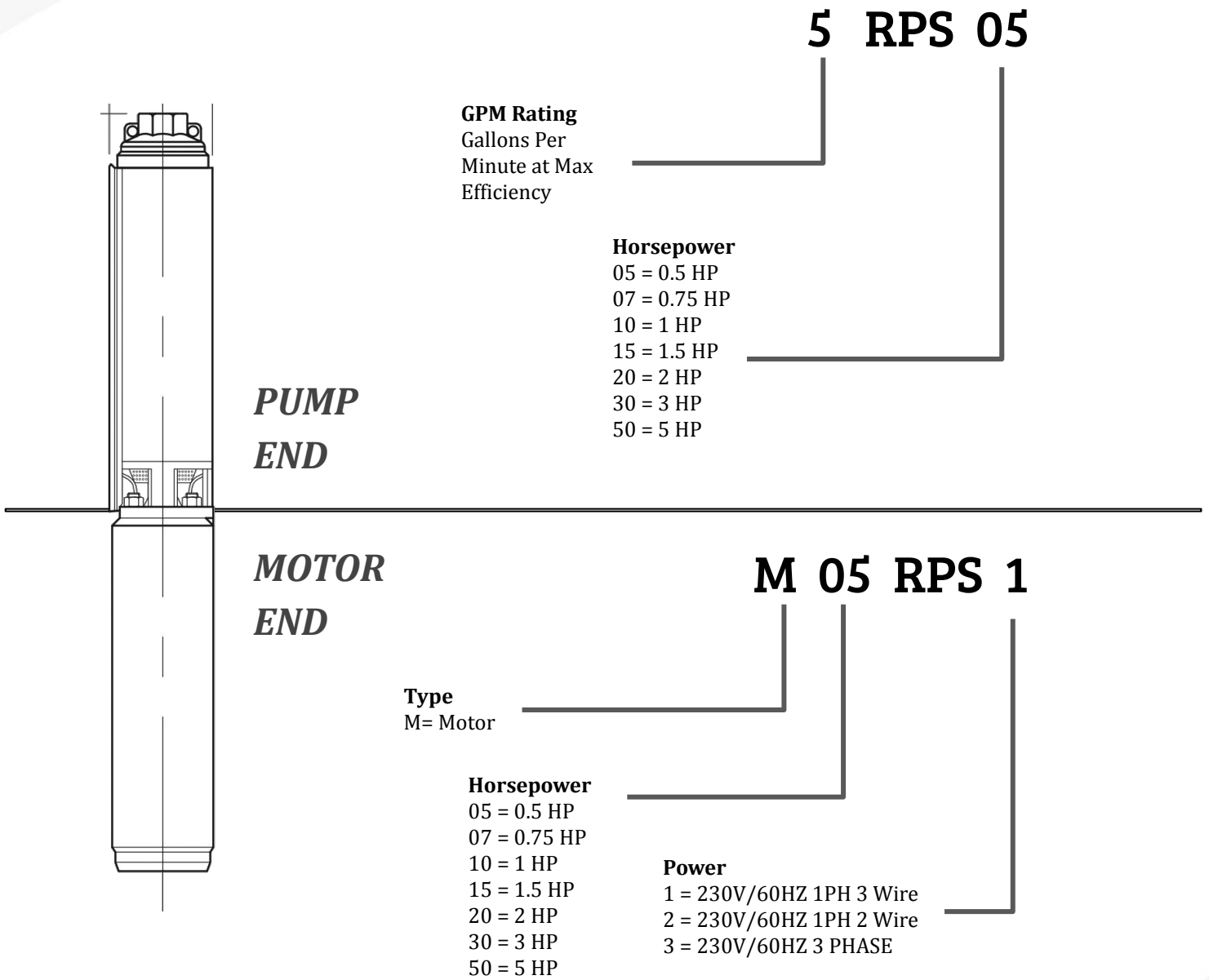
NSF/ANSI 61/372  
Drinking Water

[RPSwaterpumps.com](http://RPSwaterpumps.com)



**RPS**  
WATER PUMPS

# RPS Models



| RPS Solar Pumps Model | Horsepower | Motor   | Deep (D) | Mid (M) | Volume (V) |
|-----------------------|------------|---------|----------|---------|------------|
| 500                   | 1/2        | M05RPS3 | 5RPS05   | 10RPS05 | 18RPS05    |
| 750                   | 3/4        | M07RPS3 | 5RPS07   | 10RPS07 | 18RPS07    |
| 1000                  | 1          | M10RPS3 | 5RPS10   | 13RPS10 | 55RPS10    |
| 1500                  | 1-1/2      | M15RPS3 | 5RPS15   | 18RPS15 | 60RPS15    |
| 2000                  | 2          | M20RPS3 | 5RPS20   | 18RPS20 | 60RPS20    |
| 3000                  | 3          | M30RPS3 | 7RPS30   | 35RPS30 | 80RPS30    |
| 5000                  | 5          | M50RPS3 | 10RPS50  | 40RPS50 | 80RPS50    |



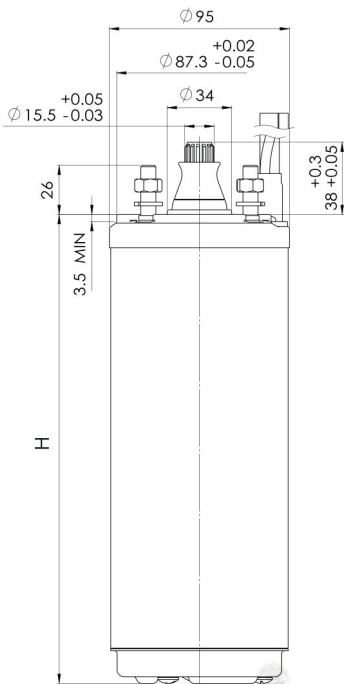
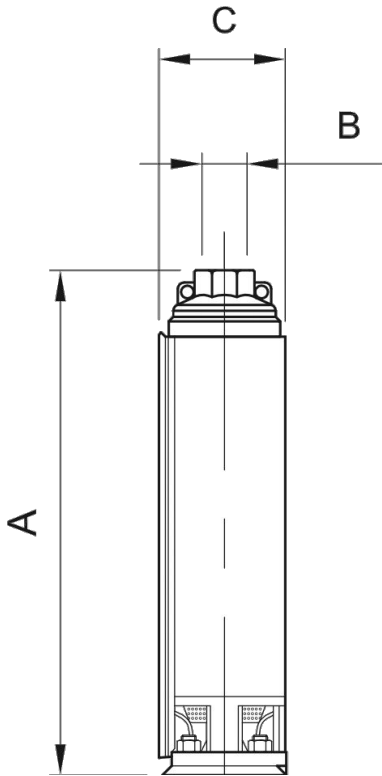
# Specifications

|                               |  |
|-------------------------------|--|
| <b>Voltage Range</b>          | 220V / 230V / 240V   |
| <b>Frequency</b>              | 60 Hz  |
| <b>RPM</b>                    | 3450   |
| <b>Start/Stop</b>             | No Limit on 3 Phase (VFD Compatible)   |
| <b>Angles of Operation</b>    | Vertical (upright) or Horizontal (90 deg)  |
| <b>Liquid Characteristics</b> | pH 5 to 9, Maximum temperature 86F<br>Sand Content: <150g/m <sup>3</sup> for centrifugal |
| <b>Rotation</b>               | CCW  |
| <b>Minimum Well Size</b>      | 4" (Pump OD 3.85")   |
| <b>Mounting</b>               | NEMA Standard Dimensions   |
| <b>Protection Class</b>       | IP 68  |
| <b>Max Submersion</b>         | 656ft  |
| <b>Backflow Preventer</b>     | 304 SS All Models  |
| <b>Certifications</b>         | CSA, NSF/ANSI 61/372 Drinking Water  |

Hermetically sealed stator, Pressure equalizing diaphragm, Removable wire connector, Field serviceable pump ends, Laser welded stainless housing

| <b>Model</b> | <b>HP</b> | <b>Service Factor</b> | <b>Current (Amps)</b> | <b>Current Max (Amps)</b> | <b>Starting Amps</b> | <b>Thrust</b> |
|--------------|-----------|-----------------------|-----------------------|---------------------------|----------------------|---------------|
| M05RPS3      | 0.5       | 1.6                   | 2.4                   | 2.8                       | 15                   | 2000N         |
| M07RPS3      | 0.75      | 1.5                   | 4                     | 4.3                       | 25.2                 | 2000N         |
| M10RPS3      | 1         | 1.4                   | 3.6                   | 4.4                       | 20                   | 3000N         |
| M15RPS3      | 1.5       | 1.3                   | 4.8                   | 6.4                       | 34.8                 | 3000N         |
| M20RPS3      | 2         | 1.25                  | 6.5                   | 7.5                       | 34.1                 | 3000N         |
| M30RPS3      | 3         | 1.15                  | 9.8                   | 10.6                      | 56                   | 4000N         |
| M50RPS3      | 5         | 1.15                  | 15.7                  | 17.3                      | 88.4                 | 6000N         |

# Dimensions

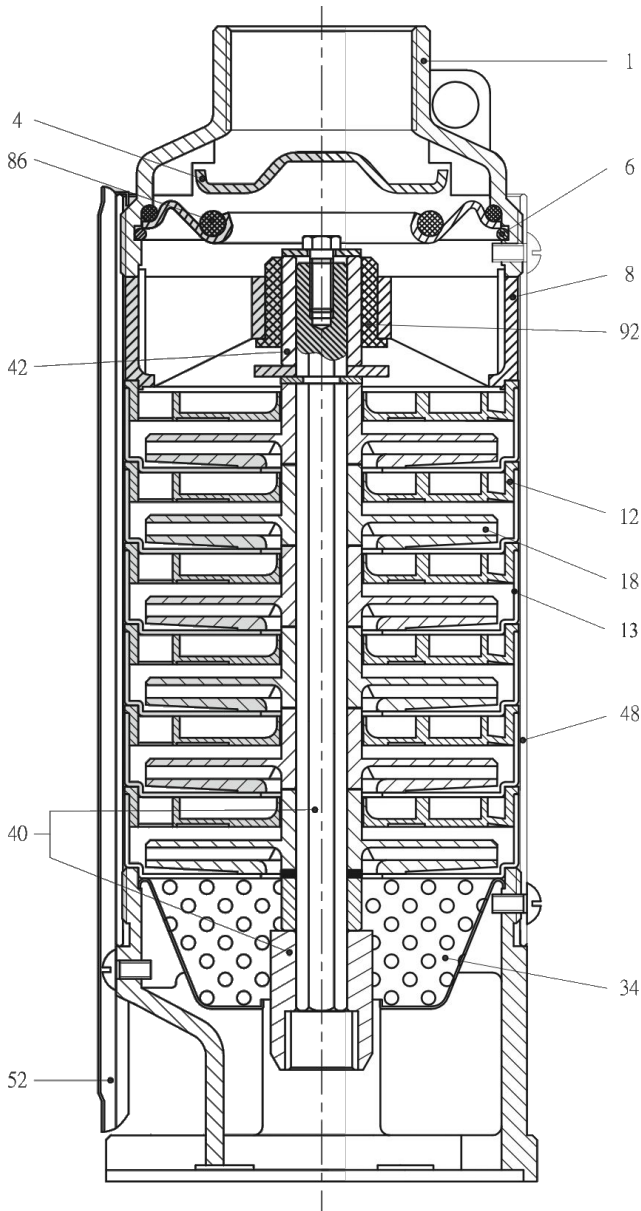


| Model   | Stages | A (in)<br>Length | B (in)<br>FNPT | C (in)<br>Diameter | Weight<br>(lbs) |
|---------|--------|------------------|----------------|--------------------|-----------------|
| 18RPS05 | 5      | 10.12            | 1-1/4"         | 3.86"              | 6.0             |
| 10RPS05 | 7      | 10.67            | 1-1/4"         | 3.86"              | 6.2             |
| 5RPS05  | 12     | 14.13            | 1-1/4"         | 3.86"              | 7.9             |
| 18RPS07 | 6      | 10.98            | 1-1/4"         | 3.86"              | 6.2             |
| 10RPS07 | 10     | 12.76            | 1-1/4"         | 3.86"              | 7.3             |
| 5RPS07  | 15     | 16.18            | 1-1/4"         | 3.86"              | 9.0             |
| 55RPS10 | 3      | 17.05            | 2"             | 3.86"              | 9.5             |
| 13RPS10 | 10     | 12.76            | 1-1/4"         | 3.86"              | 7.1             |
| 5RPS10  | 20     | 19.65            | 1-1/4"         | 3.86"              | 10.8            |
| 60RPS15 | 4      | 14.88            | 2"             | 3.86"              | 8.6             |
| 18RPS15 | 8      | 12.68            | 1-1/4"         | 3.86"              | 6.8             |
| 5RPS15  | 26     | 25.28            | 1-1/4"         | 3.86"              | 12.8            |
| 60RPS20 | 5      | 16.93            | 2"             | 3.86"              | 9.7             |
| 18RPS20 | 14     | 17.80            | 1-1/4"         | 3.86"              | 9.0             |
| 5RPS20  | 33     | 31.30            | 1-1/4"         | 3.86"              | 18.3            |
| 80RPS30 | 5      | 18.58            | 2"             | 3.86"              | 9.7             |
| 35RPS30 | 13     | 23.90            | 2"             | 3.86"              | 12.6            |
| 7RPS30  | 34     | 32.80            | 1-1/4"         | 3.86"              | 20.5            |
| 80RPS50 | 9      | 29.25            | 2"             | 3.86"              | 15.2            |
| 40RPS50 | 14     | 23.78            | 2"             | 3.86"              | 12.6            |
| 10RPS50 | 42     | 37.56            | 1-1/4"         | 3.86"              | 21.6            |

| Model   | HP   | H (mm)<br>Length | H (in)<br>Length | Weight (lbs) |
|---------|------|------------------|------------------|--------------|
| M05RPS3 | 0.5  | 248              | 9.76             | 20.2         |
| M07RPS3 | 0.75 | 275              | 10.83            | 22.6         |
| M10RPS3 | 1    | 298              | 11.73            | 24.8         |
| M15RPS3 | 1.5  | 298              | 11.73            | 24.9         |
| M20RPS3 | 2    | 352              | 13.86            | 30.0         |
| M30RPS3 | 3    | 396              | 15.59            | 34.4         |
| M50RPS3 | 5    | 551              | 21.69            | 50.0         |

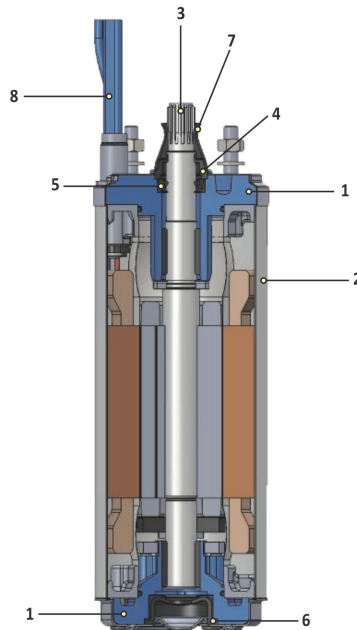
# Materials

## PUMP ENDS



|    | Part Name                  | Material            |
|----|----------------------------|---------------------|
| 1  | Discharge Head             | AISI 304 SS         |
| 4  | Check Valve Cone           | AISI 304 SS         |
| 6  | Check Valve retaining Ring | AISI 304 SS         |
| 8  | Bearing Spider             | Polycarbonate       |
| 12 | Diffuser                   | Polycarbonate       |
| 13 | Bowl                       | AISI 304 SS         |
| 18 | Impeller                   | Noryl               |
| 34 | Strainer                   | AISI 304 SS         |
| 40 | Pump Shaft / Coupling      | AISI 304 SS         |
| 42 | Shaft Sleeve               | AISI 304 SS / Noryl |
| 48 | Pump Casing                | AISI 304 SS         |
| 52 | Cable Guard                | AISI 304 SS         |
| 86 | O-Ring                     | NBR                 |
| 92 | Bearing                    | Polyacetal          |

## MOTORS

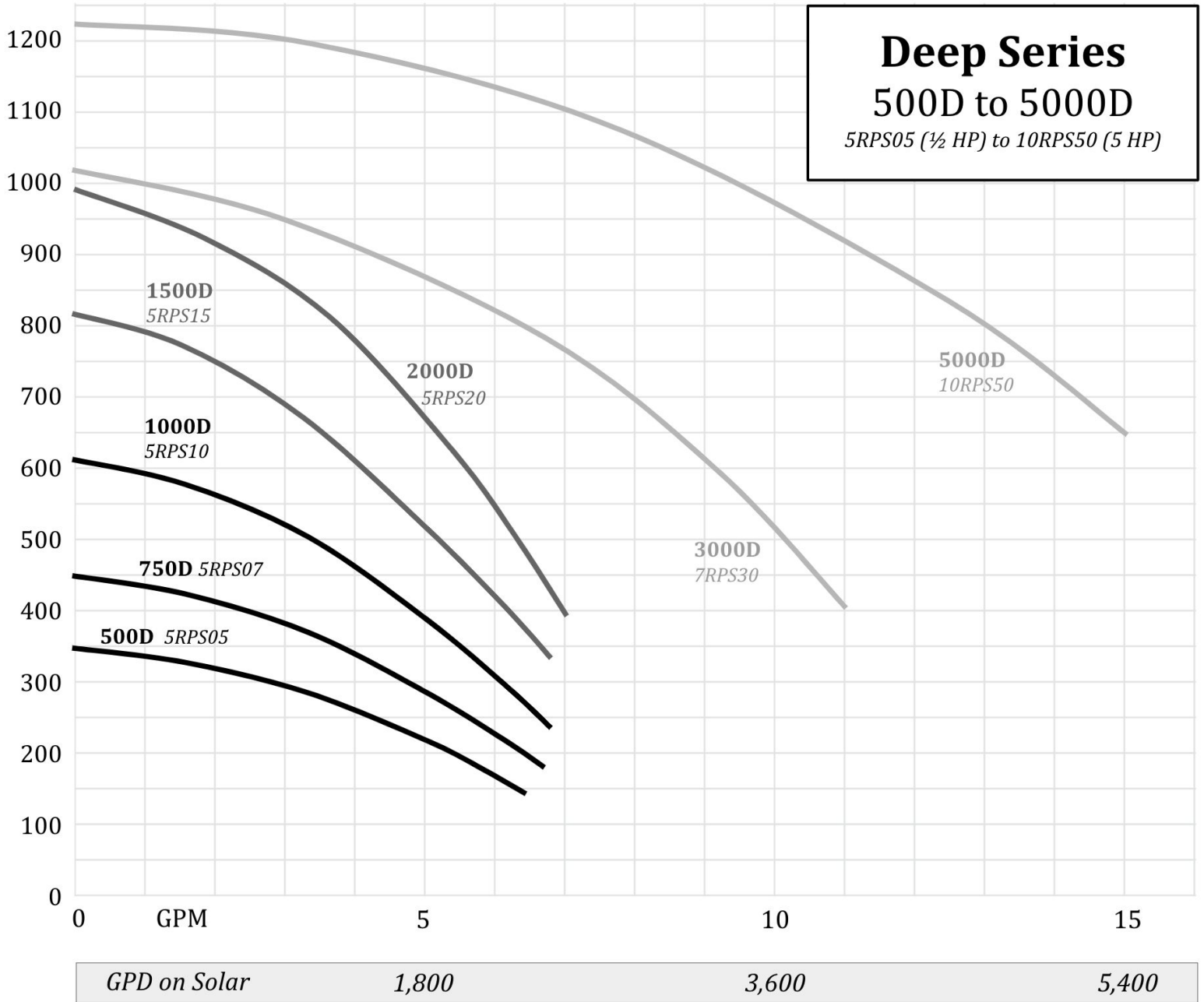


|   |              |          |
|---|--------------|----------|
| 1 | Bracket      | AISI 304 |
| 2 | Stator Shell | AISI 304 |
| 3 | Shaft        | AISI 420 |
| 4 | Seal Cover   | Nylon    |
| 5 | Lip Seal     | NBR      |
| 6 | Diaphragm    | NBR      |
| 7 | Sand Slinger | NBR      |
| 8 | Wire         | XLPE     |
|   | Hardware     | AISI 304 |
|   | Thrust Pad   | AISI 420 |

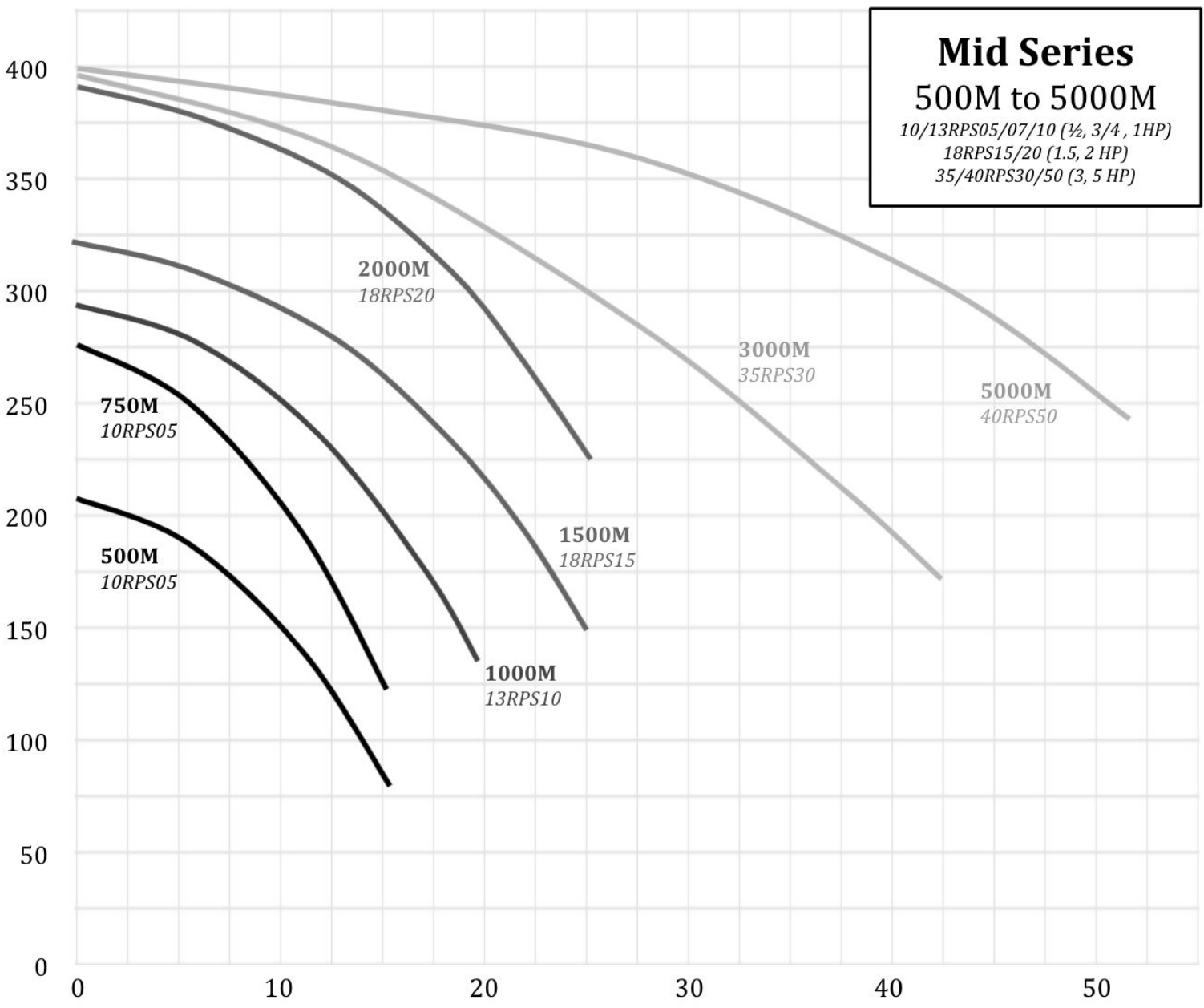


**NSF/ANSI 61/372**  
**Drinking Water**

# Pump Curves (Deep)



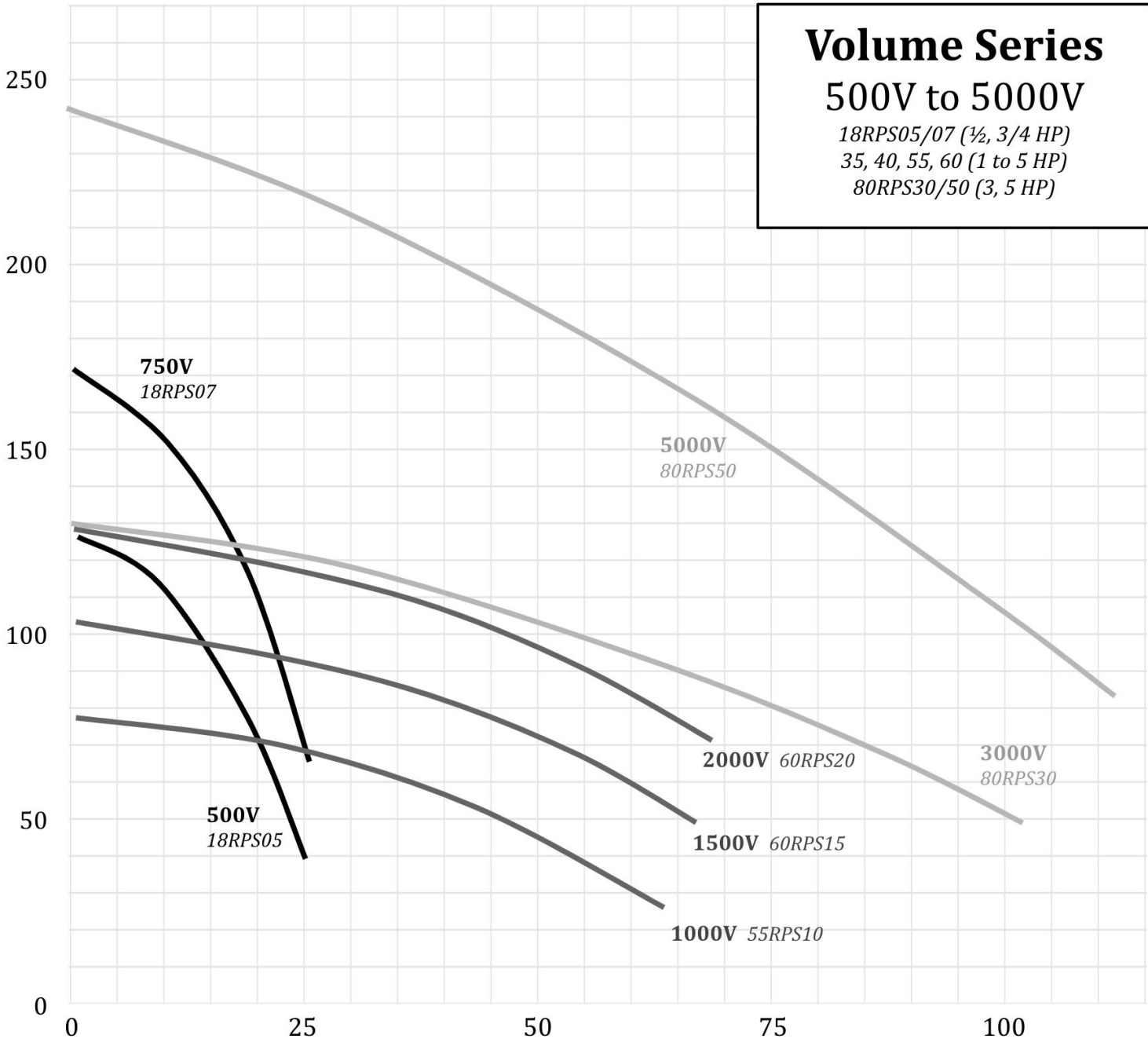
# Pump Curves (Mid)



|                     |              |              |               |               |               |
|---------------------|--------------|--------------|---------------|---------------|---------------|
| <i>GPD on Solar</i> | <i>3,600</i> | <i>7,200</i> | <i>10,800</i> | <i>14,400</i> | <i>18,000</i> |
|---------------------|--------------|--------------|---------------|---------------|---------------|

# Pump Curves (Volume)

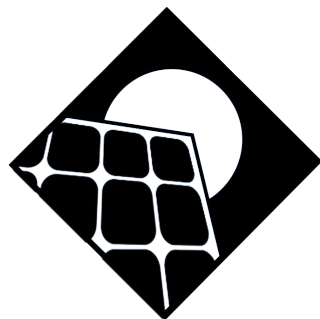
**Volume Series**  
**500V to 5000V**  
*18RPS05/07 (½, ¾ HP)*  
*35, 40, 55, 60 (1 to 5 HP)*  
*80RPS30/50 (3, 5 HP)*



|              |       |        |        |        |
|--------------|-------|--------|--------|--------|
| GPD on Solar | 9,000 | 18,000 | 27,000 | 36,000 |
|--------------|-------|--------|--------|--------|



Learn more at  
**RPSwaterpumps.com**



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**support@RPSwaterpumps.com**

