

Performance Data

Curve 6.00

Element: 008

Models: 4E008, 6E008

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

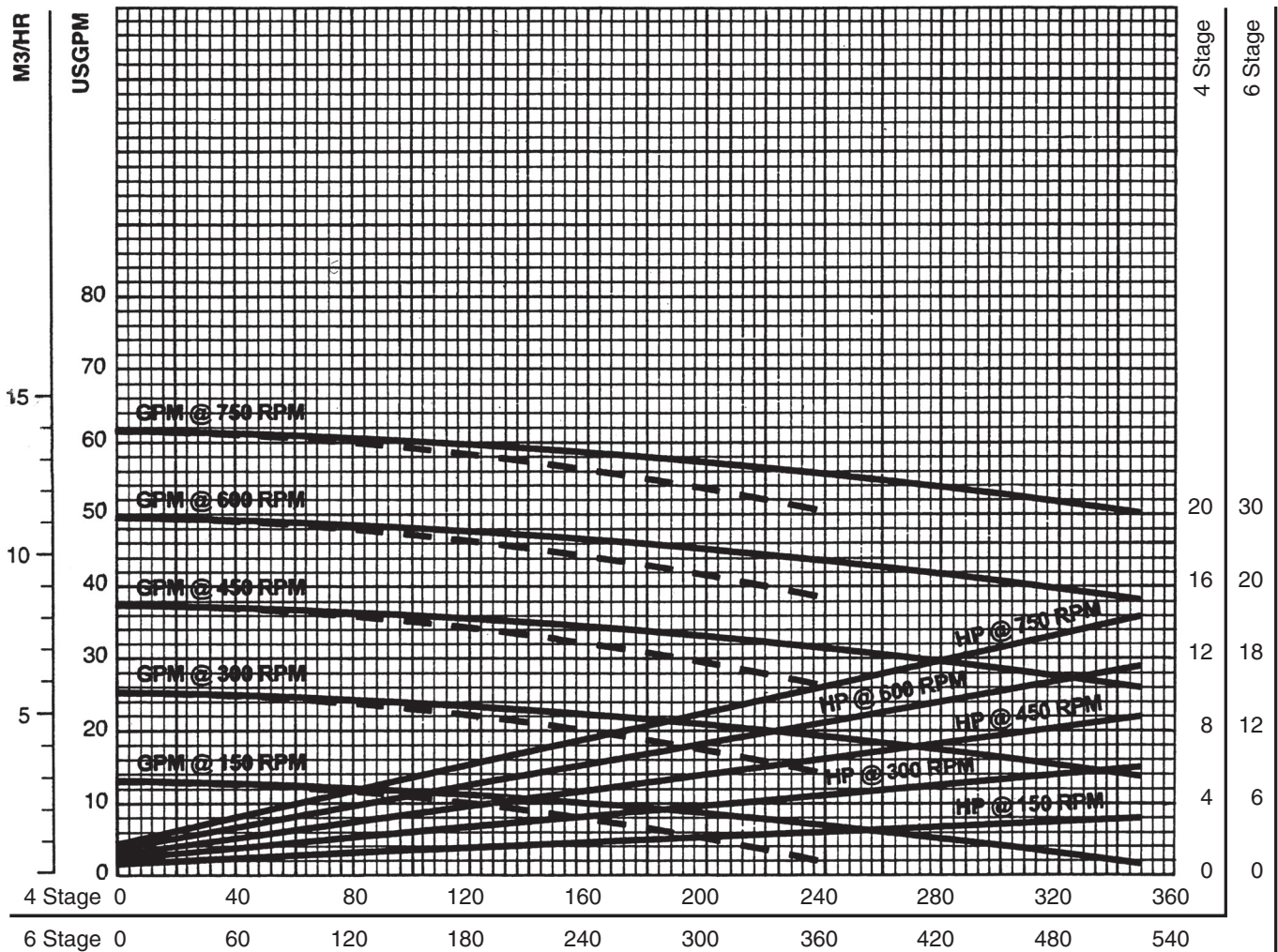
	RPM	150	300	450	600	750
NPSH Required – (Ft.)		1	2	3	4	6
Minimum Recommended Motor HP	4 STG	3	5	7½	10	10
	6 STG	5	7½	10	15	15
Drive End HP	E	0.24	0.48	0.72	0.96	1.20
Must be added to HP value from curve.						

Capacity

—— 70 Durometer - - - 55 Durometer

Data Based on Water @ 68° F

Horsepower



Differential Pressure (PSI)*

*(PSI x .069 = BAR) (PSI x .070 = kgf/cm²) (USGPM x .2271 = M³/HR) (HP x .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

%	Fine 16 Mesh (.039") (<1mm)		Medium 16 to 9 Mesh (.039" to .078") (1-2mm)		Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)	
	Number of Stages					
	4	6	4	6	4	6
Solids						
10	.21	.38	.25	.46	.43	.78
30	.63	1.15	.77	1.39	1.30	2.36
50	1.06	1.93	1.29	2.33	2.17	3.94

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
	2,500	5,000	10,000	50,000	100,000	150,000
1						
0	.33	.46	.64	1.34	1.88	2.23

Performance Data

Curve 7.00

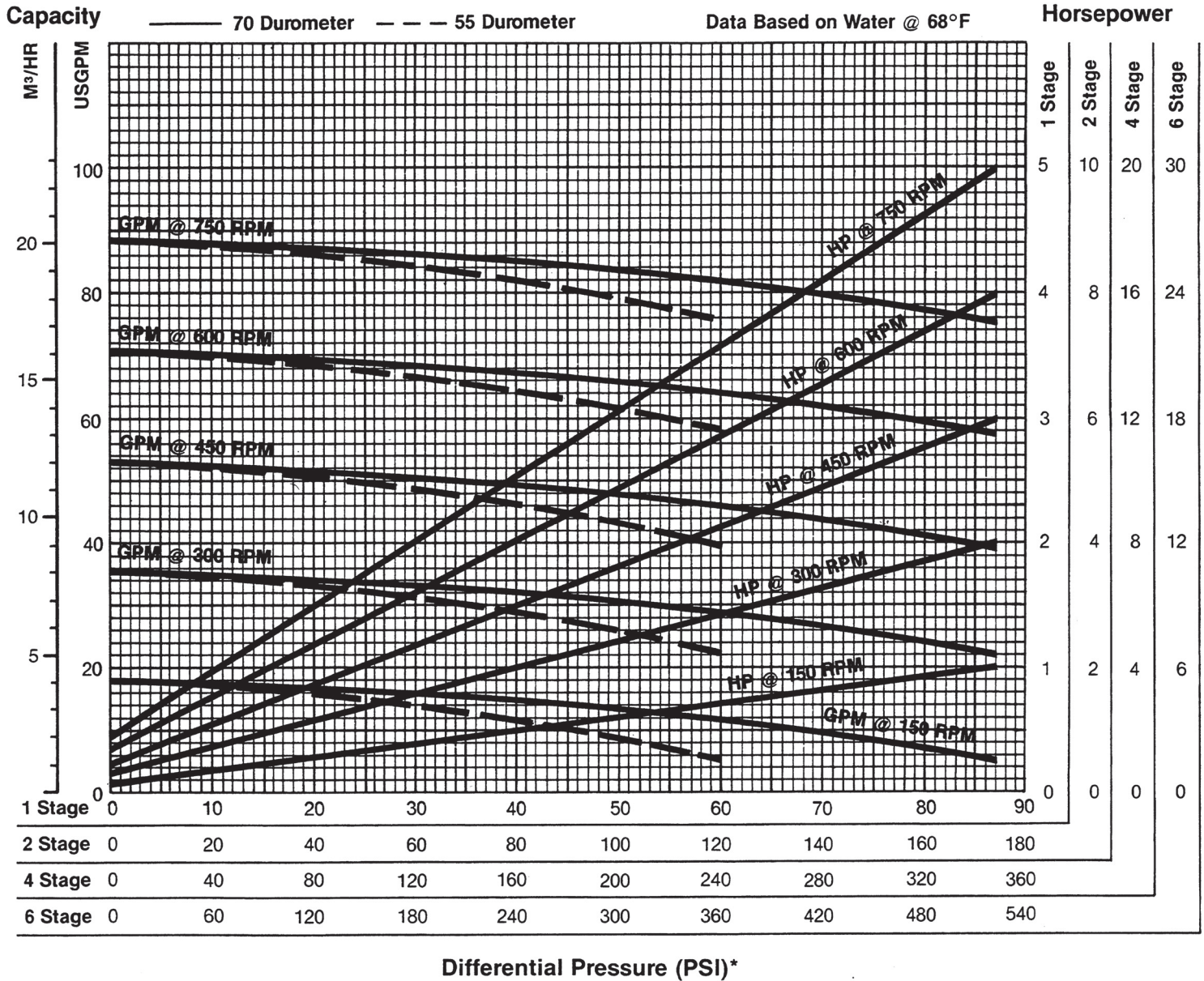
Element: 012

Models: 1E012, 2E012, 4E012
6F012

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	150	300	450	600	750
NPSH Required — (Ft.)		1.10	2.20	3.30	5.00	7.70
Minimum Recommended Motor HP	1 STG	1	2	3	3	5
	2 STG	1½	3	5	5	7½
	4 STG	3	5	7½	10	10
	6 STG	5	7½	10	15	15
Drive End HP Must be added to HP value from curve.	E	0.24	0.48	0.72	0.96	1.20
	F	0.38	0.76	1.14	1.52	1.90



*(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = $\frac{5}{9}$ C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039") (<1mm)				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.11	.14	.23	.42	.13	.17	.28	.51	.22	.29	.48	.87
30	.33	.43	.71	1.29	.40	.52	.86	1.56	.68	.88	1.45	2.64
50	.55	.72	1.19	2.16	.67	.87	1.44	2.61	1.13	1.47	2.43	4.41

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	.37	.52	.72	1.50	2.10	2.50

Performance Data

Curve 9.00

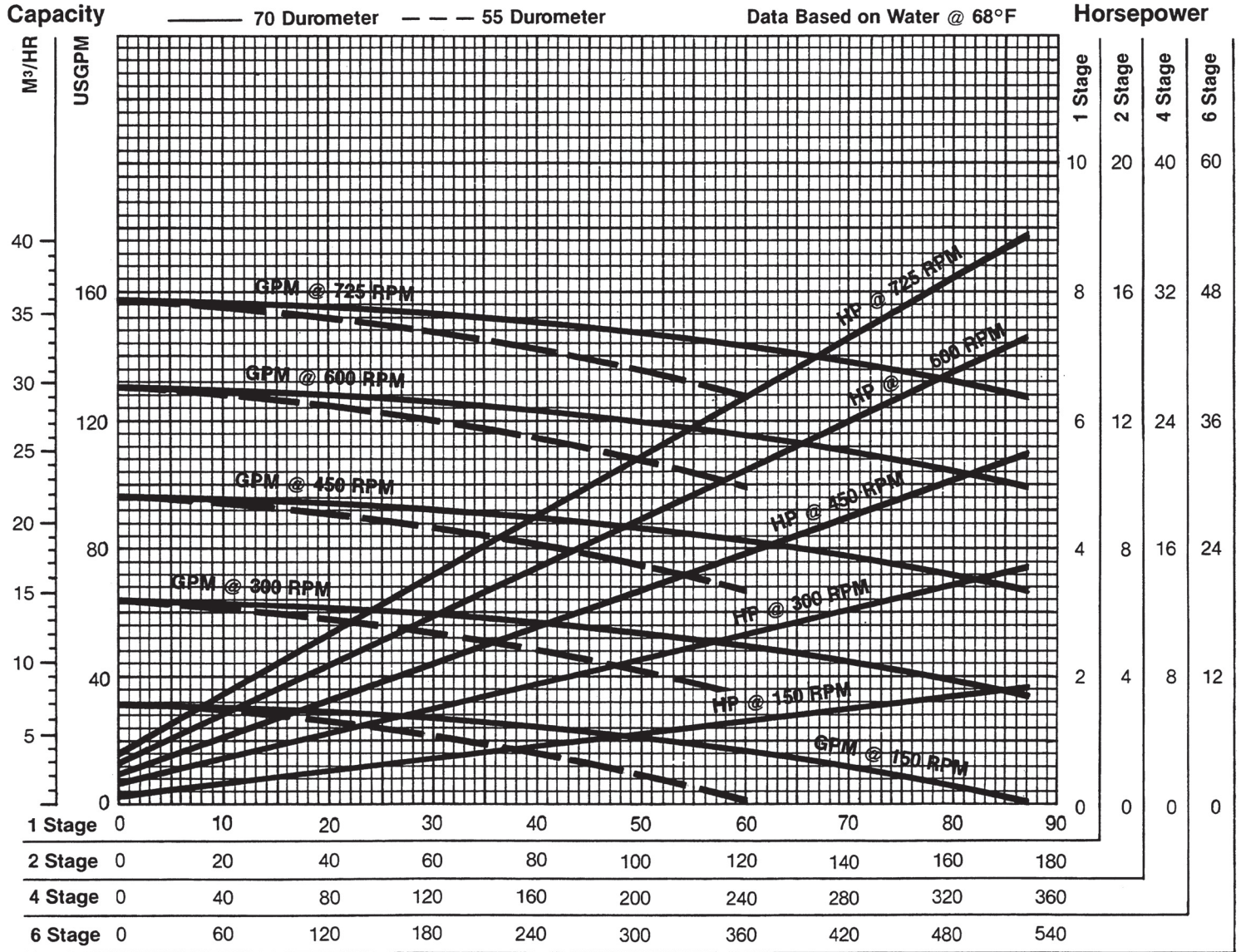
Element: 022

Models: 1E022, 2E022, 4E022
4F022, 6F022, 6G022

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	150	300	450	600	725
NPSH Required — (Ft.)		1.30	2.60	3.90	7.10	9.80
Minimum Recommended Motor HP	1 STG	1½	3	5	5	7½
	2 STG	2	5	7½	7½	10
	4 STG	3	7½	10	15	15
	6 STG	5	10	15	20	20
Drive End HP Must be added to HP value from curve.	E	0.24	0.48	0.72	0.96	1.16
	F	0.38	0.76	1.14	1.50	1.80
	G	0.53	1.10	1.60	2.20	2.50



Differential Pressure (PSI)*

*(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039" (<1mm))				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.19	.24	.40	.72	.23	.30	.50	.90	.39	.50	.83	1.50
30	.56	.73	1.20	2.20	.69	.89	1.50	2.70	1.70	1.50	2.50	4.50
50	.94	1.22	2.00	3.70	1.15	1.49	2.46	4.47	1.93	2.50	4.10	7.50

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	.68	.95	1.32	2.75	3.85	4.58

Performance Data

Curve 11.00

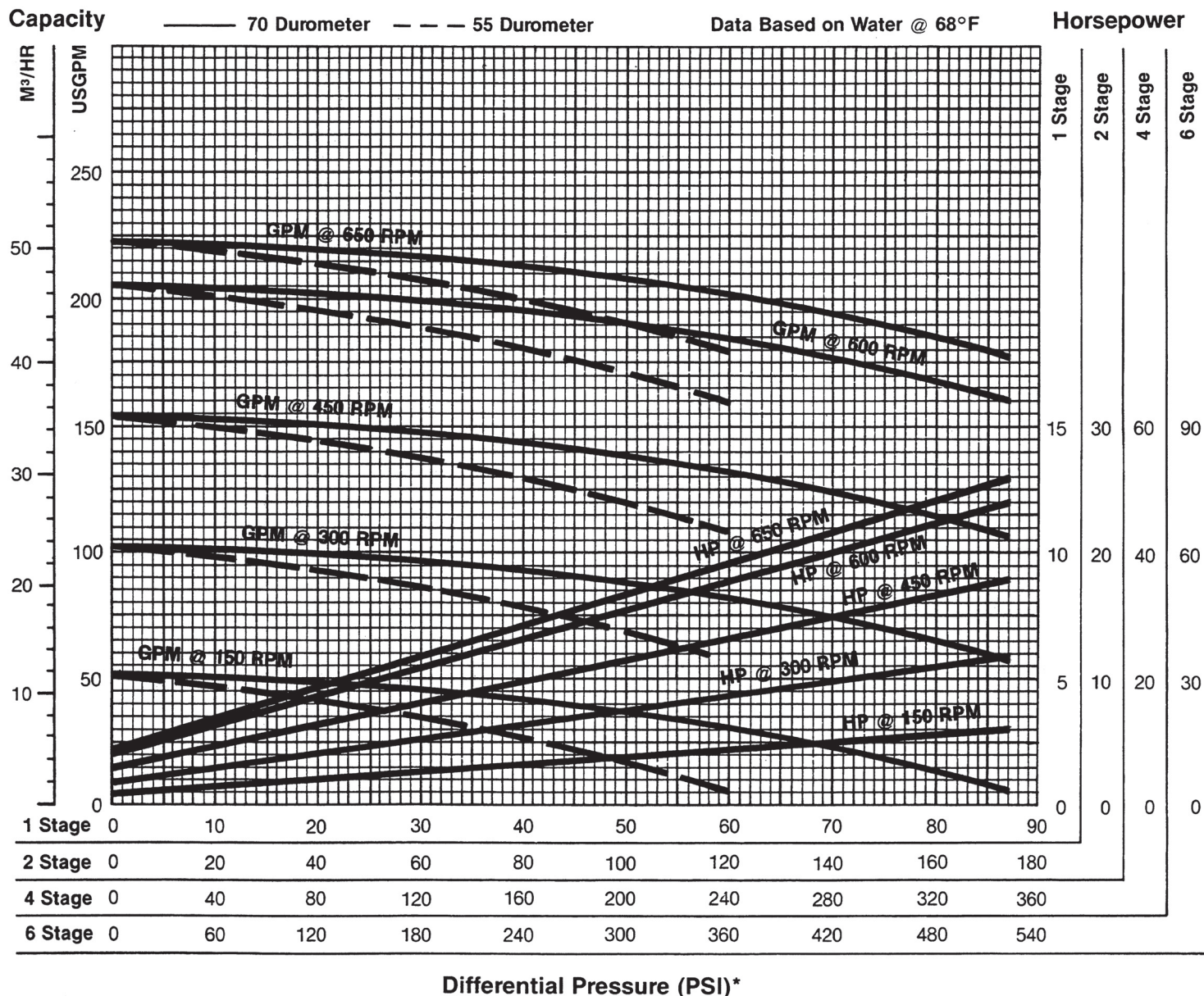
Element: 036

Models: 1E036, 2E036, 2F036, 4F036
 4G036, 6G036, 6H036

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	150	300	450	600	650
NPSH Required — (Ft.)		1.50	3.10	5.60	9.50	10.80
Minimum Recommended Motor HP	1 STG	3	5	7½	10	10
	2 STG	5	7½	10	15	15
	4 STG	7½	15	20	25	25
	6 STG	10	20	25	30	40
Drive End HP Must be added to HP value from curve.	E	0.24	0.48	0.72	0.96	1.16
	F	0.38	0.76	1.10	1.50	1.70
	G	0.53	1.10	1.60	2.20	2.30
	H	0.90	1.70	2.60	3.50	3.80


 *(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

%	Fine 16 Mesh (.039") (<1mm)				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.28	.36	.60	1.08	.34	.44	.73	1.32	.58	.75	1.24	2.25
30	.83	1.08	1.78	3.24	1.02	1.32	2.18	3.96	1.72	2.24	3.70	6.70
50	1.39	1.81	2.99	5.43	1.69	2.20	3.63	6.60	2.87	3.73	6.15	11.20

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	1.10	1.60	2.20	4.50	6.30	7.50

Performance Data

Curve 12.00

Element: 050

Models: 1E050, 2E050, 2F050, 4F050
 4G050, 6G050, 6H050

Use appropriate HP and pressure scales for the number of stages required.

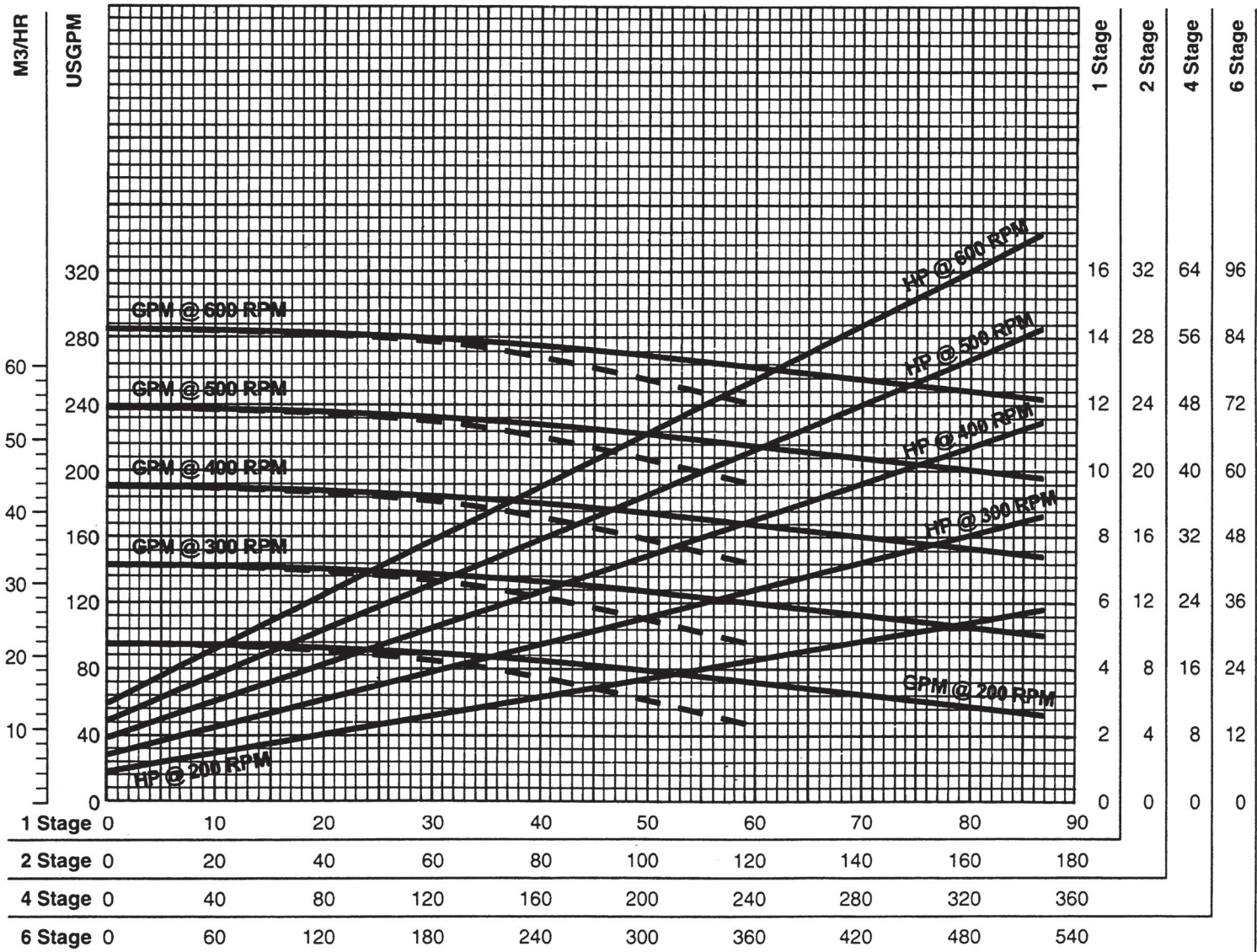
NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	200	300	400	500	600
NPSH Required — (Ft.)		2.43	3.65	6.20	9.20	12.20
Minimum Recommended Motor HP	1 STG	2	3	5	5	7½
	2 STG	5	7½	7½	10	15
	4 STG	7½	15	15	20	25
	6 STG	15	20	25	30	40
Drive End HP Must be added to HP value from curve.	E	.32	.48	.64	.80	.96
	F	0.51	0.76	1.01	1.27	1.52
	G	0.73	1.10	1.47	1.83	2.20
	H	1.13	1.70	2.27	2.83	3.40

Capacity

——— 70 Durometer - - - 55 Durometer

Data Based on Water @ 68° F

Horsepower

Differential Pressure (PSI)*

 *(PSI x .069 = BAR) (PSI x .070 = kgf/cm²) (USGPM x .2271 = M³/HR) (HP x .746 = kW)

Element: 050

Models: 1E050, 2E050, 2F050, 4F050, 4G050, 6G050, 6H050

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039") (<1mm)				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.32	.48	.79	1.44	.38	.59	.97	1.77	.67	1.00	1.65	3.00
30	1.12	1.43	2.36	4.29	1.16	1.74	2.87	5.22	2.30	2.96	4.88	8.88
50	2.16	2.40	3.96	7.20	1.94	2.92	4.82	8.76	3.29	4.94	8.15	14.82

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	1.55	2.14	3.00	6.39	8.50	10.00

Performance Data

Curve 14.00

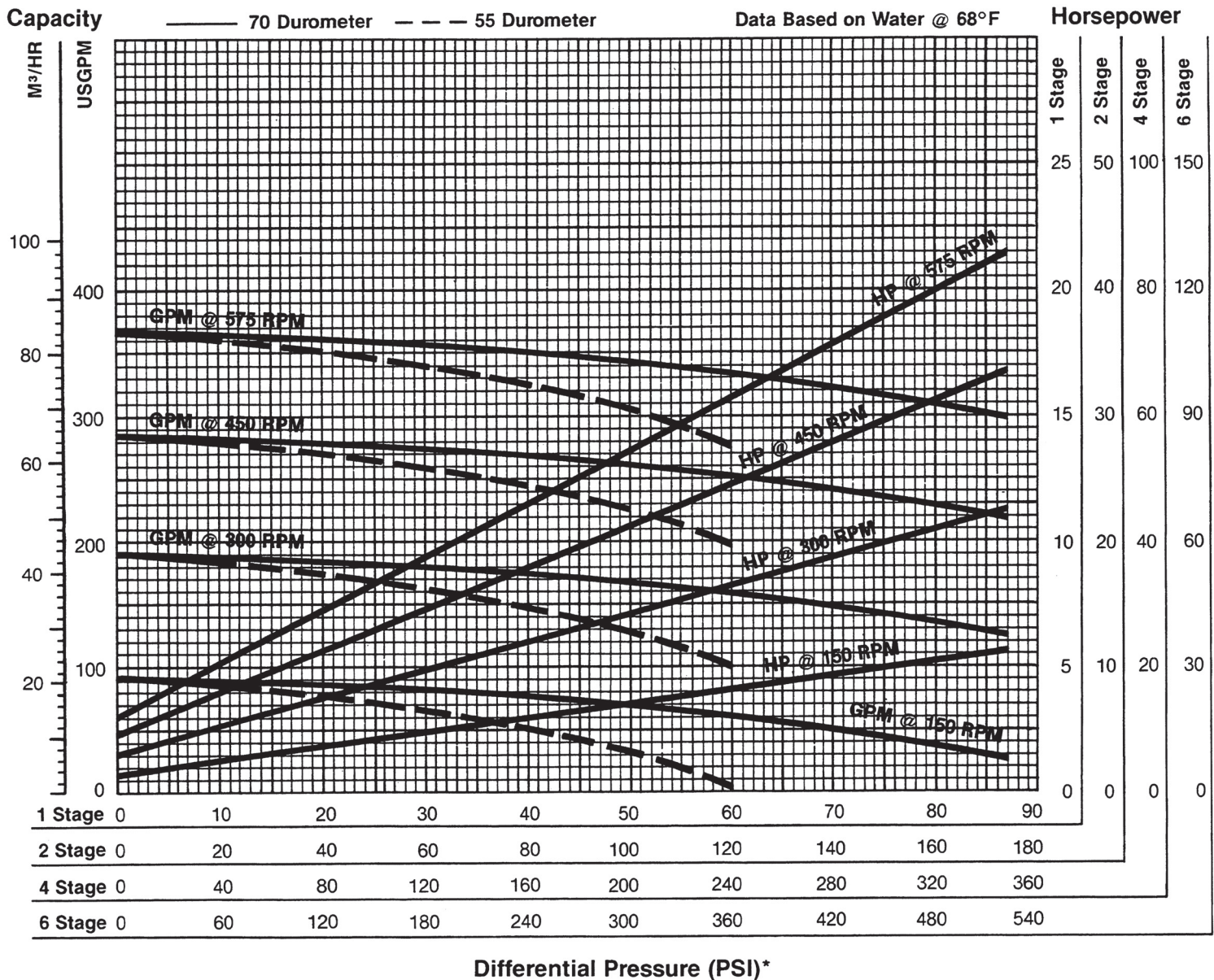
Element: 065

Models: 1F065, 2F065, 2G065, 4G065
 4H065, 6H065, 6J065

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

		RPM	150	300	450	575
NPSH Required — (Ft.)			1.90	3.80	8.30	12.20
Minimum Recommended Motor HP	1 STG		5	10	15	20
	2 STG		7½	15	20	25
	4 STG		10	20	25	30
	6 STG		15	25	40	50
Drive End HP Must be added to HP value from curve.	F		0.38	0.76	1.10	1.50
	G		0.53	1.10	1.60	2.00
	H		0.90	1.70	2.60	3.30
	J		1.00	2.00	3.00	3.90



*(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

Element: 065

Models: 1F065, 2F065, 2G065, 4G065, 4H065, 6H065, 6J065

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

%	Fine 16 Mesh (.039") (<1mm)				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.48	.62	1.02	1.86	.59	.76	1.25	2.28	.99	1.29	2.13	3.90
30	1.44	1.87	3.09	5.61	1.76	2.28	3.76	6.80	3.00	3.90	6.40	11.70
50	2.40	3.12	5.15	9.40	2.90	3.80	6.30	11.40	4.90	6.40	10.60	19.20

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	2.10	2.80	3.90	8.10	11.30	13.50

Performance Data

Curve 15.00

Element: 090

Models: 1F090, 2F090, 2G090
 4G090, 4H090, 6J090

Use appropriate HP and pressure scales for the number of stages required.

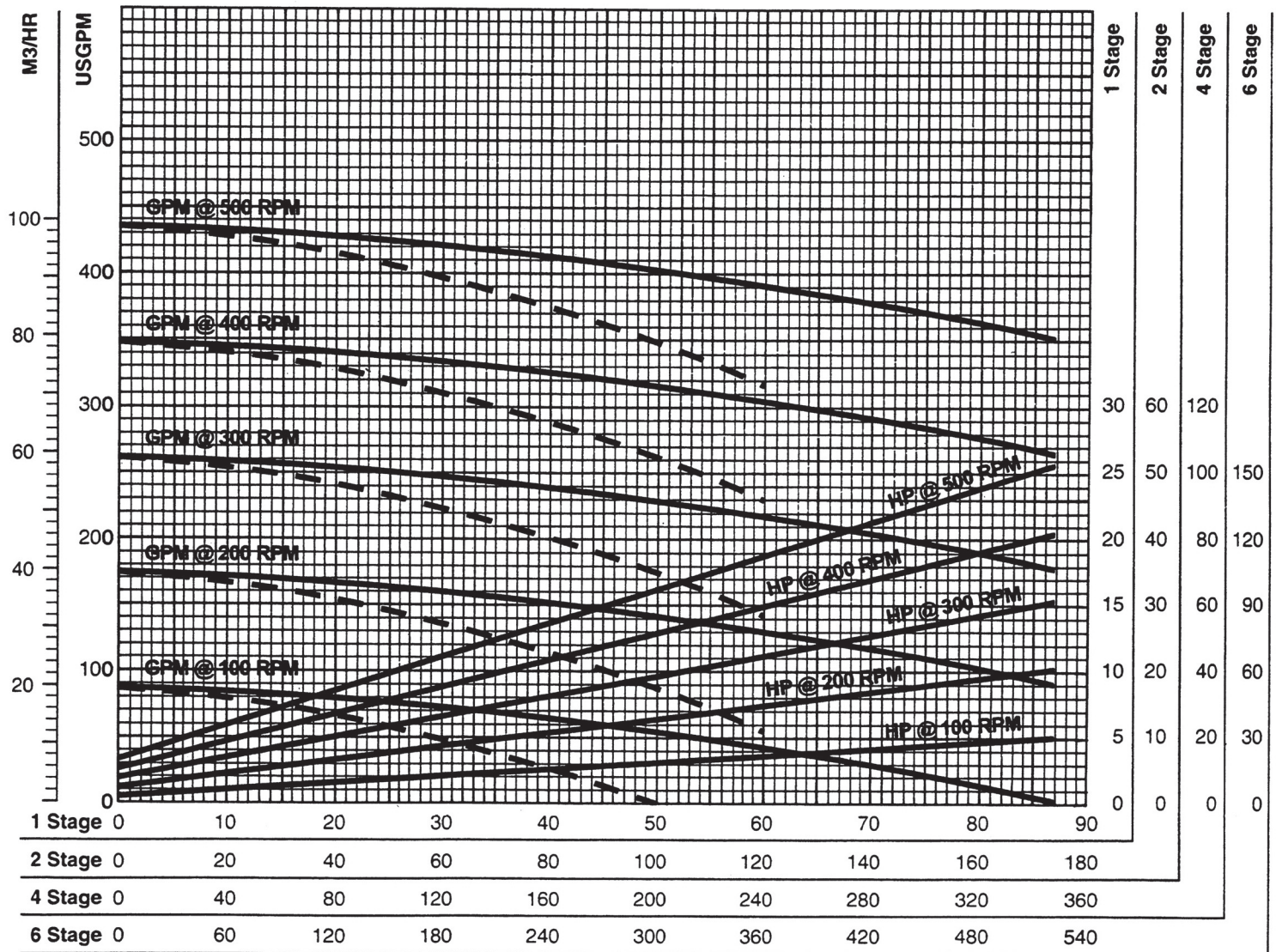
NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	100	200	300	400	500
NPSH Required — (Ft.)		1.5	3.0	5.0	9.0	12.0
Minimum Recommended Motor HP	1 STG	3	5	7½	10	10
	2 STG	5	7½	15	15	20
	4 STG	7½	15	25	30	40
	6 STG	15	30	40	50	60
Drive End HP Must be added to HP value from curve.	F	.26	.51	.76	1.01	1.27
	G	0.37	0.73	1.10	1.47	1.83
	H	0.57	1.13	1.70	2.27	2.83
	J	0.67	1.33	2.00	2.67	3.33

Capacity

——— 70 Durometer - - - 55 Durometer

Data Based on Water @ 68° F

Horsepower

Differential Pressure (PSI)*

 *(PSI x .069 = BAR) (PSI x .070 = kgf/cm²) (USGPM x .2271 = M³/HR) (HP x .746 = kW)

Element: 090

Models: 1F090, 2F090, 2G090, 4G090, 4H090, 6J090

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039" (<1mm))				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.66	.85	1.40	2.55	.81	1.04	1.71	3.12	1.36	1.77	2.92	5.34
30	1.97	2.56	4.23	7.69	2.41	3.12	5.15	9.32	4.11	5.34	8.77	16.03
50	3.29	4.27	7.06	12.88	3.97	5.21	8.63	15.60	6.71	8.77	14.52	26.30

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	2.88	3.84	5.34	11.10	15.48	18.50

Performance Data

Curve 16.00

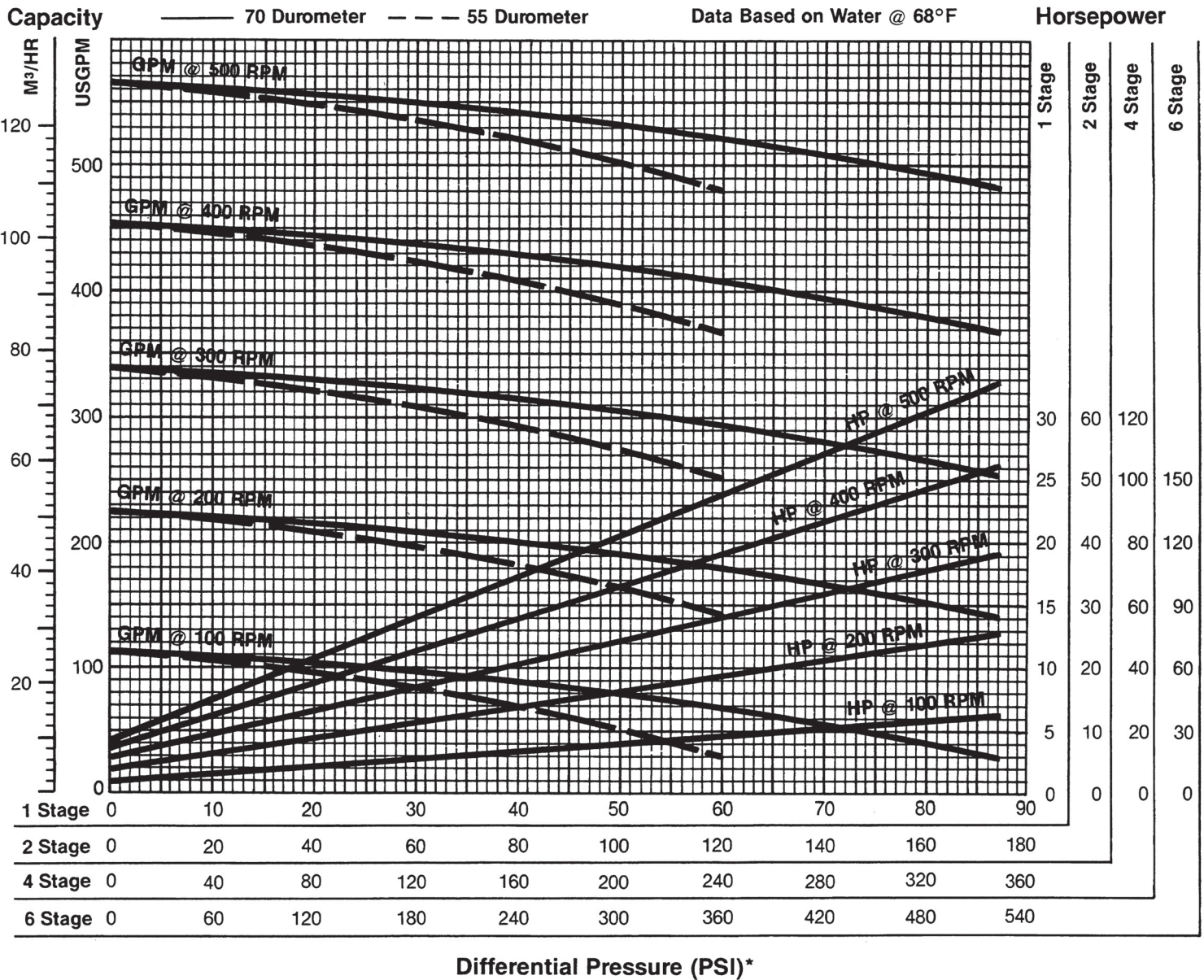
Element: 115

Models: 1G115, 2G115, 2H115, 4H115
 4J115, 6J115, 6K115

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	100	200	300	400	500
NPSH Required — (Ft.)		1.50	3.10	5.70	9.60	13.40
Minimum Recommended Motor HP	1 STG	5	7½	10	15	20
	2 STG	5	10	15	20	25
	4 STG	7½	15	25	30	40
	6 STG	10	20	30	40	50
Drive End HP Must be added to HP value from curve.	G	0.36	0.72	1.10	1.40	1.80
	H	0.60	1.10	1.70	2.30	2.80
	J	0.70	1.40	2.00	2.70	3.40
	K	1.30	2.60	3.90	5.20	5.90



*(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

Element: 115

Models: 1G115, 2G115, 2H115, 4H115, 4J115, 6J115, 6K115

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = $\frac{5}{9}C + 32$)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039") (<1mm)				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	.79	1.02	1.68	3.06	.96	1.24	2.05	3.72	1.62	2.10	3.47	6.30
30	2.36	3.06	5.05	9.18	2.86	3.72	6.14	11.20	4.87	6.30	10.40	18.90
50	3.93	5.10	8.42	15.30	4.77	6.20	10.20	18.60	8.10	10.50	17.30	31.50

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	3.50	4.80	6.60	14.0	20.0	23.0

Performance Data

Curve 17.00

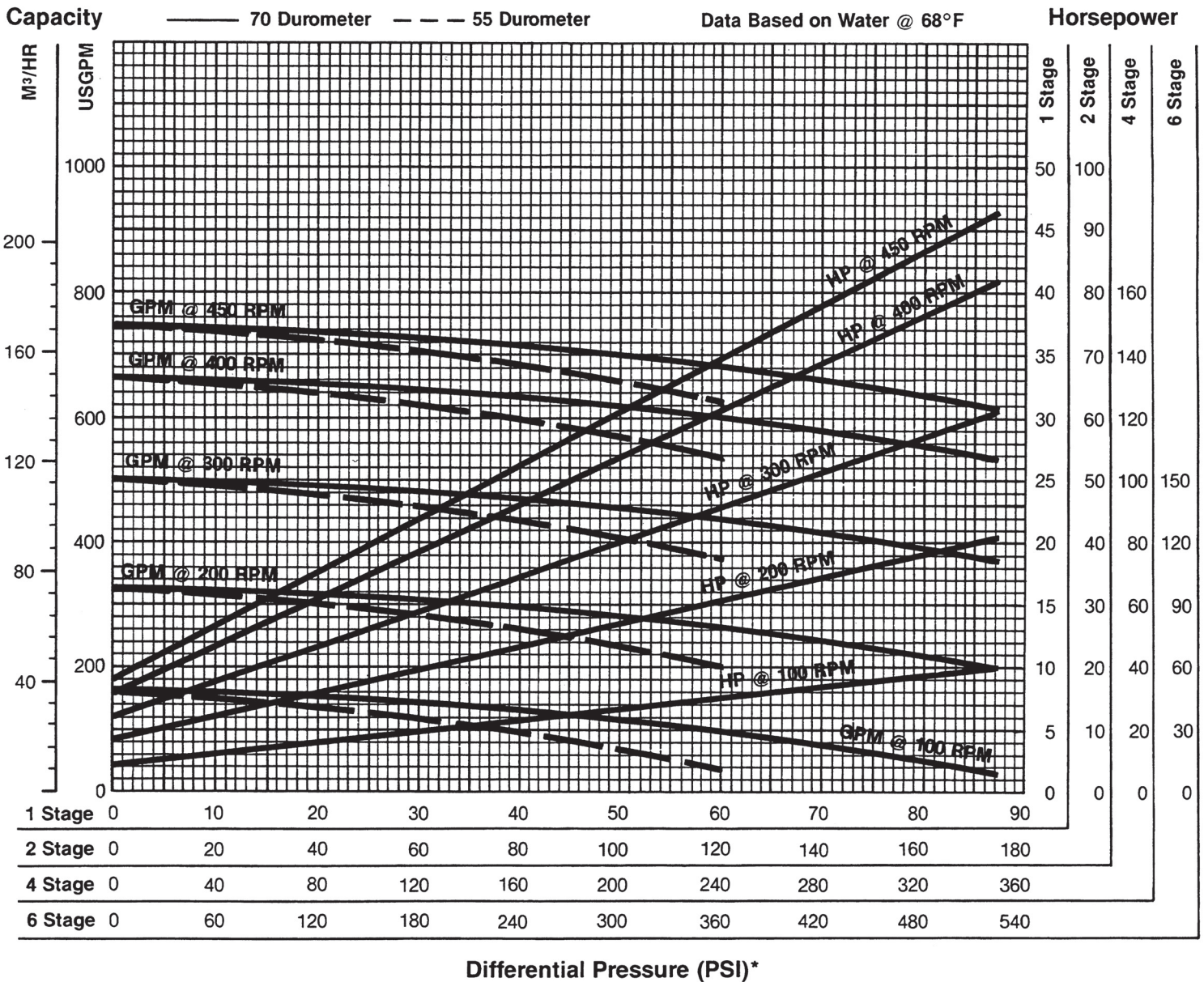
Element: 175

Models: 1H175, 2H175, 2J175
4J175, 4K175, 6K175

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	100	200	300	400	500
NPSH Required — (Ft.)		1.70	3.50	7.40	11.80	14.10
Minimum Recommended Motor HP	1 STG	7½	15	20	25	30
	2 STG	10	20	25	40	40
	4 STG	15	30	40	60	60
	6 STG	20	40	60	75	75
Drive End HP Must be added to HP value from curve.	H	0.60	1.10	1.70	2.30	2.80
	J	0.70	1.40	2.00	2.70	3.40
	K	1.30	2.60	3.90	5.20	5.90



*(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039" (<1mm))				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	4	6	1	2	4	6	1	2	4	6
10	1.11	1.44	2.38	4.32	1.35	1.75	2.89	5.25	2.28	2.96	4.88	8.88
30	3.32	4.31	7.11	12.90	4.04	5.25	8.66	15.80	6.83	8.87	14.60	26.60
50	5.53	7.18	11.90	21.50	6.74	8.75	14.40	26.30	11.40	14.80	24.40	44.40

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	5.50	7.50	11.00	23.00	30.00	37.00

Performance Data

Curve 18.00

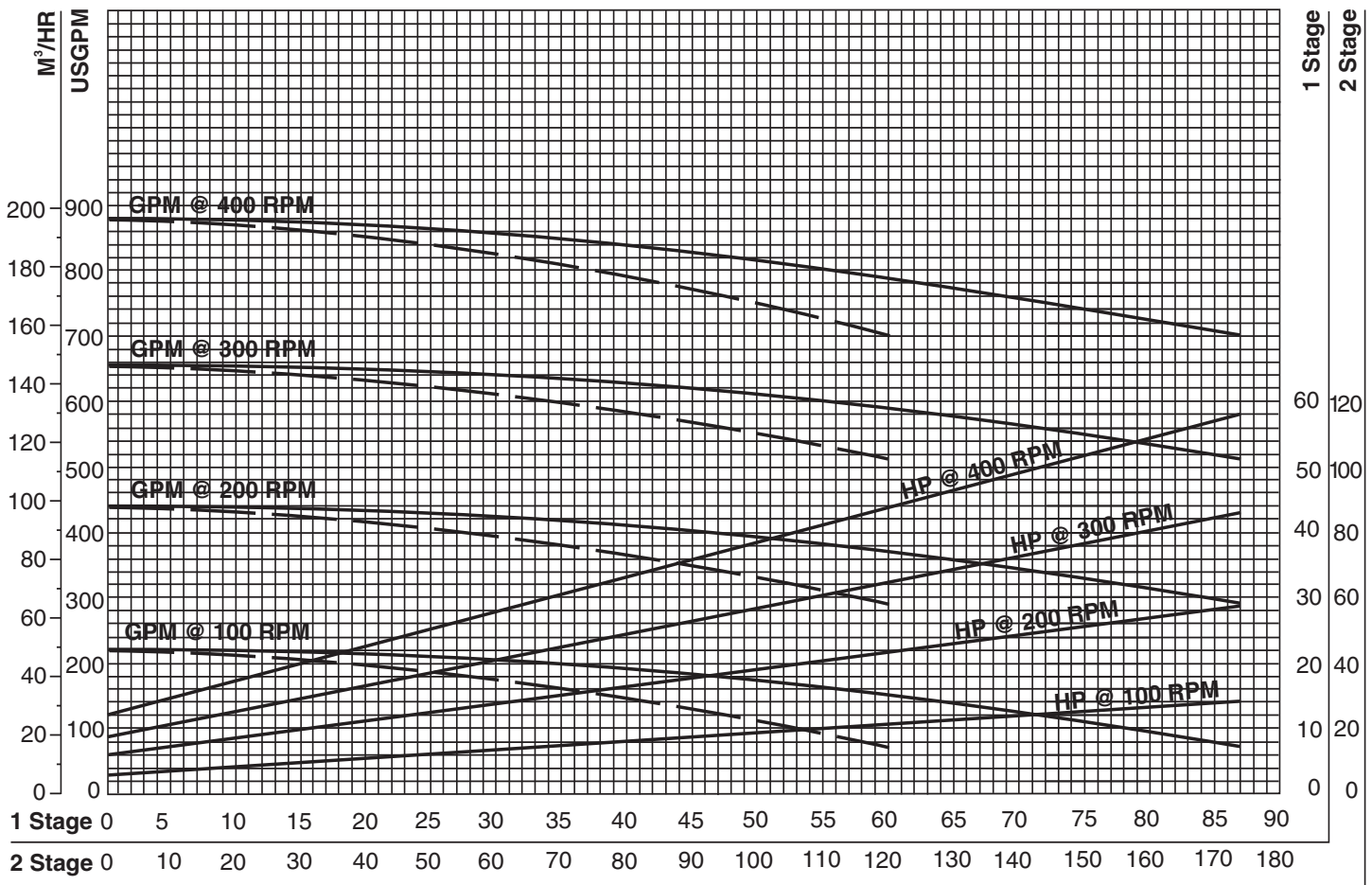
Element: 220
Models: 1J220, 2J220

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/ stage (70 Duro).

	RPM	100	200	300	400
NPSH Required – (Ft.)		2.00	3.95	8.75	13.67
Minimum Recommended Motor HP	1 STG	5	7.5	15	20
	2 STG	7.5	15	20	25
Drive End HP	J	0.70	1.40	2.00	2.70
Must be added to HP value from curve.					

Capacity — 70 Durometer - - - 55 Durometer **Data Based on Water @ 68°F** **Horsepower**



* Std. Nitrile and EPDM = 70 Duro.
Std. Natural Rubber = 55 Duro.

Differential Pressure (PSI)*

* (PSI x .069 = BAR) (PSI x .070 = kgf/cm²) (USGPM x .2271 = M³/HR) (HP x .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

$$(Degrees F = \%C + 32)$$

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039" (<1mm))		Medium 16 to 9 Mesh (.039" to .078") (1-2mm)		Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)	
	Number of Stages					
	1	2	1	2	1	2
10	1.39	1.81	1.70	2.20	2.87	3.72
30	4.17	5.42	5.08	6.60	8.59	11.15
50	6.95	9.03	8.47	11.00	14.33	18.61

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	6.50	9.50	13.00	27.50	38.50	46.50

Performance Data

Curve 20.00

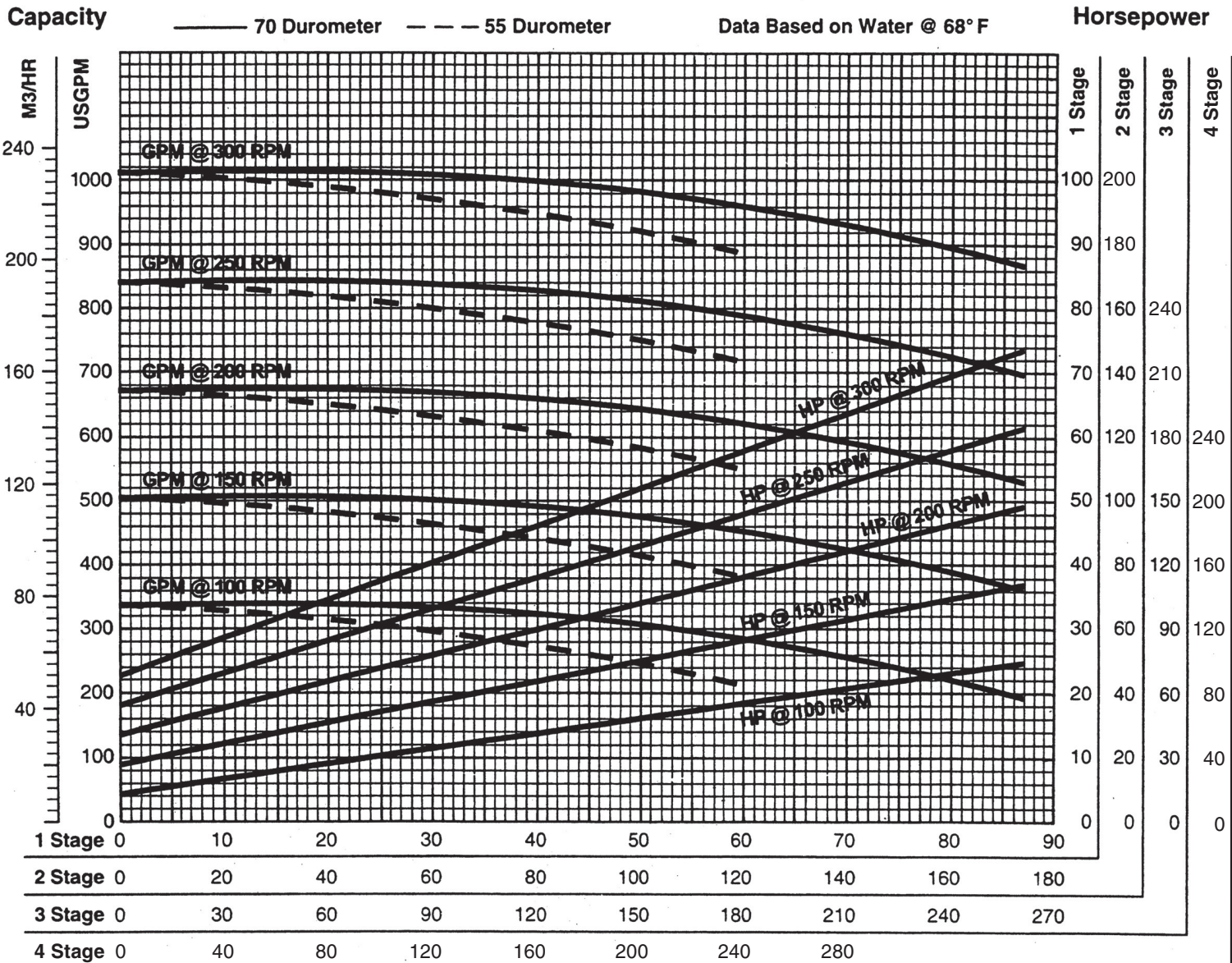
Element: 345

Models: 1J345, 2J345, 2K345
 3K345, 4K345

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	100	150	200	250	300
NPSH Required – (Ft.)						
Minimum Recommended Motor HP	1 STG	10	15	20	25	30
	2 STG	15	20	30	40	50
	3 STG	25	40	50	60	75
	4 STG	30	40	60	75	100
Drive End HP	J	0.70	1.05	1.40	1.75	2.00
Must be added to HP value from curve.	K	1.30	1.95	2.60	3.25	3.90


Differential Pressure (PSI)*

 *(PSI x .069 = BAR) (PSI x .070 = kgf/cm²) (USGPM x .2271 = M³/HR) (HP x .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039") (<1mm)				Medium 16 to 9 Mesh (.039" to .078") (1-2mm)				Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)			
	Number of Stages											
	1	2	3	4	1	2	3	4	1	2	3	4
10	2.42	3.15	3.87	4.59	2.95	3.83	4.72	5.61	4.99	6.49	7.98	9.47
30	7.26	9.44	11.62	13.80	8.85	11.50	14.16	16.82	14.97	19.46	23.95	28.44
50	12.10	15.70	19.36	23.02	14.75	19.18	23.60	28.02	24.95	32.44	39.92	47.40

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	11.33	15.45	21.63	44.29	60.77	72.10

Performance Data

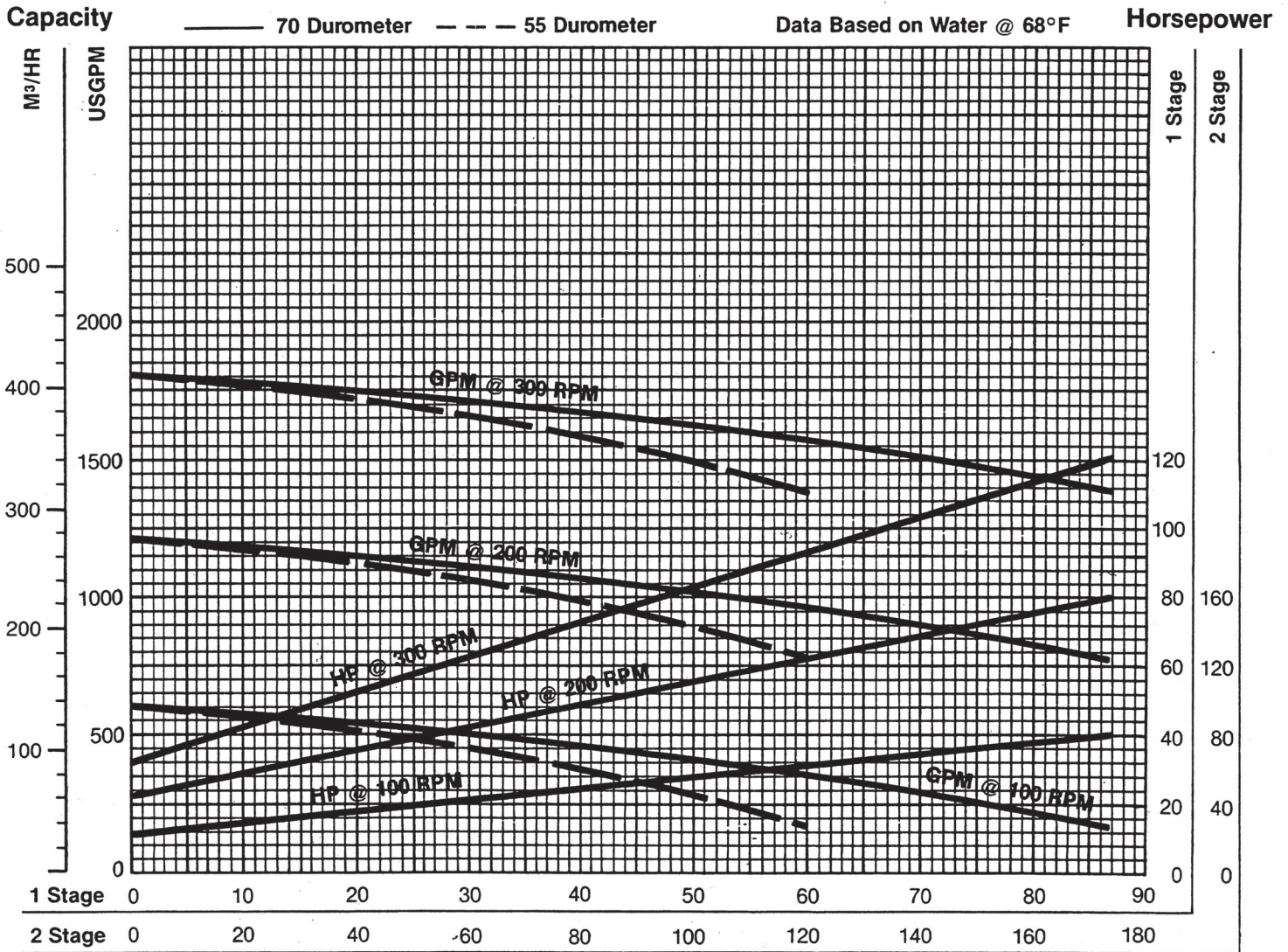
Curve 21.00

Element: 620
Models: 1K620, 2K620

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

	RPM	100	200	300
NPSH Required — (Ft.)		6.00	18.00	30.00
Minimum Recommended Motor HP	1 STG	25	50	75
	2 STG	60	75	100
Drive End HP	K	1.30	2.60	3.90
Must be added to HP value from curve.				



Differential Pressure (PSI)*

*(PSI × .069 = BAR) (PSI × .070 = kgf/cm²) (USGPM × .2271 = M³/HR) (HP × .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

%	Fine 16 Mesh (.039") (<1mm)		Medium 16 to 9 Mesh (.039" to .078") (1-2mm)		Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)	
	Number of Stages					
	1	2	1	2	1	2
10	3.7	4.8	4.5	5.9	7.6	9.9
30	11.1	14.4	13.5	17.6	22.9	29.7
50	18.5	24.1	22.6	29.3	38.1	49.5

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	19	26.7	37	77	110	130

Performance Data

Curve 22.00

Element: 800

Models: 1K800, 2K800

Use appropriate HP and pressure scales for the number of stages required.

NOTE: Pressure limits rated at 87 psi/stage (70 Duro.) Some models have additional limits. Please consult factory before making final selection.

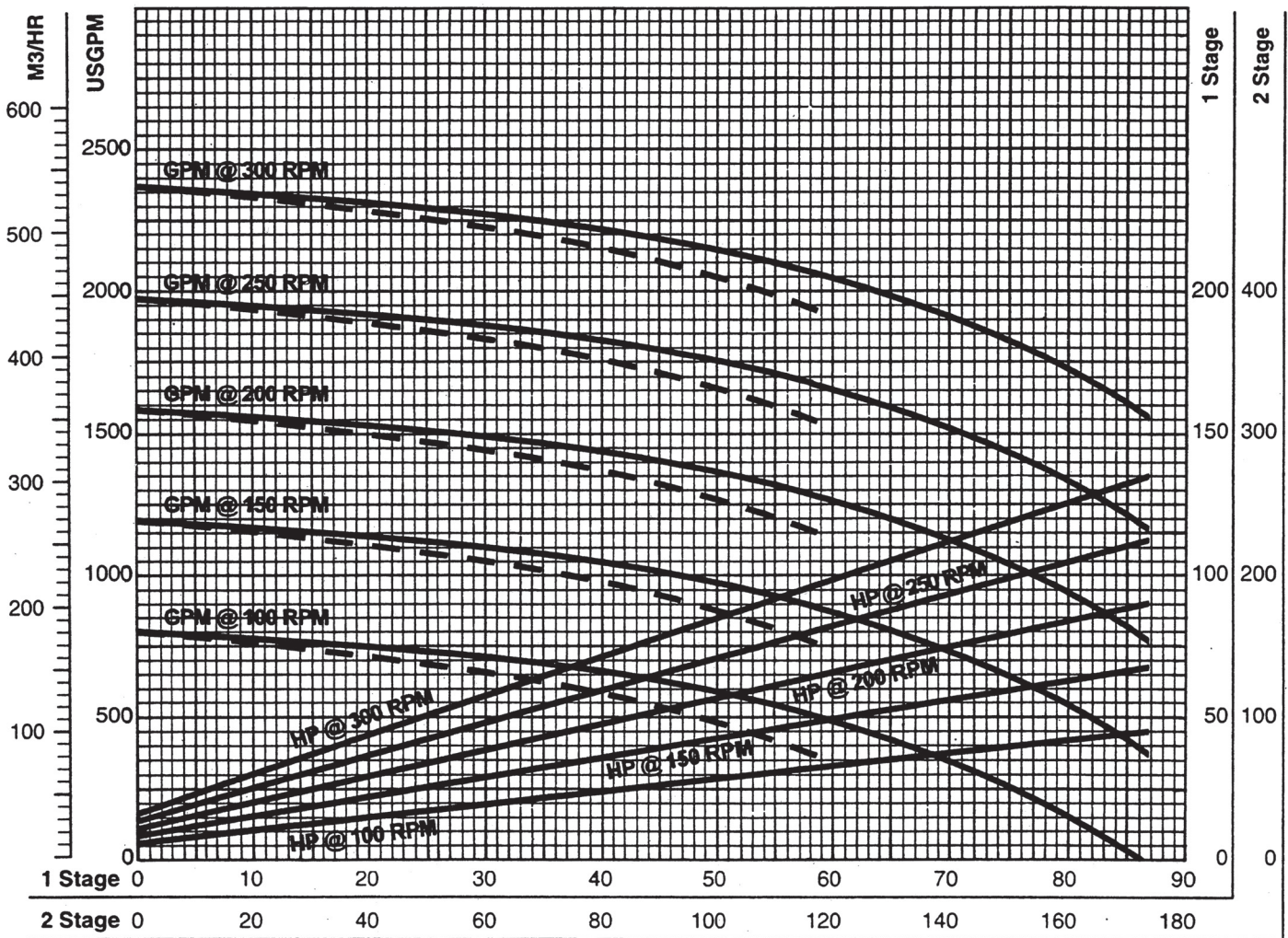
		RPM	100	150	200	250	300
NPSH Required – (Ft.)			3.2	6.3	10.4	14.5	20.0
Minimum Recommended Motor HP	1 STG		20	30	40	50	60
	2 STG		40	60	80	100	120
Drive End HP		K	1.30	1.95	2.60	3.25	3.90
Must be added to HP value from curve.							

Capacity

—— 70 Durometer - - - 55 Durometer

Data Based on Water @ 68° F

Horsepower



Differential Pressure (PSI)*

*(PSI x .069 = BAR) (PSI x .070 = kgf/cm²) (USGPM x .2271 = M³/HR) (HP x .746 = kW)

HORSEPOWER MULTIPLIERS:

Pump horsepower from the reverse side can be broken into three components: drive end, rotor/stator, and hydraulic.

Temperature affects the rotor/stator HP component only. For applications involving temperatures above 70°F, it is necessary to adjust the rotor/stator HP component of the horsepower obtained from the reverse side (i.e., the greater of the water HP or Minimum Recommended HP). This new horsepower is referred to as the **Temperature Corrected Horsepower**.

Rotor/stator horsepower can be found from the curve on the previous page. It is the HP at zero pressure for the corresponding RPM and number of stages.

To calculate the Temperature Corrected Horsepower, subtract the rotor/stator HP from the greater of the water or minimum recommended HP. This gives you the drive end/hydraulic HP. Multiply the rotor/stator HP by the appropriate temperature multiplier listed below. Add this adjusted value to the drive end/hydraulic HP to get the total Temperature Corrected Horsepower.

(Degrees F = %C + 32)

FLUID TEMPERATURE	70°F	100°F	125°F	150°F	175°F	200°F
HORSEPOWER MULTIPLIERS						
- Standard Size Rotor	1.00	1.10	1.30	1.60	2.00	2.50
- Undersize Rotor	0.75	0.80	0.85	0.95	1.10	1.60

For applications involving temperatures greater than 200°F, consult the factory.

HORSEPOWER ADDITIVES:

Shown below are HP additives for both water base slurries and for viscous materials. To use these tables, first determine which table applies to your product and enter that table with the appropriate fluid characteristics. Determine the HP additive per 100 RPM and multiply it by the speed of your pump divided by 100. Add the resulting figure to the HP for water from the curve on the preceding page or to the minimum HP for starting from the table at the top of the preceding page, whichever is larger.

If your product is a combination of a slurry and a viscous material, determine the appropriate HP additives from both tables below and use whichever is greater.

TABLE I. WATER BASE SLURRIES:

HP ADDER/100 RPM

% Solids	Fine 16 Mesh (.039") (<1mm)		Medium 16 to 9 Mesh (.039" to .078") (1-2mm)		Coarse 9 to 4 Mesh (.078" to .185") (2-5mm)	
	Number of Stages					
	1	2	1	2	1	2
10	5.6	7.3	6.6	8.6	11.2	14.8
30	16.8	21.9	20.4	26.5	34.6	44.8
50	28.0	36.6	34.0	44.1	57.5	74.8

TABLE II. VISCOSITY (NEWTONIAN FLUIDS):

HP ADDER/100 RPM/STAGE

Viscosity (Centipoise)						
1	2,500	5,000	10,000	50,000	100,000	150,000
0	27	35	48	100	133	165