



Stainless Products, Inc.

www.stainless-products.com



Centrifugal Pumps

Stainless Products, Inc.

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Stainless Products, Inc. centrifugal pumps meet the standards of 02-11, Authorization # 567

Please contact the factory or visit our website to inquire on our complete line of stainless steel flow components.

Centrifugal Pumps

Sanitary Centrifugal Pumps Ordering Information

Features and Options:

- All stainless steel construction (T316L wetted parts) including motor adapters.
- Made in the USA
- Designed for low maintenance and long life
- No special tools needed for pump maintenance



SP51 - 56 - 5.00"

Model Number
 SP41
 SP51
 SP61
 SP81

Motor Frame Size

Impeller Size

SP41=3.50"
 3.75"

SP51=3.50"
 4.00"
 4.50"
 5.00"

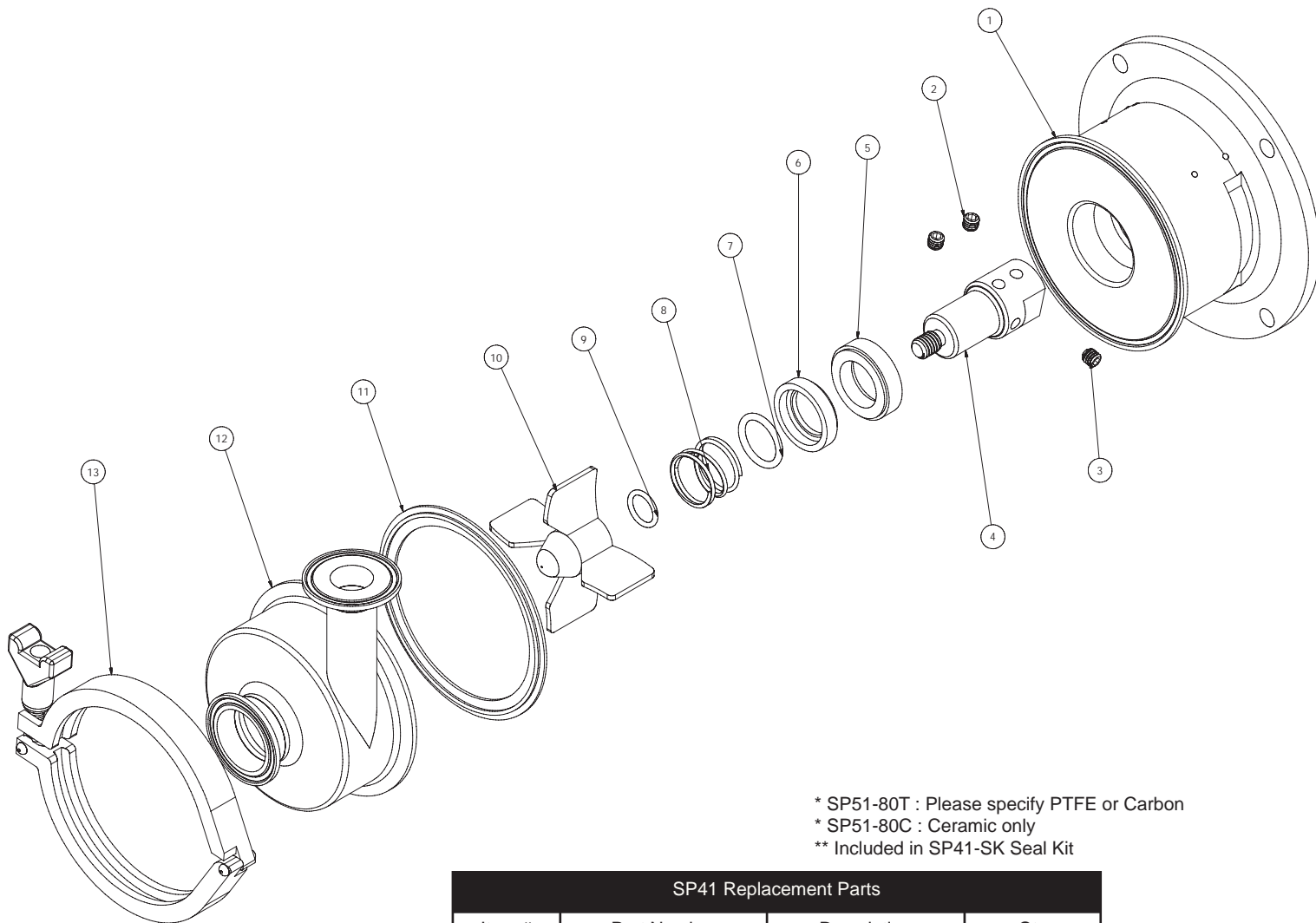
SP61=4.50"
 5.00"
 5.50"
 6.00"

SP81= 6.00"
 6.50"
 7.00"
 7.50"
 8.00"

Note: Pump Leg assemblies are not manufactured to 3A specification.

Centrifugal Pumps

SP41 Pump Replacement Parts



* SP51-80T : Please specify PTFE or Carbon

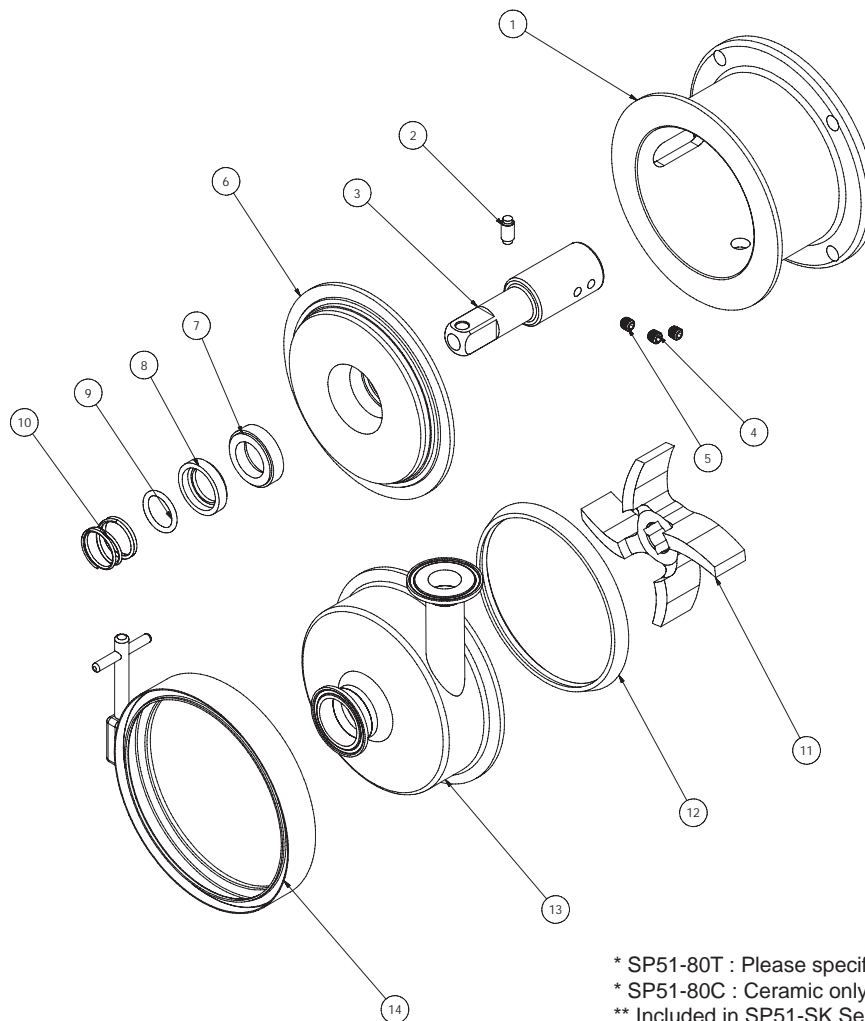
* SP51-80C : Ceramic only

** Included in SP41-SK Seal Kit

| SP41 Replacement Parts | | | |
|------------------------|-----------------|------------------|-----|
| Item # | Part Number | Description | Qty |
| 1 | SP41-19-56 | Pump Adapter | 1 |
| 2 | 10B-1.5"-HSP-NP | Set Screw | 2 |
| 3 | SP6-41-SSFDP | Set Screw | 1 |
| 4 | SP6-41-56 | Impeller Shaft | 1 |
| 5 | SP51-80C | Stationary Seal | 1** |
| 6 | SP51-80T | Rotary Seal | 1** |
| 7 | SP51-80N | Seal O-ring | 1** |
| 8 | SP41-80S | Spring | 1** |
| 9 | SP41-40 | Impeller O-ring | 1** |
| 10 | SP41-2 | Impeller | 1 |
| 11 | SP40-4 | Backplate Gasket | 1 |
| 12 | SP41-1 | Pump Head | 1 |
| 13 | SP13HC-4" | Pump Head Clamp | 1 |

Centrifugal Pumps

SP51 Pump Replacement Parts



* SP51-80T : Please specify PTFE or Carbon

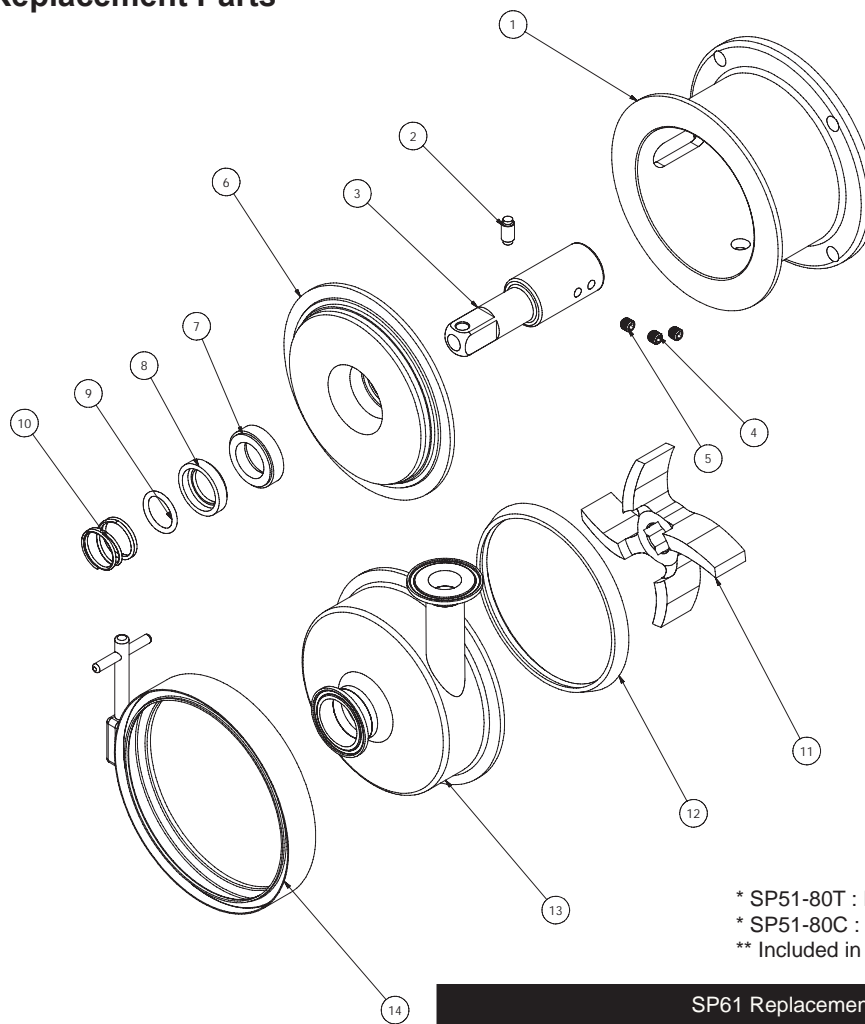
* SP51-80C : Ceramic only

** Included in SP51-SK Seal Kit

| SP51 Replacement Parts | | | |
|------------------------|-----------------|------------------|-----|
| Item # | Part Number | Description | Qty |
| 1 | SP51-19-56 | Pump Adapter | 1 |
| 2 | SP26-51 | Retaining Pin | 1 |
| 3 | SP6-51-56 | Impeller Shaft | 1 |
| | SP6-51-145 | | |
| 4 | SP6-41-SSFDP | Set Screw | 2 |
| 5 | 10B-1.5"-HSP-NP | Set Screw | 1 |
| 6 | SP51-11 | Backplate | 1 |
| 7 | SP51-80C | Stationary Seal | 1** |
| 8 | SP51-80T | Rotary Seal | 1** |
| 9 | SP51-80N | Seal O-ring | 1** |
| 10 | SP51-80S | Spring | 1** |
| 11 | SP51-2 | Impeller | 1 |
| 12 | SP40-215 | Backplate Gasket | 1 |
| 13 | SP51-1 | Pump Head | 1 |
| 14 | SP51-13HC | Pump Head Clamp | 1 |

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SP61 Pump Replacement Parts

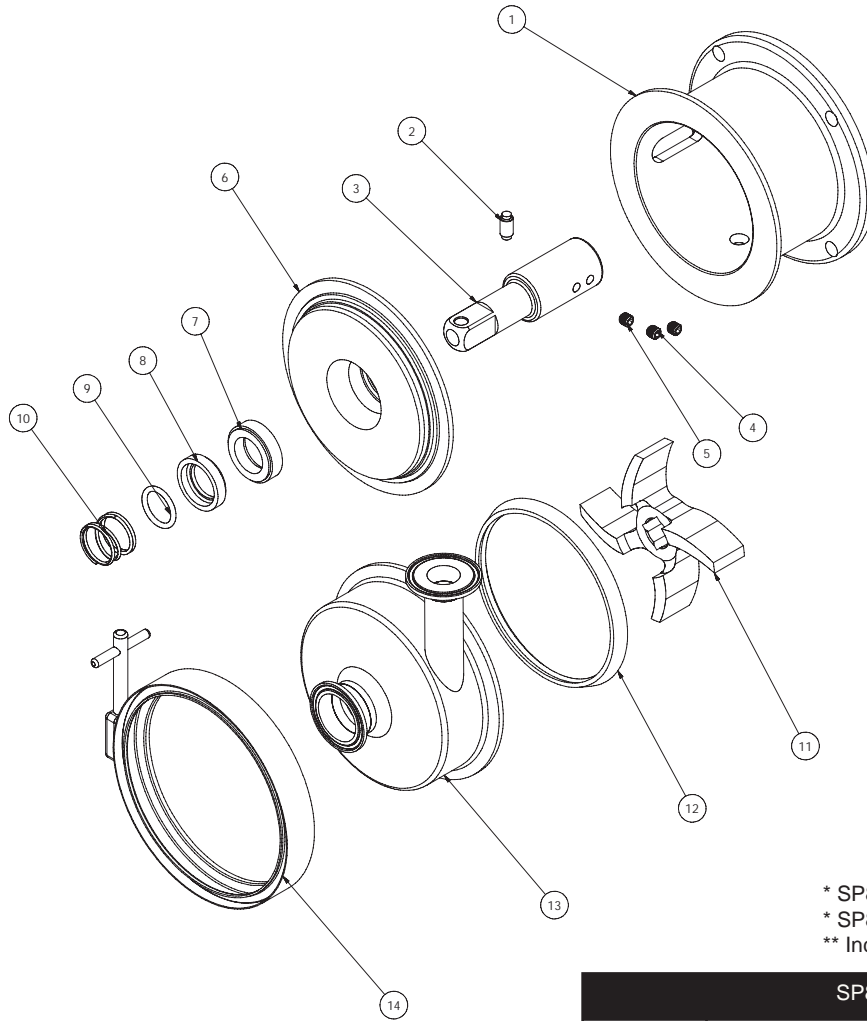


* SP51-80T : Please specify PTFE or Carbon
 * SP51-80C : Ceramic only
 ** Included in SP61-SK Seal Kit

| SP61 Replacement Parts | | | |
|------------------------|-----------------|------------------|-----|
| Item # | Part Number | Description | Qty |
| 1 | SP61-19-56 | Pump Adapter | 1 |
| | SP61-19-184 | Pump Adapter | |
| 2 | SP26-51 | Retaining Pin | 1 |
| 3 | SP6-61-184 | Impeller Shaft | 1 |
| | SP6-61-215 | | |
| | SP6-61-256 | | |
| 4 | SP6-41-SSFDP | Set Screw | 2 |
| 5 | 10B-1.5"-HSP-NP | Set Screw | 1 |
| 6 | SP61-11 | Backplate | 1 |
| 7 | SP51-80C | Stationary Seal | 1** |
| 8 | SP51-80T | Rotary Seal | 1** |
| 9 | SP51-80N | Seal O-ring | 1** |
| 10 | SP51-80S | Spring | 1** |
| 11 | SP61-2 | Impeller | 1 |
| 12 | SP40-216 | Backplate Gasket | 1 |
| 13 | SP61-1 | Pump Head | 1 |
| 14 | SP61-13HC | Pump Head Clamp | 1 |

Centrifugal Pumps

SP81 Pump Replacement Parts

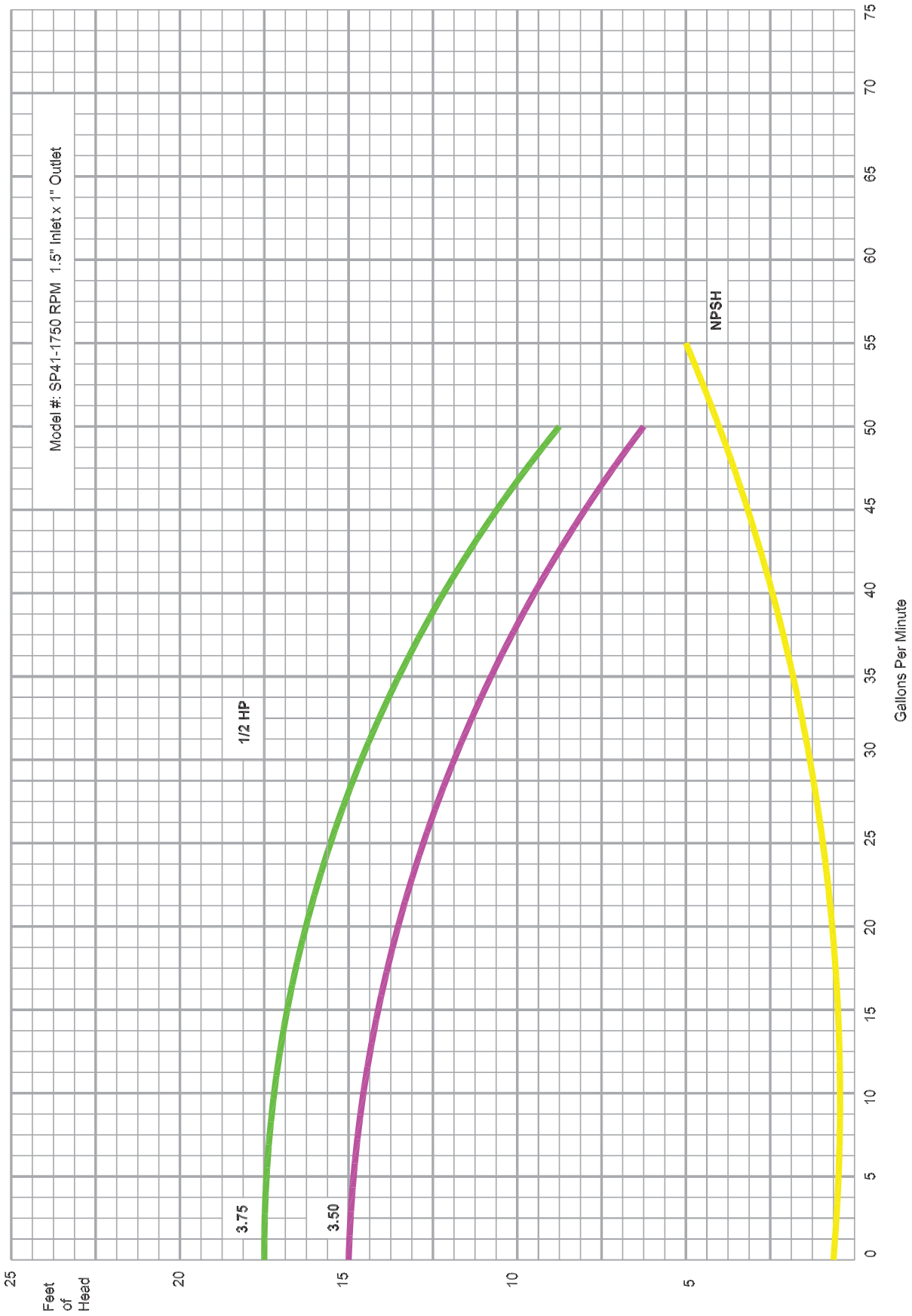


- * SP81-80T : Please specify PTFE or Carbon
- * SP81-80C : Ceramic only
- ** Included in SP81-SK Seal Kit

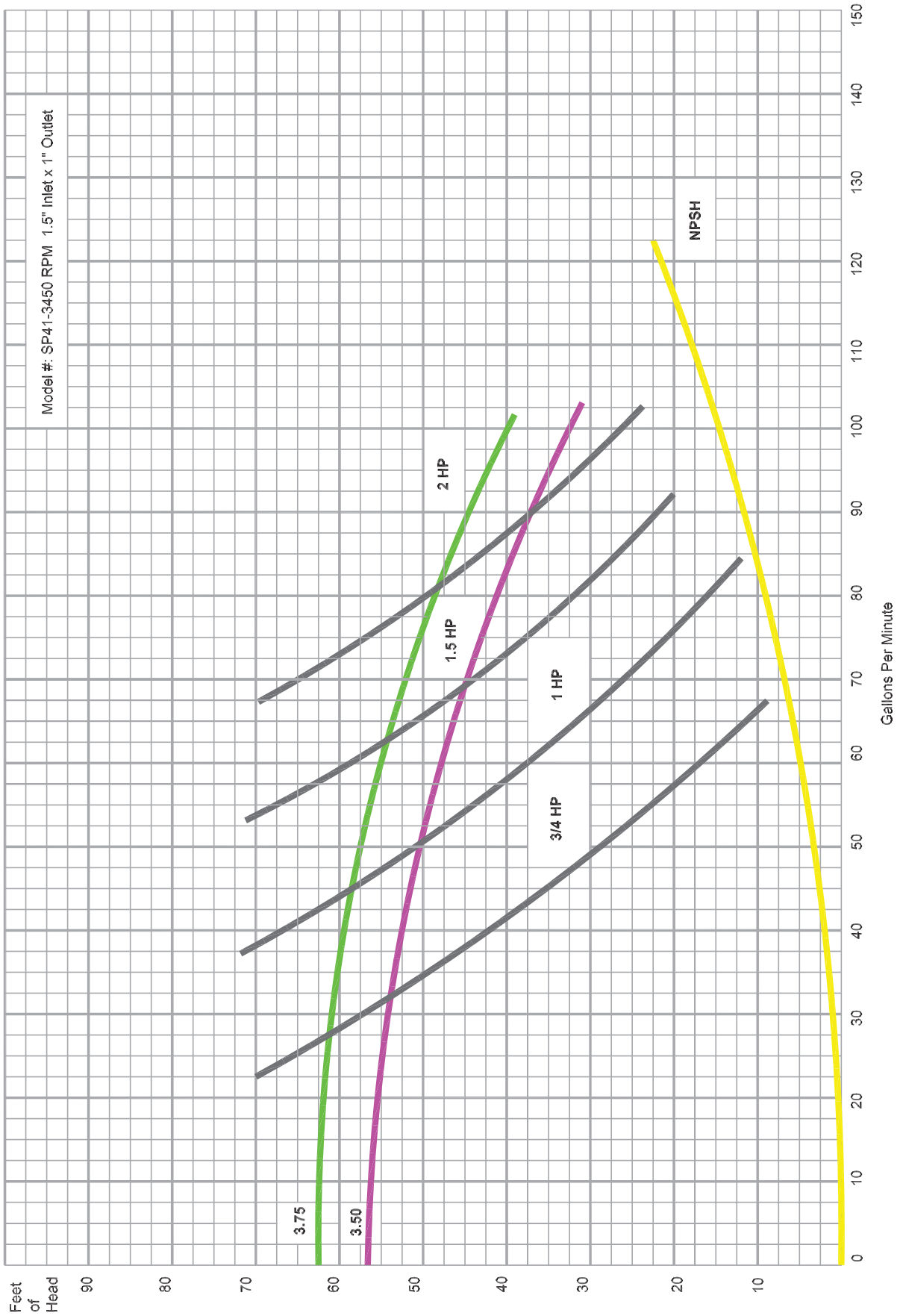
SP81 Replacement Parts

| Item # | Part Number | Description | Qty |
|--------|-----------------|------------------|-----|
| 1 | SP81-19-184 | Pump Adapter | 1 |
| 2 | SP26-81 | Retaining Pin | 1 |
| 3 | SP6-81-184 | Impeller Shaft | 1 |
| | SP6-81-215 | | |
| | SP6-61-215 | | |
| | SP6-61-256 | | |
| 4 | SP6-41-SSFDP | Set Screw | 2 |
| 5 | 10B-1.5"-HSP-NP | Set Screw | 1 |
| 6 | SP81-11 | Backplate | 1 |
| 7 | SP81-80C | Stationary Seal | 1** |
| 8 | SP81-80T | Rotary Seal | 1** |
| 9 | SP81-80N | Seal O-ring | 1** |
| 10 | SP81-80S | Spring | 1** |
| 11 | SP81-2 | Impeller | 1 |
| 12 | SP40-218 | Backplate Gasket | 1 |
| 13 | SP81-1 | Pump Head | 1 |
| 14 | SP81-13HC | Pump Head Clamp | 1 |

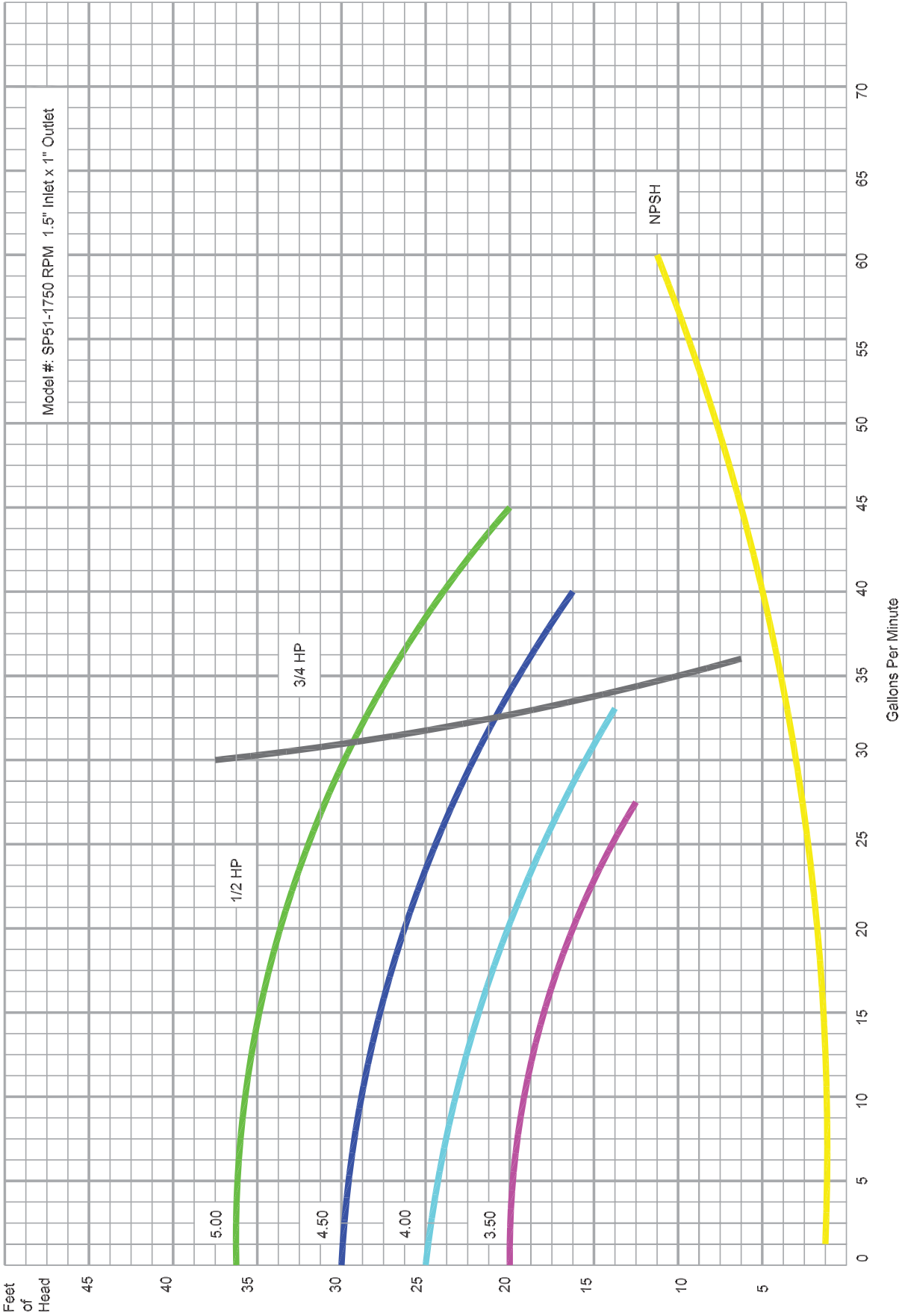
Pump Performance Curves



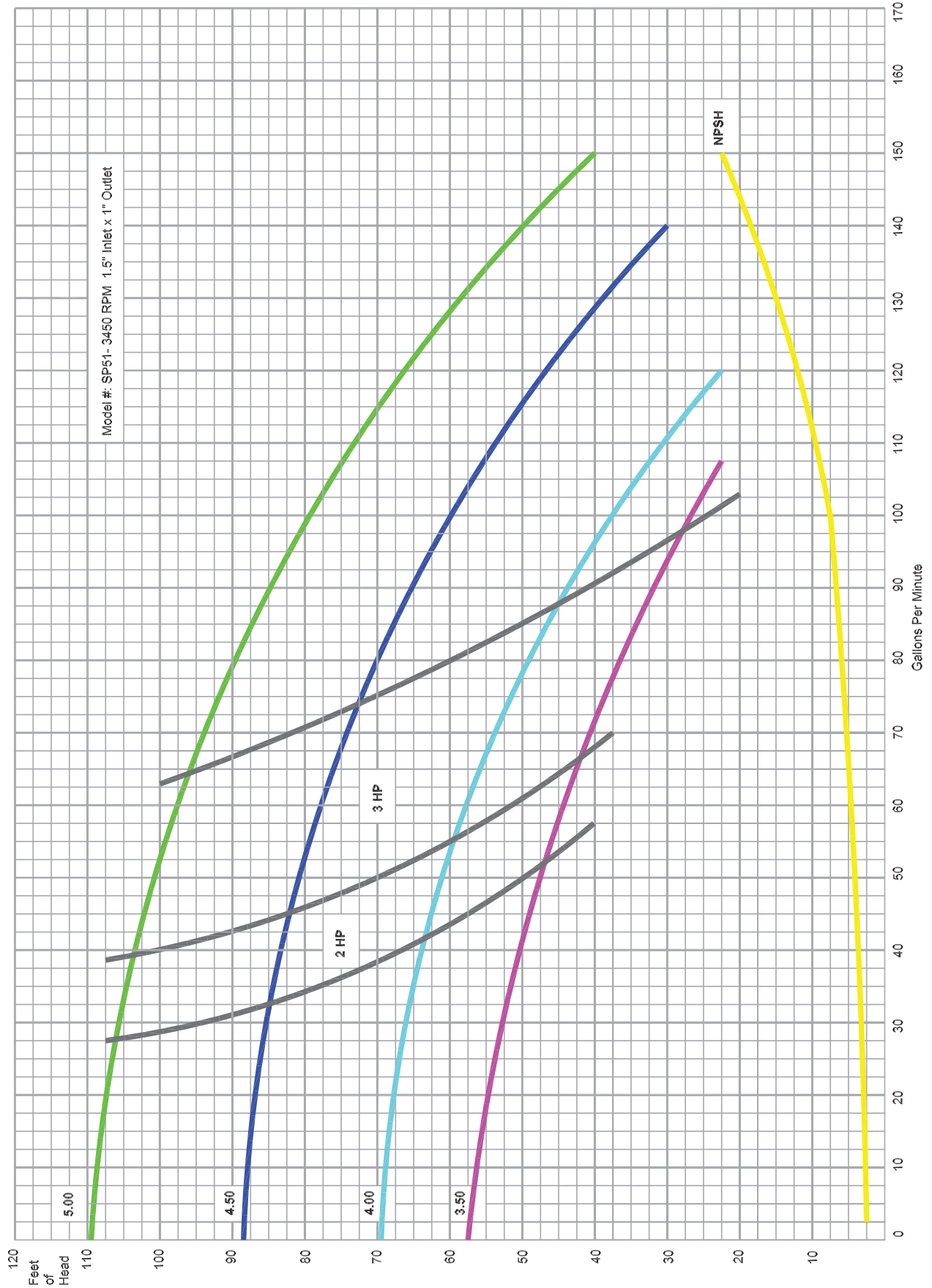
Pump Performance Curves



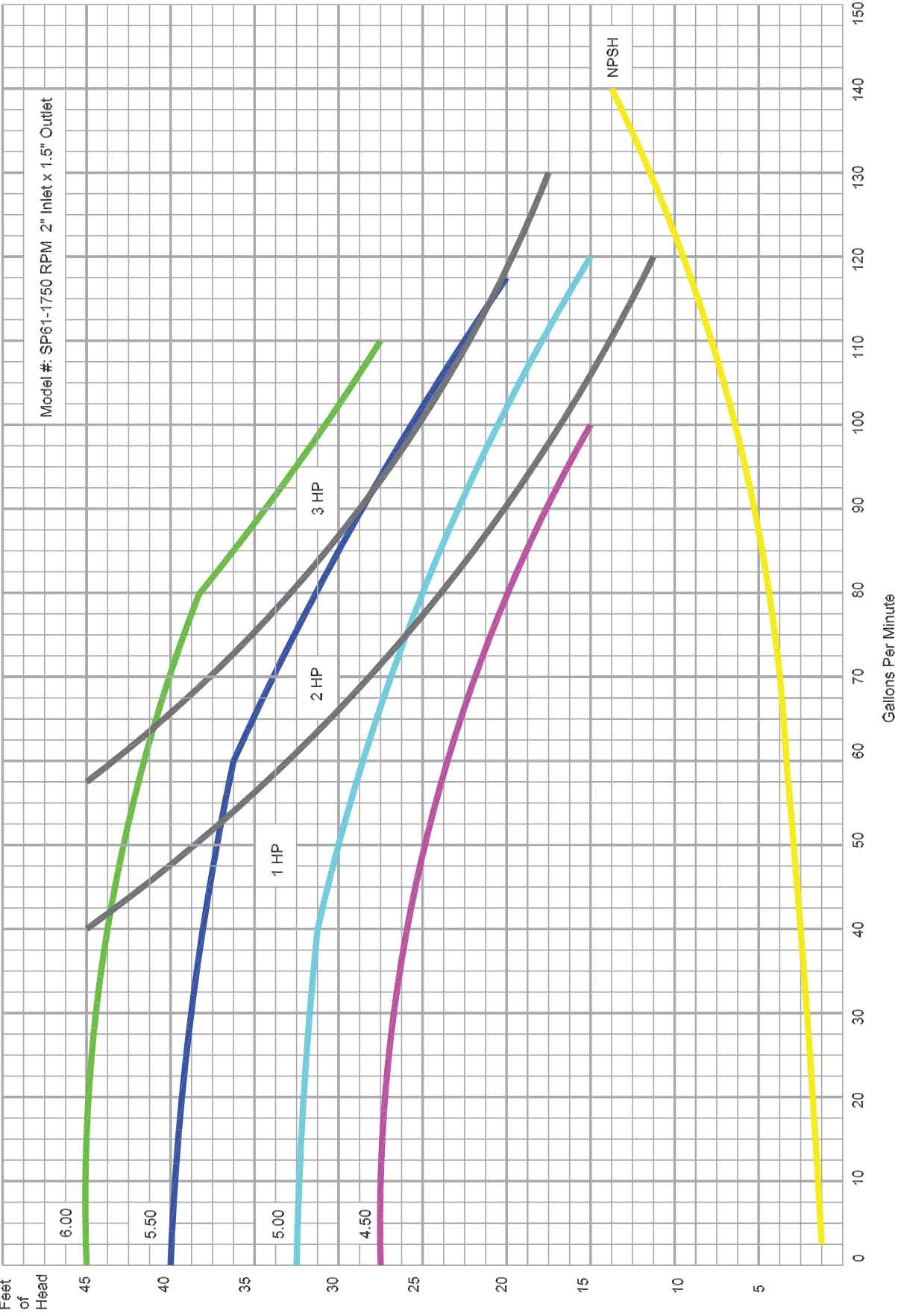
Pump Performance Curves



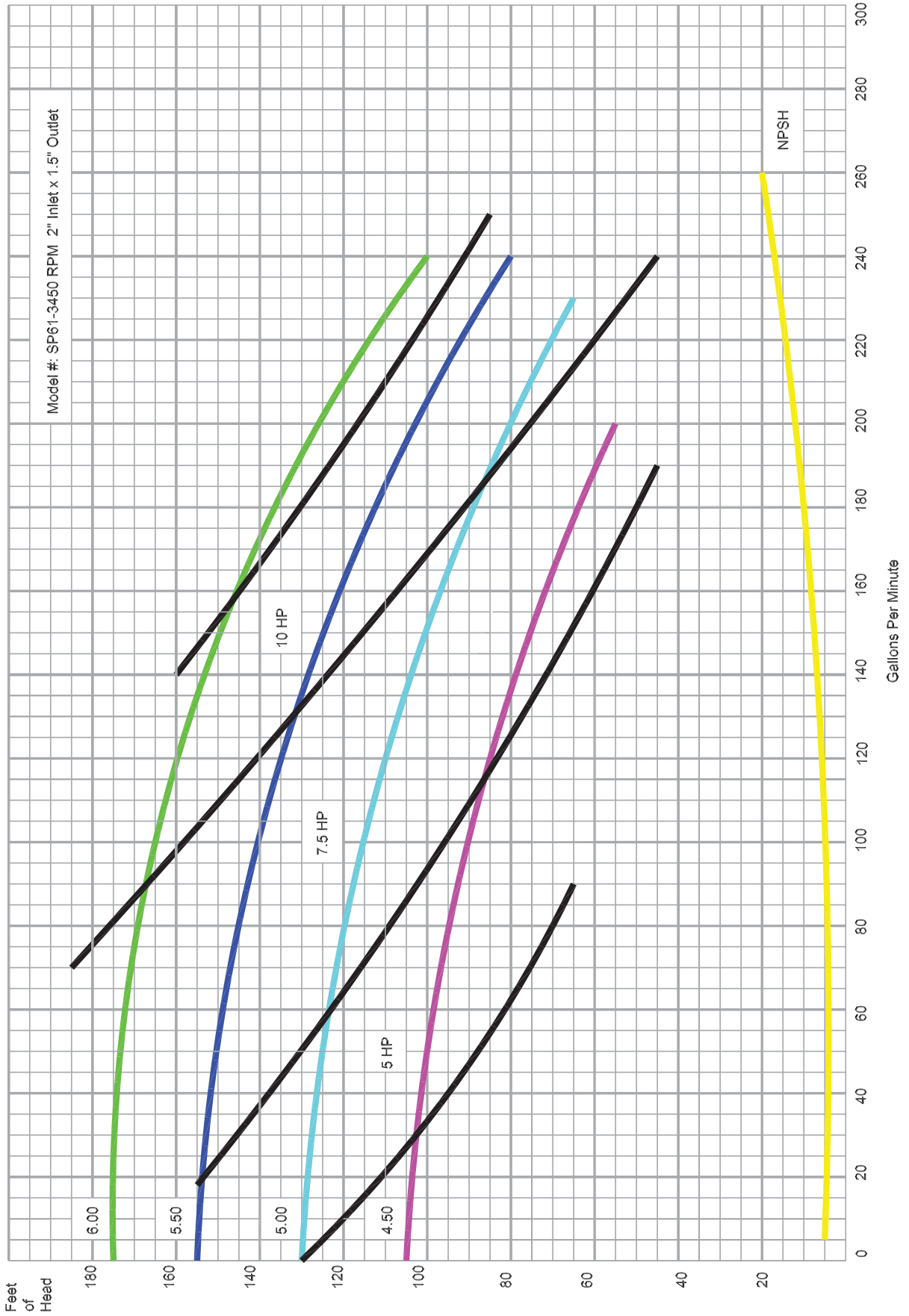
Pump Performance Curves



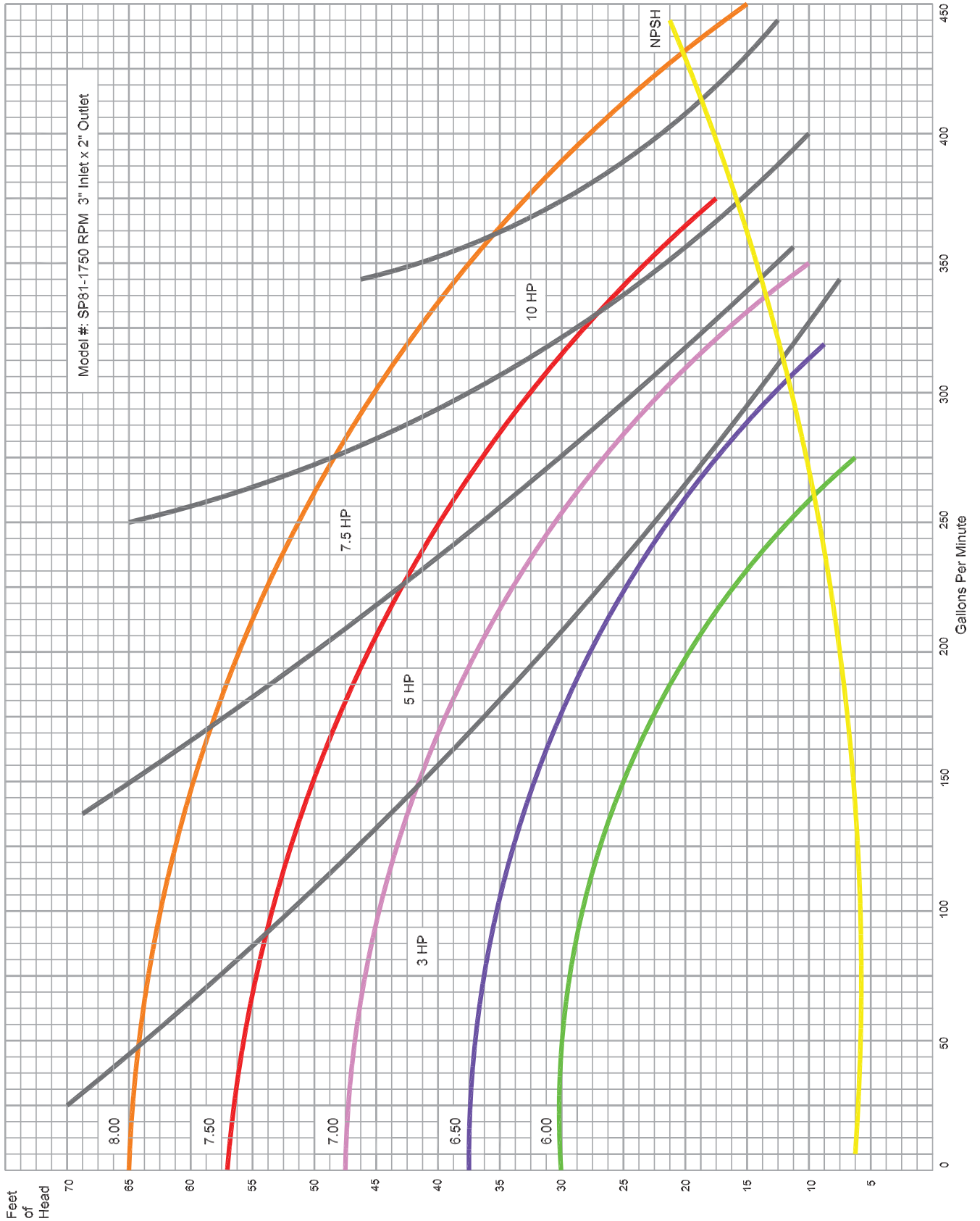
Pump Performance Curves



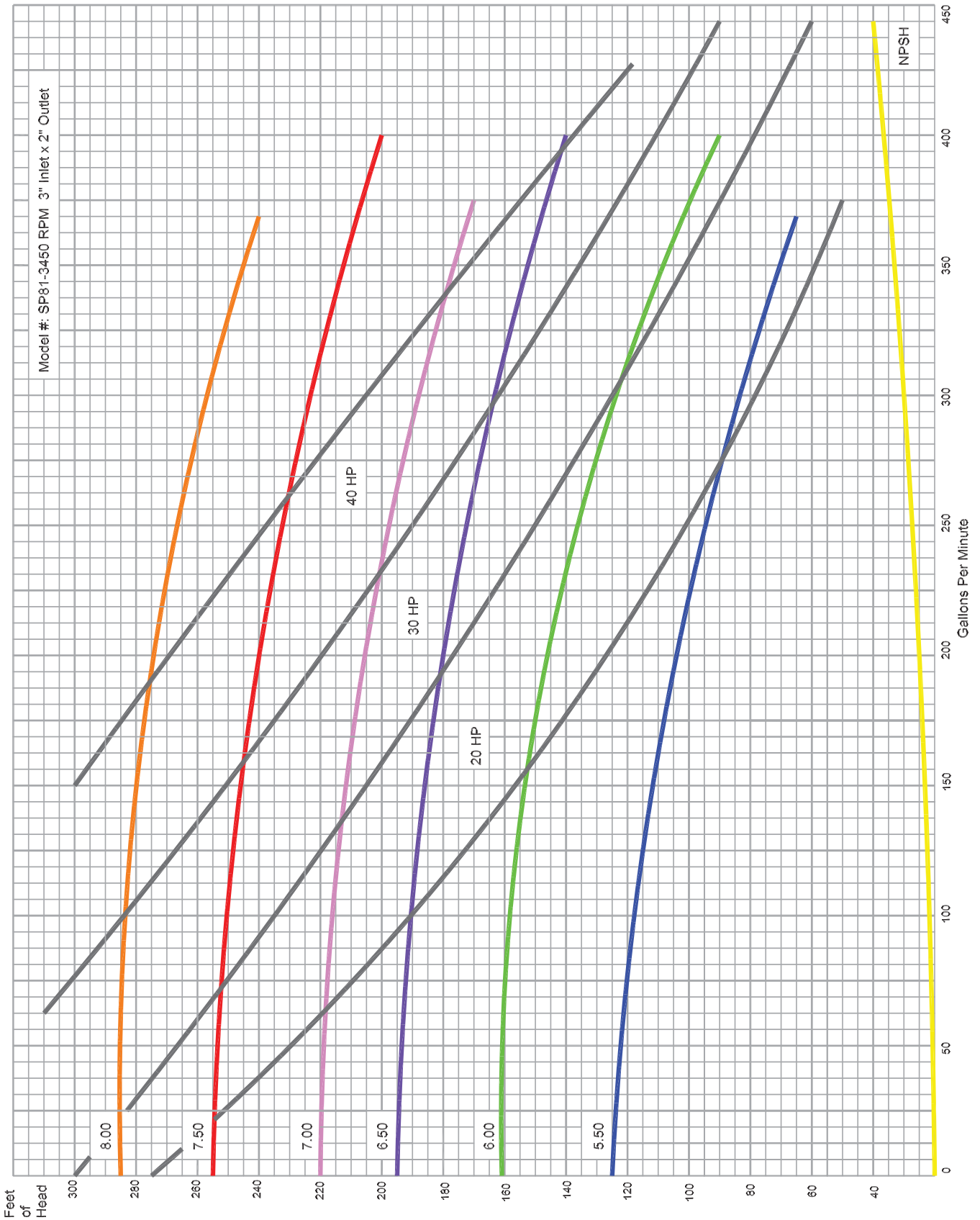
Pump Performance Curves



Pump Performance Curves



Pump Performance Curves



Friction Loss Chart

| Capacity in US GPM | O.D. - 1" | | | O.D. - 1.5" | | | O.D. - 2" | | | O.D. - 2.5" | | | O.D. - 3" | | | O.D. - 4" | | |
|--------------------|-----------|-------|------|-------------|-------|------|-----------|-------|------|-------------|-------|------|-----------|-------|------|-----------|-------|------|
| | Tubing | Elbow | Tee | Tubing | Elbow | Tee | Tubing | Elbow | Tee | Tubing | Elbow | Tee | Tubing | Elbow | Tee | Tubing | Elbow | Tee |
| 2 | 0.01 | 0.01 | 0.1 | | | | | | | | | | | | | | | |
| 4 | 0.02 | 0.02 | 0.2 | | | | | | | | | | | | | | | |
| 5 | 0.03 | 0.02 | 0.25 | | | | | | | | | | | | | | | |
| 10 | 0.12 | 0.06 | 0.4 | 0.02 | 0.01 | 0.15 | 0.00 | 0.01 | 0.1 | | | | | | | | | |
| 15 | 0.25 | 0.1 | 0.8 | 0.04 | 0.02 | 0.25 | 0.01 | 0.02 | 0.15 | | | | | | | | | |
| 20 | 0.43 | 0.22 | 1.5 | 0.06 | 0.03 | 0.3 | 0.02 | 0.02 | 0.2 | 0.00 | 0.02 | 0.1 | 0.00 | 0.02 | 0.06 | | | |
| 25 | 0.66 | 0.4 | 2.3 | 0.08 | 0.04 | 0.4 | 0.02 | 0.03 | 0.25 | 0.00 | 0.03 | 0.15 | 0.00 | 0.03 | 0.08 | | | |
| 30 | 0.93 | 0.7 | 3.3 | 0.10 | 0.06 | 0.55 | 0.03 | 0.05 | 0.3 | 0.00 | 0.05 | 0.2 | 0.00 | 0.04 | 0.1 | | | |
| 35 | 1.22 | 1.25 | 5.2 | 0.13 | 0.09 | 0.8 | 0.04 | 0.06 | 0.4 | 0.01 | 0.06 | 0.25 | 0.00 | 0.05 | 0.13 | | | |
| 40 | | | | 0.17 | 0.11 | 1 | 0.05 | 0.08 | 0.5 | 0.01 | 0.07 | 0.3 | 0.00 | 0.06 | 0.15 | | | |
| 45 | | | | 0.21 | 0.16 | 1.3 | 0.06 | 0.1 | 0.6 | 0.02 | 0.09 | 0.35 | 0.00 | 0.06 | 0.18 | | | |
| 50 | | | | 0.25 | 0.2 | 1.6 | 0.07 | 0.12 | 0.7 | 0.02 | 0.1 | 0.4 | 0.01 | 0.07 | 0.2 | | | |
| 60 | | | | 0.34 | 0.35 | 2.2 | 0.1 | 0.18 | 0.9 | 0.03 | 0.12 | 0.45 | 0.01 | 0.08 | 0.25 | | | |
| 80 | | | | 0.57 | 0.76 | 3.7 | 0.16 | 0.3 | 1.5 | 0.05 | 0.15 | 0.55 | 0.02 | 0.1 | 0.4 | | | |
| 100 | | | | 0.85 | 1.35 | 5.8 | 0.23 | 0.44 | 2.3 | 0.07 | 0.18 | 0.6 | 0.03 | 0.11 | 0.5 | 0.00 | 0.04 | 0.1 |
| 120 | | | | 1.18 | 2.05 | 9.1 | 0.32 | 0.64 | 3.3 | 0.10 | 0.21 | 1 | 0.04 | 0.13 | 0.6 | 0.01 | 0.05 | 0.15 |
| 140 | | | | | | | 0.42 | 0.85 | 4.5 | 0.14 | 0.23 | 1.25 | 0.05 | 0.16 | 0.8 | 0.01 | 0.06 | 0.2 |
| 160 | | | | | | | 0.54 | 1.13 | 5.8 | 0.17 | 0.28 | 1.6 | 0.07 | 0.2 | 1.1 | 0.01 | 0.07 | 0.25 |
| 180 | | | | | | | 0.67 | 1.45 | 7.4 | 0.20 | 0.31 | 2 | 0.08 | 0.21 | 1.3 | 0.02 | 0.08 | 0.3 |
| 200 | | | | | | | 0.81 | 1.82 | 9 | 0.24 | 0.35 | 2.5 | 0.1 | 0.26 | 1.6 | 0.02 | 0.09 | 0.4 |
| 220 | | | | | | | 0.95 | 2.22 | 11 | 0.29 | 0.41 | 3 | 0.12 | 0.3 | 1.9 | 0.02 | 0.1 | 0.5 |
| 240 | | | | | | | 1.1 | 2.63 | 13.5 | 0.34 | 0.48 | 3.7 | 0.14 | 0.33 | 2.2 | 0.03 | 0.11 | 0.55 |
| 260 | | | | | | | | | | 0.39 | 0.53 | 4.5 | 0.16 | 0.39 | 2.5 | 0.04 | 0.11 | 0.6 |
| 280 | | | | | | | | | | 0.45 | 0.61 | 5.3 | 0.19 | 0.42 | 2.8 | 0.04 | 0.12 | 0.65 |
| 300 | | | | | | | | | | 0.51 | 0.7 | 6.2 | 0.22 | 0.5 | 3.1 | 0.05 | 0.13 | 0.7 |
| 350 | | | | | | | | | | 0.68 | 1.05 | 8.5 | 0.28 | 0.67 | 4.1 | 0.07 | 0.15 | 0.9 |
| 400 | | | | | | | | | | 0.86 | 1.55 | 11 | 0.36 | 0.88 | 5.2 | 0.08 | 0.18 | 1.2 |
| 450 | | | | | | | | | | 1.05 | 2.25 | 13.5 | 0.44 | 1.1 | 6.6 | 0.10 | 0.2 | 1.5 |
| 500 | | | | | | | | | | | | | 0.54 | 1.4 | 8 | 0.13 | 0.23 | 1.75 |
| 550 | | | | | | | | | | | | | 0.64 | 1.7 | 9.5 | 0.15 | 0.27 | 2.1 |
| 600 | | | | | | | | | | | | | 0.75 | 2.05 | 10.2 | 0.17 | 0.3 | 2.5 |
| 650 | | | | | | | | | | | | | 0.87 | 2.41 | 13 | 0.2 | 0.34 | 2.8 |
| 700 | | | | | | | | | | | | | 1 | 2.8 | 15 | 0.23 | 0.4 | 3.4 |
| 750 | | | | | | | | | | | | | | | | 0.26 | 0.43 | 3.8 |
| 800 | | | | | | | | | | | | | | | | 0.3 | 0.5 | 4.4 |
| 850 | | | | | | | | | | | | | | | | 0.33 | 0.56 | 5 |
| 900 | | | | | | | | | | | | | | | | 0.37 | 0.62 | 5.7 |
| 950 | | | | | | | | | | | | | | | | 0.41 | 0.7 | 6.3 |
| 1000 | | | | | | | | | | | | | | | | 0.45 | 0.8 | 7 |
| 1100 | | | | | | | | | | | | | | | | 0.53 | 1.06 | 8.6 |

Seal Replacement Instructions

SP41 Seal Replacement

See page 2 for parts list

1. Remove the clamp (item 13) the head (item 12) and the gasket (item 11) from the pump.
2. Unscrew and remove the impeller (item 10), impeller o-ring (item 9) and remove the seal components spring (item 8), o-ring (item 7) and Carbon seal (item 6).
3. Remove the four bolts holding the pump adapter (item 4) onto the motor. Then remove the pump adapter.
4. From the back side, using a screwdriver or small punch, push the ceramic mating surface (item 5) out of the counter bore in the adapter (item 1).
5. Set the adapter (item 1) on a flat, hard surface pump side up. With the handle of a screw driver press the new mating surface (item 5) in the counter bore of the adapter. Be careful not to scratch or touch the face of the mating surface with your fingers. Use a sanitary food grade grease on the seal.
6. Reinstall the adapter on the motor and tighten the four adapter bolts down.
7. Slide the new Carbon seal (item 5) down over the shaft (item 4) bevel side in until it makes contact with the mating surface (item 5).
8. Slide the new o-ring (item 7) down over the shaft and using your finger nail, press it down into the counterbore in the Carbon seal (item 6).
9. Slide the spring (item 8) over the shaft and into the counterbore in the Teflon seal. It should also make contact with the o-ring.
10. Replace the Impeller O-ring (item 9) and screw the impeller (item 9) onto the shaft, tighten firmly. Check the clearance between the backplate and impeller. There should be approximately .060 (the width of one penny)
11. Reinstall the gasket, head, and clamp.

SP51,61 and 81 Seal Replacement

See page 3,4 and 5 for parts list

1. Remove the clamp (item 14) the head (item 13) and the gasket (item 12) from the pump.
2. Remove the impeller (item 11) and remove the seal components spring (item 10), o-ring (item 9) and Carbon seal (item 8).
3. Remove the backplate (item 6).
4. From the back side, using a screwdriver or small punch, push the ceramic mating surface (item 7) out of the counter bore in the backplate (item 6).
5. Set the backplate (item 6) on a flat, hard surface pump side up. With the handle of a screw driver press the new mating surface (item 7) in the counter bore of the backplate. Be careful not to scratch or touch the face of the mating surface with your fingers.
6. Reinstall the backplate.
7. Slide the new Carbon seal (item 8) down over the shaft (item 4) bevel side in until it makes contact with the mating surface (item 7).
8. Slide the new o-ring (item 9) down over the shaft and using your finger nail, press it down into the counterbore in the Teflon seal (item 8).
9. Slide the spring (item 10) over the shaft and into the counterbore in the Teflon seal. It should also make contact with the o-ring.
10. Reinstall the impeller (item 11) onto the shaft.
11. Reinstall the gasket, head, and clamp.
12. Check the clearance between the backplate and the impeller. There should be approximately .060 (the width of one penny)



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