nexus

NEXT GENERATION PUMPING

NP SERIES

NP
Self-Priming
Centrifugal Pump

www.allpumps.com.au

Coding System

Eg. **NP 40-110 XX XX XX**
NP 50-160

XXX XX-XXX XX XXXX XXXX

Series

NPS = Shaft (bare) pumps
NPT = Large Flow pumps
NPU = High Head pumps
NPM = Mono Block pumps

Discharge Size - Impeller Nominal Size

40-110	80-140	80-280	100-280	150-318	200-375
50-120	80-215	100-248	150-250	150-400	250-375
50-160	80-223	100-250	150-315	200-300	300-457

Seal Type

10 = Sic Vs Sic/Viton
20 = Tc Vs/Viton
30 = C Vs Ceramic/Viton

Tc = Tungsten Carbide
C = Carbon
Sic = Silicon Carbide

Body / Impeller / Shaft Material

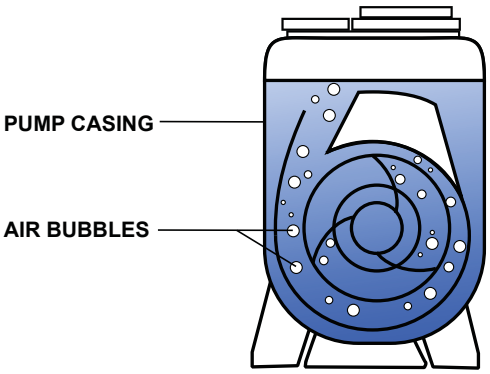
Codes	Casing	Impeller	Shaft
CD	CI	Ductile Iron	2Cr13 (420)
CA	CI	A 216 (Carbon Steel)	2Cr13
CAD	CI	Harden Iron	SS304
CB	CI	Bronze	SS304
C20	CI	CD4MCU	SS304
CS04	CI	SS304	SS304
BB	Bronze	Bronze	SS316
D4MC	Duplex SS	Duplex SS	SS316
SS04	SS304	SS304	SS304
SS16	SS316	SS316	SS316
ADI	Harden Iron	Harden Iron	SS304
HH	Hastelloy	Hastelloy	SS316

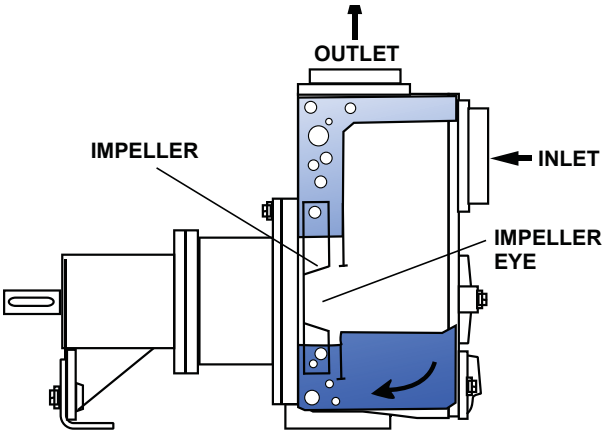
Special Option

Engine

EB = Engine on baseplate
ET1 = Engine on Trolly - off road
ET2 = Engine on Trolly - on road

Introduction





Principal of Self Priming

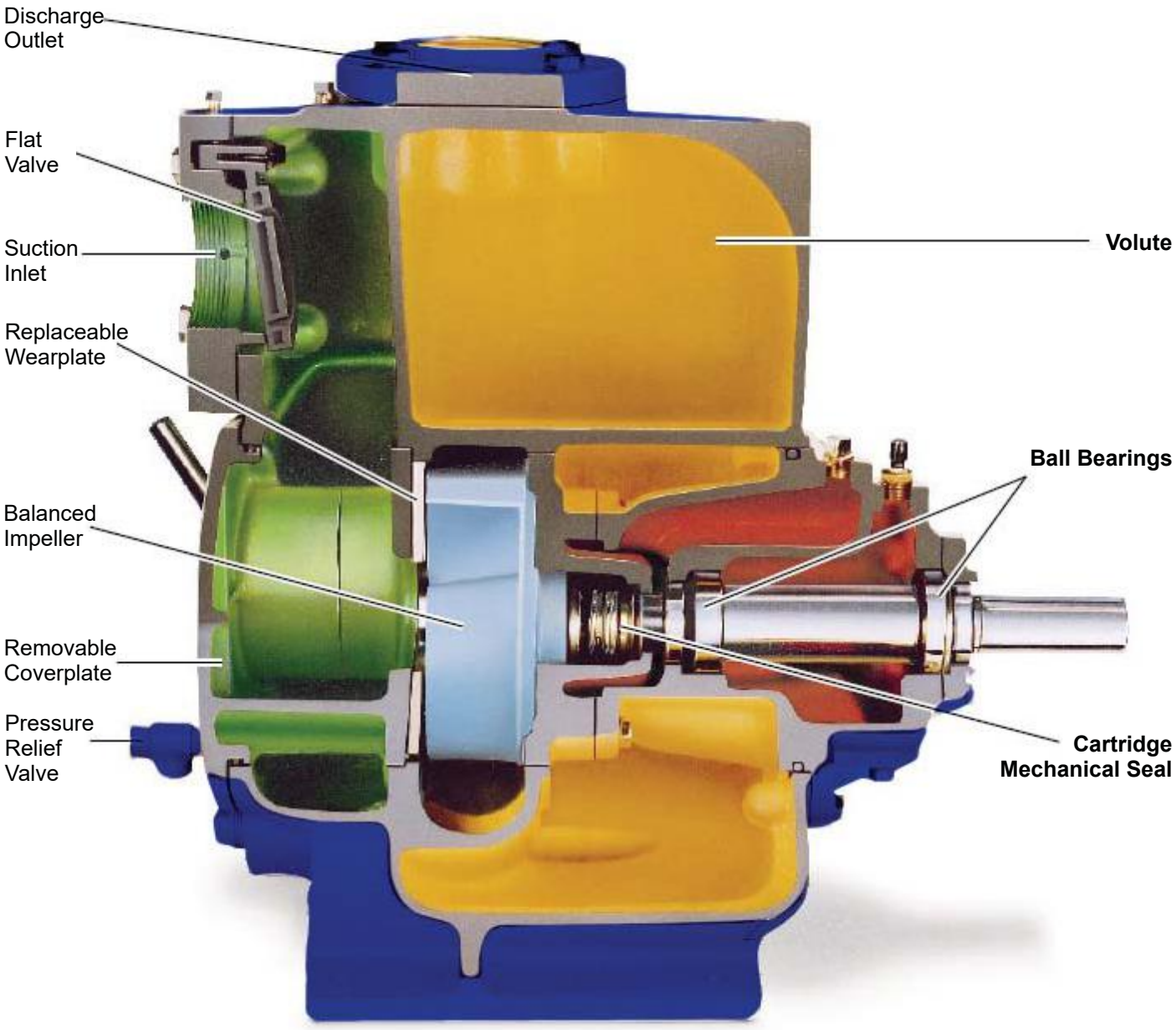
Upon starting the pump, pressure drop occurs at the eye of the impeller which will give rise to pressure differences within the pump system (pump casing & suction pipe) and outside the pump system. As the pressure continues to drop in the pump system, a mixture of liquid and air will start to flow into the pump due to higher atmospheric pressure outside the pump system.

The mixture of liquid and air will flow through the casing chamber designed like a diffuser through the inlet and then to the discharge port. At the discharge port, air being lighter will be extricated through the discharge piping. The liquid being heavier will fall back into the pump chamber and re-mix with the inlet liquid. This process is repeated till air in the suction pipe and pump casing is fully emptied and filled with liquid. At this point, the pump will then be fully primed and achieve the self-priming effect.

Application :

- **Industry**
  - Waste water treatment
  - Transfer of low viscosity petroleum products
  - Recovery of dirty solvents
  - Emergency duty
- **Civil engineering / civil defence**
  - Sewer by-pass
  - Recovery of hazardous liquids
  - Flood drainage
- **Marine duty**
  - Bilge pumping
  - Sanitary duty
  - Loading and unloading
  - Washing
  - Fire fighting
- **Sewage**
  - Lift stations
  - Sewage by-pass
  - Treatment
- **Construction**
  - Dewatering
  - Ground water control
  - Water supply
- **Agriculture**
  - Surface irrigation
  - Liquid manure
  - Distribution of liquid animal feed

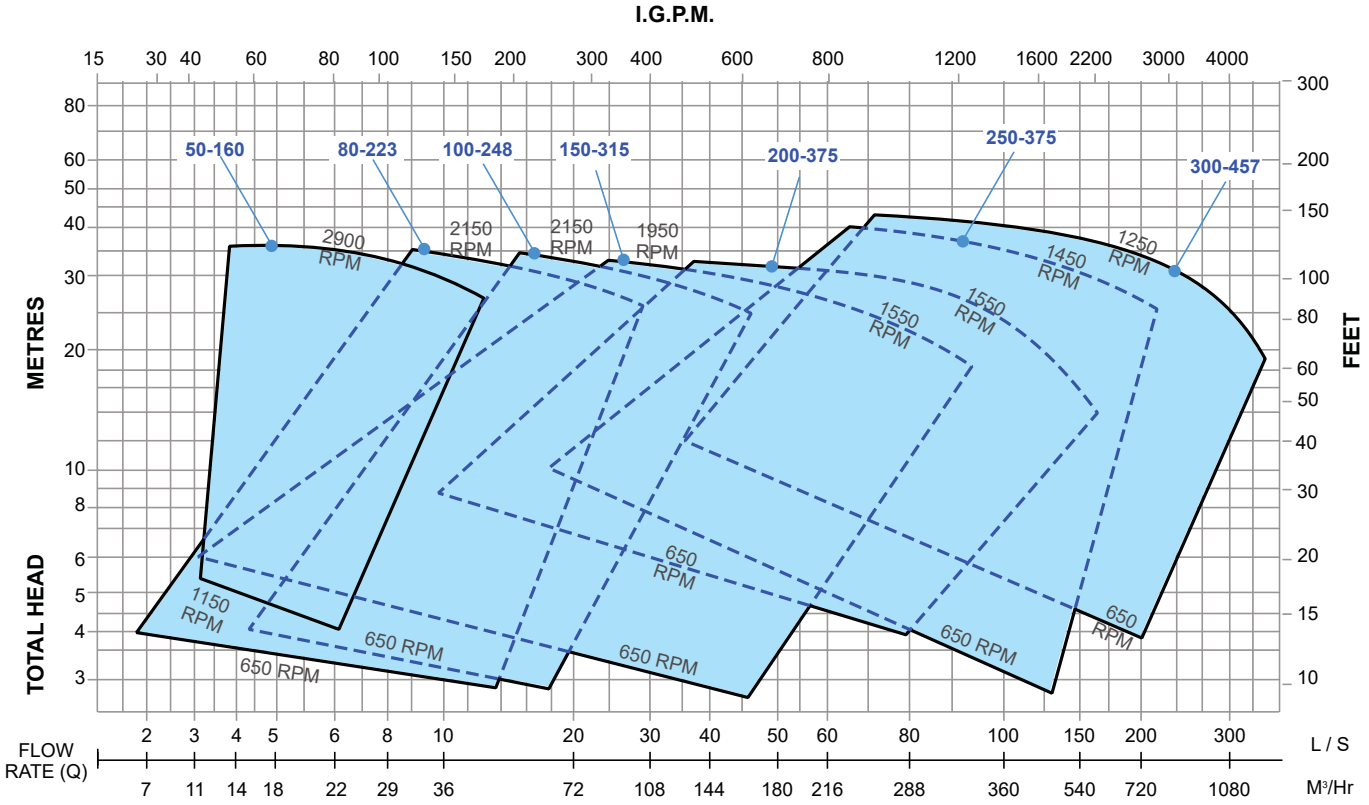
Sectional Parts



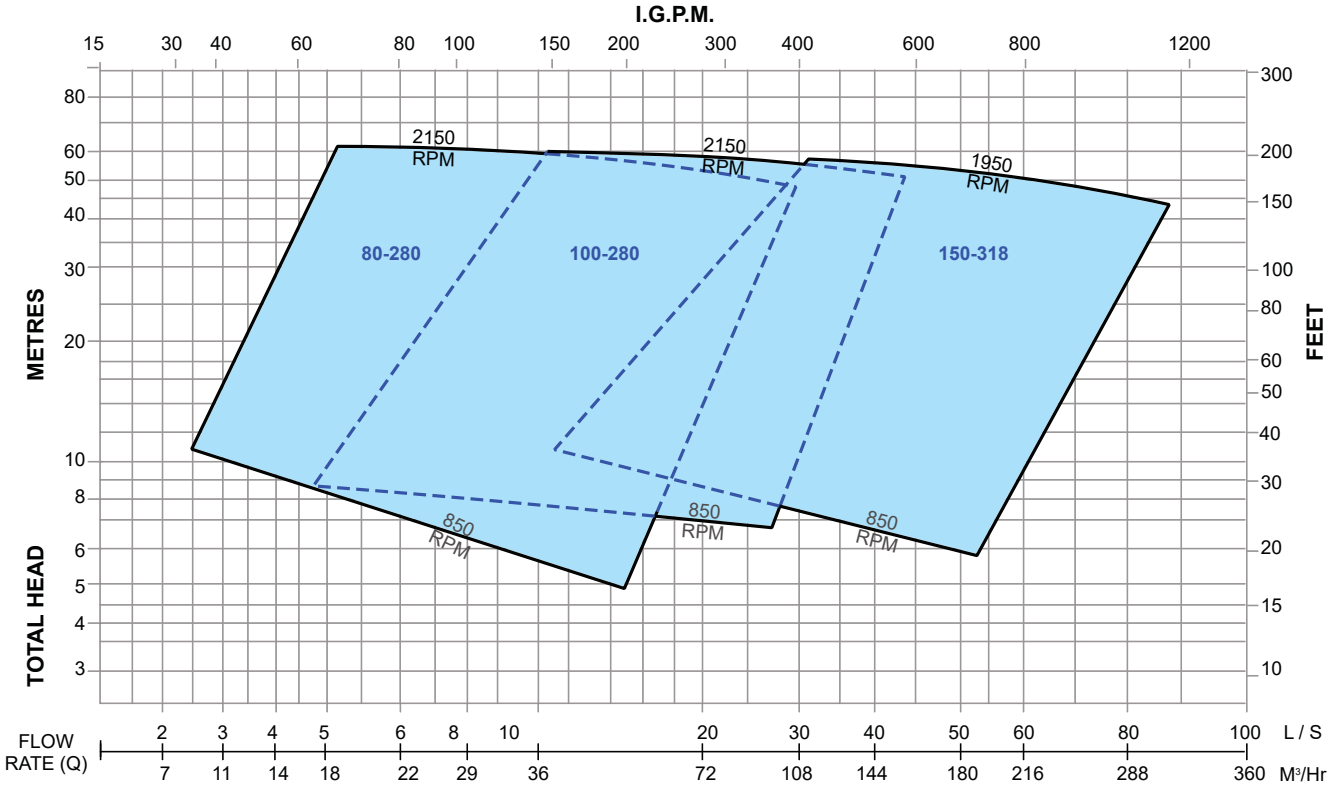
Pump Model	Port Size		Solid Size	50/60hz							
	mm	in	Ømm	Capacity m3/hr			Head m			RPM	Motor kW
NP50-160	50	2"	44	47	30	14	27	31	35	2900	15
NP80-223	80	3"	64	105	70	31	25	30	34	2150	25
NP100-248	100	4"	76	180	110	55	24	30	35	1950	30
NP150-315	150	6"	76	330	225	85	18	24	32	1550	40
NP200-375	200	8"	76	590	360	140	12	26	33	1550	75
NP250-375	250	10"	76	760	470	220	23	33	39	1450	100
NP300-457	300	12"	76	1250	800	250	19	34	43	2150	125
NP80-280	80	3"	21	85	55	20	49	58	61	2150	30
NP100-280	100	4"	29	145	100	35	74	55	60	2150	50
NP150-318	150	6"	32	305	210	98	44	53	58	1950	75

Family Curves

2” - 12” Large Flow

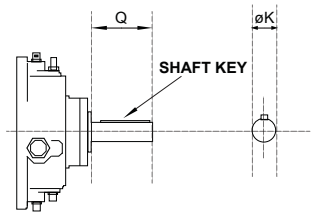


3” - 6” High Head

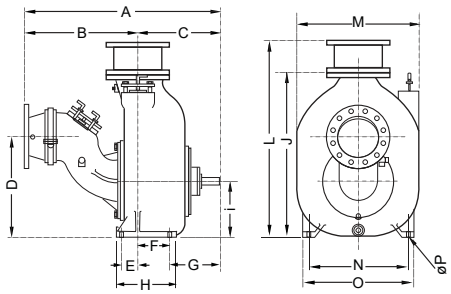


Installing Dimensions

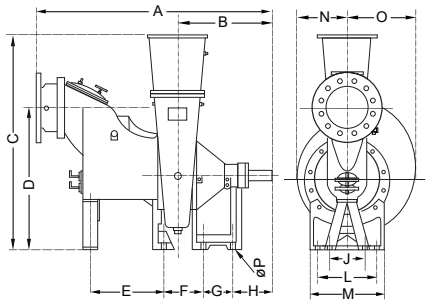
IMPELLER SHAFT



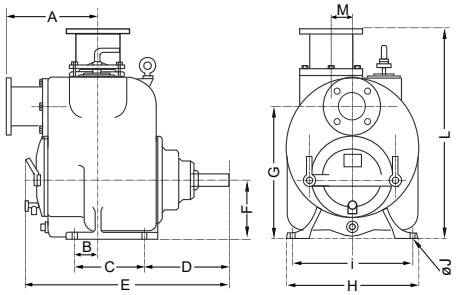
Models NP 250-375



Models NP 300-457

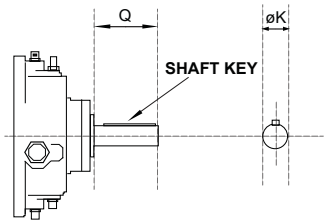


Models NP 50-160, NP 80-223, NP 100-248, NP 150-315 and NP 200-375

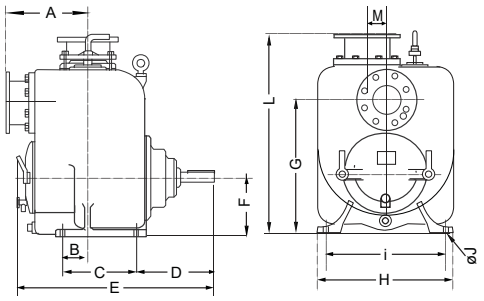


Pump Model	Port Size		Pump Dimension								Foot Dimension							Shaft End		Shipping Weight (kg)
	mm	in	A	E	F	G	L	M	N	O	B	C	D	H	I	J	P	K	Q	
50-160	50	2"	235	547	152	318	523	70			54	163.2	275.0	308.3	281.0	14.0		38.1	101.6	156
80-223	80	3"	294	668	191	432	687	70			76.2	228.6	284.2	431.8	393.7	17.5		38.1	101.6	270
100-248	100	4"	318	768	222	495	743	70			77.8	280.0	293.7	501.7	457.2	17.5		38.1	127.0	375
150-315	150	6"	406	802	257	568	897	70			77.8	279.4	293.7	577.9	527.0	17.5		38.1	127.0	487
200-380	200	8"	413	1023	330	724	1068				101.6	304.8	407.1	704.9	635.0	22.4		44.5	169.9	905
250-375	250	10"	1237	102	204	322	1221	786	635	705	712.0	523.3	636.5	381.0	355.6	1041.4	22.4	44.5	122.2	943
300-457	300	12"	1622	508	270	203	406	508	346	467	650.0	1474.7	917.5	272.5	508.0	242.8	28.7	69.9	167.4	1100

IMPELLER SHAFT

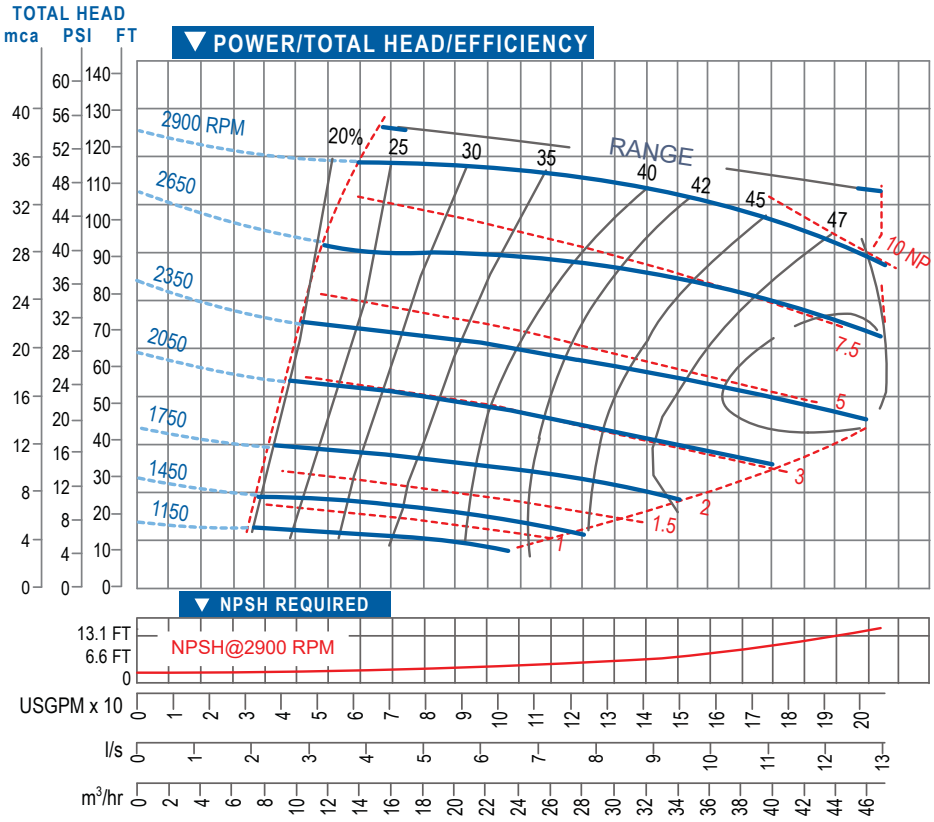


Models NP 80-280, NP 100-280, NP 150-318



Pump Model	Port Size		Pump Dimension						Foot Dimension						Shaft End		Shipping Weight (kg)
	mm	in	A	E	F	G	L	M	B	C	D	H	I	J	K	Q	
80-280	80	3"	292	667	191	432	687	70	76.2	228.6	282.9	431.8	394.0	17.5	38.1	103.1	301
100-280	100	4"	318	752	222	508	749	70	96.8	279.4	297.5	508.0	457.2	17.5	38.1	126.2	357
150-318	150	6"	406	845	257	568	897	70	77.7	279.4	330.7	584.2	527.2	17.5	44.5	114.3	574

Performance Curves

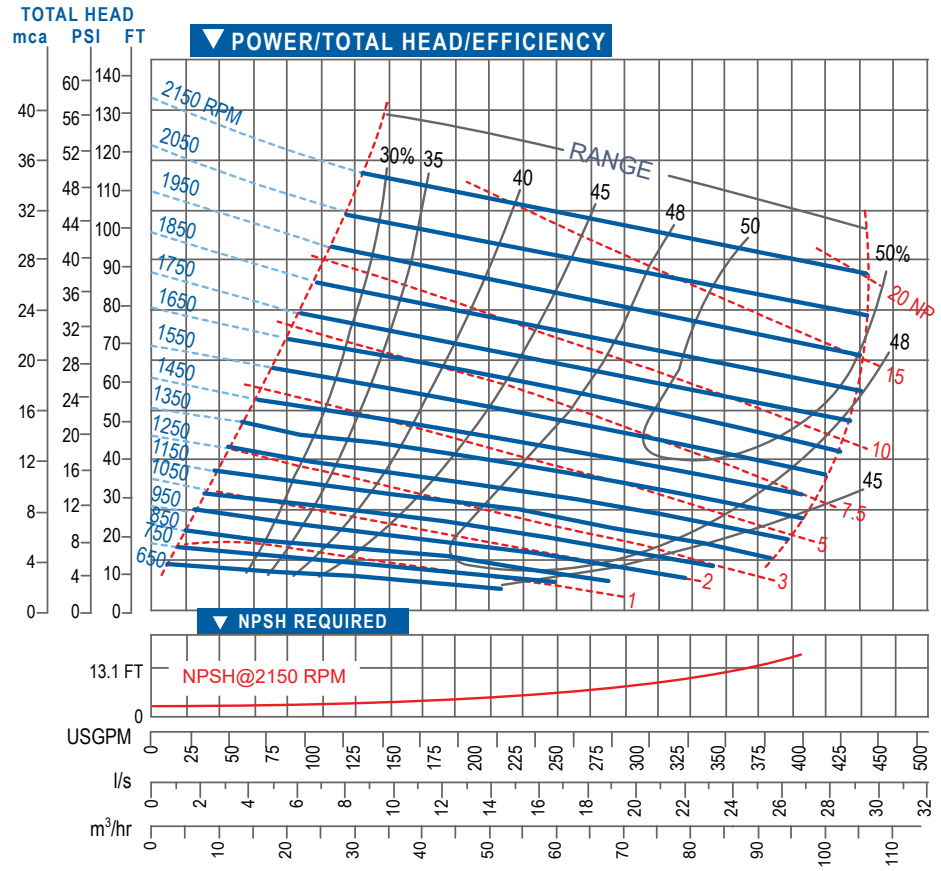


NP 50-160
Performance Curve

Impeller Dia. 158,75mm (6.1/4")

Max Solids 44,45mm (1.3/4")

R.P.M. from 1150rpm to 2900rpm



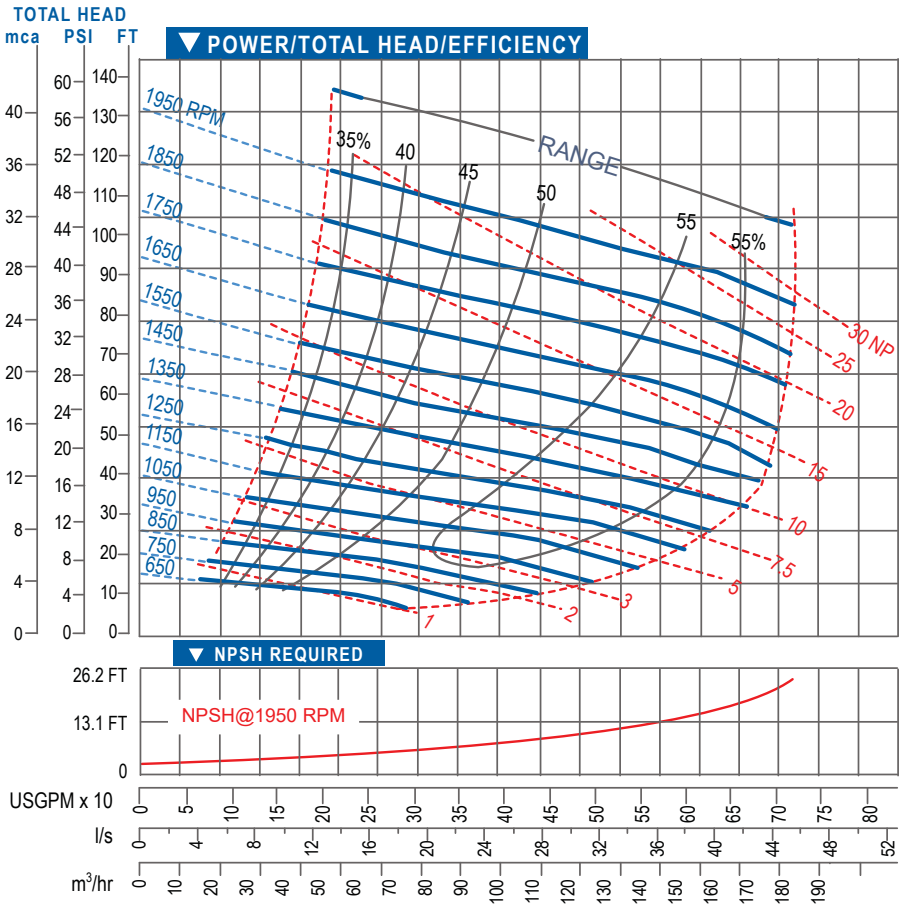
NP 80-223
Performance Curve

Impeller Dia. 222,25mm (8.3/4")

Max Solids 63,5mm (2.1/2")

R.P.M. from 650rpm to 2150rpm

Performance Curves

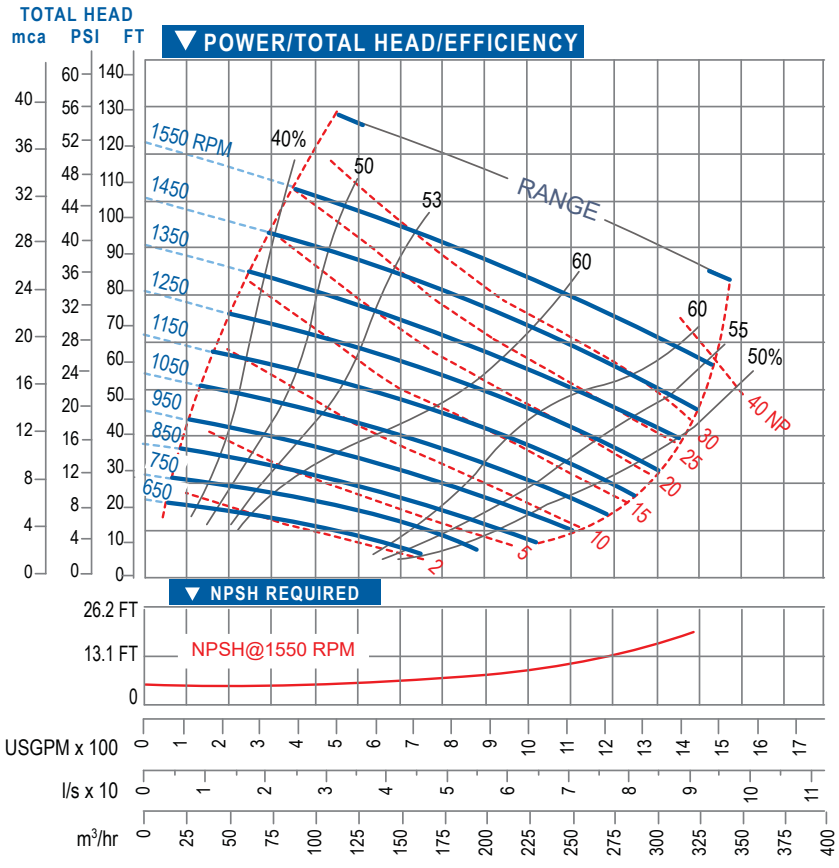


NP 100-248
Performance Curve

Impeller Dia. 247,65mm (9.3/4")

Max Solids 76,2mm (3")

R.P.M. from 650rpm to 1950rpm



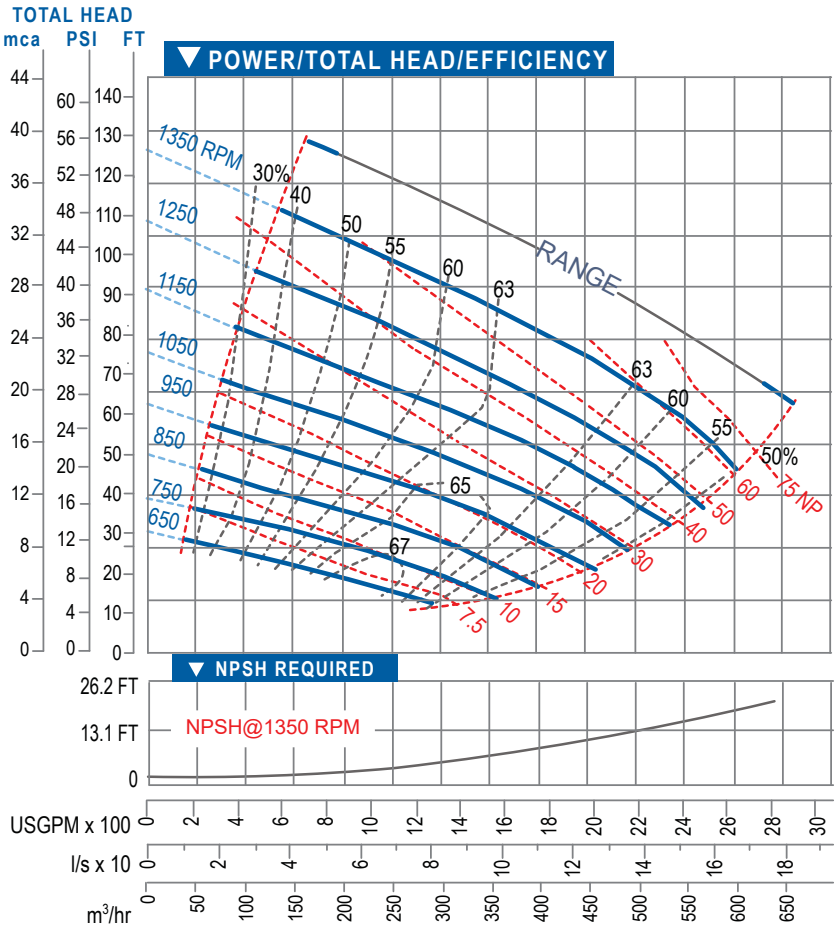
NP 150-315
Performance Curve

Impeller Dia. 314,32mm (12.3/8")

Max Solids 76,2mm (3")

R.P.M. from 650rpm to 1550rpm

Performance Curves

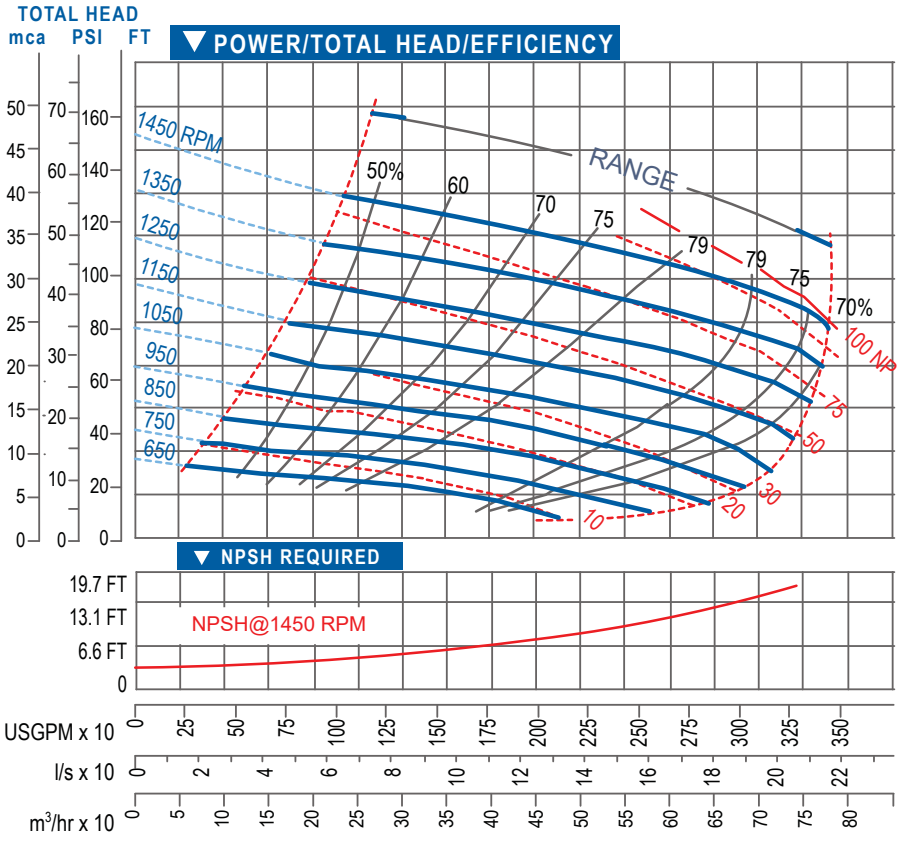


NP 200-375
Performance Curve

Impeller Dia. 374,65mm (14.3/4")

Max Solids 76,2mm (3")

R.P.M. from 650rpm to 1450rpm



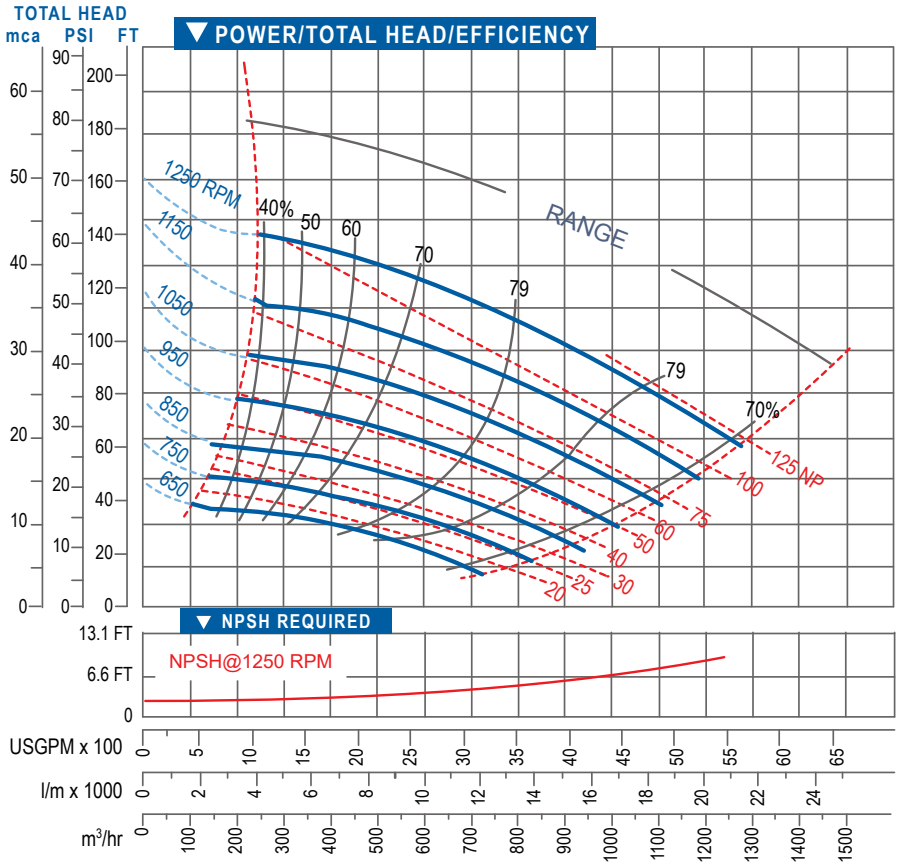
NP 250-375
Performance Curve

Impeller Dia. 374,65mm (14.3/4")

Max Solids 76,2mm (3")

R.P.M. from 650rpm to 1450rpm

Performance Curves

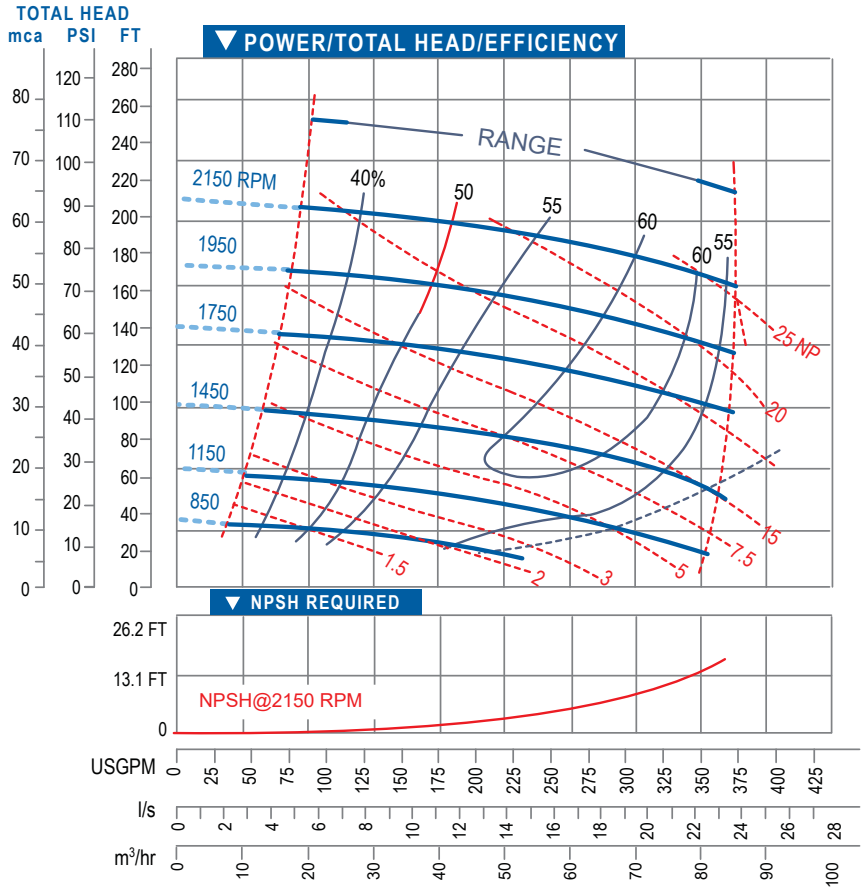


NP 300-457
Performance Curve

Impeller Dia. 457,2mm (18")

Max Solids 76,2mm (3")

R.P.M. from 650rpm to 2150rpm



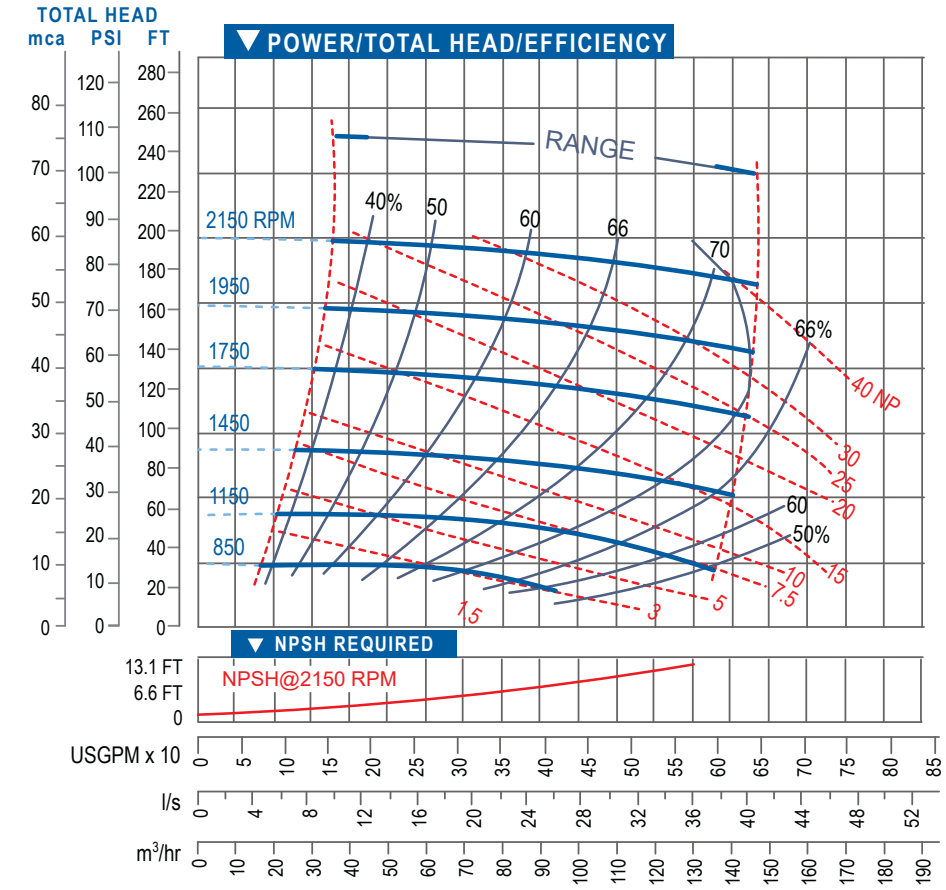
NP 80-280
Performance Curve

Impeller Dia. 279,4mm (11")

Max Solids 20,63mm (13/16")

R.P.M. from 850rpm to 2150rpm

Performance Curves

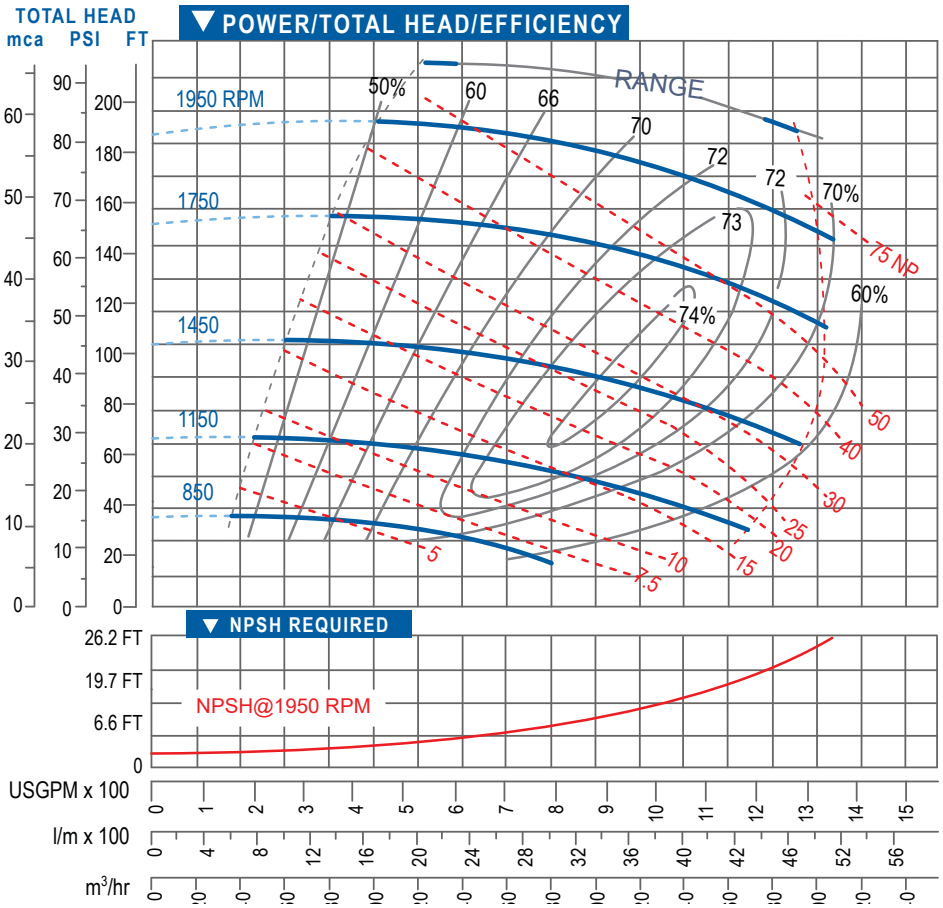


NP 100-280
Performance Curve

Impeller Dia. 279,4mm (11")

Max Solids 28,57mm (1.1/8")

R.P.M. from 850rpm to 2150rpm



NP 150-318
Performance Curve

Impeller Dia. 317,5mm (12 .1/2")

Max Solids 31,75mm (1.1/4")

R.P.M. from 850rpm to 1950rpm

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