



Application

The PISO centrifugal pump is suitable for handling water or similar liquids mainly used in the following.

- Water Supply
- Industry
- Mining
- Environmental
- Leisure
- Building Services

Design

Horizontal, single stage, end suction centrifugal pump dimensionally built to ISO2858/5199. The back pull out design allows for easy maintenance and repair as the rotating element may be removed without disturbing the pipework.

Operating Data --50Hz

Pump sizes		32mm to 350mm
Flow	up to	540 L/s
Head	up to	160 m
Temperature	up to	120°C
Speed	up to	3600 rpm
Pressure	up to	24 Bar

Design Features

PISO design is in accordance with international standards of **ISO2858**, which means PISO Series pumps are interchangeable with other similar pumps, conforming to the same standards. This ensures a robust, long lasting, high performing product consumers have come to depend on from Preeminence.

Pump Casing

highly efficient cast iron volute casings, with flanges rated to PN1.6MPa (16bar), drilled to ISO7005.2 : 1988).
Material options: Ductile Iron, 316SS .

Enlarge Shaft

reduces shaft deflection.
Standard in 420SS & **304SS**,316SS as an option.
Tapered & keyed shaft design allowing ease of removal in maintenance & positive locking whilst in operation

Bearings

Heavy duty NTN or approved equivalent, greased for life, reducing maintenance. Protected by a quality manufactured lip seal reducing ingress of moisture or foreign matter. Housed within removable bearing cap cover assembly

Bearing housing

Robust / heavy duty, manufactured in high strength cast iron providing trouble-free life complete with lifting provision and support foot.

Shaft seal

single, high quality John Crane or approved equivalent mechanical seal with **carbon vs ceramic** fitted as standard to all PISO Series pumps with other options such as Silicone vs Silicone or high temp also available.

Wear Ring

Cast Iron **wear rings** - fitted as standard, replaceable front & rear wear rings with optional materials, for a trouble-free lifecycle.

Casing O-Ring

Re-usable o-rings in Nitrile for ease of re-assembly

Tappings

Convenient suction & discharge pressure gauge tappings plus volute drain, fitted as standard to all PISO Series pumps.

Painting

Prior to painting, the pump is thoroughly cleaned of foreign material. The pump is then painted with a high quality/ undercoat/ primer and industrial enamel paint.

Accessories

Drive

The pump is only recommended for direct drive via a flexible spacer coupling. Spacer couplings enable the utilization of the back pull out feature.

Where belt drives are necessary a separate jack (intermediate) shaft with bearings to carry the belt loads may be required.

All drive systems, where supplied by **PRE PUMP** are appropriately protected by suitable guards.

Pump Selection

For pump selection the hydraulic performance curves should be used. These curves are based on water at 15°C and SG equal to 1.0.

NPSH values are indicated on the performance curves. At least 0.5m should be added as a safety margin

To overcome variations between actual and design requirements it is recommended that the driver power exceeds the absorbed pump shaft power.

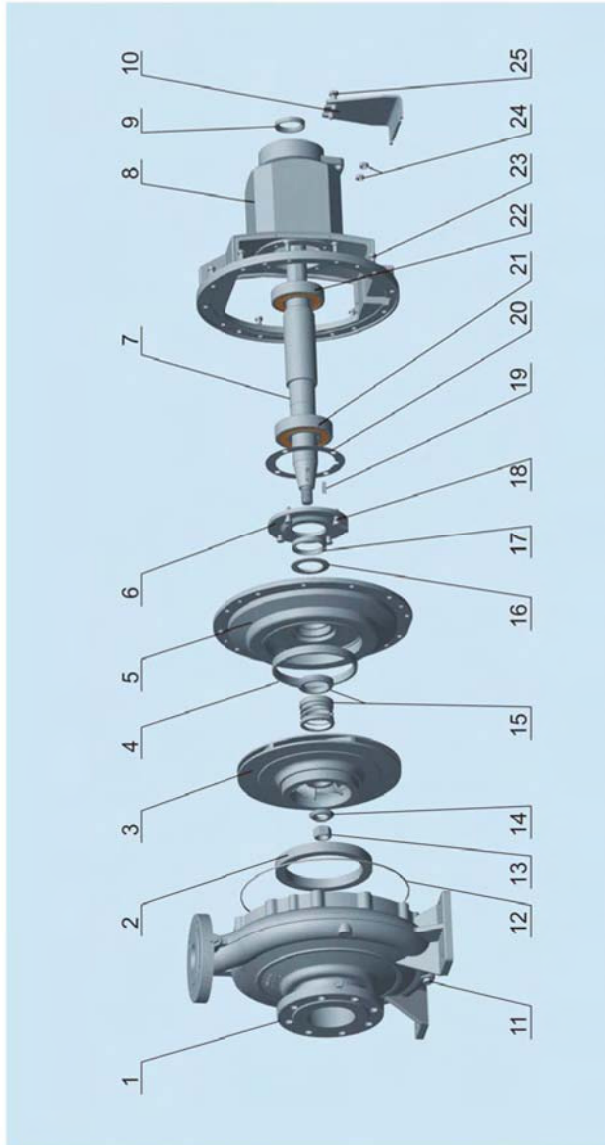
Absorbed Pump Shaft kW	Driver Power Reserve
Up to 7.5	Approx. 20%
7.5~40	Approx. 15%
Above 40	Approx. 10%

Impeller

Cast Iron/SS316 **impeller**-fitted as standard, in a closed design is fitted as standard to prevent corrosion in stationary or inactive situations. The use of 3-D solid model (CAD) Computer Aided Design and (CFD) Computational Fluid Dynamics ensures **high efficiencies**, reducing overall running costs. Impeller diameters can be trimmed to suit specified performance. PISO impellers are dynamically balanced, providing smooth, vibration free operation, preventing premature bearing failure.

Back pull-out design - allowing for easy removal of rotating element without disturbing the pipework, lagging or pump volute casing. This is proven to reduce downtime whilst performing routine maintenance.

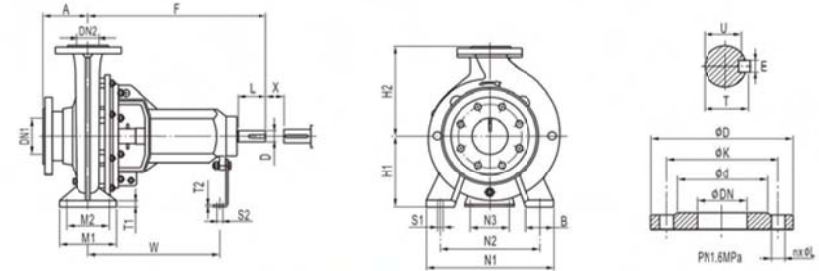
Section Drawing



Parts Name & Code

1	2	3	4	5	6	7	8	9
Casing	Front-wear ring	Impeller	Back-Wear Ring	Casing Cover	Bearing Cover	Shaft	Bearing Housing	Rear Oil Seal
10	11	12	13	14	15	16	17	18
Support Foot	Drainage plug & Washer	Casing O-Ring	Impeller Nut	Washer	Mechanical Seal	Slinger	Front Oil Seal	
19	20	21	22	23	24	25		
Bolt	Impeller Key	Front-Bearing	Rear-Bearing	Bolt	Nut	Bolt		

Dimensions Table



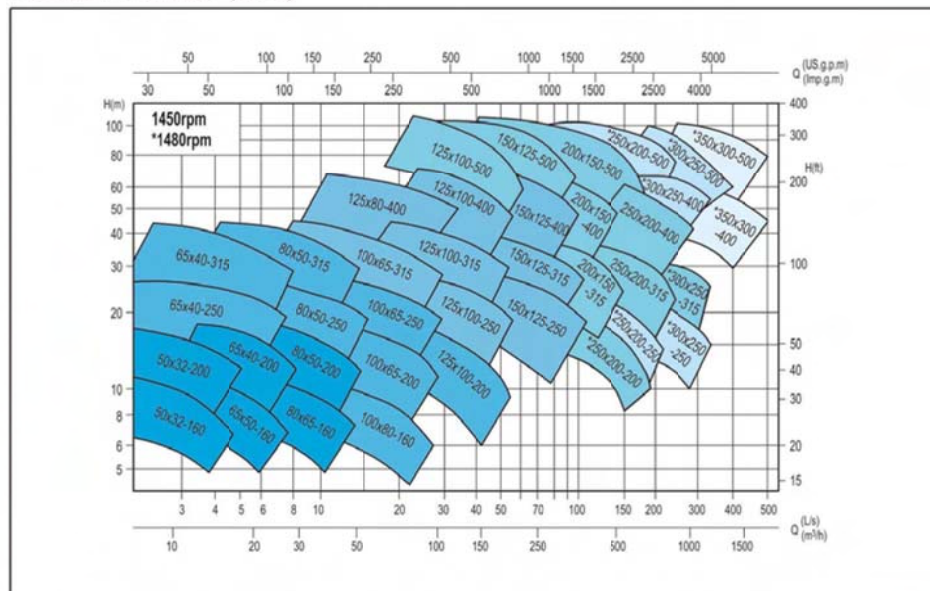
Pump Model	Shaft No.	Flange Size	Pump Dimensions	Foot Dimensions	Bolt Holes	Shaft End	Spacer	Net Weight
		DN1 DN2	A F H1 H2	B M1 M2 N1 N2 N3 W T1 T2	S1 S2 D L T E U X			
50X32-160	1	50 32	80 385 132 160	50 100 70 240 190 110 285 12	6 M12 M12 24 50 27 8 20 100	38		
50X32-200	1	50 32	80 385 160 180	50 100 70 240 190 110 285 12	6 M12 M12 24 50 27 8 20 100	46		
65X40-200	1	65 40	100 385 160 180	50 100 70 265 212 110 285 13	6 M12 M12 24 50 27 8 20 100	48		
65X40-250	2	65 40	100 500 180 225	65 125 95 320 250 110 370 14	6 M12 M12 32 80 35 10 27 100	70		
65X40-315	2	65 40	125 500 200 250	65 125 95 345 280 110 370 16	6 M12 M12 32 80 35 10 27 100	80		
65X50-160	1	65 50	80 385 132 160	50 100 70 240 190 110 285 11	6 M12 M12 24 50 27 8 20 100	40		
80X50-200	1	80 50	100 385 160 200	50 100 70 265 212 110 285 13	6 M12 M12 24 50 27 8 20 100	52		
80X50-250	2	80 50	125 500 180 225	65 125 95 320 250 110 370 15	6 M12 M12 32 80 35 10 27 100	72		
80X50-315	2	80 50	125 500 225 280	65 125 95 345 280 110 370 18	6 M12 M12 32 80 35 10 27 100	87		
80X65-160	1	80 65	100 385 160 180	50 100 70 265 212 110 285 11	6 M12 M12 24 50 27 8 20 100	46		
100X65-200	2	100 65	100 500 180 225	65 125 95 320 250 110 370 14	6 M12 M12 32 80 35 10 27 140	70		
100X65-250	2	100 65	125 500 200 250	80 160 120 360 280 110 370 16	6 M16 M12 32 80 35 10 27 140	80		
100X65-315	3	100 65	125 530 225 280	80 160 120 400 315 110 370 18	6 M16 M12 42 110 45 12 37 140	118		
100X80-160	2	100 80	100 500 160 200	65 125 95 280 212 110 370 14	6 M12 M12 32 80 35 10 27 100	68		
125X80-400	3	125 80	125 530 280 355	80 160 120 435 355 110 370 20	6 M16 M12 42 110 45 12 37 140	165		
125X100-200	2	125 100	125 500 200 280	80 160 120 360 280 110 370 17	6 M16 M12 32 80 35 10 27 140	85		
125X100-250	3	125 100	140 530 225 280	80 160 120 400 315 110 370 18	6 M16 M12 42 110 45 12 37 140	126		
125X100-315	3	125 100	140 530 250 315	80 160 120 400 315 110 370 19	6 M16 M12 42 110 45 12 37 140	135		
125X100-400	3	125 100	140 530 280 355	100 200 150 500 400 110 370 20	6 M20 M12 42 110 45 12 37 140	175		
125X100-500	4	125 100	160 670 355 450	100 200 150 550 450 110 500 25	10 M20 M16 48 110 51.5 14 42.5 180	313		
150X125-250	3	150 125	140 530 250 355	80 160 120 400 315 110 370 19	6 M16 M12 42 110 45 12 37 140	140		
150X125-315	3	150 125	140 530 280 355	100 200 150 500 400 110 370 20	6 M20 M12 42 110 45 12 37 140	150		
150X125-400	3	150 125	140 530 315 400	100 200 150 500 400 110 370 21	6 M20 M12 42 110 45 12 37 140	186		
150X125-500	4	150 125	160 670 355 450	100 200 150 550 450 140 500 25	10 M20 M16 48 110 51.5 14 42.5 180	336		
200X150-315	4	200 150	160 670 315 400	100 200 150 550 450 140 500 25	10 M20 M16 48 110 51.5 14 42.5 180	222		
200X150-400	4	200 150	160 670 315 450	100 200 150 550 450 140 500 25	10 M20 M16 48 110 51.5 14 42.5 180	300		
200X150-500	4	200 150	160 670 400 500	100 200 150 550 450 140 500 25	10 M20 M16 48 110 51.5 14 42.5 180	382		
250X200-200	4	250 200	180 670 315 450	100 200 150 550 450 140 500 22	10 M20 M16 48 110 51.5 14 42.5 180	345		
250X200-250	5	250 200	180 885 315 450	100 200 150 550 450 180 670 25	12 M24 M16 65 140 69 18 58 250	490		
250X200-315	4	250 200	180 670 315 450	100 200 150 550 450 140 500 25	10 M20 M16 48 110 51.5 14 42.5 180	277		
250X200-400	4	250 200	180 670 355 500	100 200 150 550 450 140 500 25	10 M20 M16 48 110 51.5 14 42.5 180	340		
250X200-500	5	250 200	225 885 400 580	150 315 250 760 630 180 670 28	12 M24 M16 65 140 69 18 58 250	495		
300X250-250	5	300 250	225 885 355 560	125 250 190 630 500 180 670 24	12 M24 M16 65 140 69 18 58 250	360		
300X250-315	4	300 250	225 670 355 500	125 250 190 690 560 180 500 24	12 M20 M16 48 110 51.5 14 42.5 180	350		
300X250-400	5	300 250	225 885 450 560	150 250 190 690 560 180 670 28	12 M24 M16 65 140 69 18 58 250	480		
300X250-500	5	300 250	225 885 450 630	150 315 250 760 630 180 670 28	12 M24 M16 65 140 69 18 58 250	530		
350X300-400	6	350 300	250 975 450 600	180 315 250 760 630 180 730 24	12 M24 M16 75 170 79.5 20 67.5 250	900		
350X300-500	6	350 300	250 975 500 650	225 360 270 900 750 180 730 32	12 M30 M16 75 170 79.5 20 67.5 250	1100		

Standard flange: GB/T 17241.6-1998(ISO7005.2:1988), PN 1.6MPa

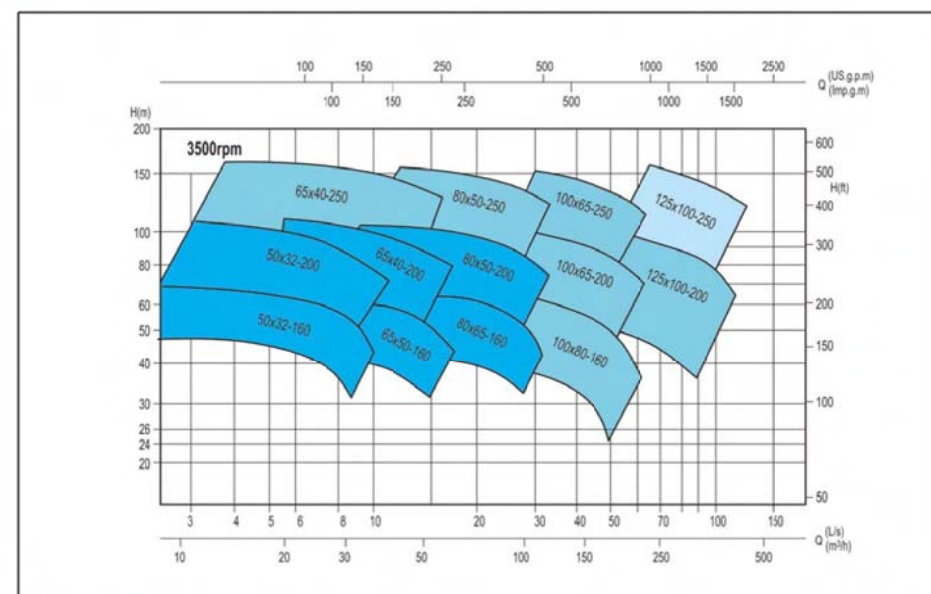
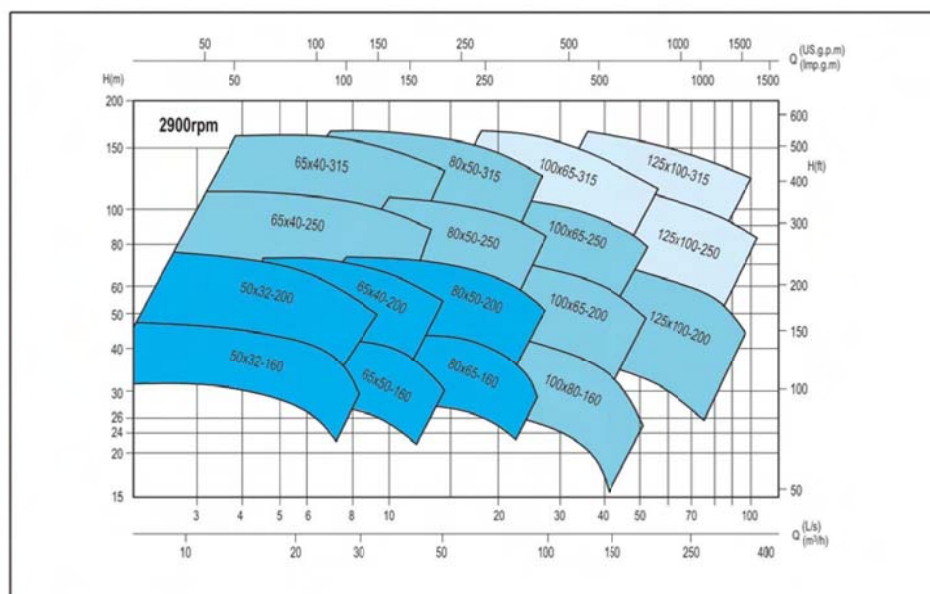
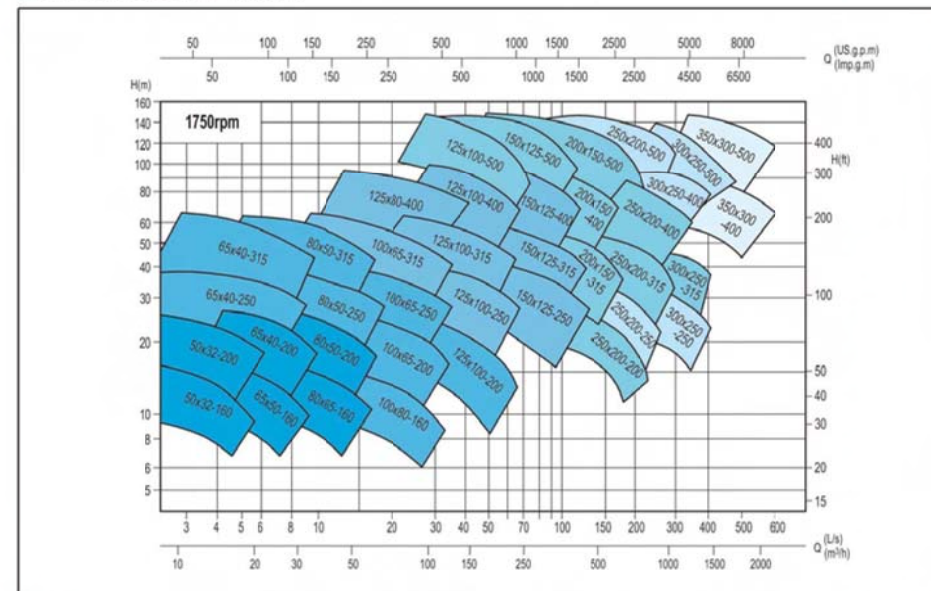
DN	32	40	50	65	80	100	125	150	200	250	300	350
φd	76	84	99	118	132	156	184	211	266	319	370	429
φK	100	110	125	145	160	180	210	240	295	355	410	470
φD	140	150	165	185	200	220	250	285	340	405	460	520
m6L	φ18×4	φ18×4	φ18×4	φ18×4	φ18×8	φ18×8	φ18×8	φ22×8	φ22×12	φ26×12	φ26×12	φ26×16

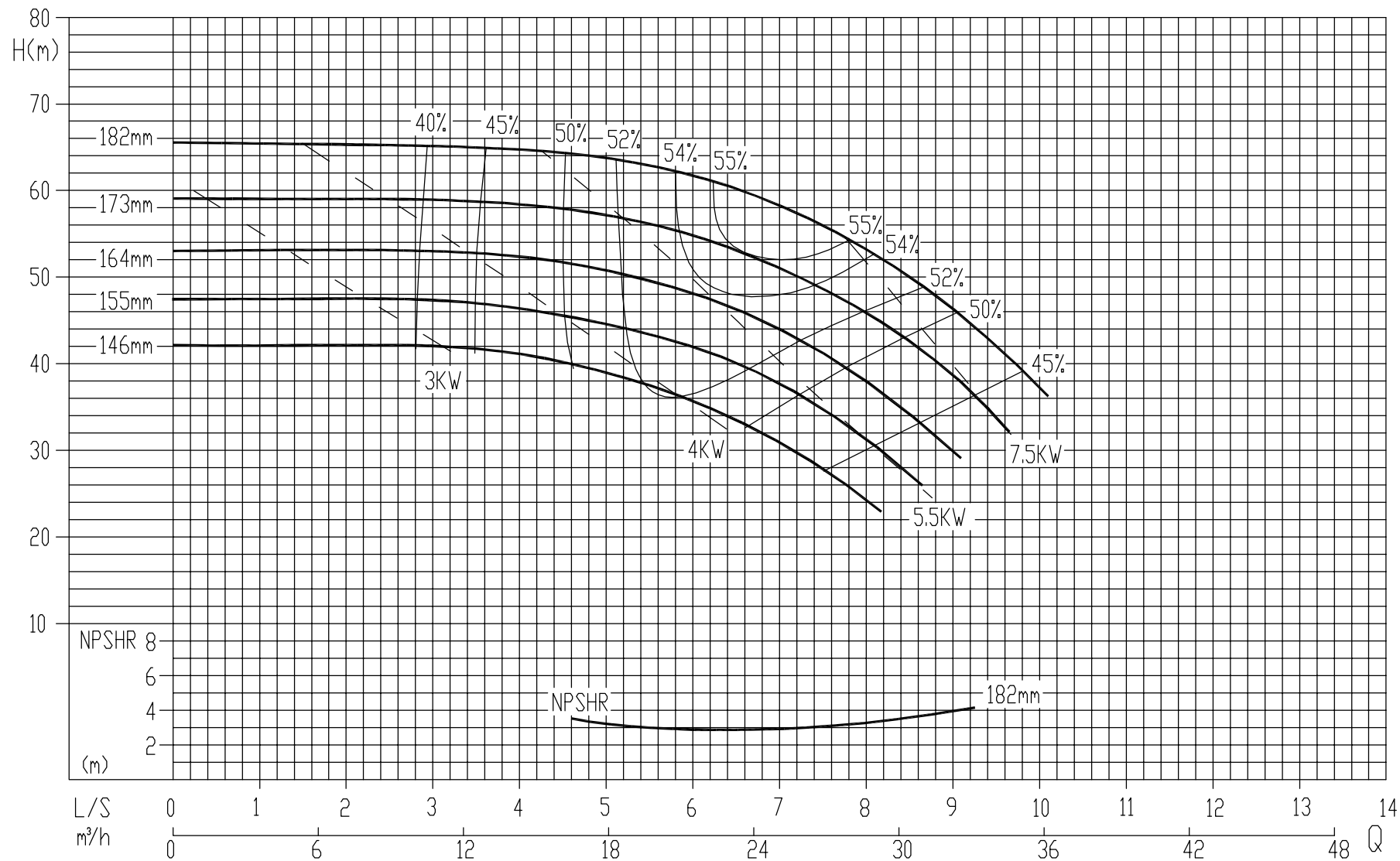
Notes: 1. Optional Flange: AS2129-1982, ANSI 16.1-1975, JISB 2210-1984

Performance Chart (50Hz)



Performance Chart (60Hz)

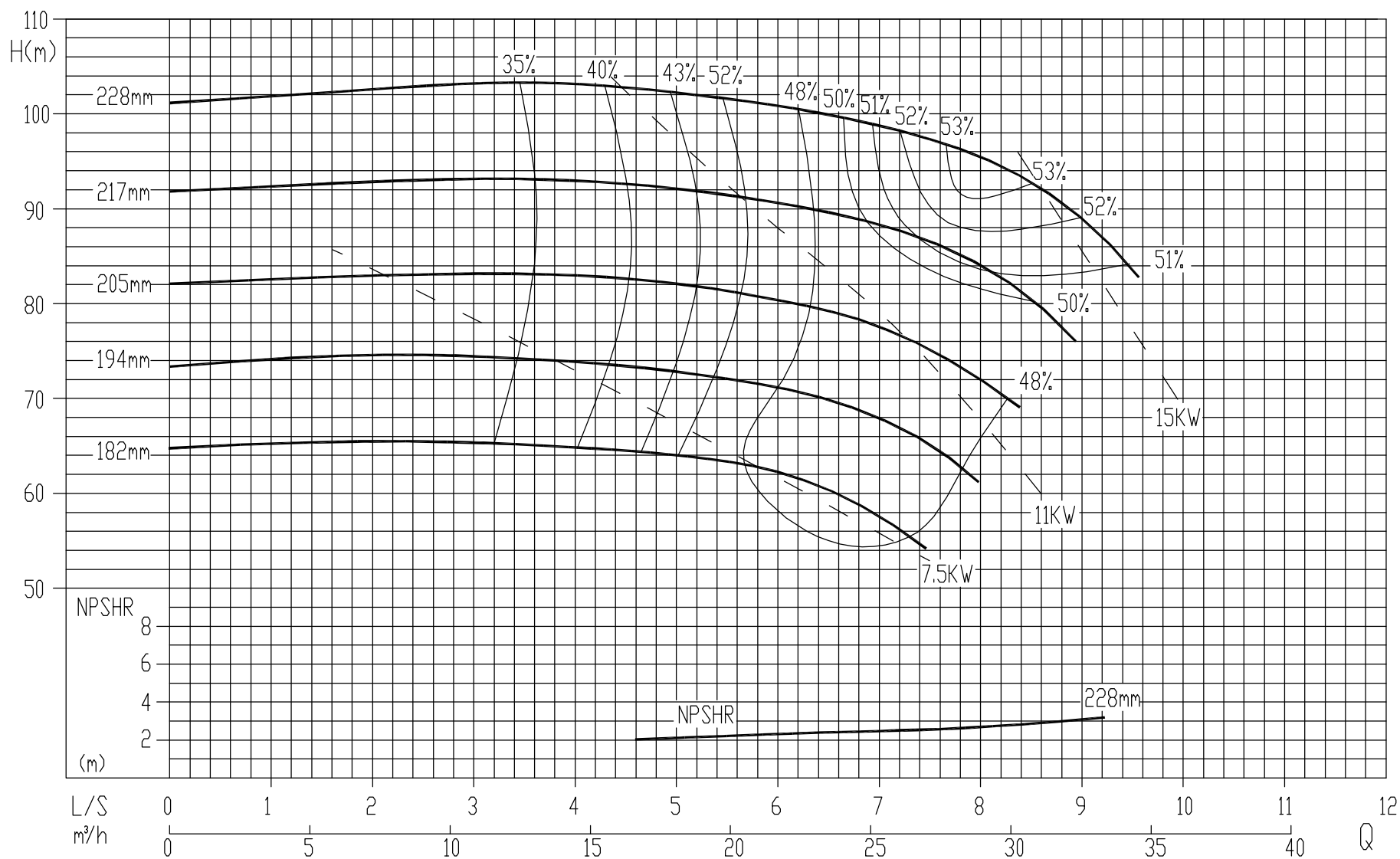


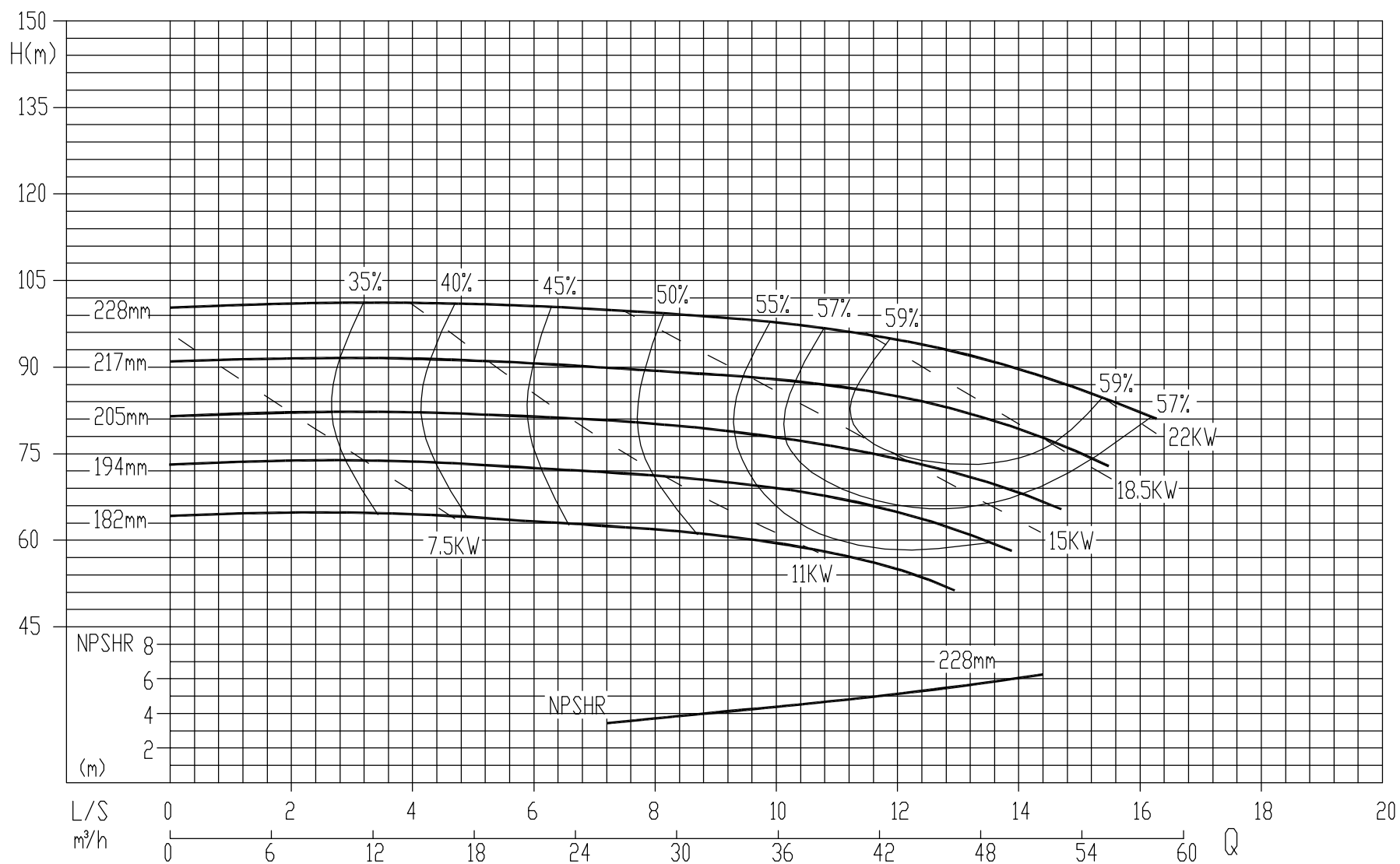


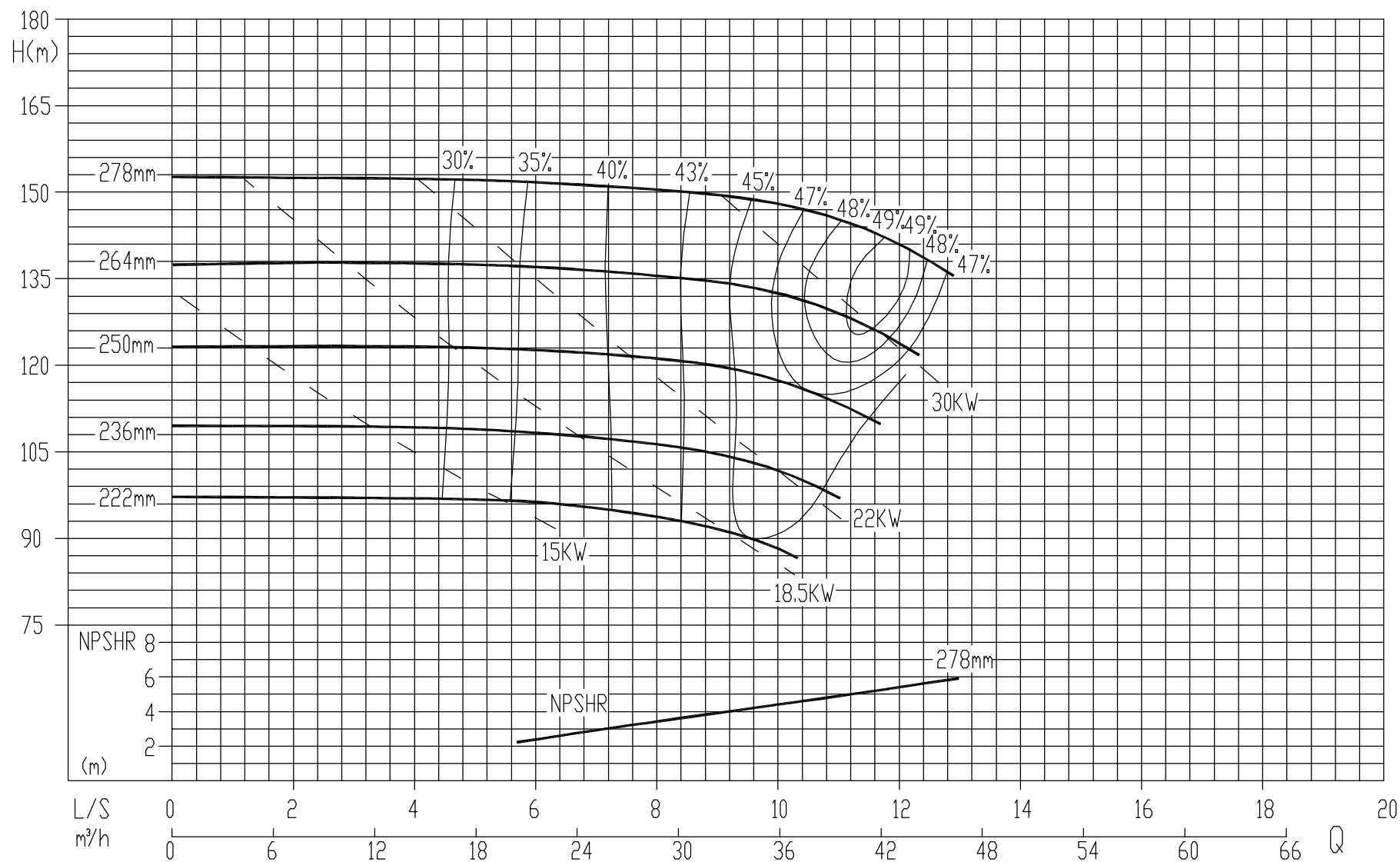
Pump Model
IS 50x32-160

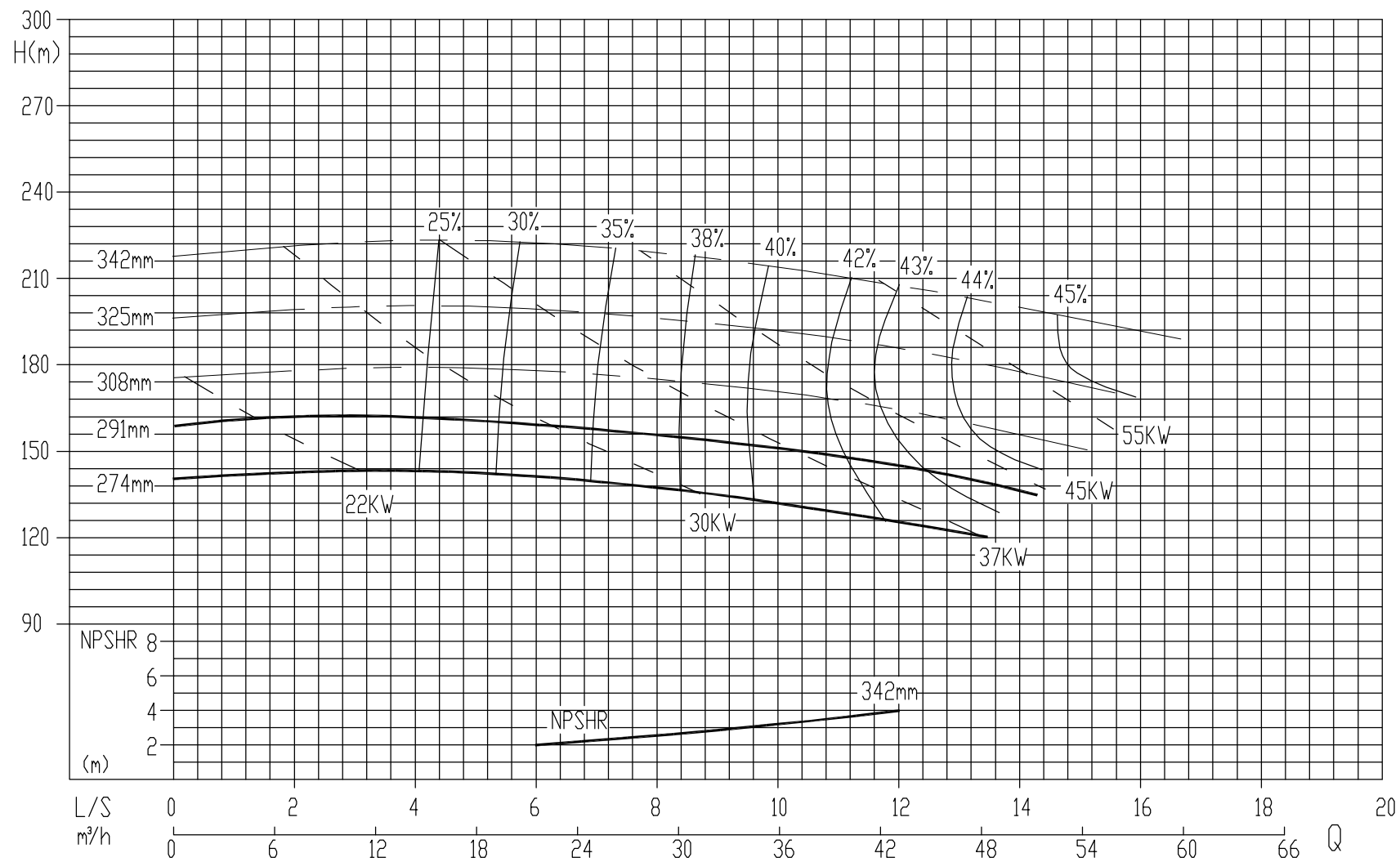
Speed
3500rpm

Performance Curve
60Hz









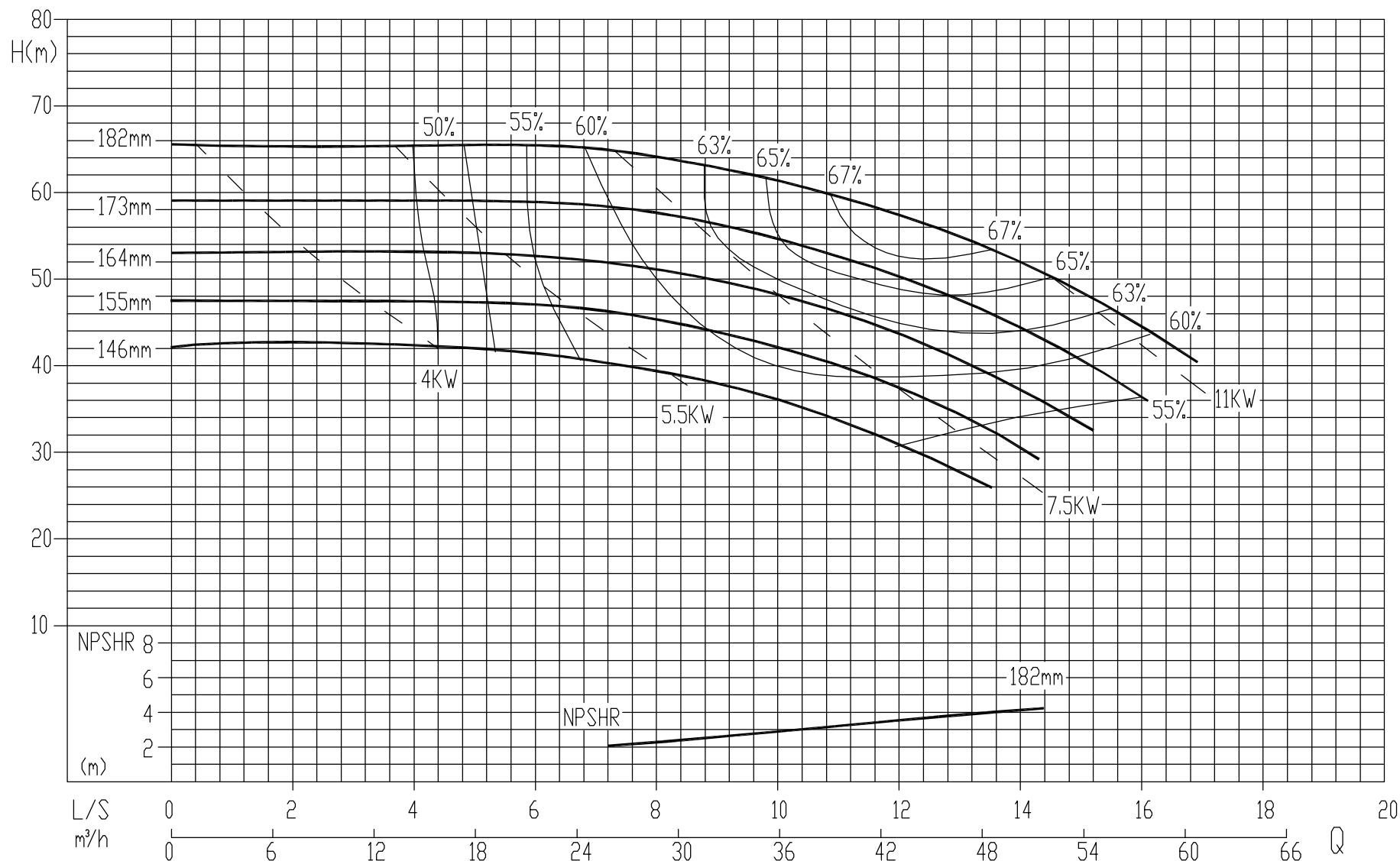
Note: Q-H dotted line can be achieved, please kindly refer to factory

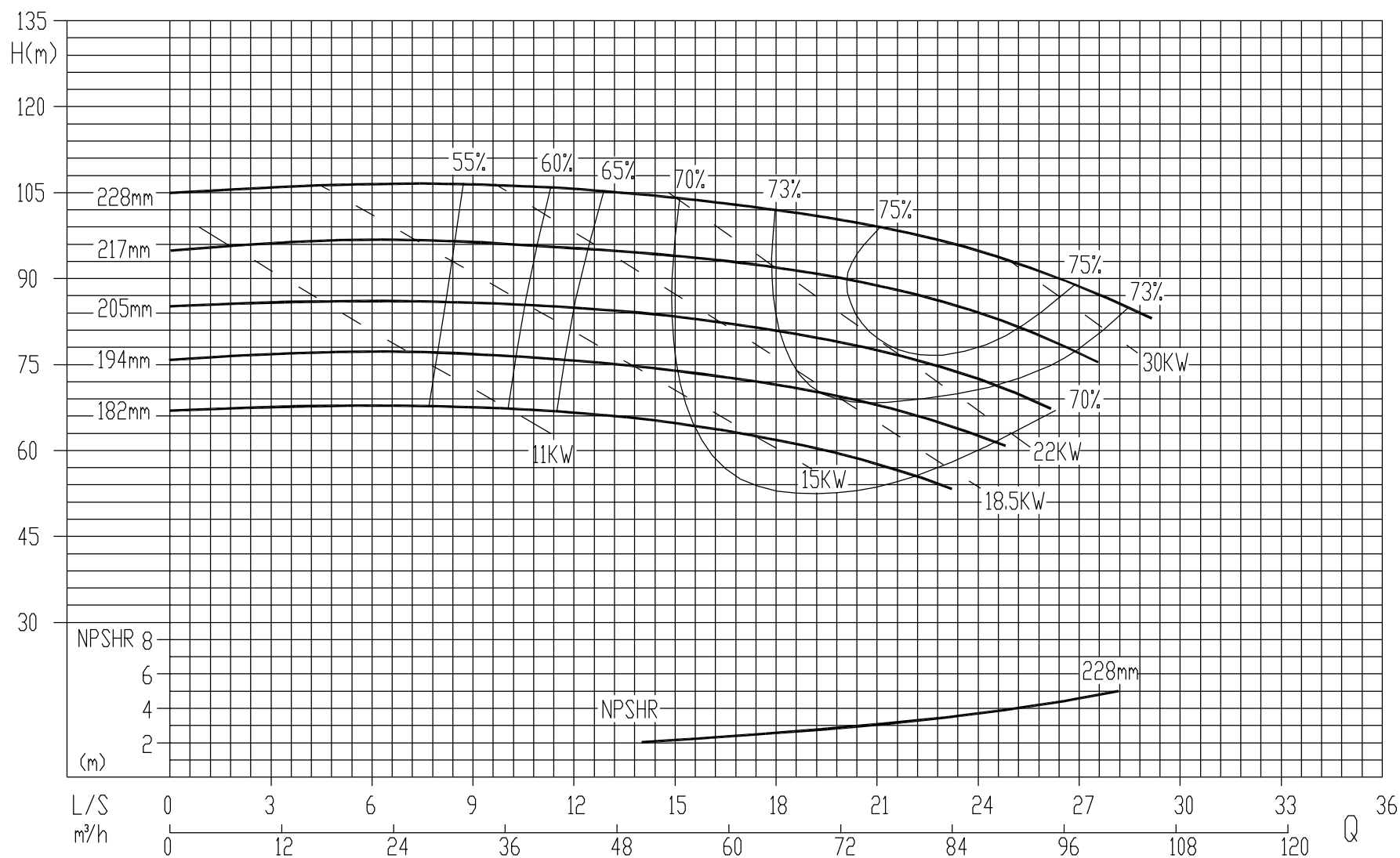


Pump Model
IS 65x40-315

Speed
3500rpm

Performance Curve
60Hz

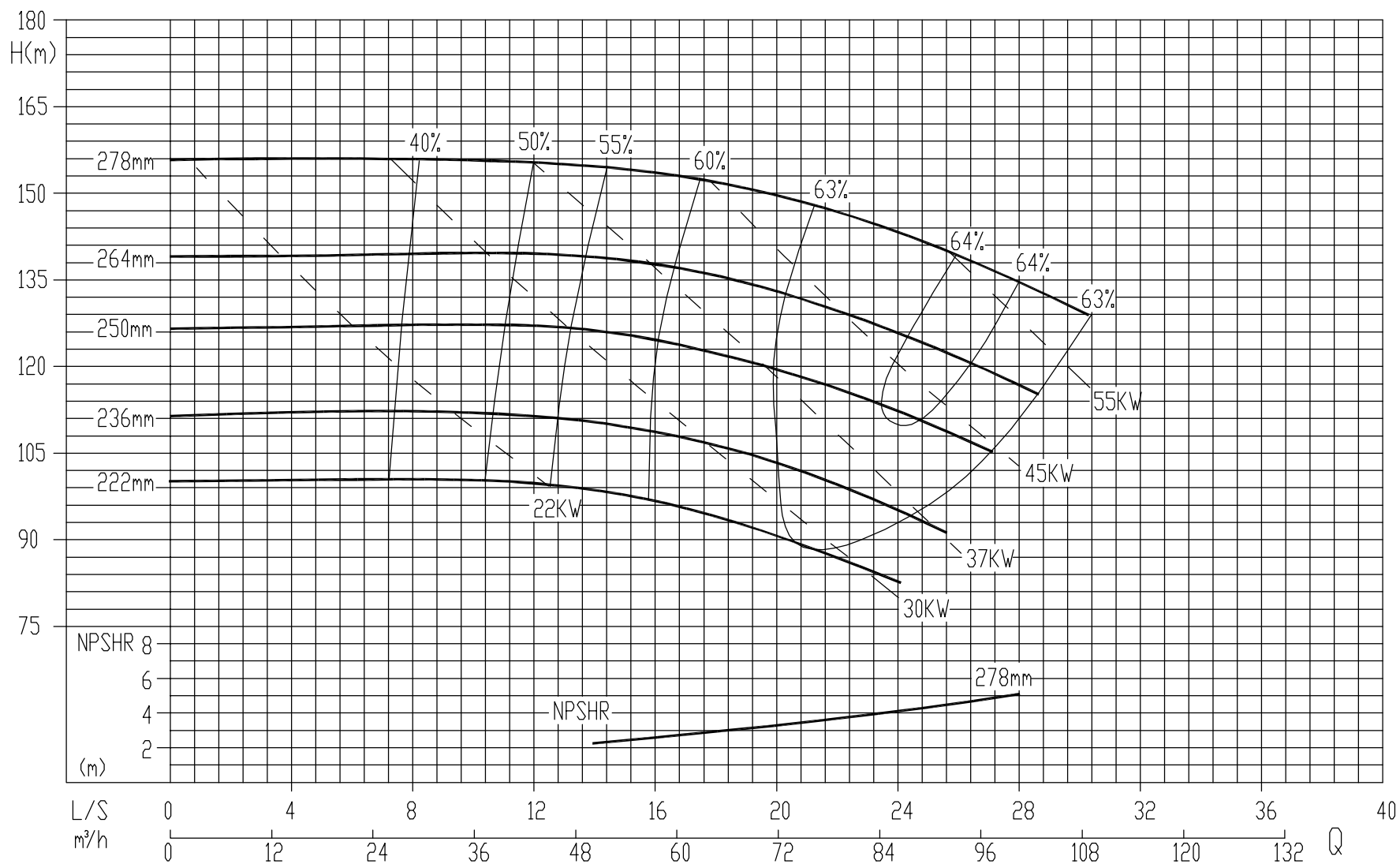




Pump Model
IS 80x50-200

Speed
3500rpm

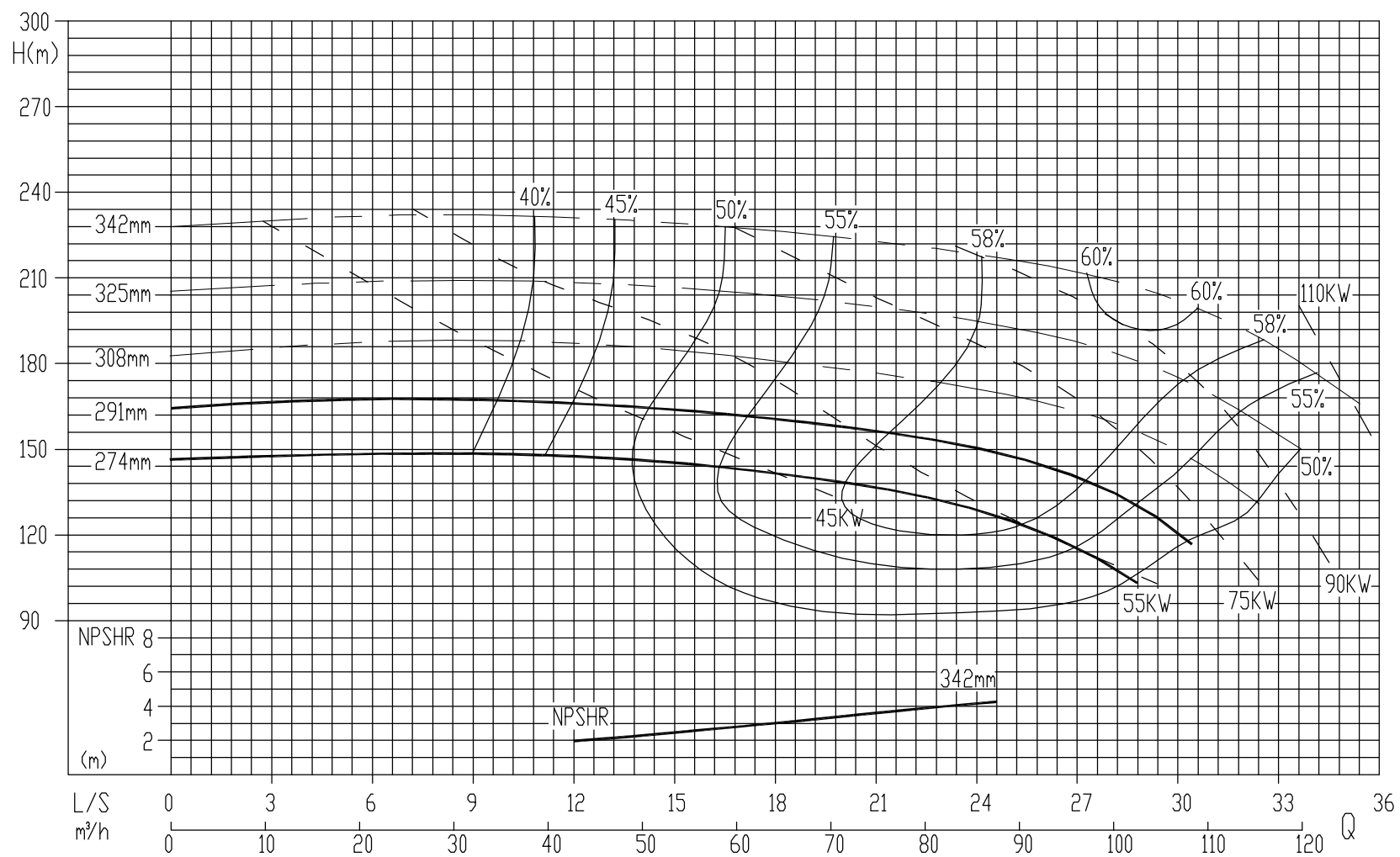
Performance Curve
60Hz




Pump Model
IS 80x50-250

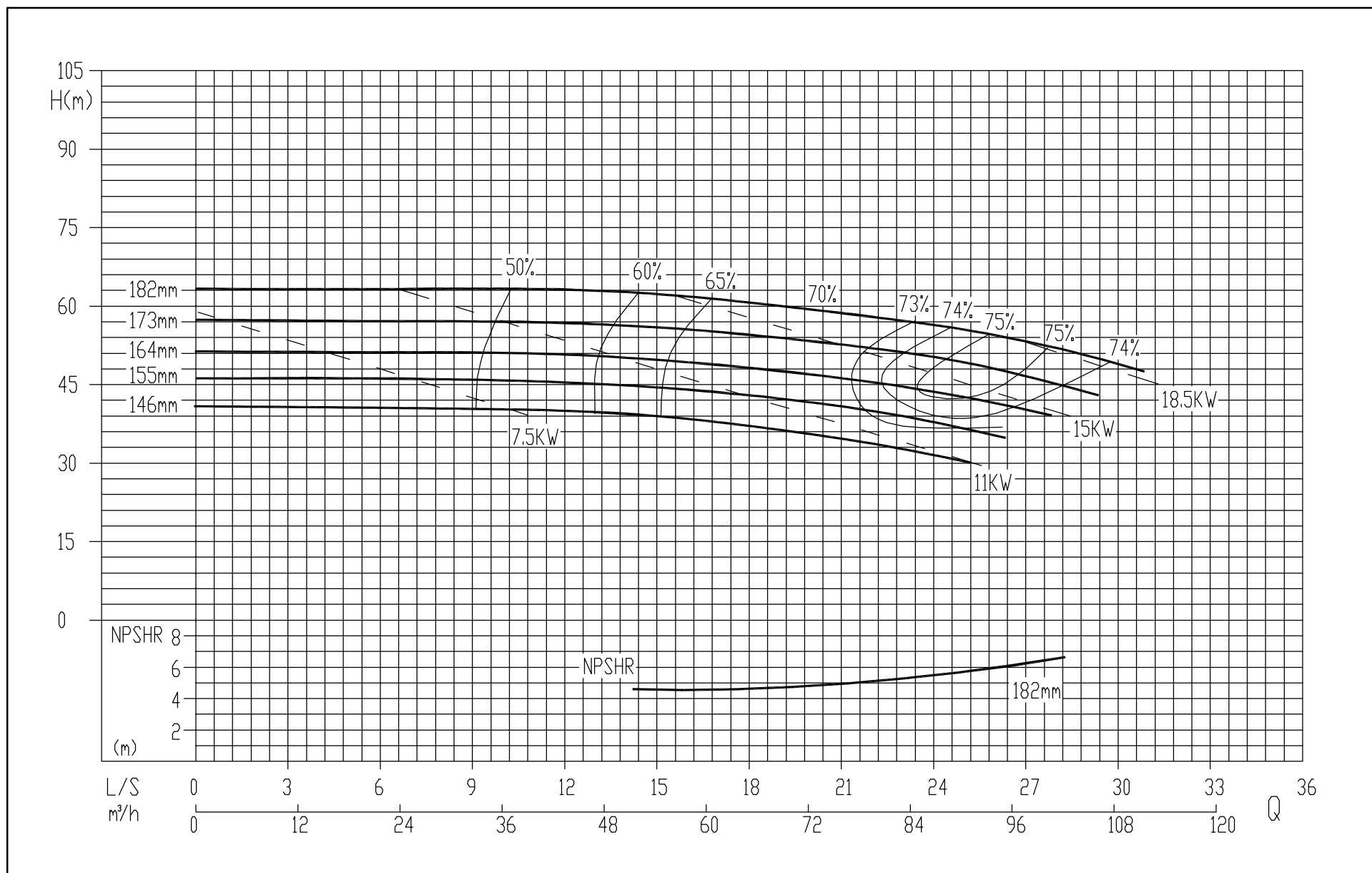
Speed
3500rpm


Performance Curve
60Hz

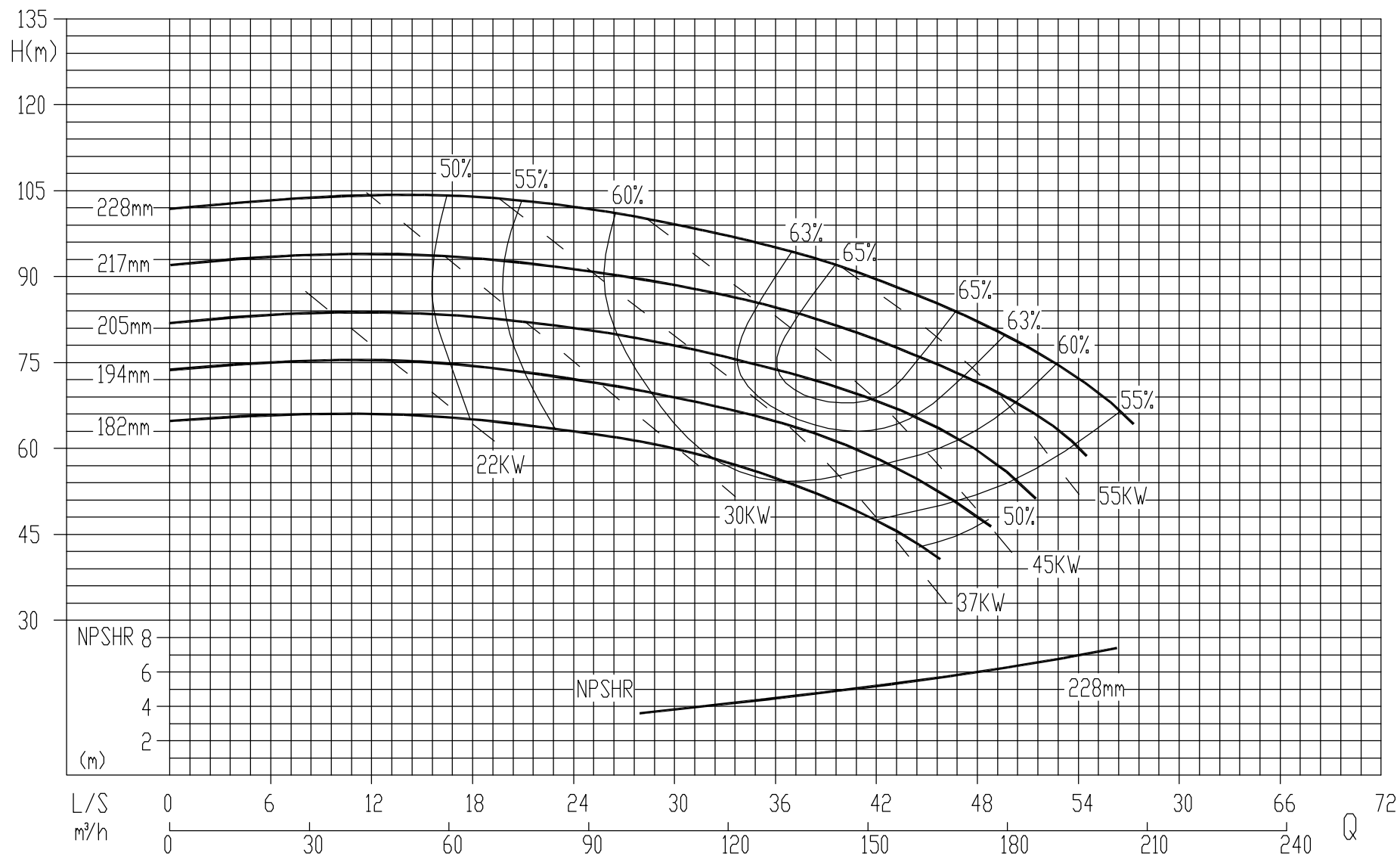


Note: Q-H dotted line can be achieved, please kindly refer to factory

 连成集团 LIANCHENG GROUP		Pump Model IS 80x50-315	Speed 3500rpm	Performance Curve 60Hz
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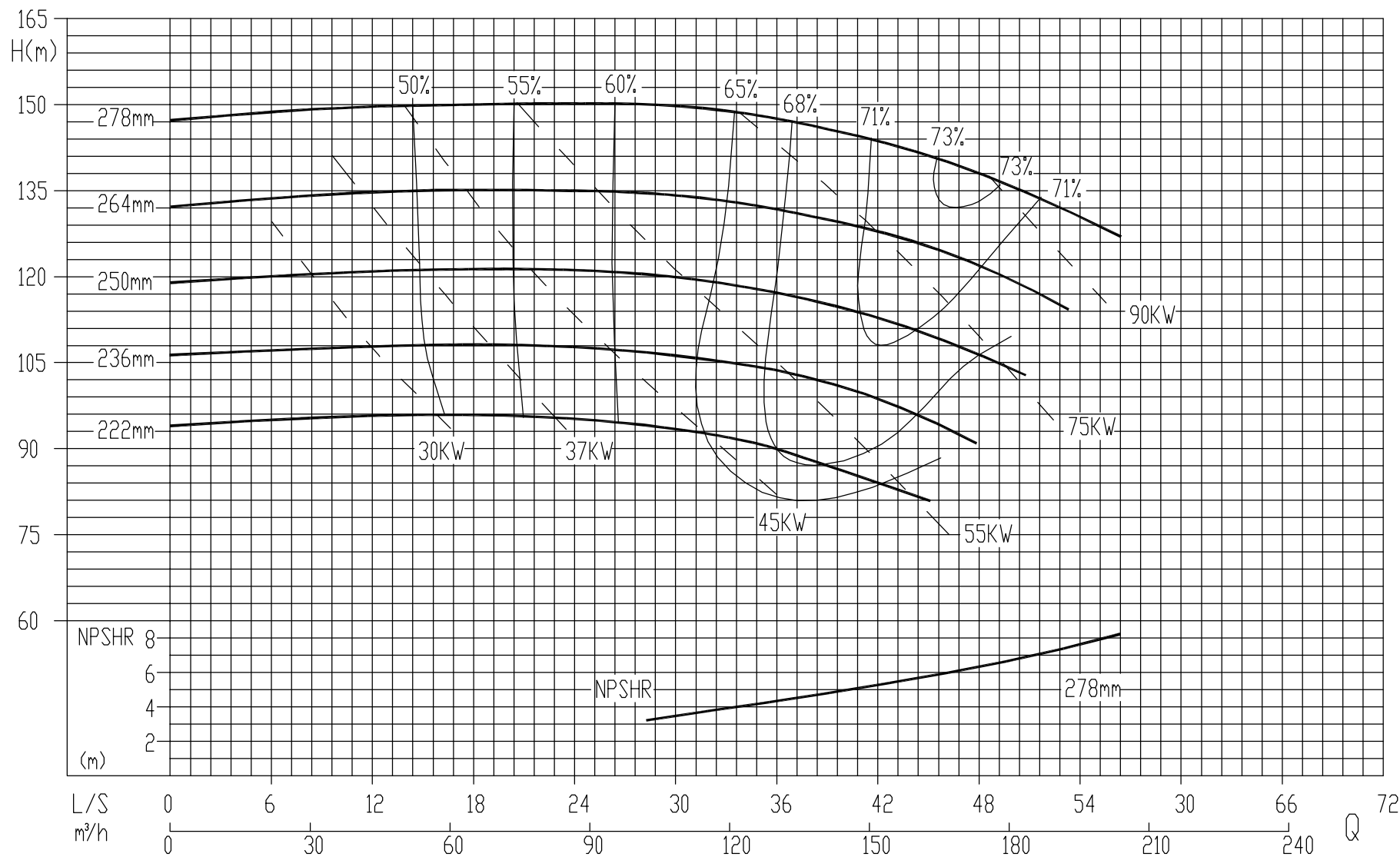
 连成集团 LIANCHENG GROUP		Pump Model IS 80x65-160	Speed 3500rpm	Performance Curve 60Hz
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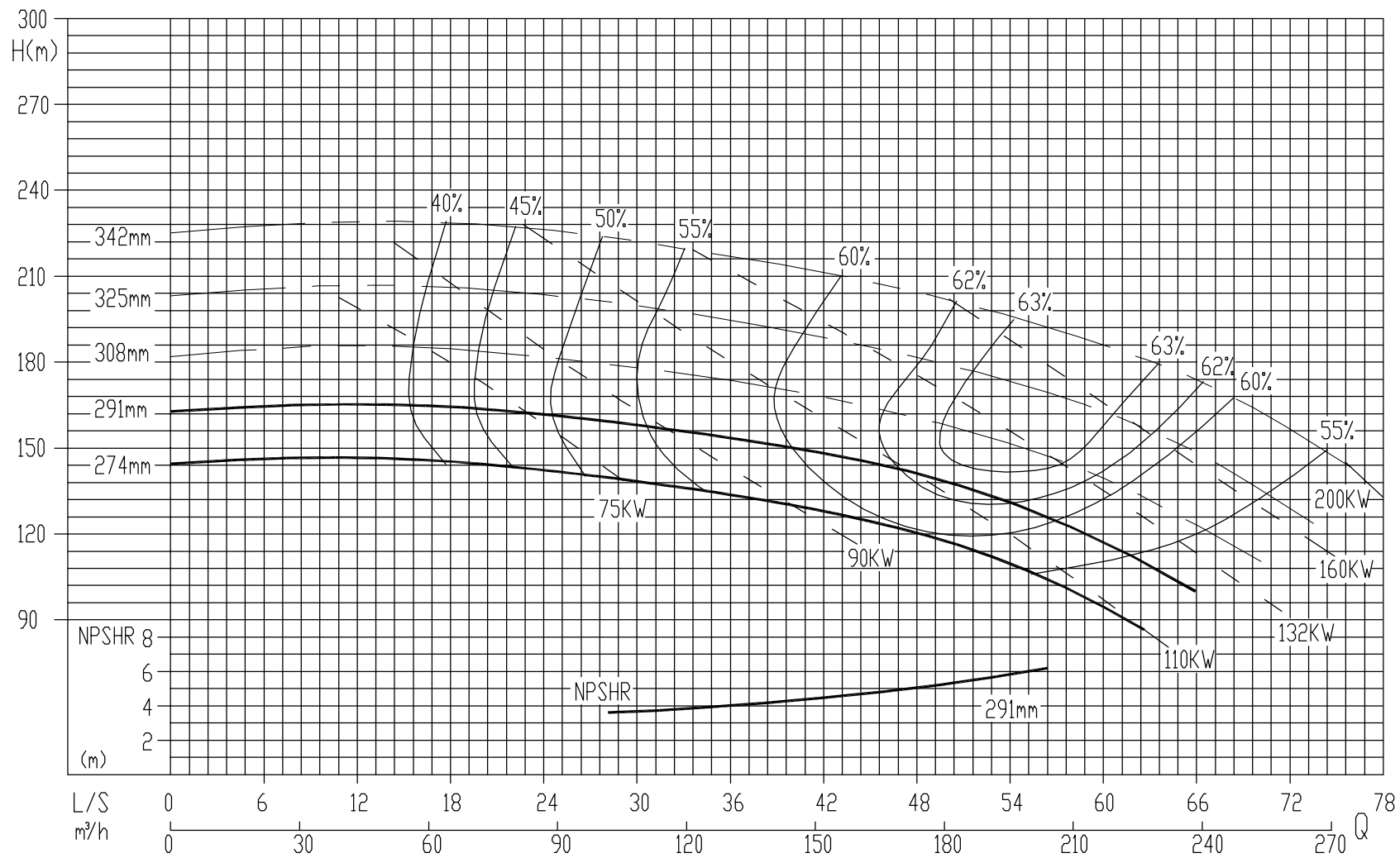


Pump Model
IS 100x65-200

Speed
3500rpm

Performance Curve
60Hz





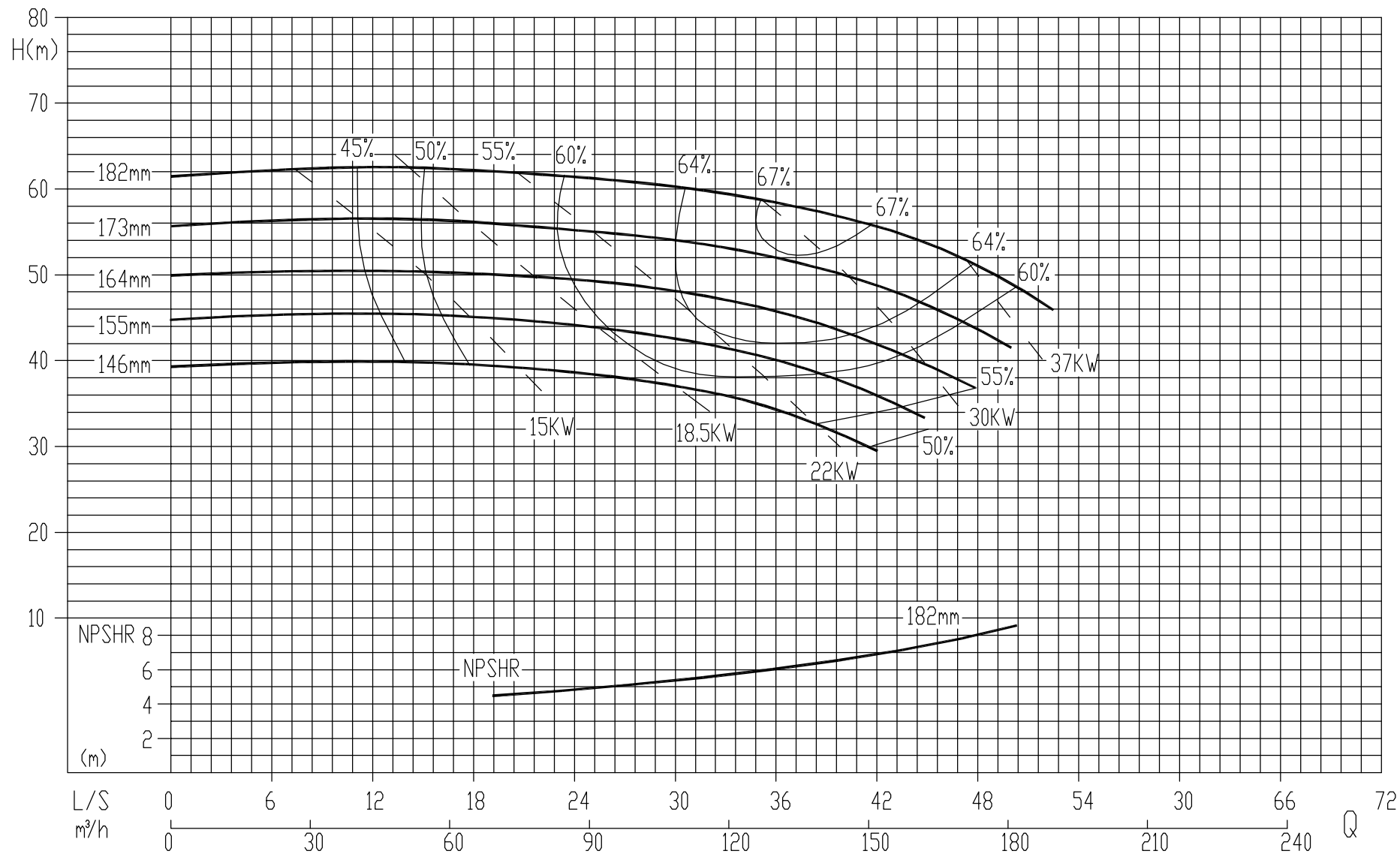
Note: Q-H dotted line can be achieved, please kindly refer to factory



Pump Model
IS 100x65-315

Speed
3500rpm

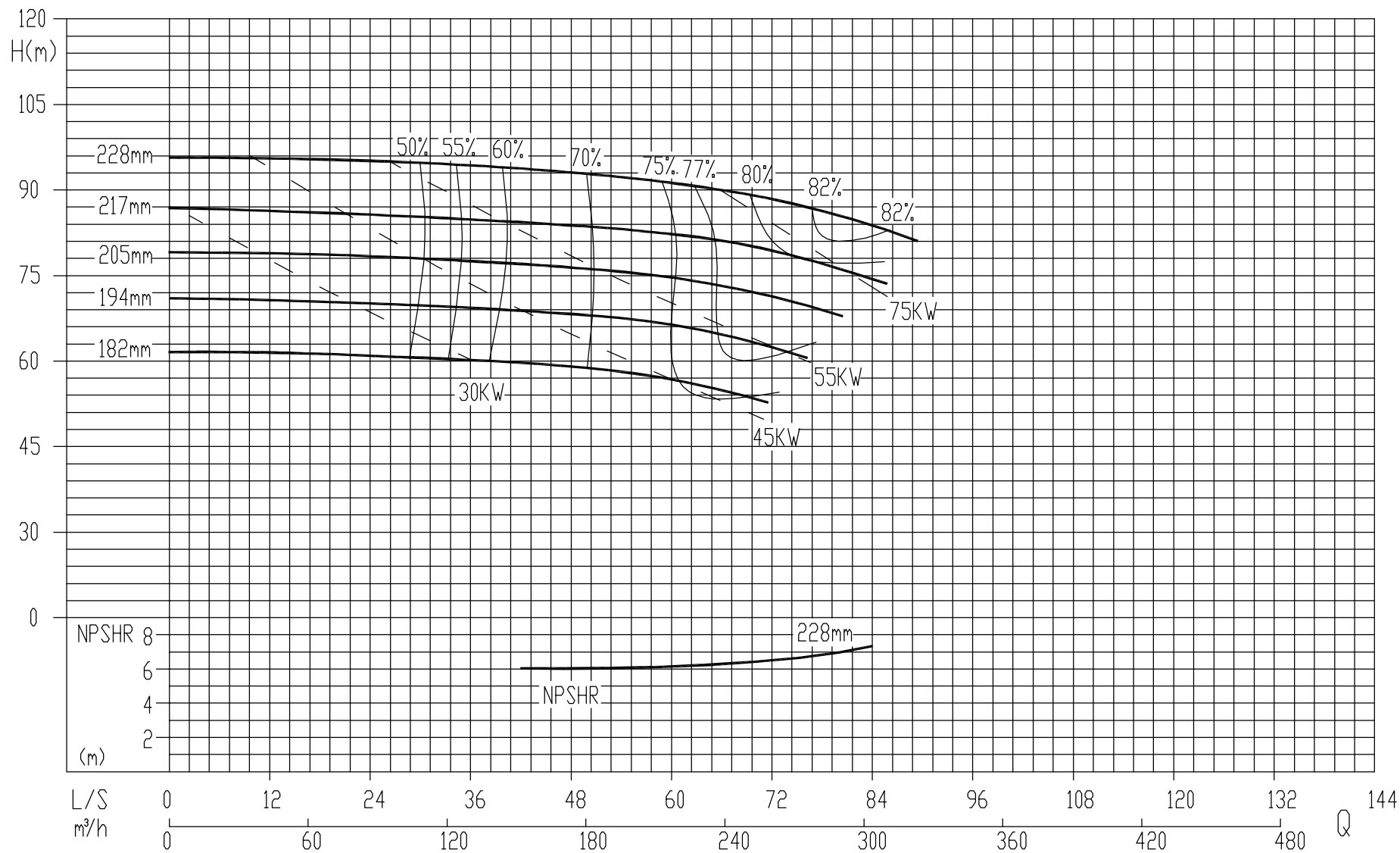
Performance Curve
60Hz

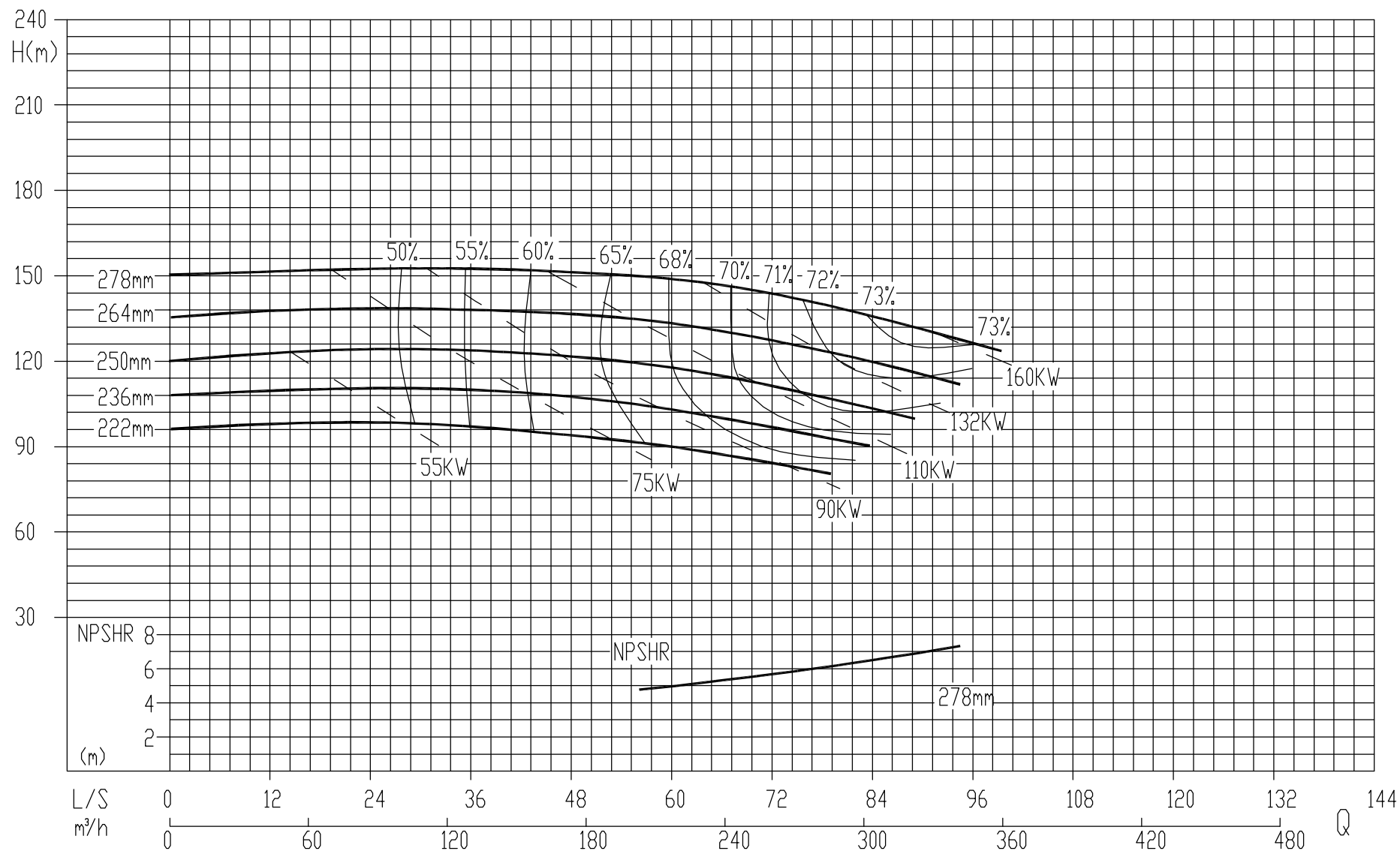


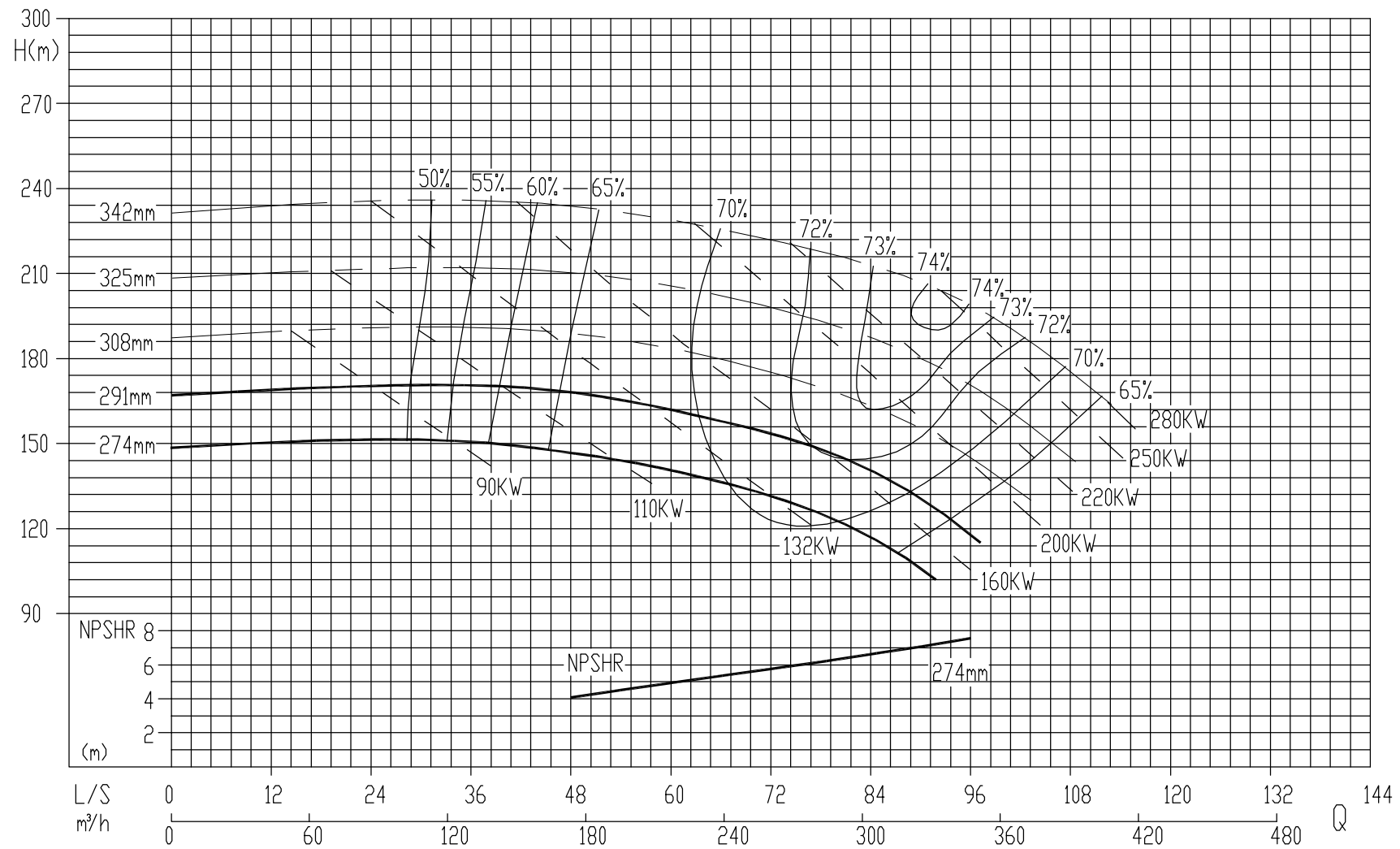
Pump Model
IS 100x80-160

Speed
3500rpm

Performance Curve
60Hz







Note: Q-H dotted line can be achieved, please kindly refer to factory



Pump Model
IS 125x100-315

Speed
3500rpm

Performance Curve
60Hz