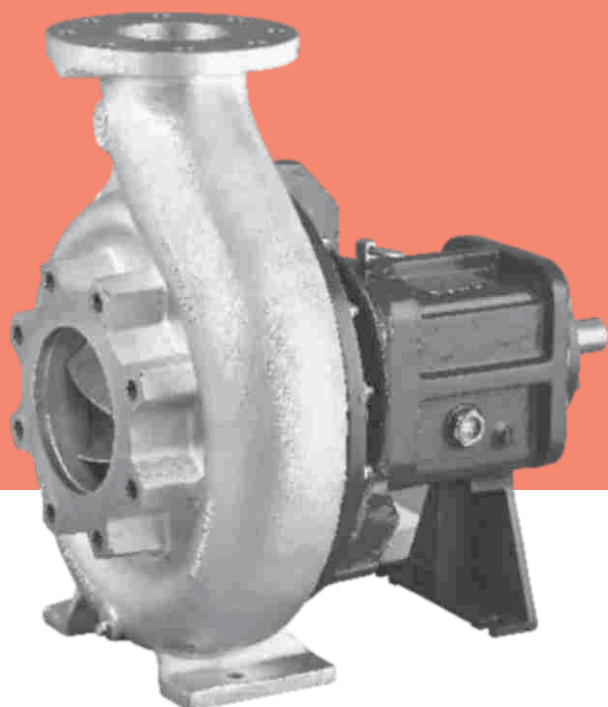


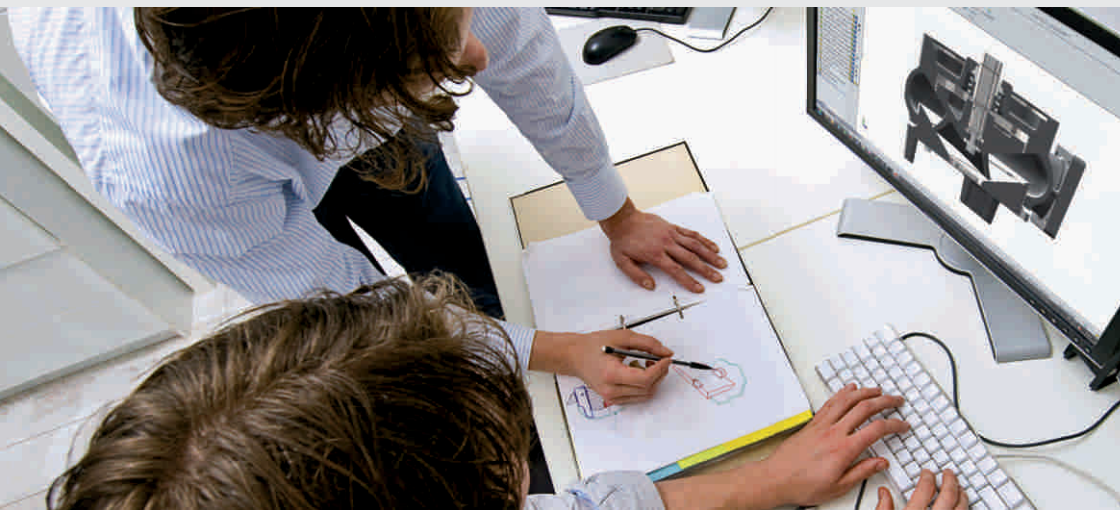
**END SUCTION CHEMICAL &
PROCESS PUMPS
(ANSI/ASME B73.1)
FECC Series (50Hz)**

Zirantec



www.zirantec.com

Zirantec



ZIRANTEC products are designed & manufactured by well qualified and experienced Engineers in state of the art manufacturing facilities

CERTIFICATION



ZIRANTEC Pumps & Motors are from the house of **Fabbrica Italiana Pompe Sommersibili S.r.l.** a four decades old Italian company of high repute, offering complete waste water solutions around the world. Its current product portfolio includes world class Waste Water Pumps of various types, Multistage Centrifugal Pressure Booster Pumps, Borehole Submersible Pumps & Motors, End Suction Centrifugal Pumps, Industrial Pumps for various applications.

Founded as early as 1978 in Rozzano, South of Milan, Italy by Mr.Orfeo Agostini, the company has witnessed steady growth and market expansion continuously ever since. In these four decades of existence, the company has carved a niche for itself in the waste water and sewage pump market in Italy and other countries. Its products are employed in Municipal, Domestic and Industrial applications. The Company is well known for the unique and robust designs of its products and their workmanship. Due to its superior quality ZIRANTEC products are also exported to many European, African and Asian countries.

ZIRANTEC's products are designed and manufactured to meet high quality Standards and they are 'CE' certified. The Facility is accredited with ISO 9001 Certification.

Over the years, the company has metamorphosed and ventured into manufacturing of high quality water pumps, for domestic, agricultural and industrial applications. In the due process, Fabbrica Italiana Pompe Sommersibili S.r.l. has shed its image of an exclusive sewage and waste water pumps manufacturer to a complete pump production company with an ability to manufacture diverse kinds of pumps for different applications.

C O N T E N T S

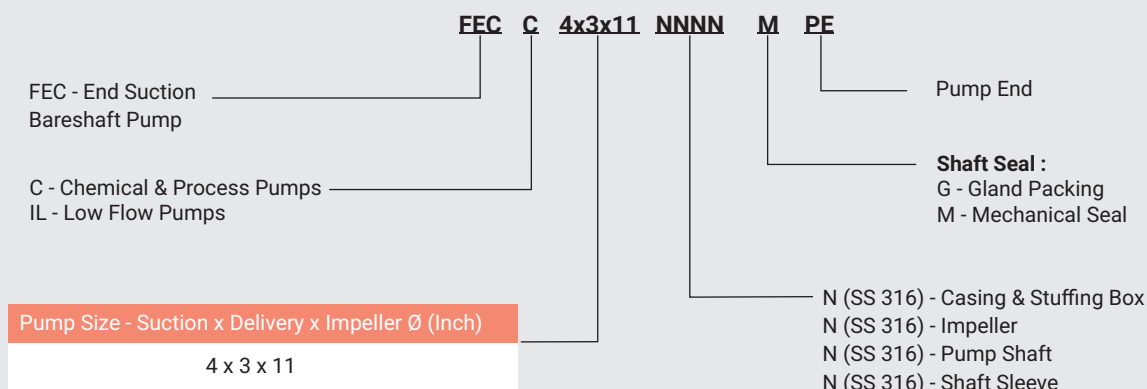
END SUCTION CHEMICAL & PROCESS PUMPS (ANSI/ASME B73.1) FECC SERIES (50Hz)

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END SUCTION LIGHT CHEMICAL & PROCESS LOW FLOW PUMPS FECC - IL SERIES (50Hz)

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MODEL IDENTIFICATION CODE



MATERIALS OF CONSTRUCTION

TYPE - WSSS

Parts Name	Material (Code)	SAE/AISI	DIN	EUROPEAN
Casing	WCB (W)	ASTM A216 WCB	1.0619	GP240GH
Impeller	SS 304 (S)	ASTM A743 / A351 CF8	1.4308	X5CrNi18-9
Stuffing Box	WCB (W)	ASTM A216 WCB	1.0619	GP240GH
Bearing Housing	Cast Iron (C)	ASTM A48 class 30B	(0.6020) GG20	EN-GJL-220
Shaft	SS 304 (S)	ASTM A276 AISI 304	1.4301	X5CrNi18-10
Shaft Sleeve	SS 304 (S)	ASTM A276 AISI 304	1.4301	X5CrNi18-10

TYPE - SSSS

Parts Name	Material (Code)	SAE/AISI	DIN	EUROPEAN
Casing	SS 304 (S)	ASTM A743 / A351 CF8	1.4308	X5CrNi18-9
Impeller	SS 304 (S)	ASTM A743 / A351 CF8	1.4308	X5CrNi18-9
Stuffing Box	SS 304 (S)	ASTM A743 / A351 CF8	1.4308	X5CrNi18-9
Bearing Housing	Cast Iron (C)	ASTM A48 class 30B	(0.6020) GG20	EN-GJL-220
Shaft	SS 304 (S)	ASTM A276 AISI 304	1.4301	X5CrNi18-10
Shaft Sleeve	SS 304 (S)	ASTM A276 AISI 304	1.4301	X5CrNi18-10

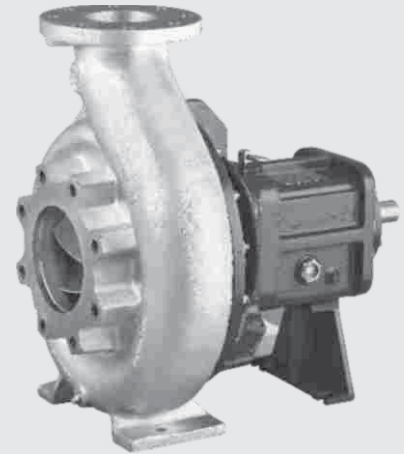
TYPE - NNNN

Parts Name	Material (Code)	SAE/AISI	DIN	EUROPEAN
Casing	SS 316 (N)	ASTM A743 / A351 CF8M	1.4408	X6CrNiMo18-10
Impeller	SS 316 (N)	ASTM A743 / A351 CF8M	1.4408	X6CrNiMo18-10
Stuffing Box	SS 316 (N)	ASTM A743 / A351 CF8M	1.4408	X6CrNiMo18-10
Bearing Housing	Cast Iron (C)	ASTM A48 class 30B	(0.6020) GG20	EN-GJL-220
Shaft	SS 316 (N)	ASTM A276 AISI 316	1.4401	X5CrNiMo18-10
Shaft Sleeve	SS 316 (N)	ASTM A276 AISI 316	1.4401	X5CrNiMo18-10

Optional Materials : Duplex, Super Duplex and other materials are available on request.

END SUCTION CHEMICAL & PROCESS PUMPS (ANSI/ASME B73.1) - FECC SERIES

The FECC series of chemical and process pumps are horizontal, end-suction, single-stage pumps designed for reliability and safety. These pumps meet ASME (ANSI) B73.1 standards for dimensional, configuration, and design features, ensuring ease of installation. They feature a semi-open scallop-cut impeller that is ideal for pumping low-viscosity fluids with suspended solids. This impeller design also simplifies cleaning and maintenance. The FECC series offers a variety of material options to suit different applications, and a cooling jacket is available for processes requiring temperature control to maintain optimal pumping performance.



KEY FEATURES

- Back Pull-out Design for ease of maintenance
- High Efficiency & optimized performance reduces the operating Cost
- Robust shaft and bearing design
- Non clog impeller
- Modular design helps reduce spare parts inventory

APPLICATIONS

- Chemical processing
- Erosive / Corrosive Liquors
- Chemical dosing and injection
- Demineralized Water
- Condensate Water
- Acid Transfer
- Distilled liquid transfer
- Brine Transfer
- Pharmaceutical
- Process liquids with suspended solids
- Solvent transfer

TECHNICAL SPECIFICATIONS

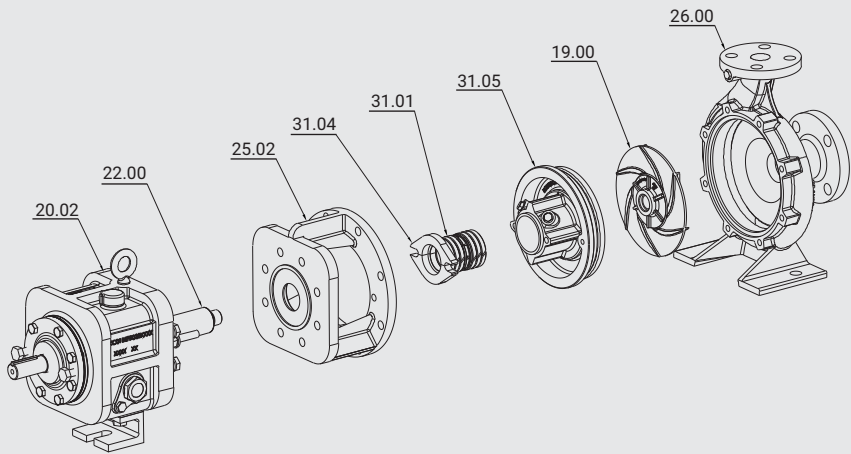
Head Range	5 - 154.5m
Flow Range	5 - 860m³/h
Speed	1450 / 2900 rpm
Impeller Type	Semi Open Impeller
Outlet Size	1" - 8"
Power Range	0.55 - 93kW
Maximum Liquid Temperature	-20°C to 140°C / Optional : Cooling Jacket models max. 260°C
Shaft Seal	Standard : Gland Packing Optional : Mechanical Seal
Bearing Lubrication	Oil
Flange Standard	ASME 16.5 Class 150
Maximum working Pressure	8-16 bar

GENERAL PUMP SELECTION & OPERATION INSTRUCTIONS

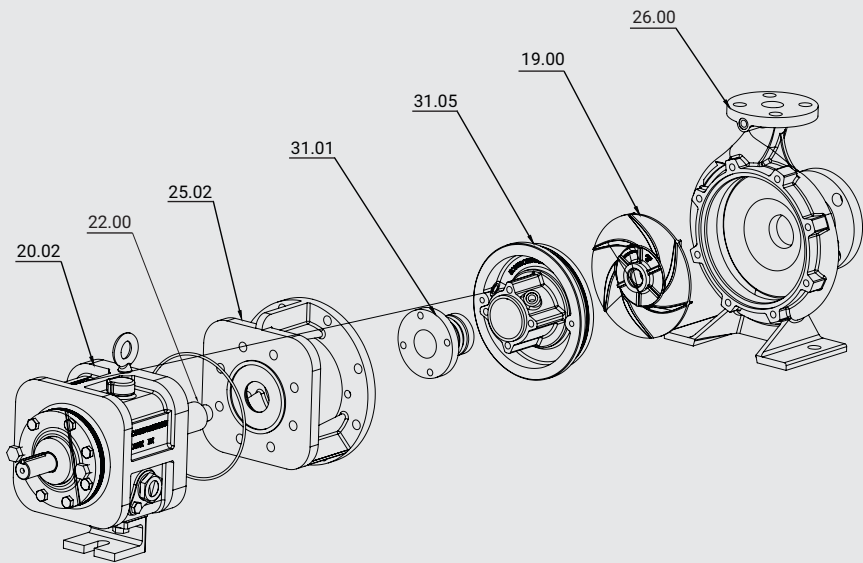
1. All performance curves are based on water (specific gravity = 1.0; low viscosity). Corrections must be applied for fluids with different properties.
2. Select a motor or engine with sufficient power margin above the pump duty point. This prevents overloading under normal and transient operating conditions.
3. Always calculate NPSHA (Net Positive Suction Head Available) carefully, especially when pumping hot or cold liquids with negative or positive suction. Account for vapor pressure effects.
4. Ensure $NPSHA \geq NPSHR + 0.5m$ to avoid cavitation during both negative and positive suction conditions.
5. For high-viscosity fluids, apply viscosity correction factors to head, flow and efficiency.
6. Choose pumps to operate within 70% to 120% of the Best Efficiency Point (BEP) against flow. Operating within this range ensures better efficiency, reliability, and reduced wear.
7. Select pump materials based on fluid properties:
 - i. Chemical compatibility
 - ii. Operating temperature
 - iii. Abrasiveness or corrosiveness
8. Use suction and discharge piping at least one nominal size larger than the pump nozzle to reduce friction losses and turbulence.
9. Delivery Side:
 - i. Install a Non-Return Valve (NRV) to prevent backflow.
 - ii. Install a gate or globe valve to control flow during start-up/shutdown.
10. Start-Up and Shut-Down Procedure:
 - i. Keep the delivery valve closed when starting or stopping the pump.
 - ii. For mixed flow pumps and pumps with a rising power curve toward shut-off, the pump must be started and stopped with the delivery valve in the open position, or as per the manufacturer's specific recommendations.
11. All pump performance curve tolerances conform to HI : 14.6 / ISO : 9906 Grade 2B standards.

EXPLODED VIEW

GLAND PACKING CONSTRUCTION



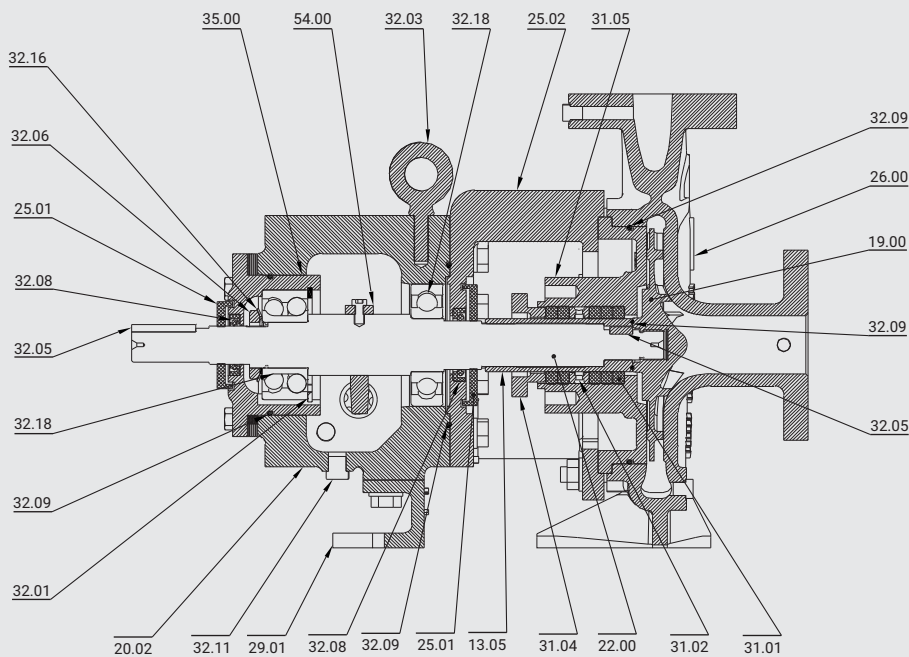
MECHANICAL SEAL CONSTRUCTION



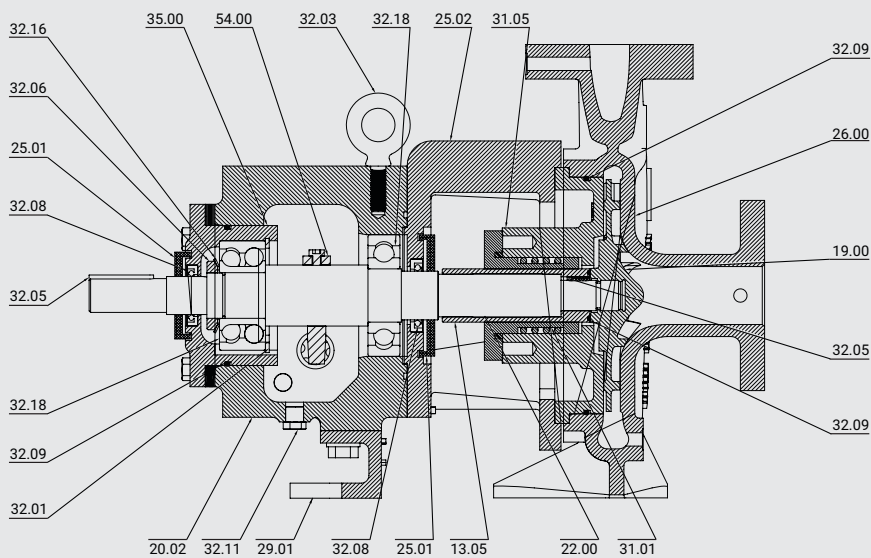
PART NO	PART NAME
26.00	Casing
19.00	Impeller
31.05	Stuffing Box
31.01	Gland Packing / Mechanical Seal
25.02	Connecting Frame
20.02	Bearing Frame
22.00	Pump Shaft
31.04	Gland

CROSS SECTIONAL DRAWING

GLAND PACKING CONSTRUCTION

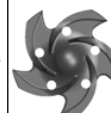
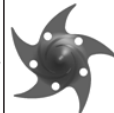
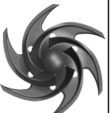
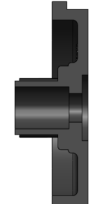
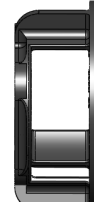
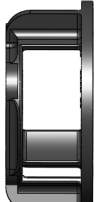
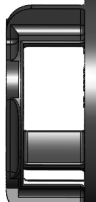


MECHANICAL SEAL CONSTRUCTION



PART NO	PART NAME
32.11	Plug
20.02	Bearing Frame
32.01	Circlip
32.18	Bearing
32.06	Lock Nut
32.16	Washer
35.00	Bearing Housing
54.00	Thrower
32.03	Eye Bolt
25.02	Connecting Frame
31.05	Stuffing Box
32.09	O-ring
26.00	Casing
19.00	Impeller
32.05	Key
31.01	Gland Packing / Mechanical Seal
31.02	Lantern Ring
22.00	Pump Shaft
31.04	Gland
13.05	Sleeve
25.01	Deflector
32.08	Oil Seal
29.01	Frame Support

INTERCHANGEABILITY CHART

PART NAME	1.5 x 1 x 6 (40 x 25 x 150)	3 x 1.5 x 6 (80 x 40 x 150)	3 x 2 x 6 (80 x 50 x 150)	1.5 x 1 x 8 (40 x 25 x 200)	3 x 1.5 x 8 (80 x 40 x 200)	2 x 1 x 10 (50 x 25 x 250)	3 x 1.5 x 8.5 (80 x 40 x 215)	3 x 2 x 8.5 (80 x 50 x 215)	4 x 3 x 8.5 (100 x 80 x 215)	6 x 4 x 8.5 (150 x 100 x 215)
CASING										
IMPELLER										
STUFFING BOX										
CONNECTING FRAME										
BEARING FRAME ASSEMBLY										

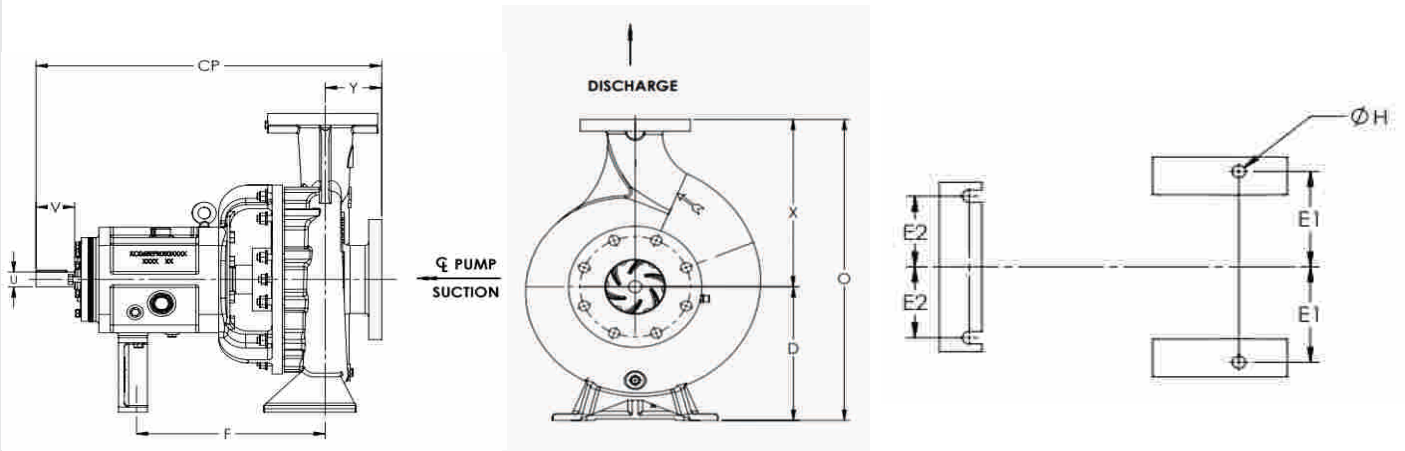
INTERCHANGEABILITY CHART

PART NAME	3 x 1.5 x 11 (80 x 40 x 280)	3 x 2 x 11 (80 x 50 x 280)	4 x 3 x 11 (100 x 80 x 280)	3 x 1.5 x 13 (80 x 40 x 330)	3 x 2 x 13 (80 x 50 x 330)	4 x 3 x 13 (100 x 80 x 330)	6 x 4 x 13 (150 x 100 x 330)	8 x 6 x 13 (200 x 150 x 330)	8 x 6 x 15 (200 x 150 x 380)	10 x 8 x 13 (250 x 200 x 330)	10 x 8 x 15 (250 x 200 x 380)
CASING											
IMPELLER											
STUFFING BOX											
CONNECTING FRAME											
BEARING FRAME ASSEMBLY											

DETAILS OF STANDARD COMPONENTS

SHAFT AND BEARING DATA	FRAME SIZE		
	I	II	III
SHAFT DIAMETER (mm)			
At Coupling	Ø 22.23	Ø 28.58	Ø 60.33
At 'NDE' Bearings	Ø 35	Ø 55	Ø 85
At 'DE' Bearings	Ø 30	Ø 45	Ø 75
Between bearings	Ø 40.13	Ø 60	Ø 92.1
Under Sleeve	Ø 27.97	Ø 45	Ø 60
STUFFING BOX DETAILS (mm)			
Shaft sleeve outer diameter	Ø 35	Ø 55	Ø 70
Stuffing Box Bore Diameter	Ø 50.5	Ø 74.5	Ø 94.5
Stuffing Box Depth	57	67	91
SHAFT LENGTH (mm)			
Impeller end of shaft to 'NDE' Bearing	165.95	218.25	297
Between bearings	67.4	128.75	172
'DE' Bearing to Coupling end	116	150	247.5
BEARINGS			
'NDE'	6307	6311	6317
'DE'	3306	7309 (2 Bearings back to back)	3315
KEYWAY AT COUPLING (mm)			
Width	4.76	6.35	15.88
Depth	2.38	3.18	9.15
Length	40	50	90
SHAFT THREAD AT IMPELLER	M20X1.5 RH	M24X2 RH	M45X1.5 RH

BARE SHAFT PUMP - MOUNTING DIMENSION



Pump Size - Suc x Del / Imp Ø (mm) (inch)	Suction size (mm)	Delivery size (mm)	Mounting Dimension (mm)										
			CP	D	ZE 1	ZE 2	F	H	X	Y	O	V	U (Dia.)
40 x 25 x 150 (1.5 x 1 x 6)	40	25	445	133	152	0	184	16	165	102	298	51	22.23
80 x 40 x 150 (3 x 1.5 x 6)	80	40	445	133	152	0	184	16	165	102	298	51	22.23
80 x 50 x 150 (3 x 2 x 6)	80	50	445	133	152	0	184	16	165	102	298	51	22.23
40 x 25 x 200 (1.5 x 1 x 8)	40	25	445	133	152	0	184	16	165	102	298	51	22.23
80 x 40 x 200 (3 x 1.5 x 8)	80	40	445	133	152	0	184	16	165	102	298	51	22.23
50 x 25 x 250 (2 x 1 x 10)*	50	25	597	210	248	184	318	16	216	102	425	67	28.58
80 x 40 x 215 (3 x 1.5 x 8.5)*	80	40	597	210	248	184	318	16	216	102	425	67	28.58
80 x 50 x 215 (3 x 2 x 8.5)*	80	50	597	210	248	184	318	16	242	102	450	67	28.58
100 x 80 x 215 (4 x 3 x 8.5)*	100	80	597	210	248	184	318	16	280	102	490	67	28.58
150 x 100 x 215 (6 x 4 x 8.5)	150	100	597	210	248	184	318	16	280	102	490	67	28.58
80 x 40 x 280 (3 x 1.5 x 11)*	80	40	597	254	248	184	318	16	267	102	520	67	28.58
80 x 50 x 280 (3 x 2 x 11)*	80	50	597	254	248	184	318	16	292	102	546	67	28.58
100 x 80 x 280 (4 x 3 x 11)*	100	80	597	254	248	184	318	16	318	102	572	67	28.58
80 x 40 x 330 (3 x 1.5 x 13)*	80	40	597	254	248	184	318	16	266	102	520	67	28.58
80 x 50 x 330 (3 x 2 x 13)	80	50	597	254	248	184	318	16	292	102	546	67	28.58
100 x 80 x 330 (4 x 3 x 13)	100	80	597	254	248	184	318	16	318	102	572	67	28.58
150 x 100 x 330 (6 x 4 x 13)	150	100	597	254	248	184	318	16	343	102	597	67	28.58
125 x 100 x 250 (5 x 4 x 10)*	125	100	597	254	248	184	318	16	343	102	597	67	28.58
200 x 150 x 330 (8 x 6 x 13)*	200	150	860	368	406	229	476	22	406	152	775	102	60.33
200 x 150 x 380 (8 x 6 x 15)	200	150	860	368	406	229	476	22	457	152	826	102	60.33
250 x 200 x 380 (10 x 8 x 15)	250	200	860	368	406	229	476	22	483	152	851	102	60.33

* Optional : Cooling jacket models.

Note : All Dimensions are in mm, Unless Otherwise Specified

In view of continous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

OVERALL RANGE & PERFORMANCE DETAILS

Pump performance curve details at 1450 rpm

S. No.	Pump Size - Suction x Discharge / Impeller Sizes (inch) (mm)	Suction Nozzle Dia (mm)	Discharge Nozzle Dia (mm)	Maximum Power (kW)	Maximum Flow Rate (m³/hr)	Maximum Total Head (m)	Maximum Suspended Solid Size (mm)	Pump Weight (kg)
1	1.5 x 1 x 6 (40 x 25 x 150)	40	25	0.4	14	8.2	5.8	40
2	3 x 1.5 x 6 (80 x 40 x 150)	80	40	0.8	28.5	8	9.1	45
3	3 x 2 x 6 (80 x 50 x 150)	80	50	0.7	44	7.8	16.4	46
4	1.5 x 1 x 8 (40 x 25 x 200)	40	25	1.1	21	16.1	5.3	46.5
5	3 x 1.5 x 8 (80 x 40 x 200)	80	40	1.3	29	14.3	10.3	50.5
6	3 x 1.5 x 8.5 (80 x 40 x 215)	80	40	1.7	30	16.9	7.6	102
7	3 x 2 x 8.5 (80 x 50 x 215)	80	50	2.5	45	15.8	9.3	105
8	4 x 3 x 8.5 (100 x 80 x 215)	100	80	3.8	86	15.6	18	114
9	2 x 1 x 10 (50 x 25 x 250)	50	25	1.8	14.5	24	5.4	115
10	5 x 4 x 10 (125 x 100 x 250)	125	100	7.34	130	19.73	24	86
11	3 x 1.5 x 11 (80 x 40 x 280)	80	40	3.9	45	27.9	8.5	128
12	3 x 2 x 11 (80 x 50 x 280)	80	50	6.9	110	28.7	14.1	128
13	4 x 3 x 11 (100 x 80 x 280)	100	80	11.1	170	29.3	21.9	136
14	3 x 1.5 x 13 (80 x 40 x 330)	80	40	9.0	34	32.4	3.8	137
15	3 x 2 x 13 (80 x 50 x 330)	80	50	9.8	78	38.6	13.8	145
16	4 x 3 x 13 (100 x 80 x 330)	100	80	18.0	143	39.7	15.5	163
17	6 x 4 x 13 (150 x 100 x 330)	150	100	25.9	420	39	26.5	160.3
18	8 x 6 x 13 (200 x 150 x 330)	200	150	67.8	670	44.5	55	249
19	8 x 6 x 15 (200 x 150 x 380)	200	150	87.7	690	51.2	53.2	324
20	10 x 8 x 15 (250 x 200 x 380)	250	200	93.0	870	52.5	42	359

OVERALL RANGE & PERFORMANCE DETAILS

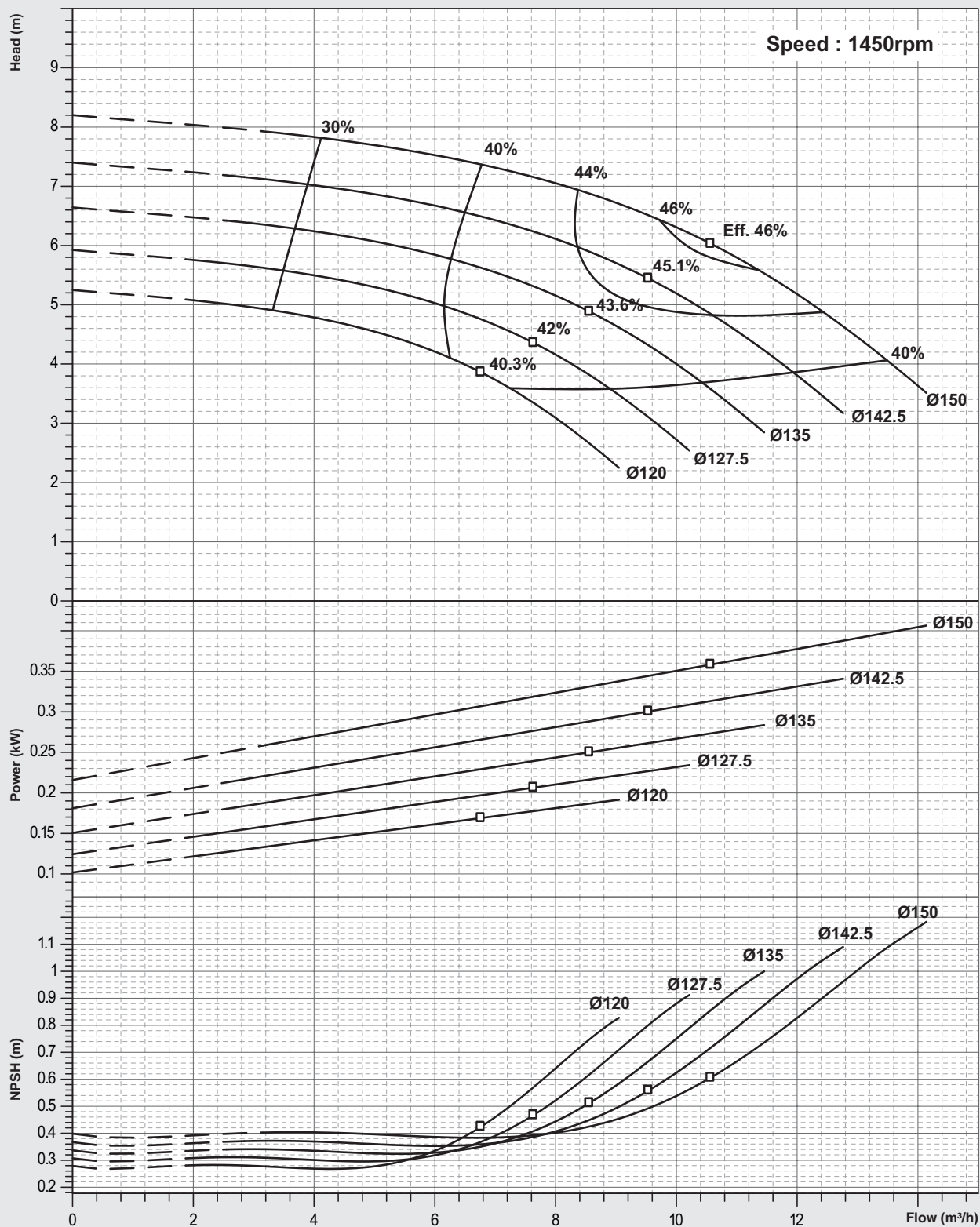
Pump performance curve details at 2900 rpm

S. No.	Pump Size - Suction x Discharge / Impeller Sizes (inch) (mm)	Suction Nozzle Dia (mm)	Discharge Nozzle Dia (mm)	Maximum Power (kW)	Maximum Flow Rate (m³/hr)	Maximum Total Head (m)	Maximum Suspended Solid Size (mm)	Pump Weight (kg)
1	1.5 x 1 x 6 (40 x 25 x 150)	40	25	3.3	28	32.8	5.8	40
2	3 x 1.5 x 6 (80 x 40 x 150)	80	40	6.8	57	32.2	9.1	45
3	3 x 2 x 6 (80 x 50 x 150)	80	50	5.6	87	31.5	16.4	46
4	1.5 x 1 x 8 (40 x 25 x 200)	40	25	8.5	40	64.4	5.8	46.5
5	3 x 1.5 x 8 (80 x 40 x 200)	80	40	10.6	58	57.2	10.3	50.5
6	3 x 1.5 x 8.5 (80 x 40 x 215)	80	40	14.3	60	67.5	7.6	102
7	3 x 2 x 8.5 (80 x 50 x 215)	80	50	18.4	75	63.5	9.3	105
8	4 x 3 x 8.5 (100 x 80 x 215)	100	80	22.2	158	62.6	18	114
9	6 x 4 x 8.5 (150 x 100 x 215)	150	100	35.5	290	59	25	129
10	2 x 1 x 10 (50 x 25 x 250)	50	25	14.3	28	96.0	5.4	115
11	5 x 4 x 10 (125 x 100 x 250)	125	100	58.8	280	58.2	24	86
12	3 x 1.5 x 11 (80 x 40 x 280)	80	40	31	90	111.6	8.5	128
13	3 x 2 x 11 (80 x 50 x 280)	80	50	55.2	220	114.7	14.1	128
14	4 x 3 x 11 (100 x 80 x 280)	100	80	88.9	340	117.3	21.9	136
15	3 x 1.5 x 13 (80 x 40 x 330)	80	40	70.9	68	129.6	3.8	137
16	3 x 2 x 13 (80 x 50 x 330)	80	50	78.2	148	154.5	13.8	145

PERFORMANCE CURVE

Pump Model : FECC - 1.5 x 1 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.5 x 1 x 6
(40 x 25 x 150)



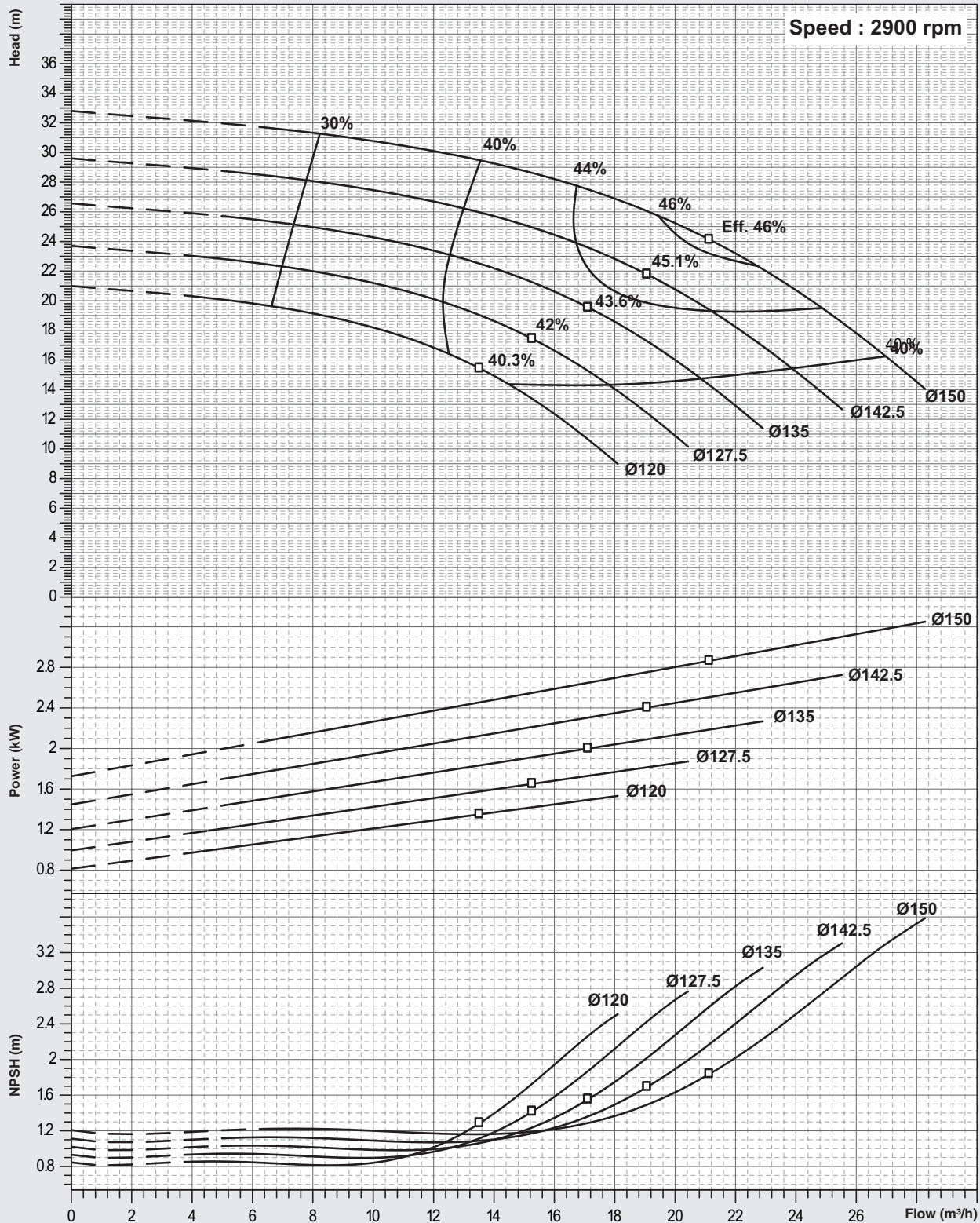
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 1.5 x 1 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.5 x 1 x 6
(40 x 25 x 150)



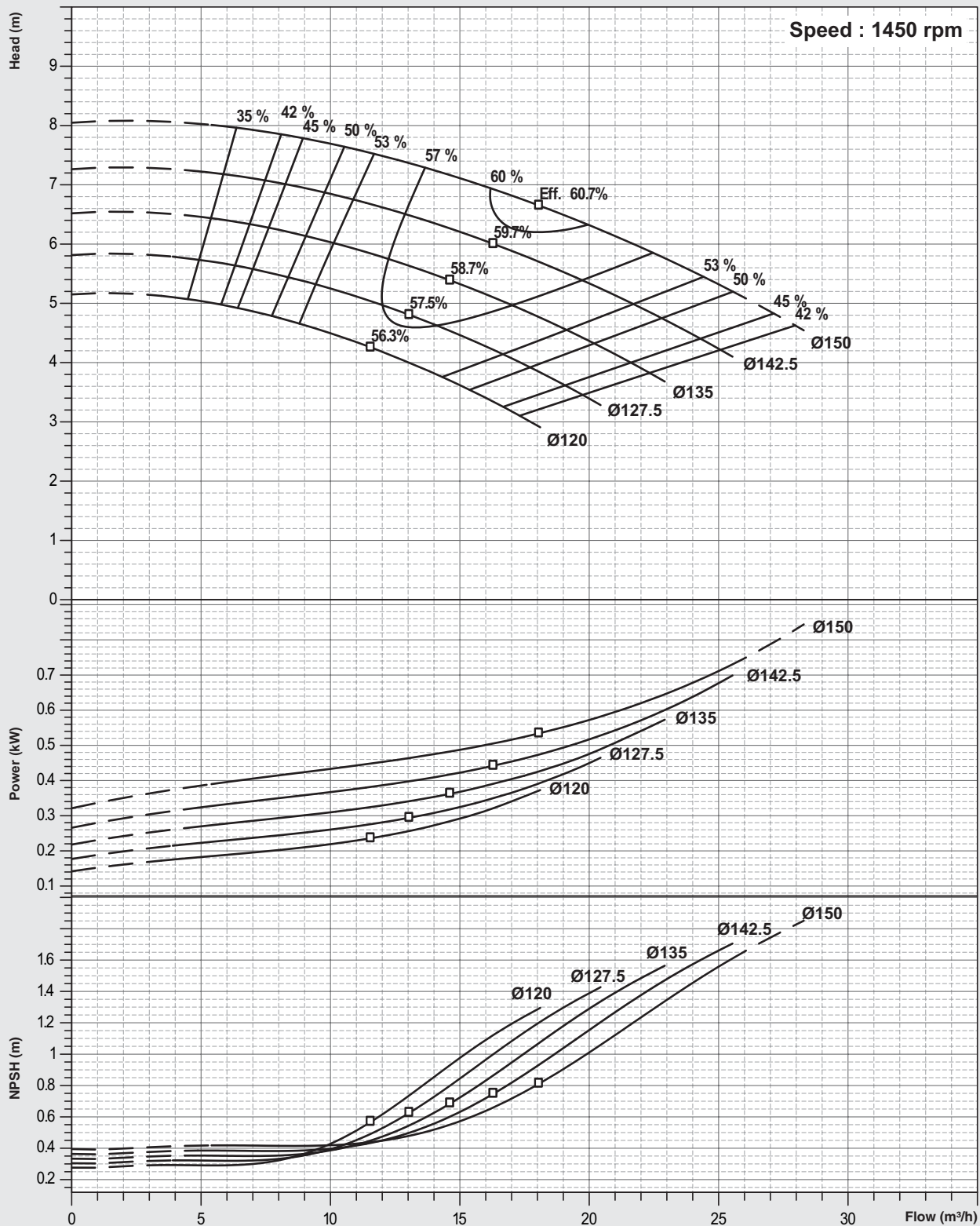
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 3 x 1.5 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 1.5 x 6
(80 x 40 x 150)



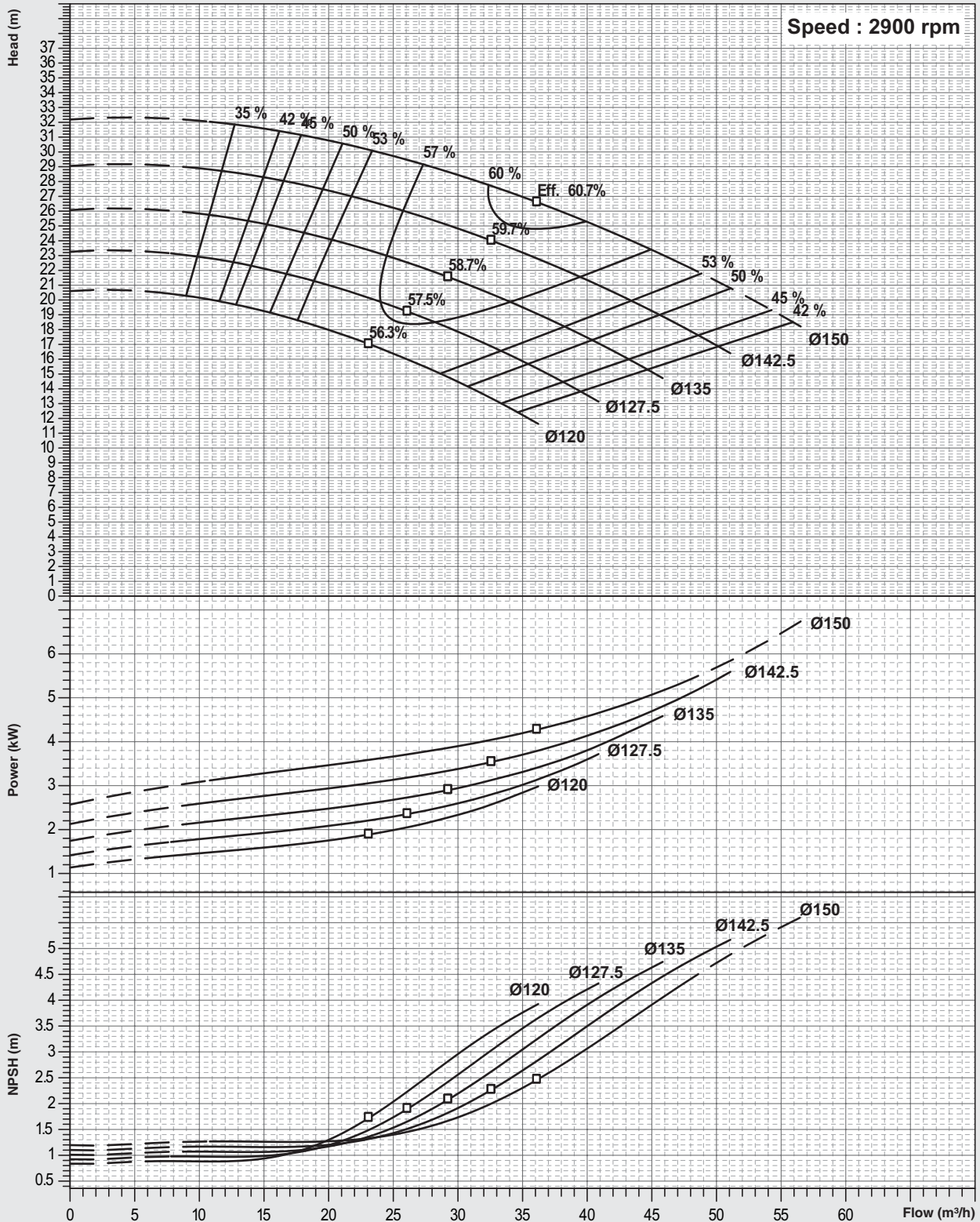
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 3 x 1.5 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 1.5 x 6
(80 x 40 x 150)



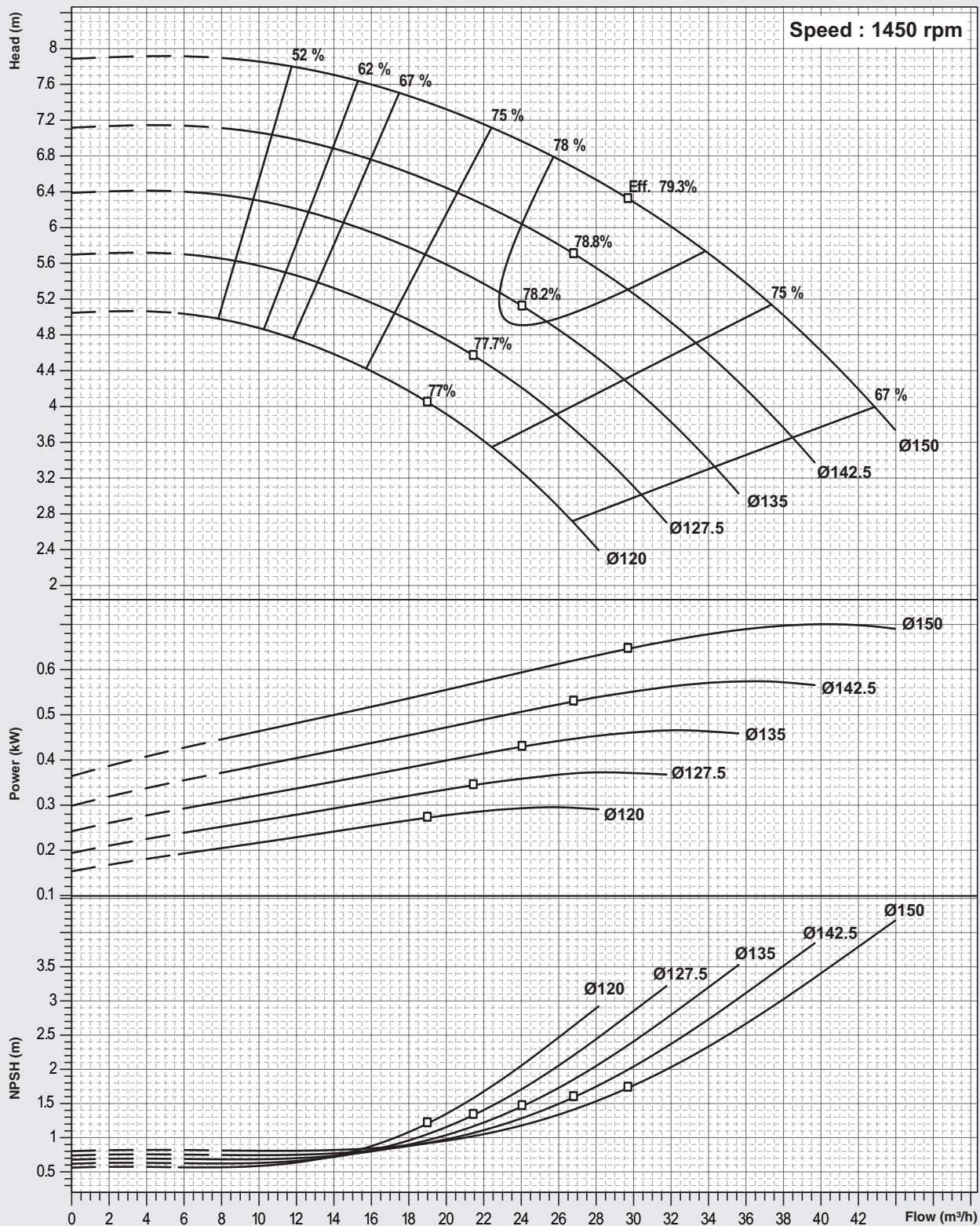
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : **FECC - 3 x 2 x 6**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 2 x 6**
(80 x 50 x 150)



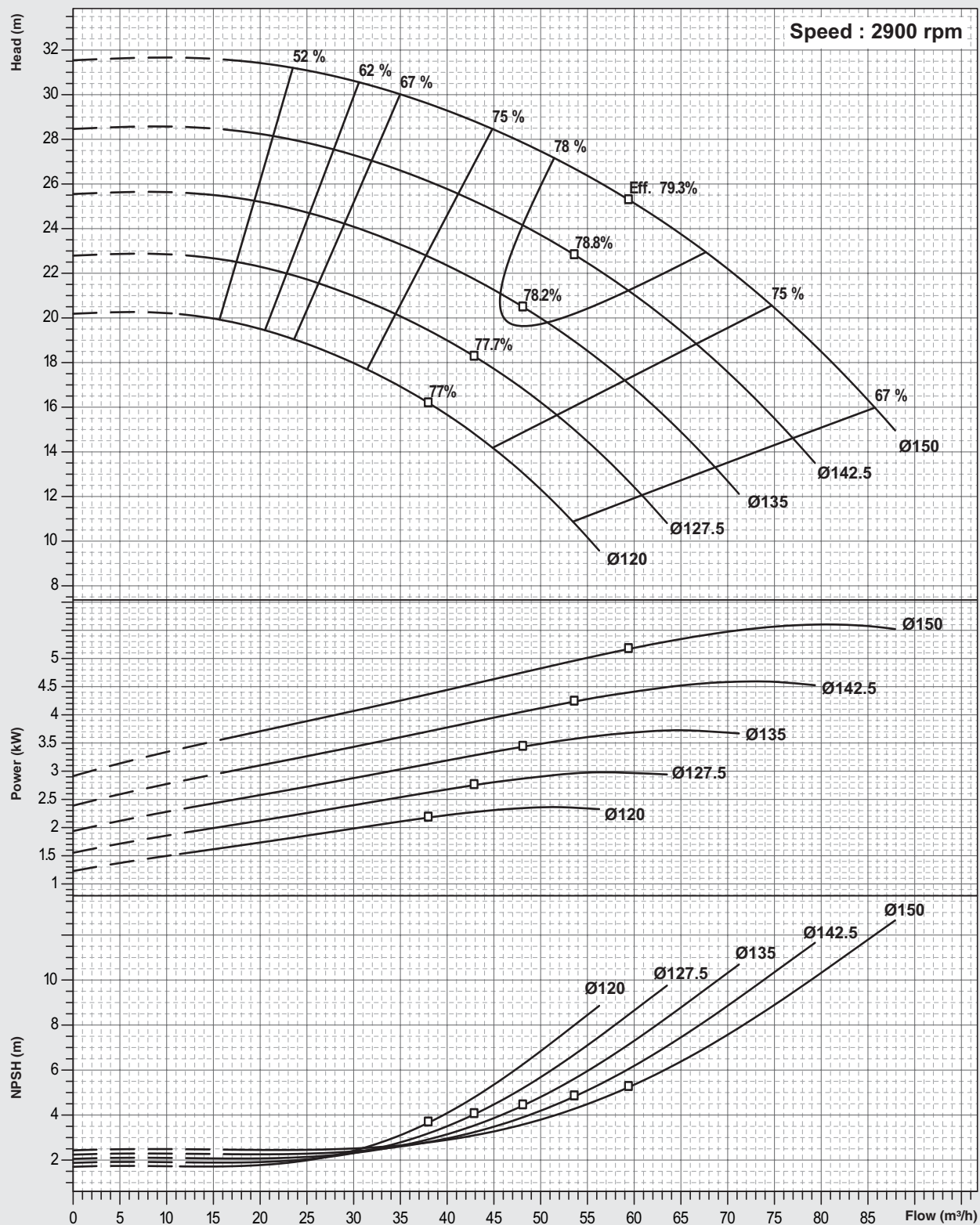
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 3 x 2 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 1.5 x 6
(80 x 50 x 150)



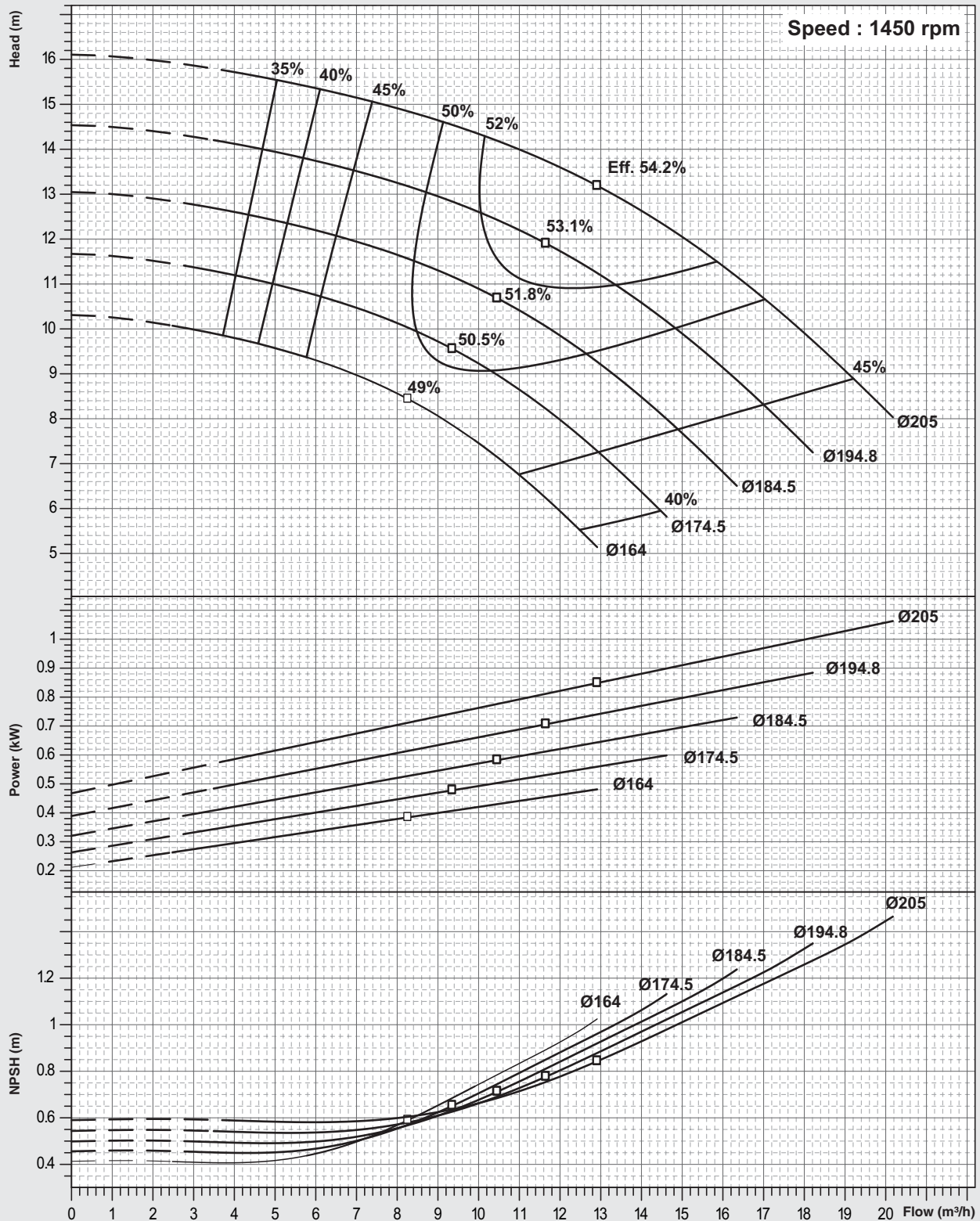
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 1.5 x 1 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.5 x 1 x 8
(40 x 25 x 205)



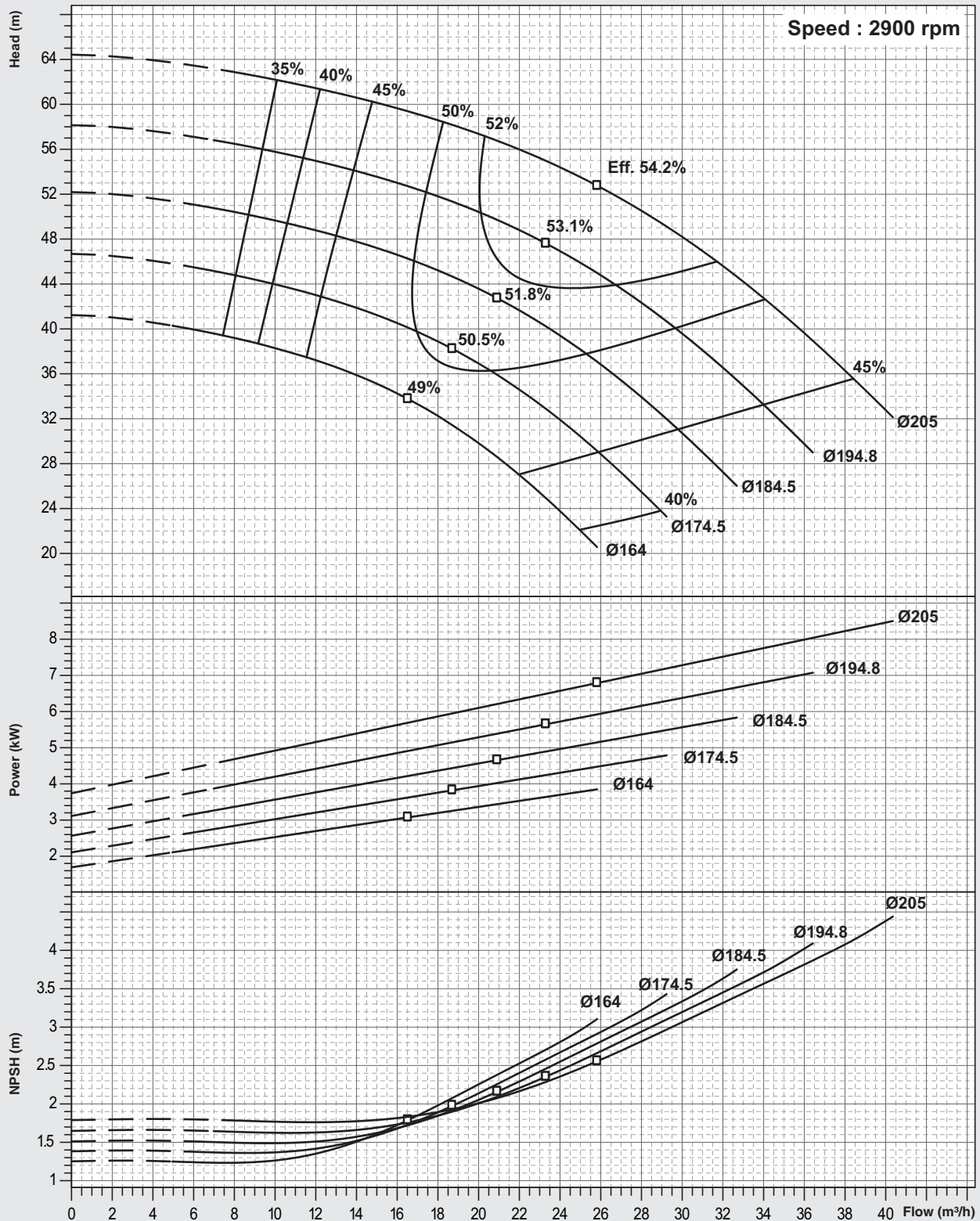
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 1.5 x 1 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.5 x 1 x 8
(40 x 25 x 205)



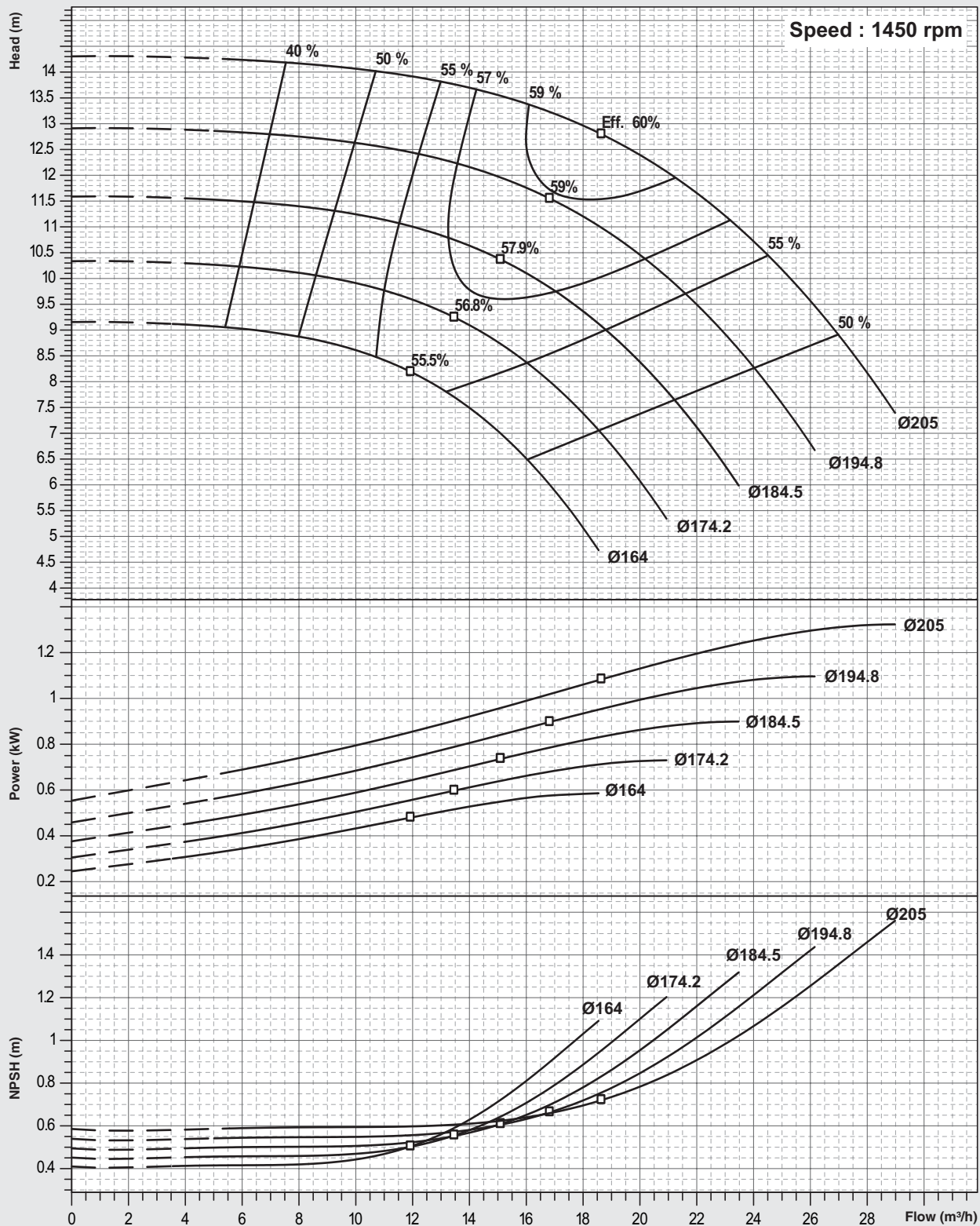
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 3 x 1.5 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 1.5 x 8
(80 x 40 x 205)



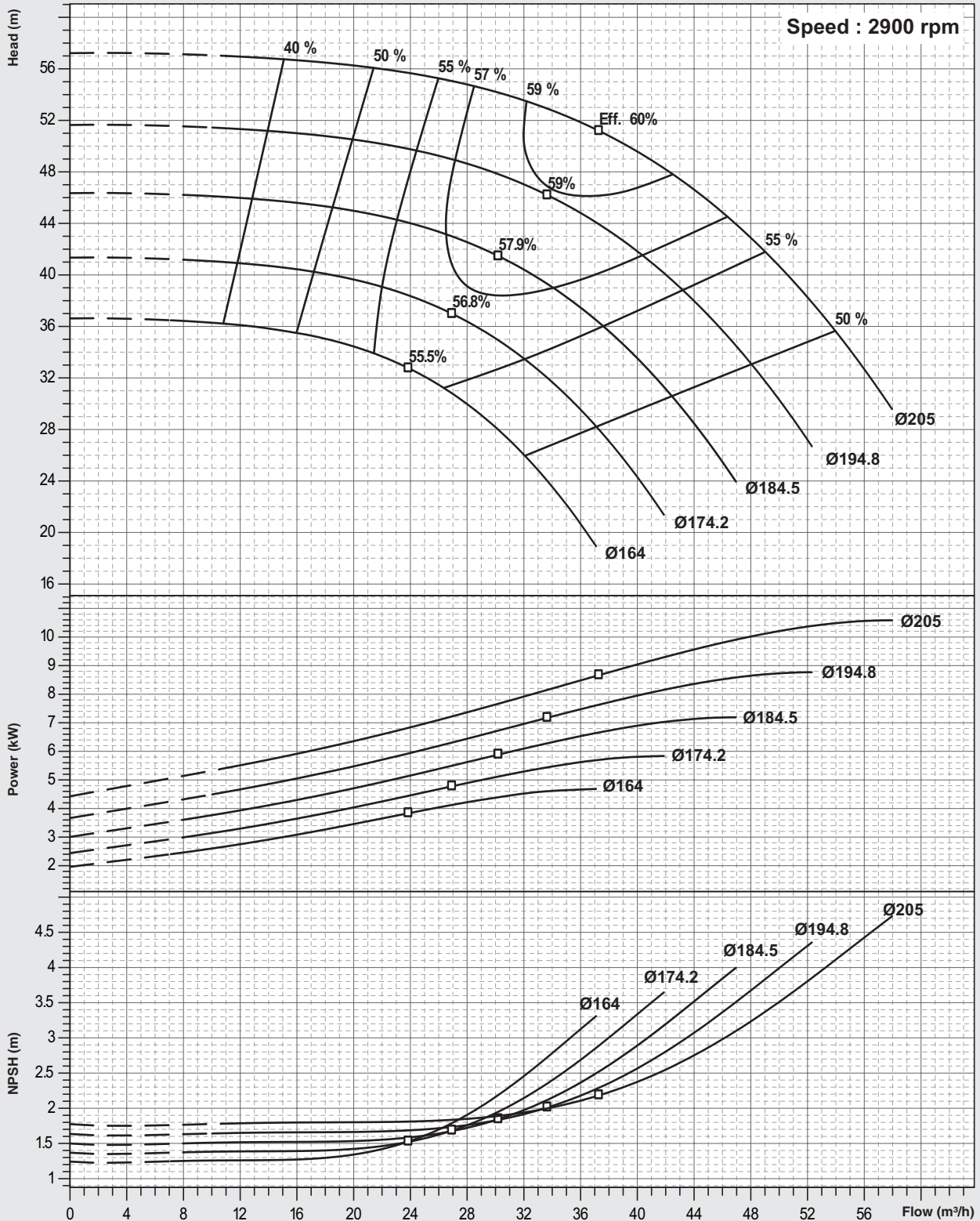
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : **FECC - 3 x 1.5 x 8**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 1.5 x 8**
(80 x 40 x 205)



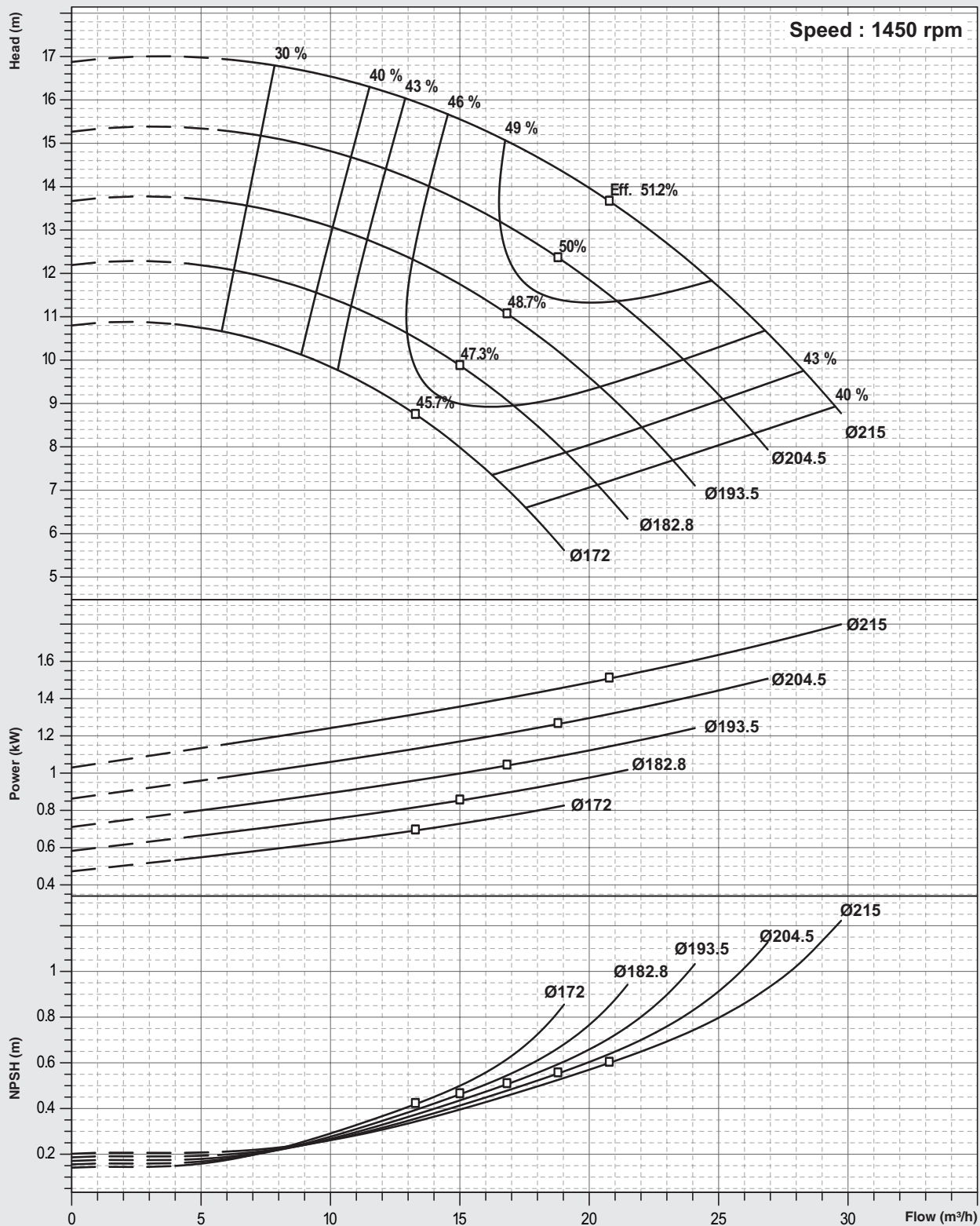
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 3 x 1.5 x 8.5

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 1.5 x 8.5
(80 x 40 x 215)



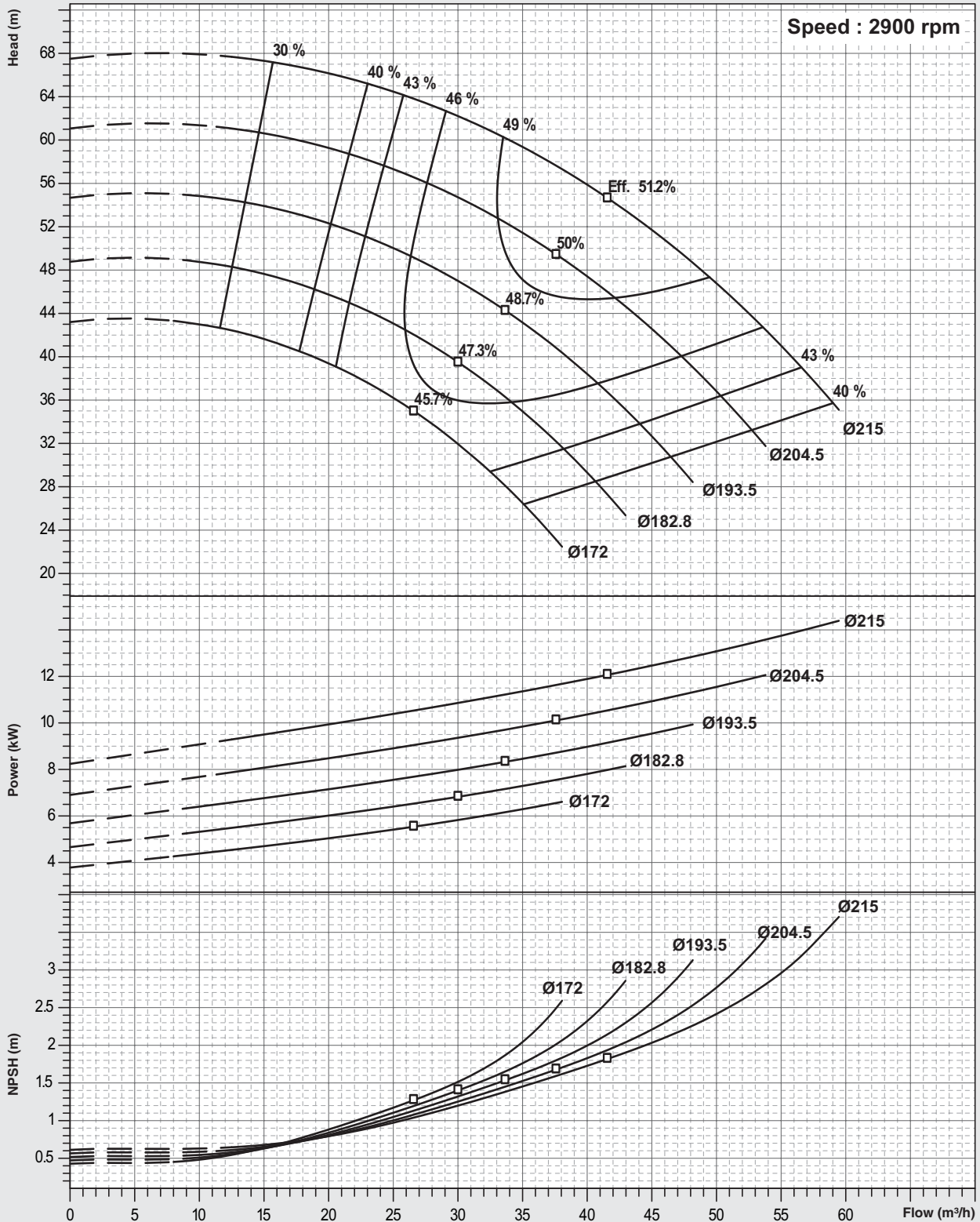
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 3 x 1.5 x 8.5

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 1.5 x 8.5
(80 x 40 x 215)



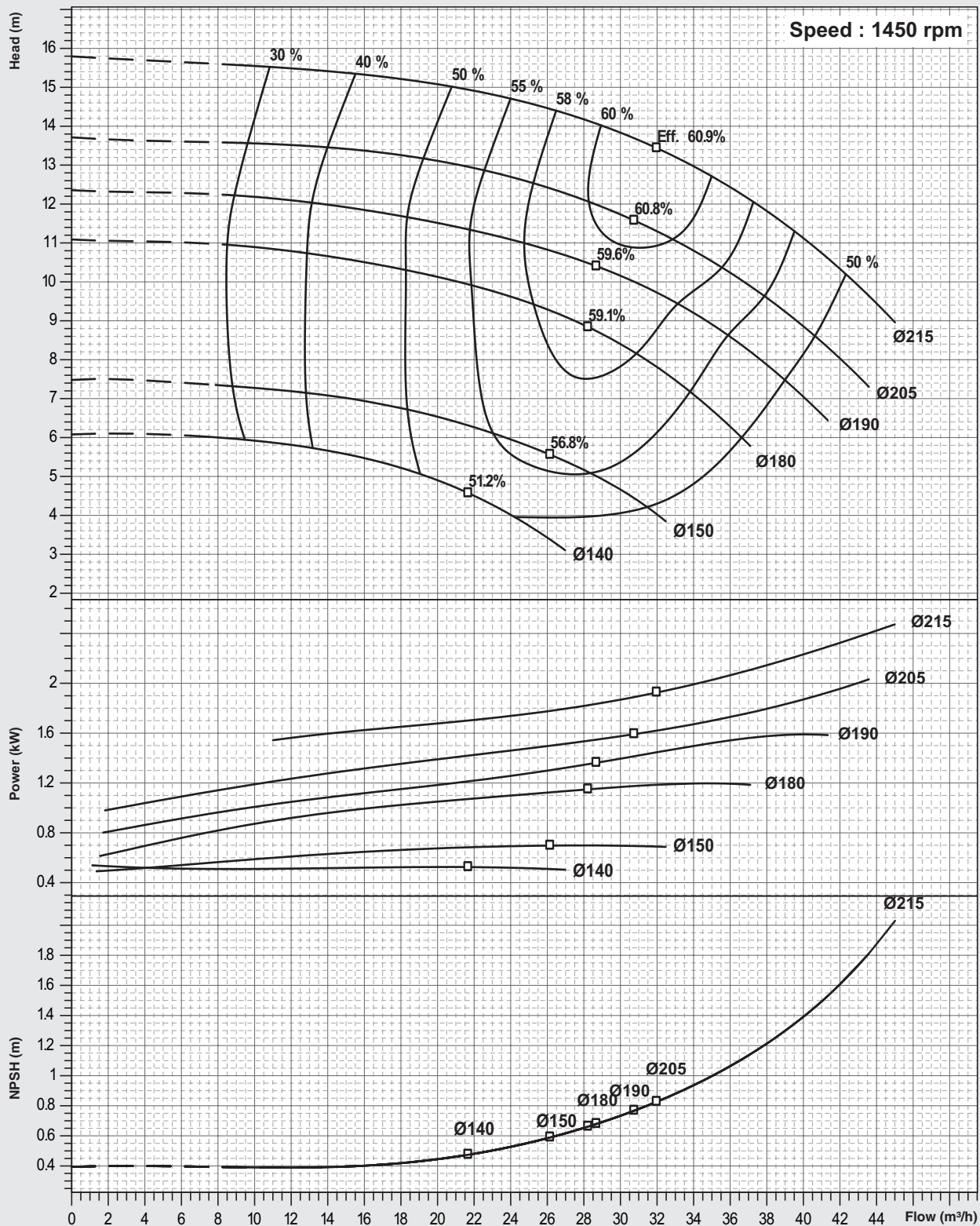
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 3 x 2 x 8.5

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 2 x 8.5
(80 x 50 x 215)



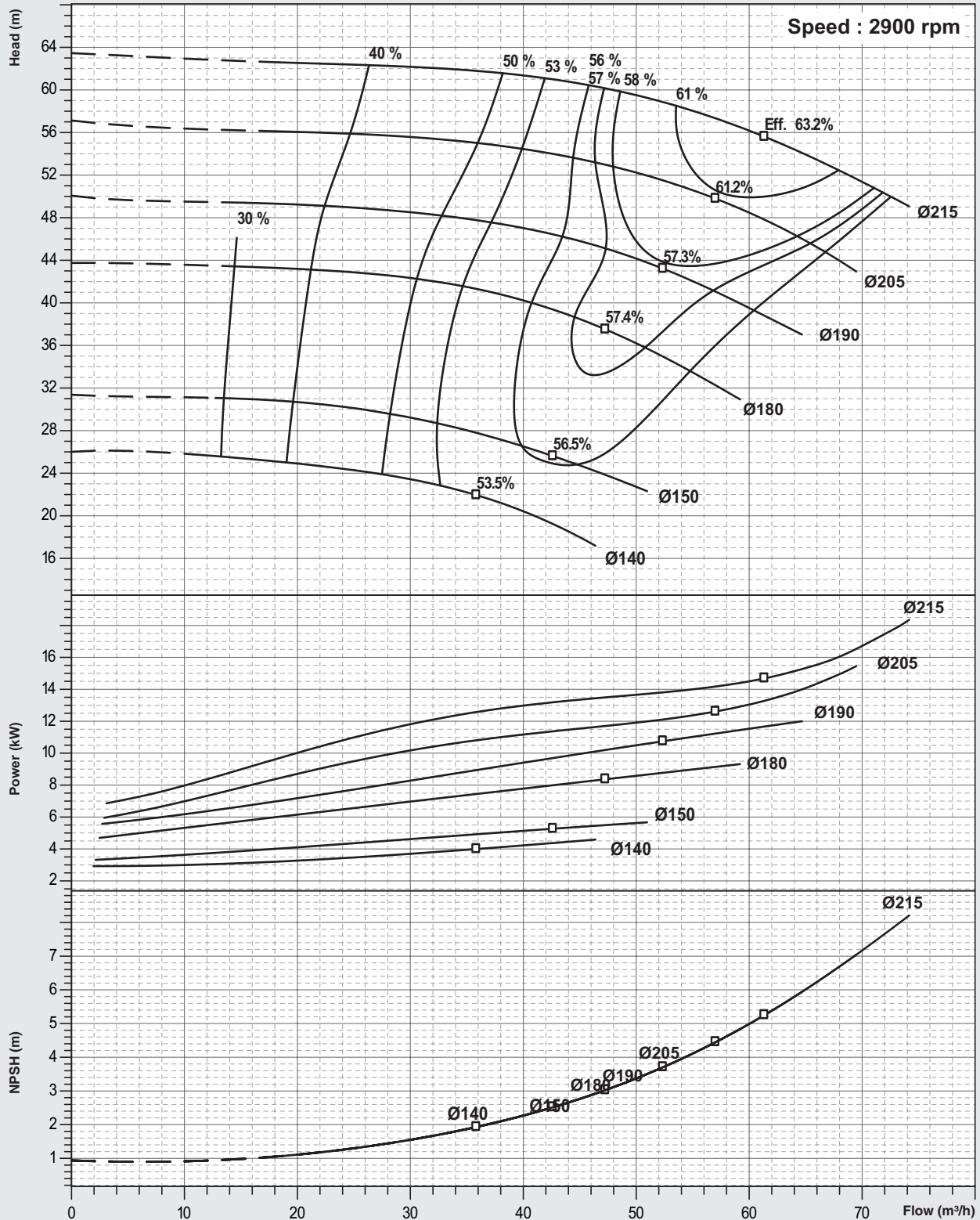
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : **FECC - 3 x 2 x 8.5**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 2 x 8.5**
(80 x 50 x 215)



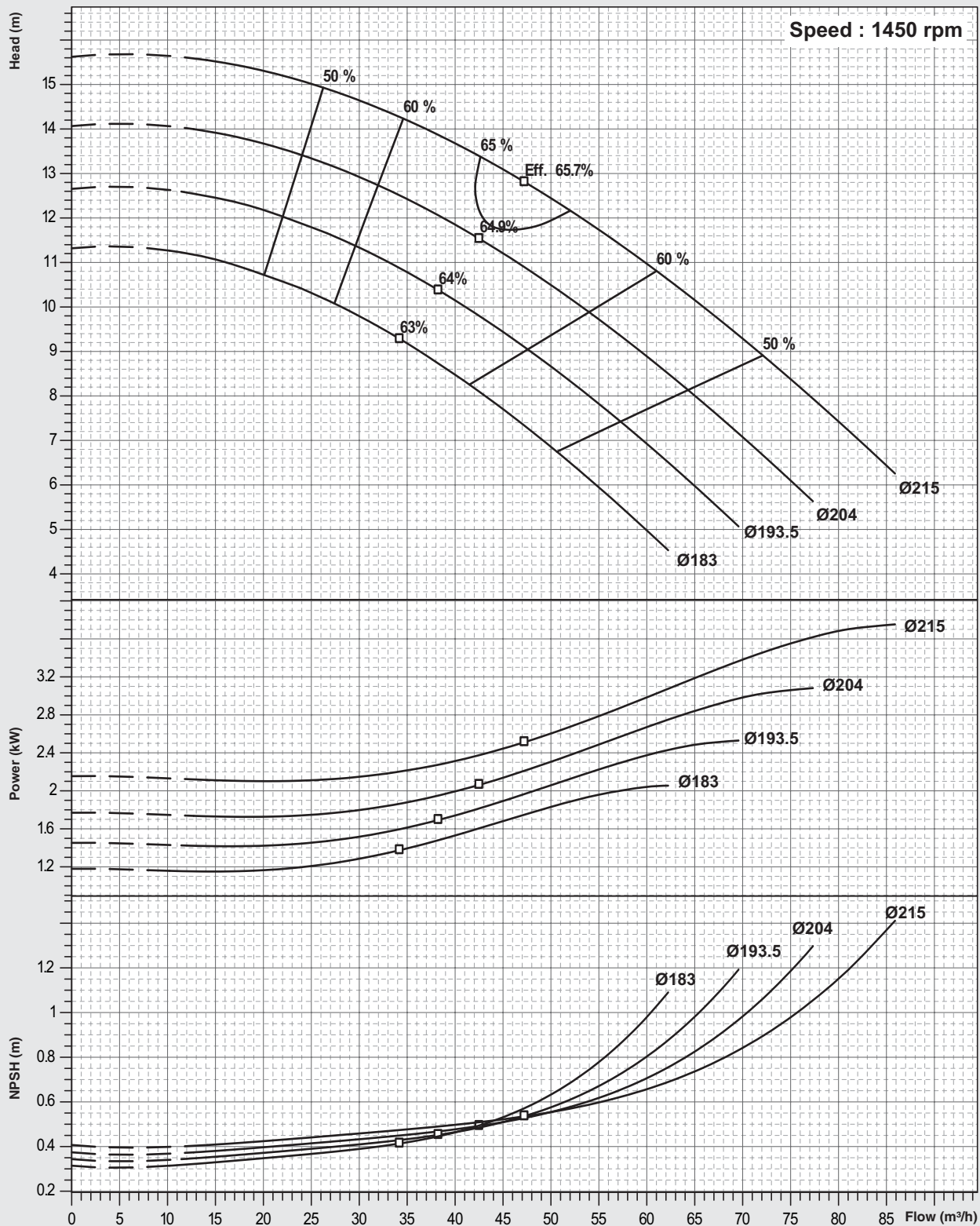
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 4 x 3 x 8.5

Pump Size in mm (Suc X Del X Max. Imp Ø) : 4 x 3 x 8.5
(100 x 80 x 215)



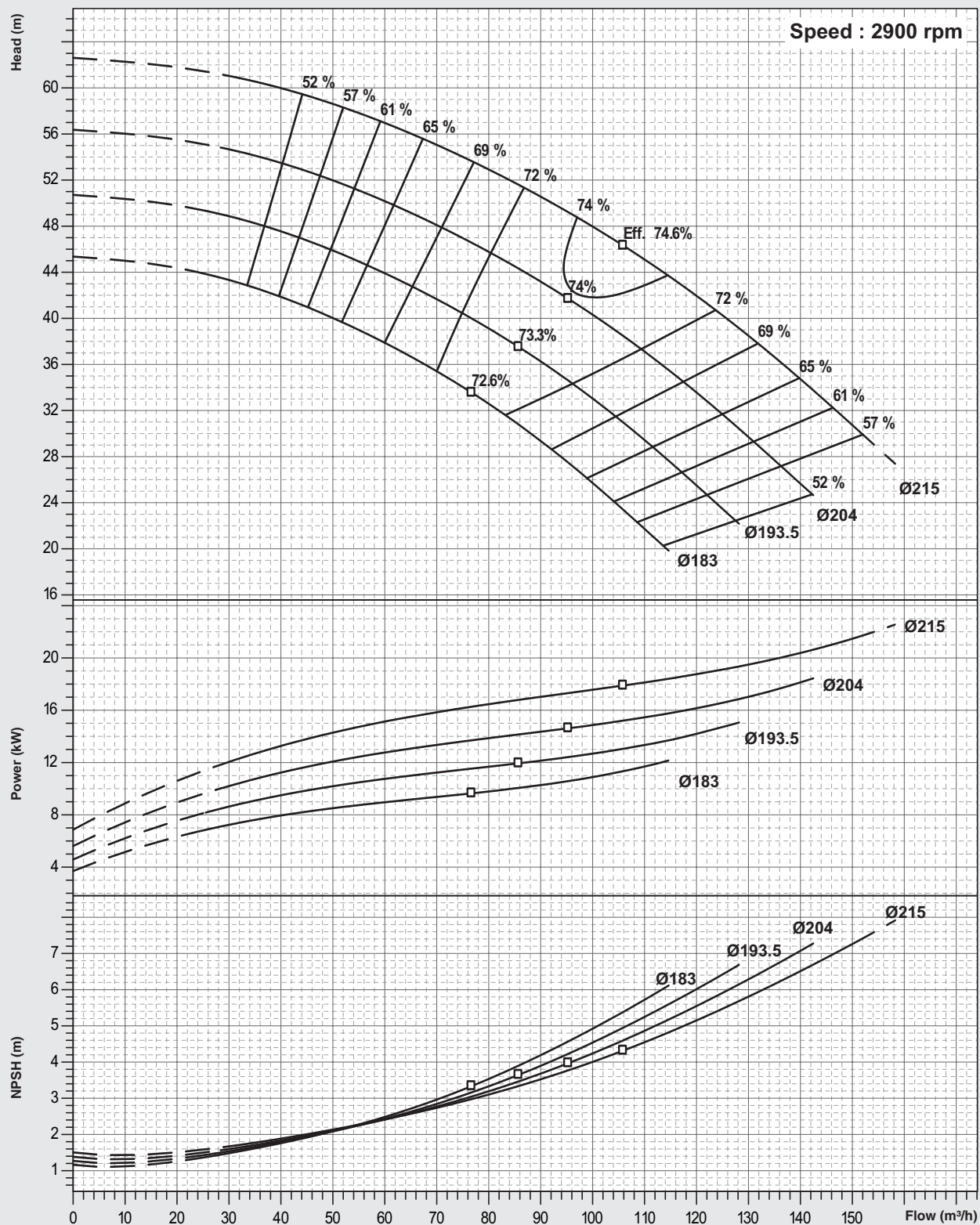
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : **FECC - 4 x 3 x 8.5**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **4 x 3 x 8.5**
(100 x 80 x 215)



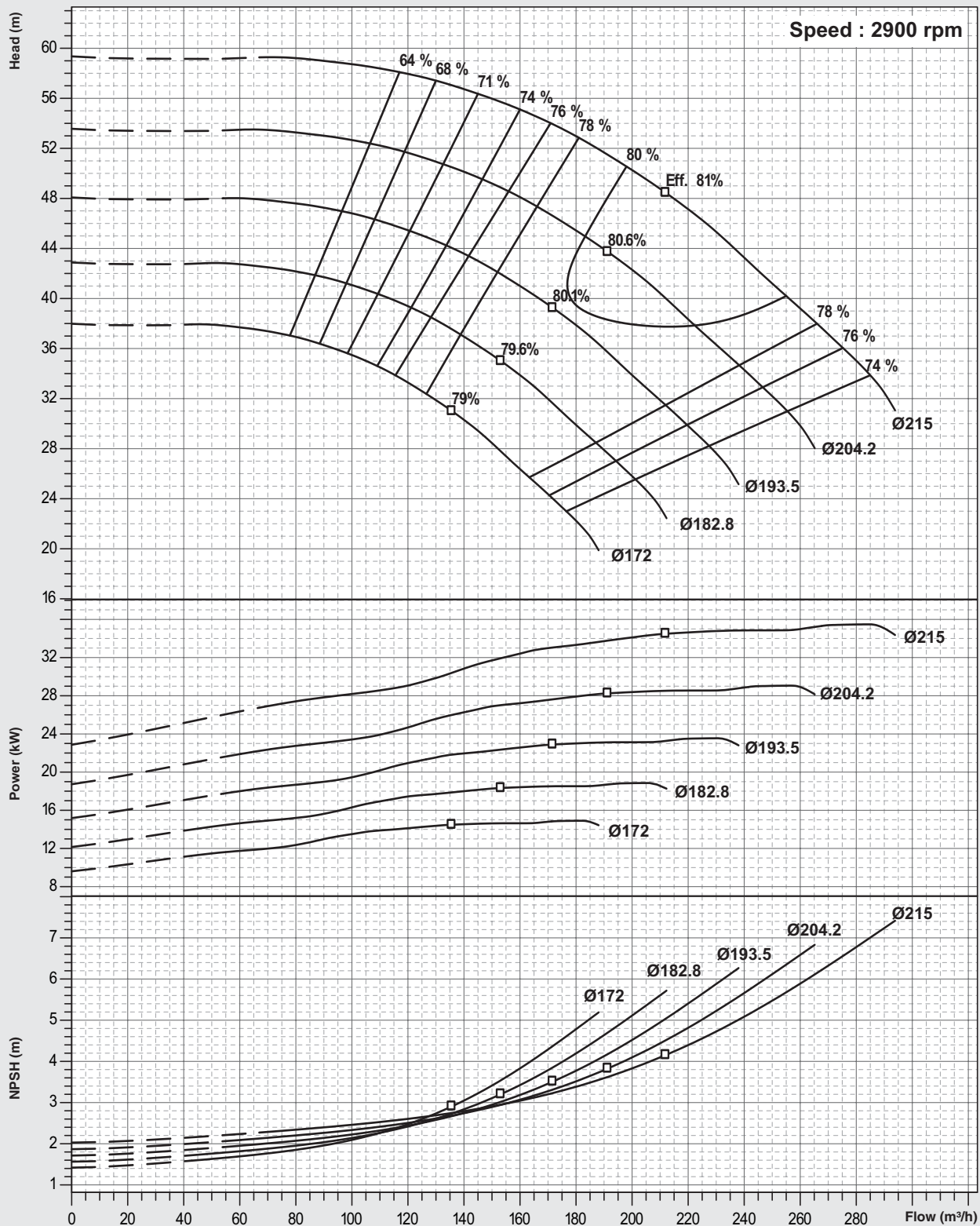
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 6 x 4 x 8.5

Pump Size in mm (Suc X Del X Max. Imp Ø) : 6 x 4 x 8.5
(150 x 100 x 215)



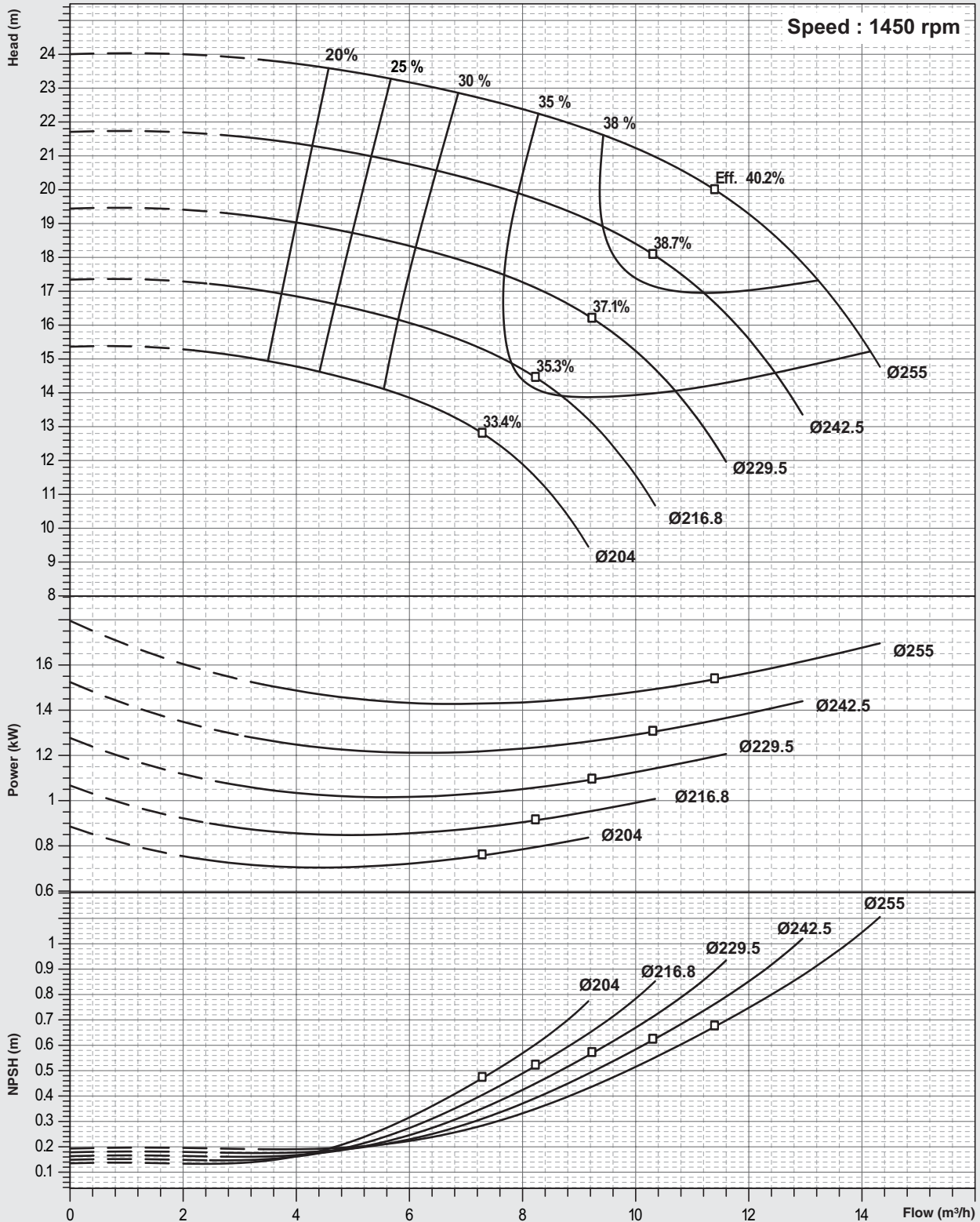
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 2 x 1 x 10

Pump Size in mm (Suc X Del X Max. Imp Ø) : 2 x 1 x 10
(50 x 25 x 255)



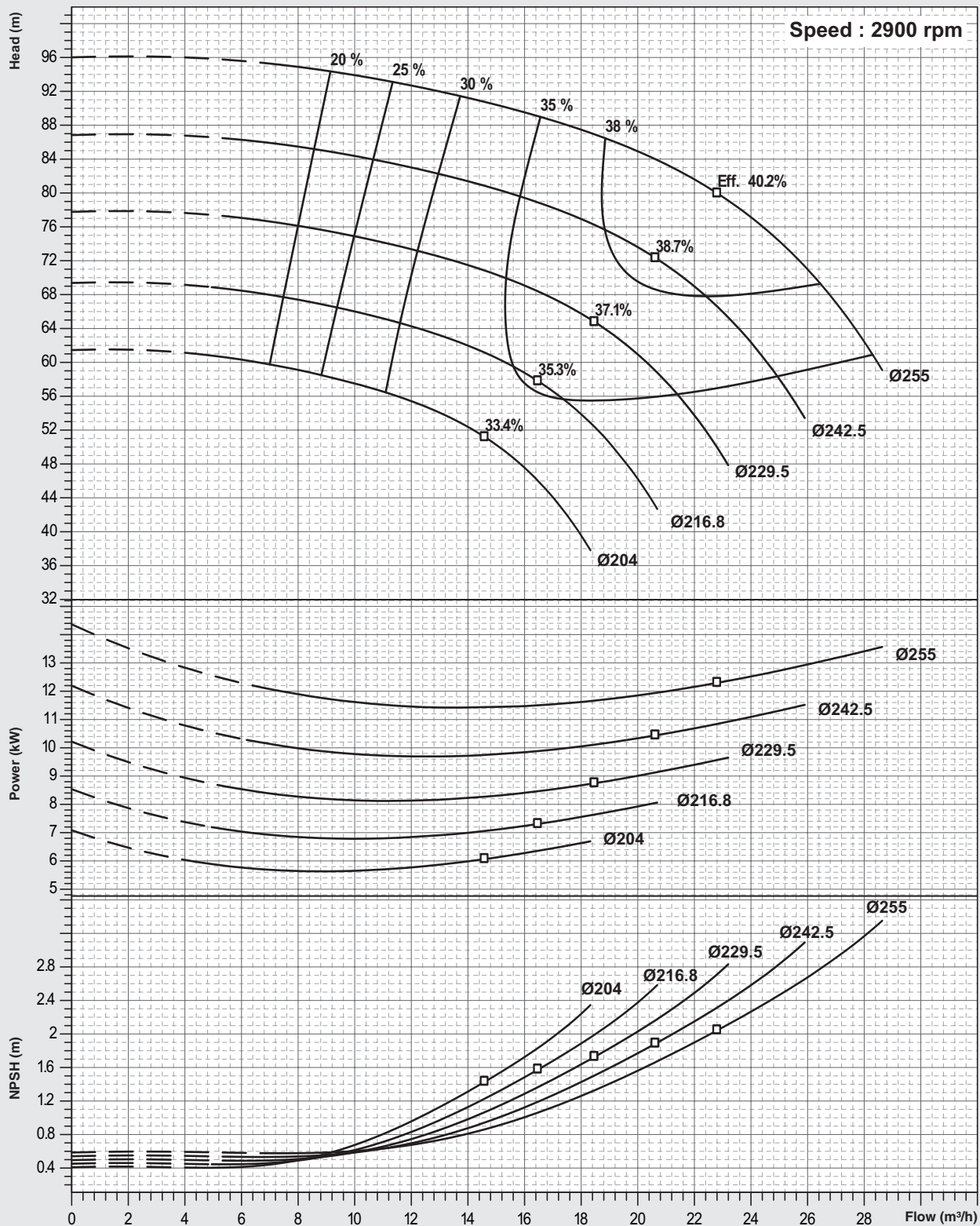
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 2 x 1 x 10

Pump Size in mm (Suc X Del X Max. Imp Ø) : 2 x 1 x 10
(50 x 25 x 255)



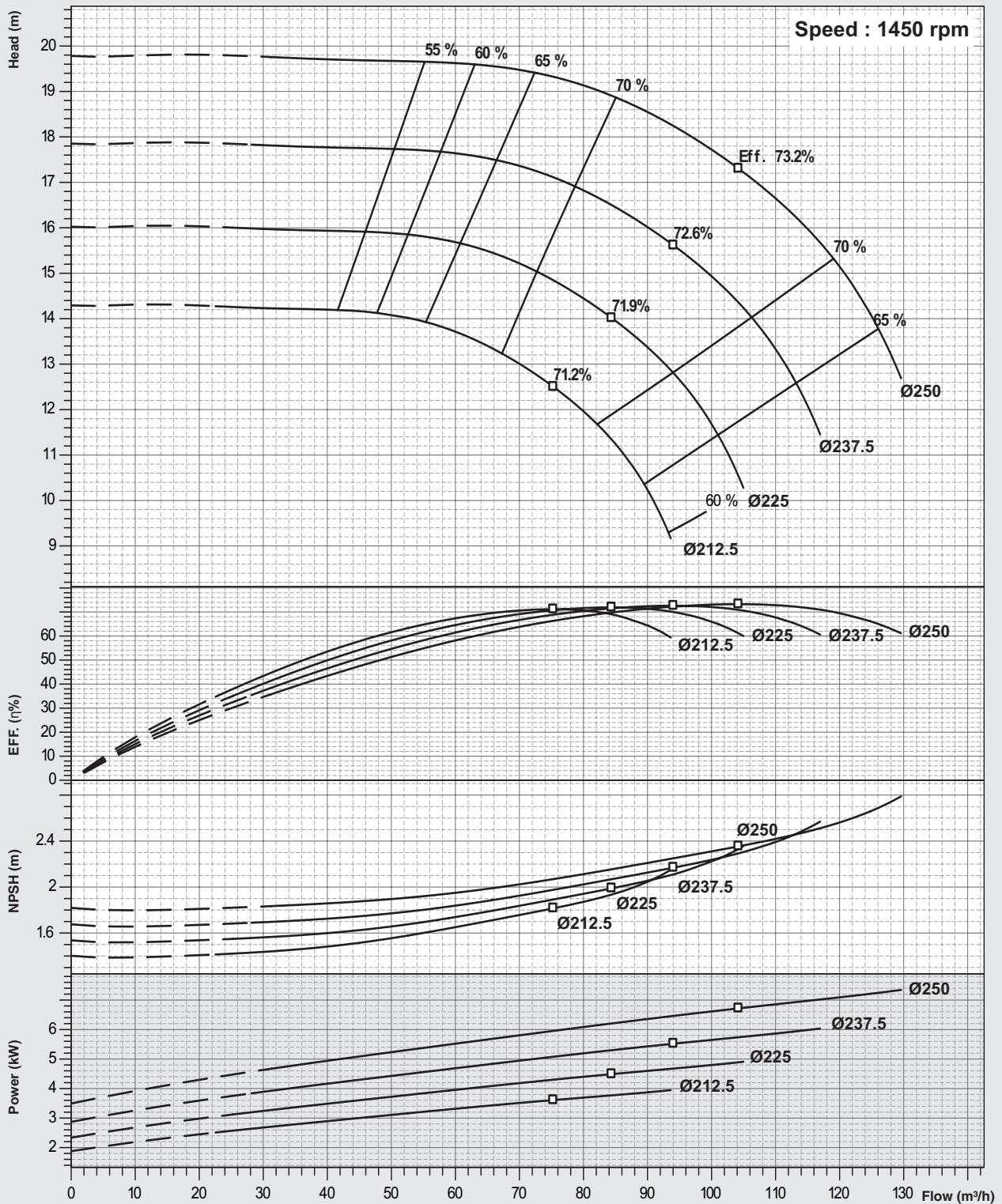
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 5 x 4 x 10

Pump Size in mm (Suc X Del X Max. Imp Ø) : 5 x 4 x 10
(125 x 100 x 250)



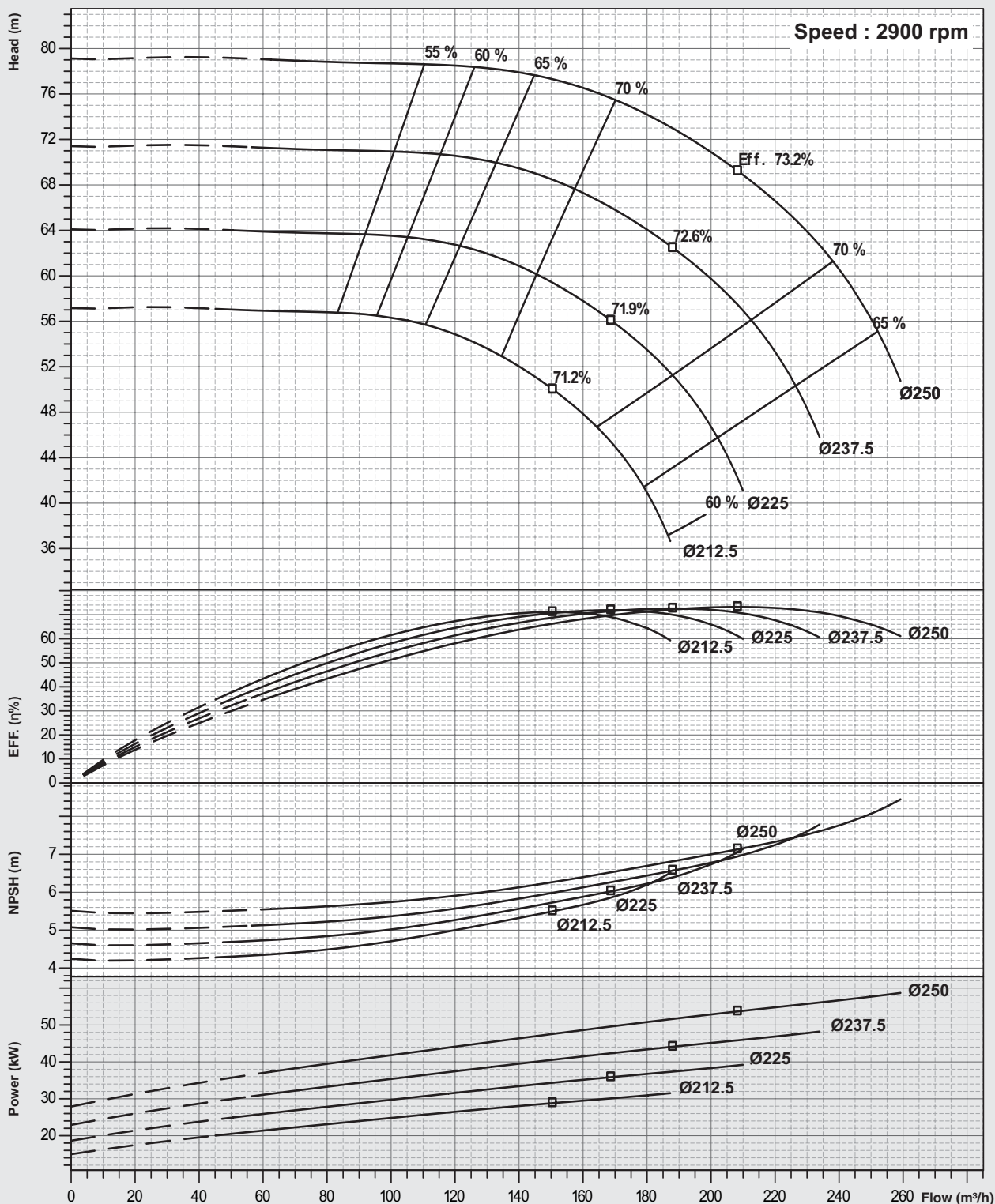
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 5 x 4 x 10

Pump Size in mm (Suc X Del X Max. Imp Ø) : 5 x 4 x 10
(125 x 100 x 250)



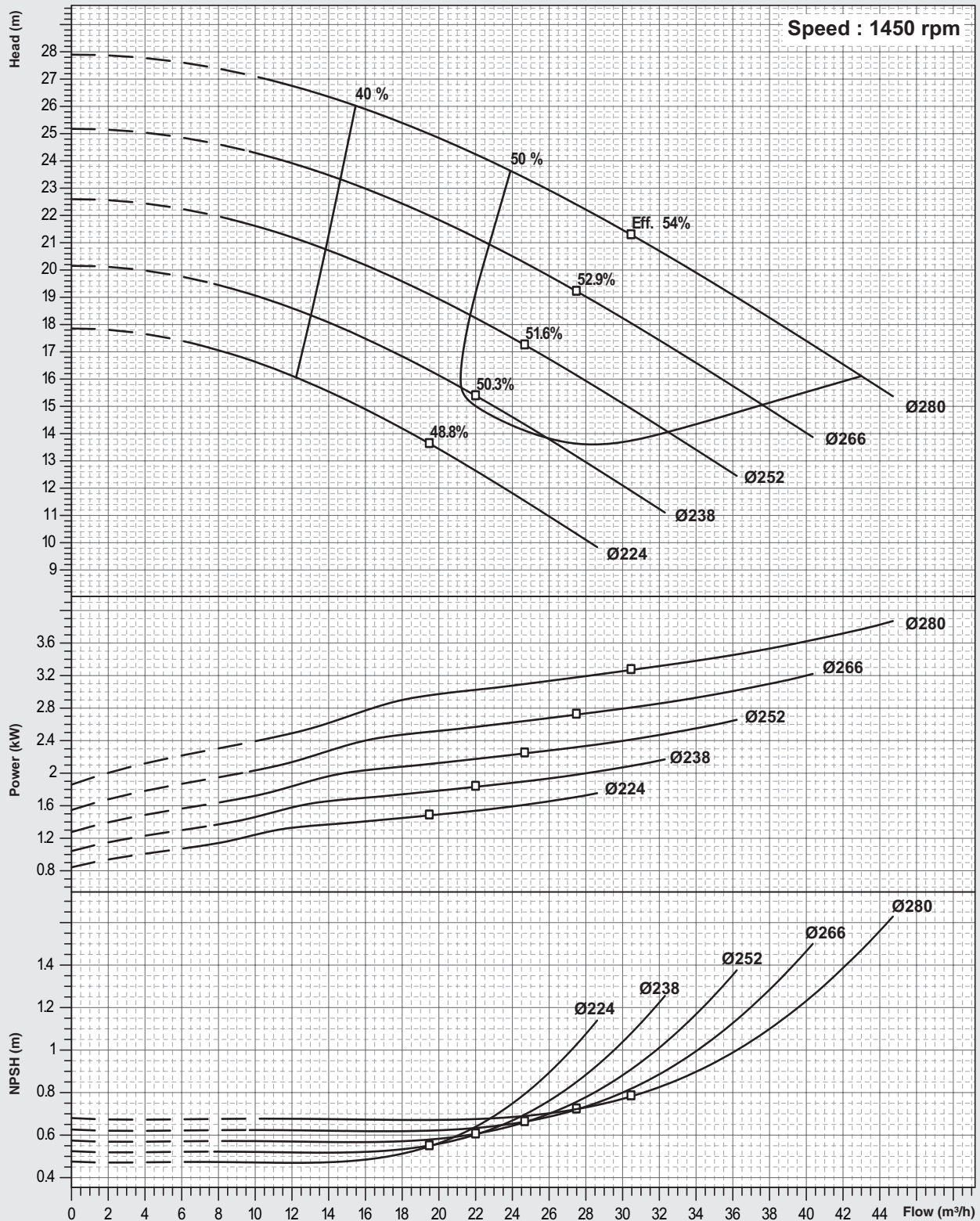
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : **FECC - 3 x 1.5 x 11**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 1.5 x 11**
(80 x 40 x 280)



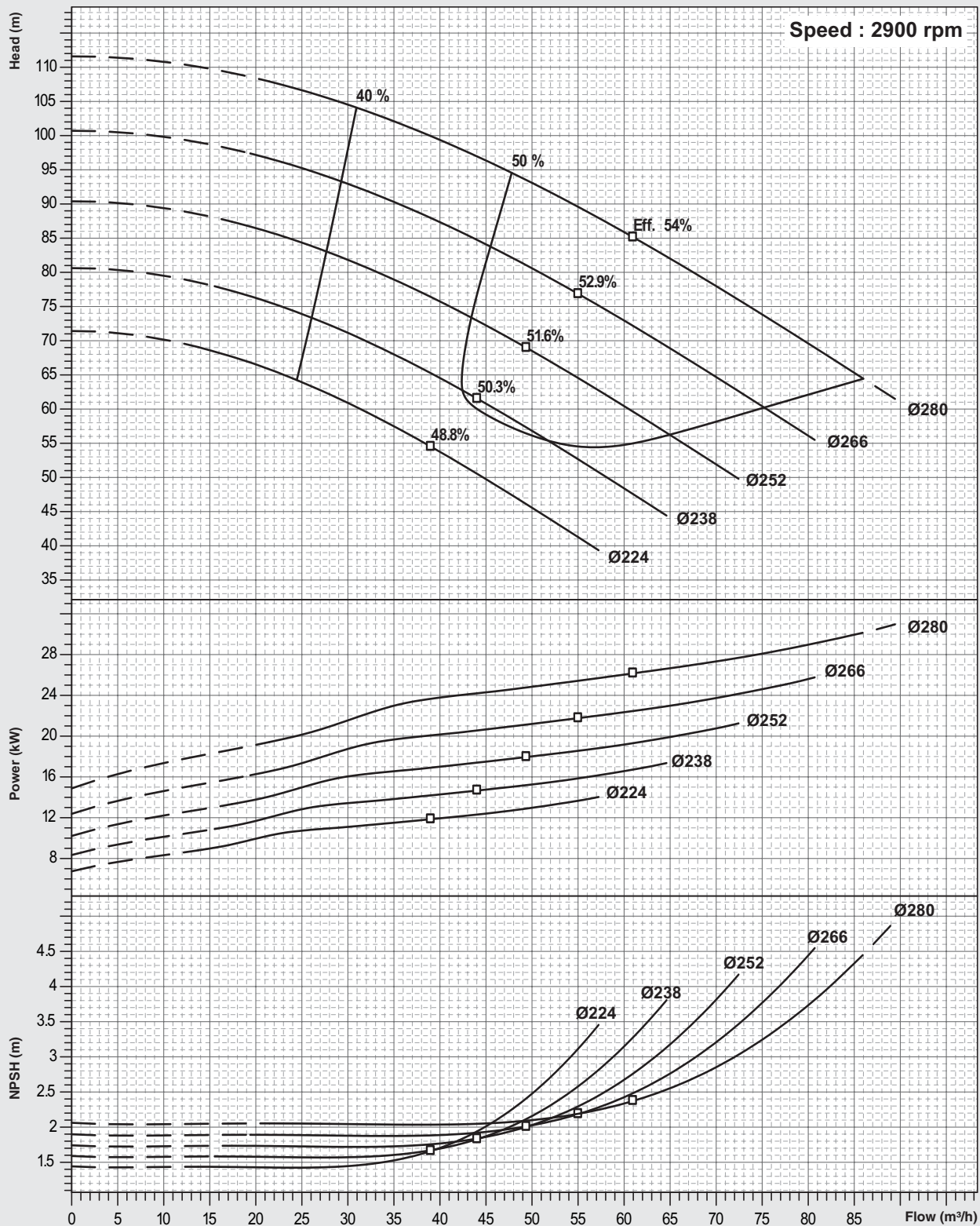
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : **FECC - 3 x 1.5 x 11**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 1.5 x 11**
(80 x 40 x 280)



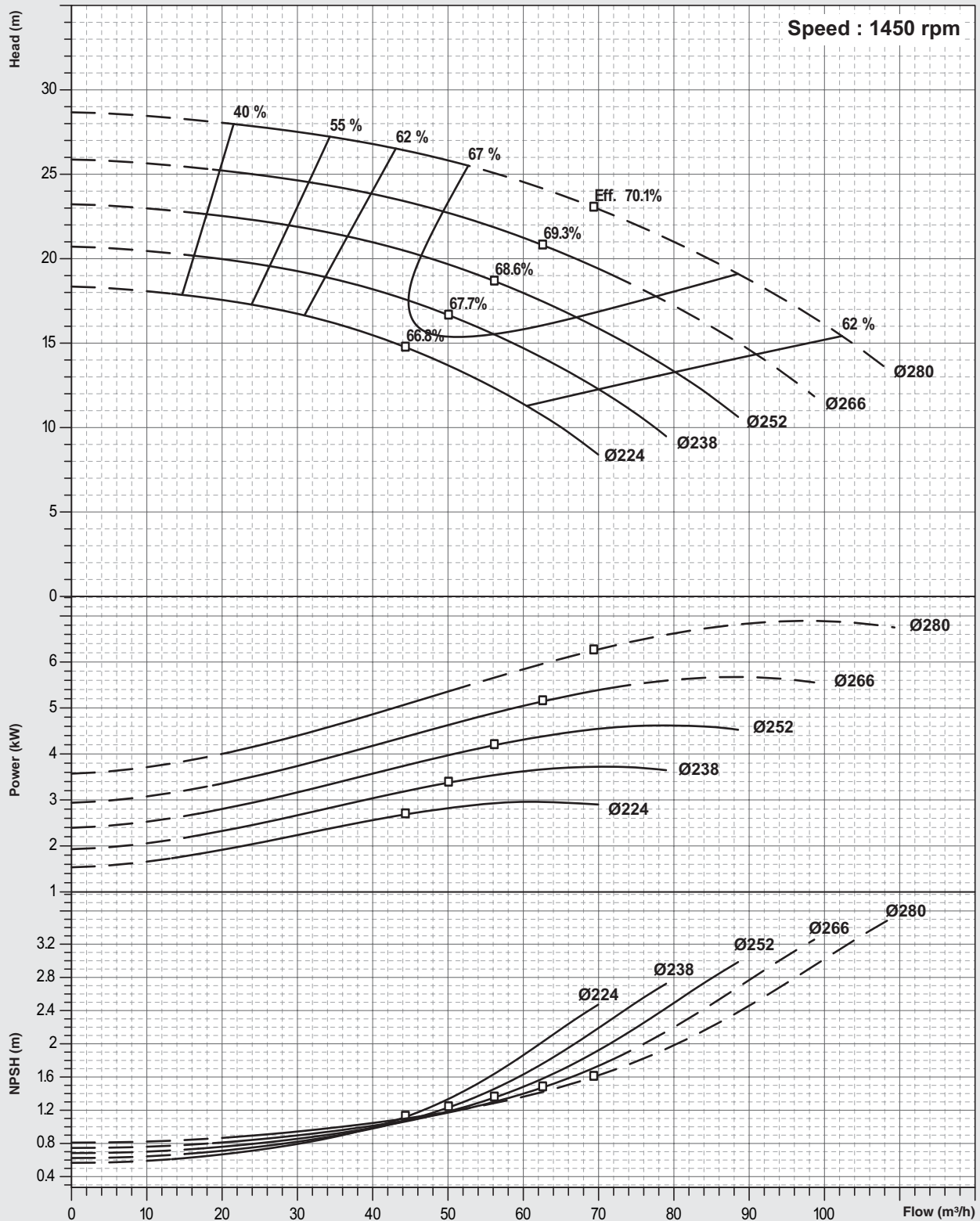
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 3 x 2 x 11

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 2 x 11
(80 x 50 x 280)



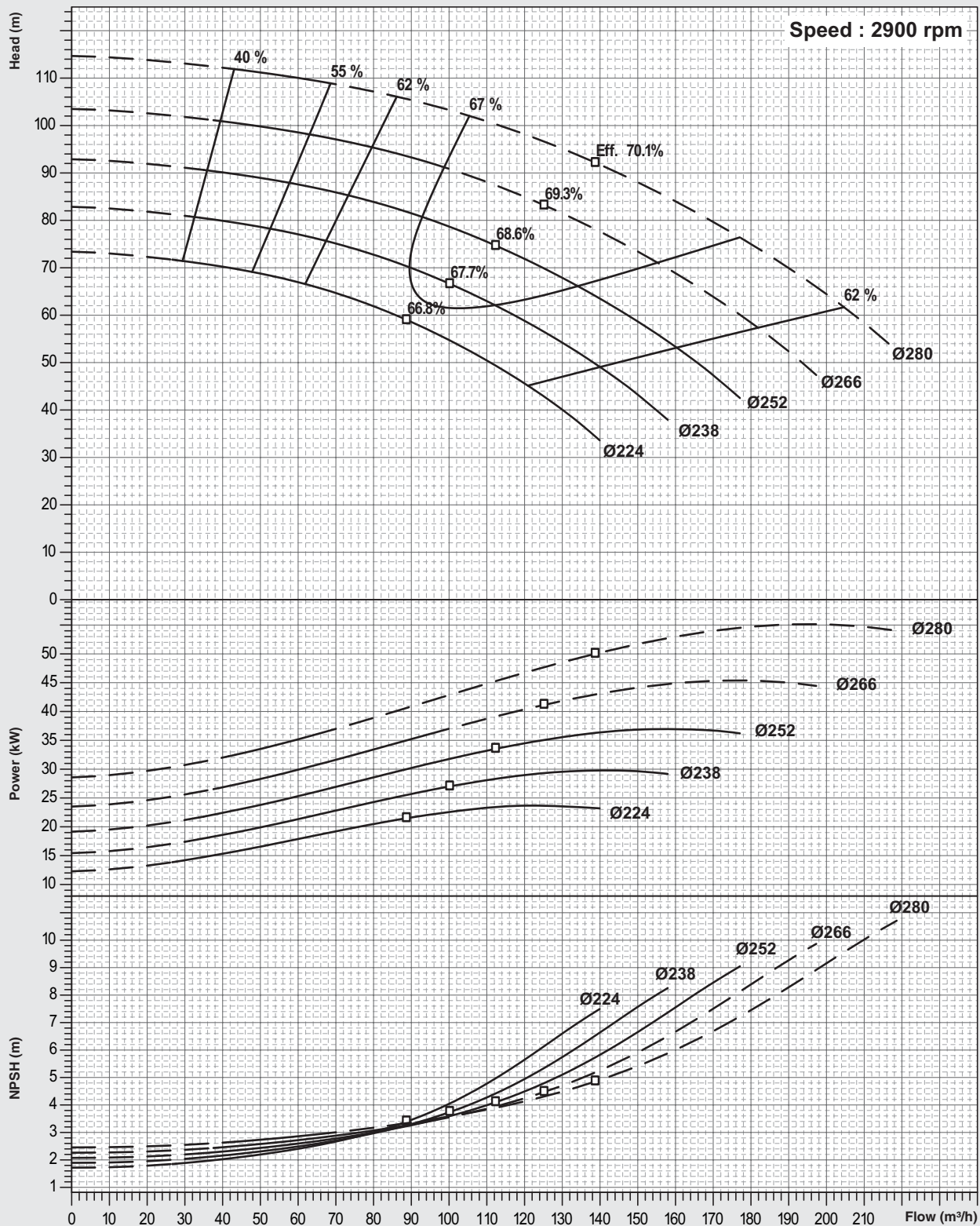
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 3 x 2 x 11

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 2 x 11
(80 x 50 x 280)



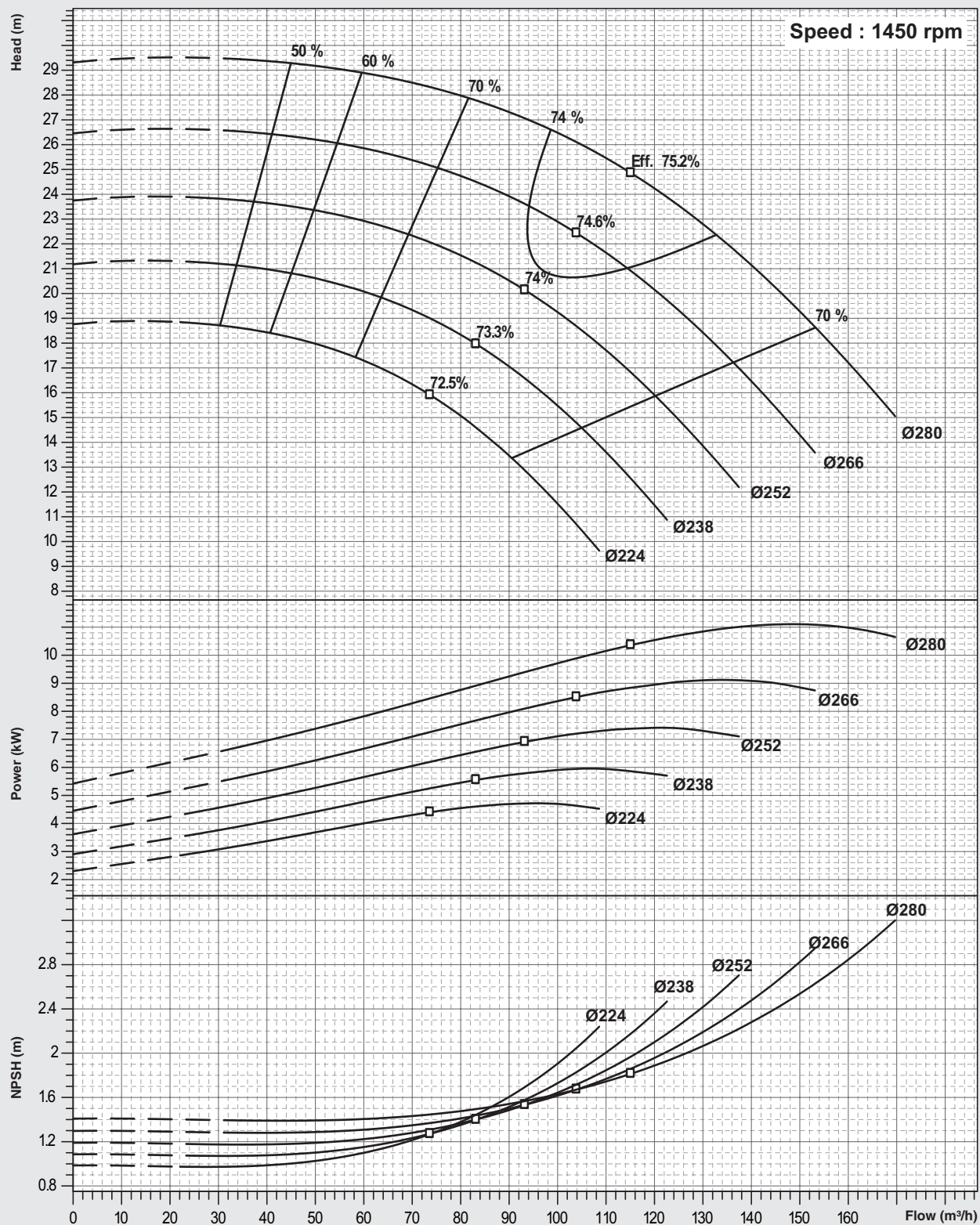
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 4 x 3 x 11

Pump Size in mm (Suc X Del X Max. Imp Ø) : 4 x 3 x 11
(100 x 80 x 280)



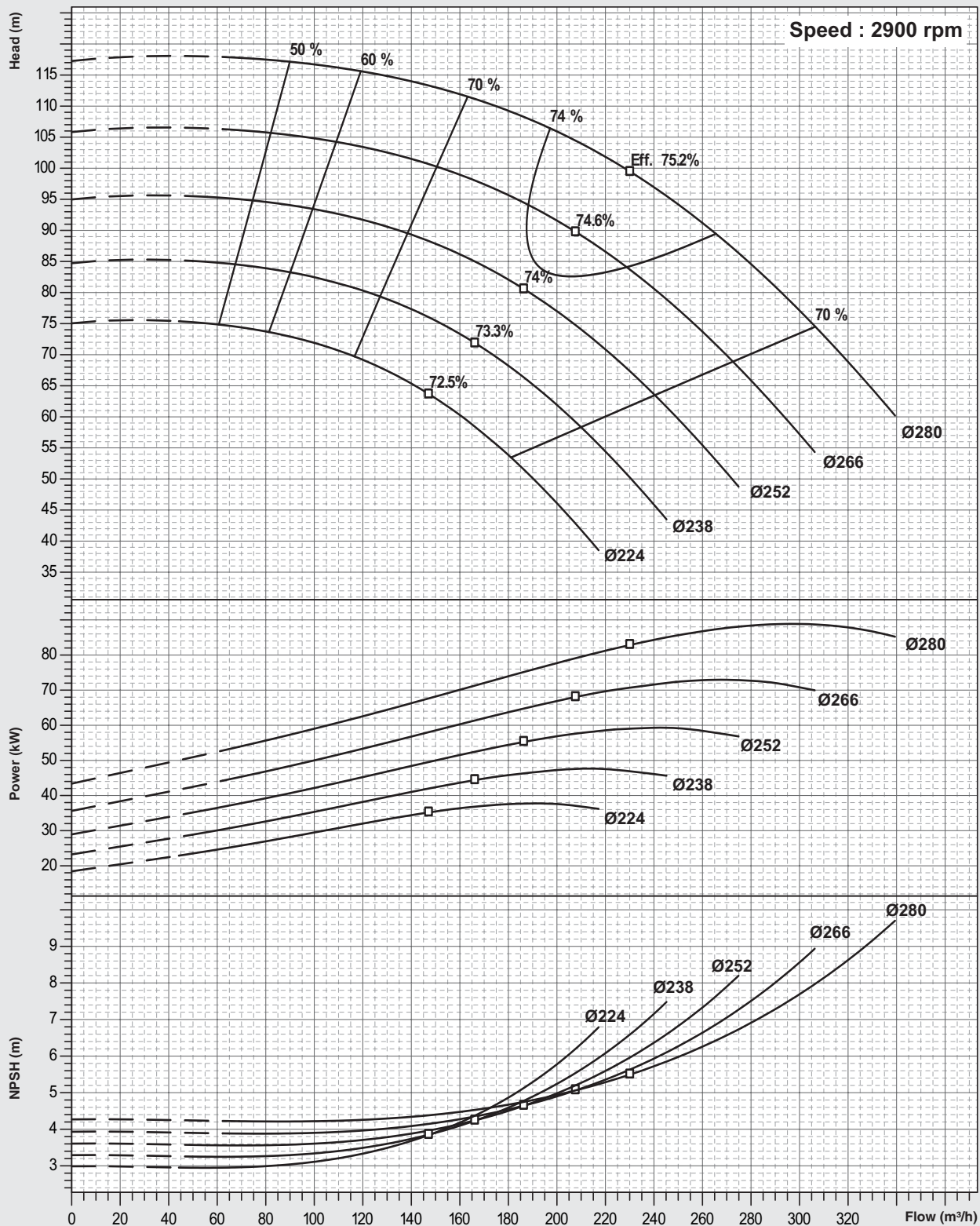
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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Pump Model : FECC - 4 x 3 x 11

Pump Size in mm (Suc X Del X Max. Imp Ø) : 4 x 3 x 11
(100 x 80 x 280)



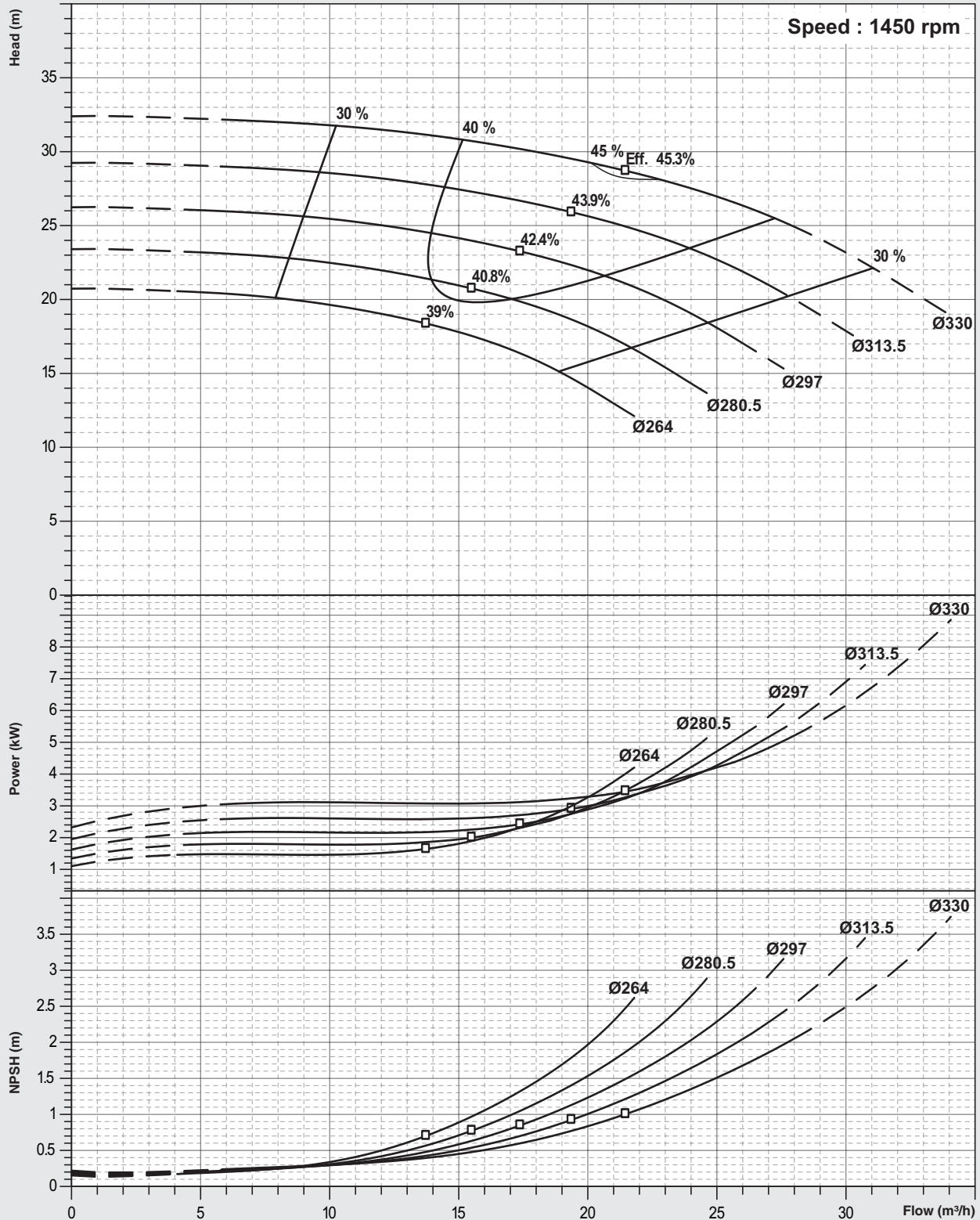
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : **FECC - 3 x 1.5 x 13**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 1.5 x 13**
(80 x 40 x 330)



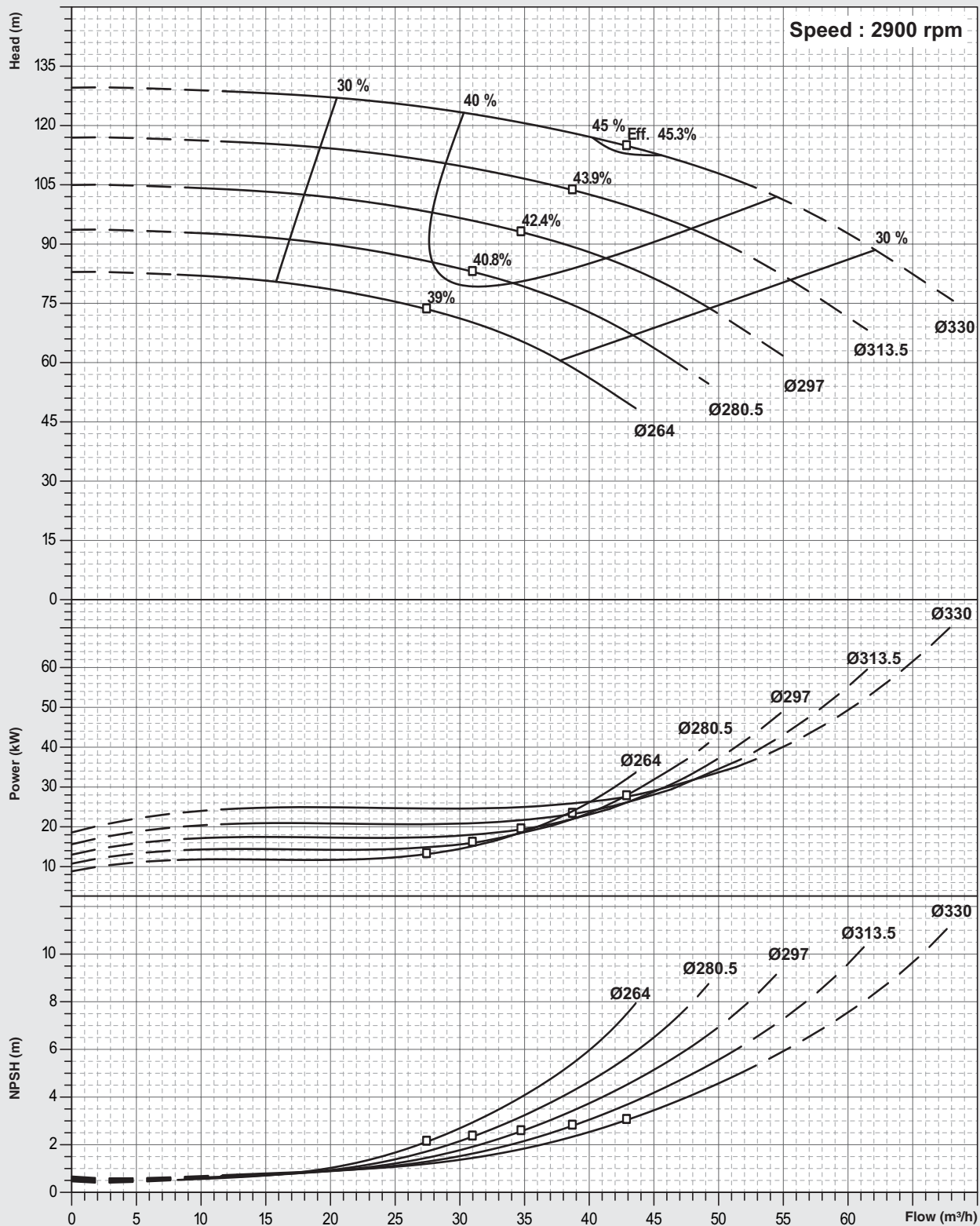
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : **FECC - 3 x 1.5 x 13**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **3 x 1.5 x 13**
(80 x 40 x 330)



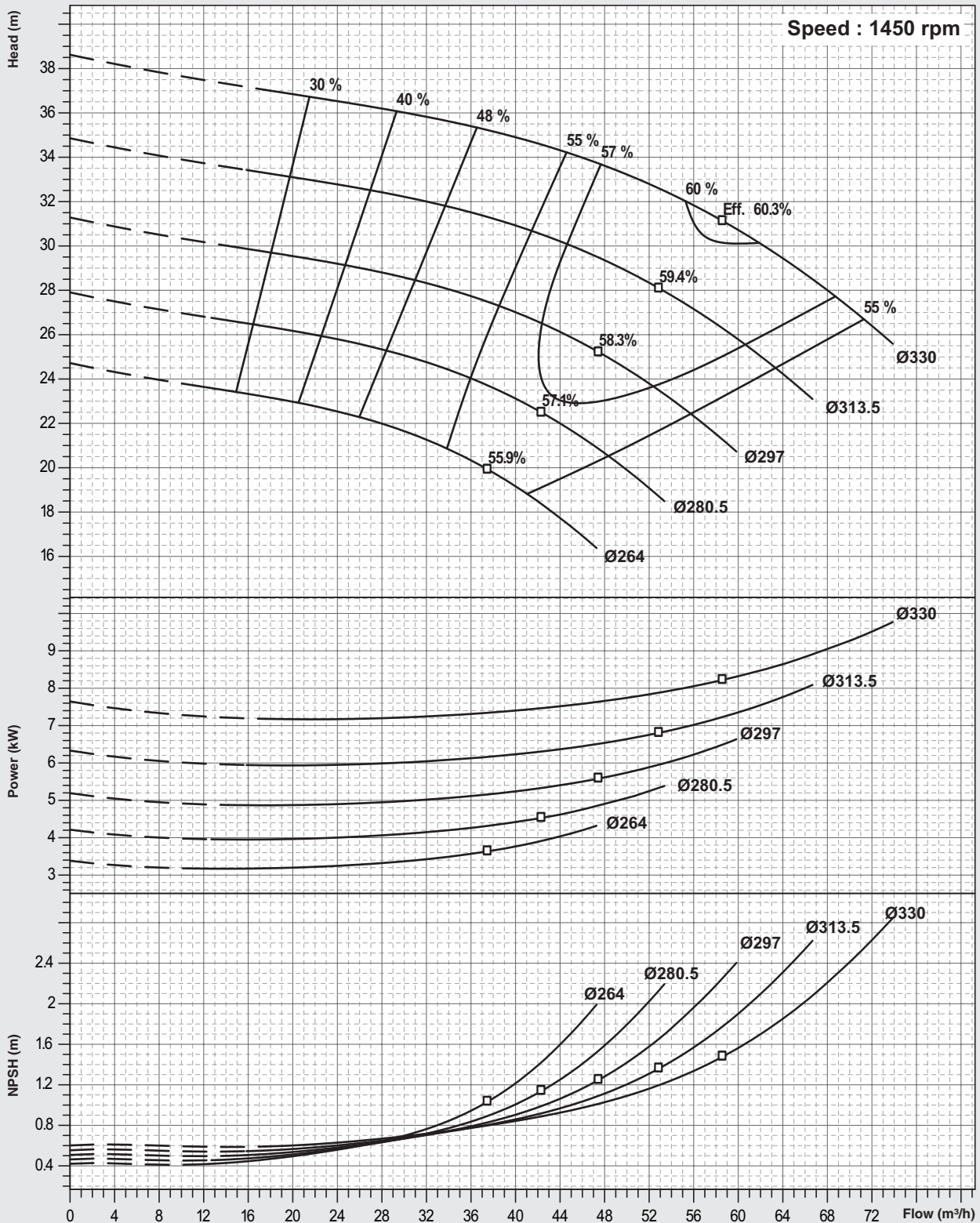
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 3 x 2 x 13

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 2 x 13
(80 x 50 x 330)



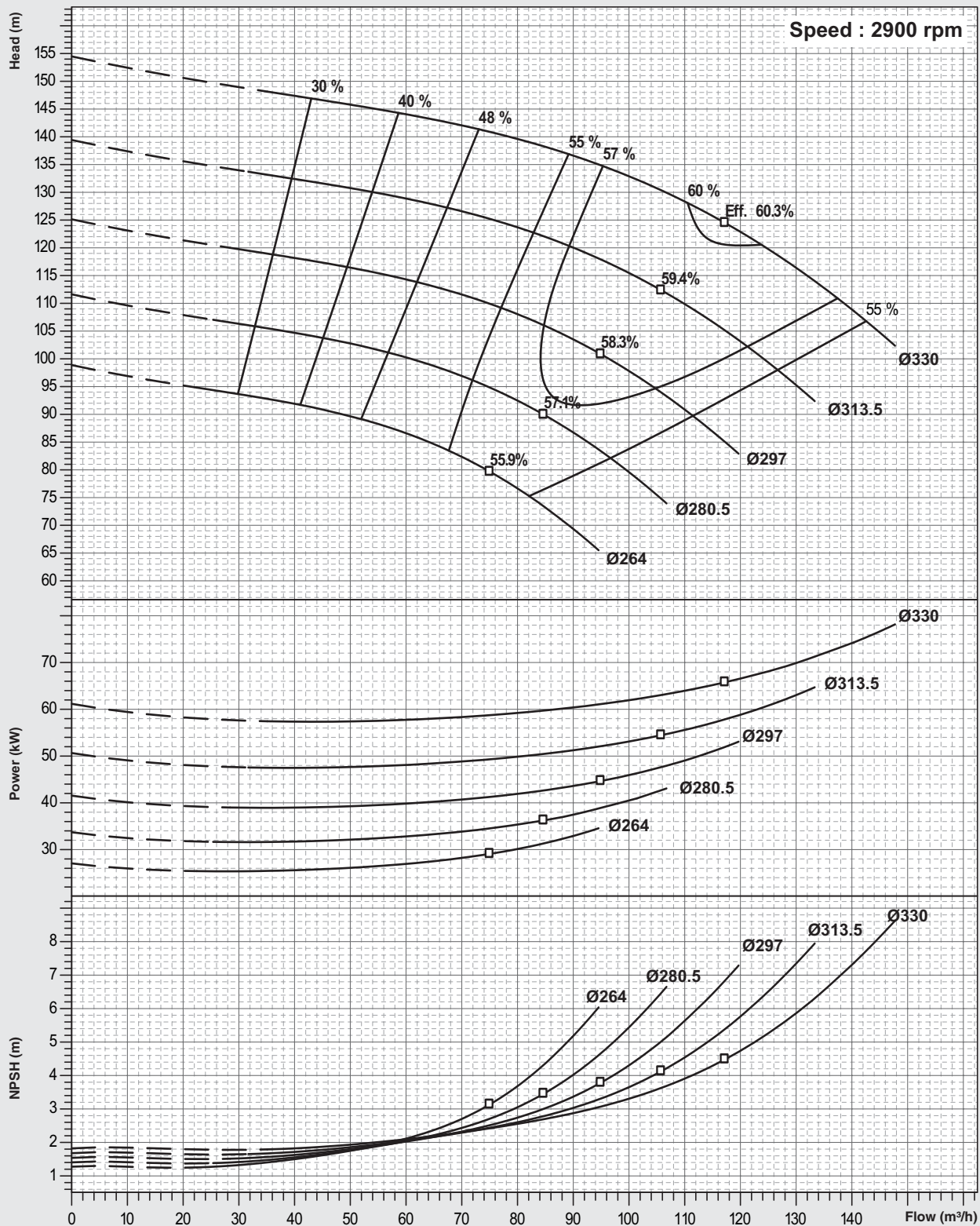
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 3 x 2 x 13

Pump Size in mm (Suc X Del X Max. Imp Ø) : 3 x 2 x 13
(80 x 50 x 330)



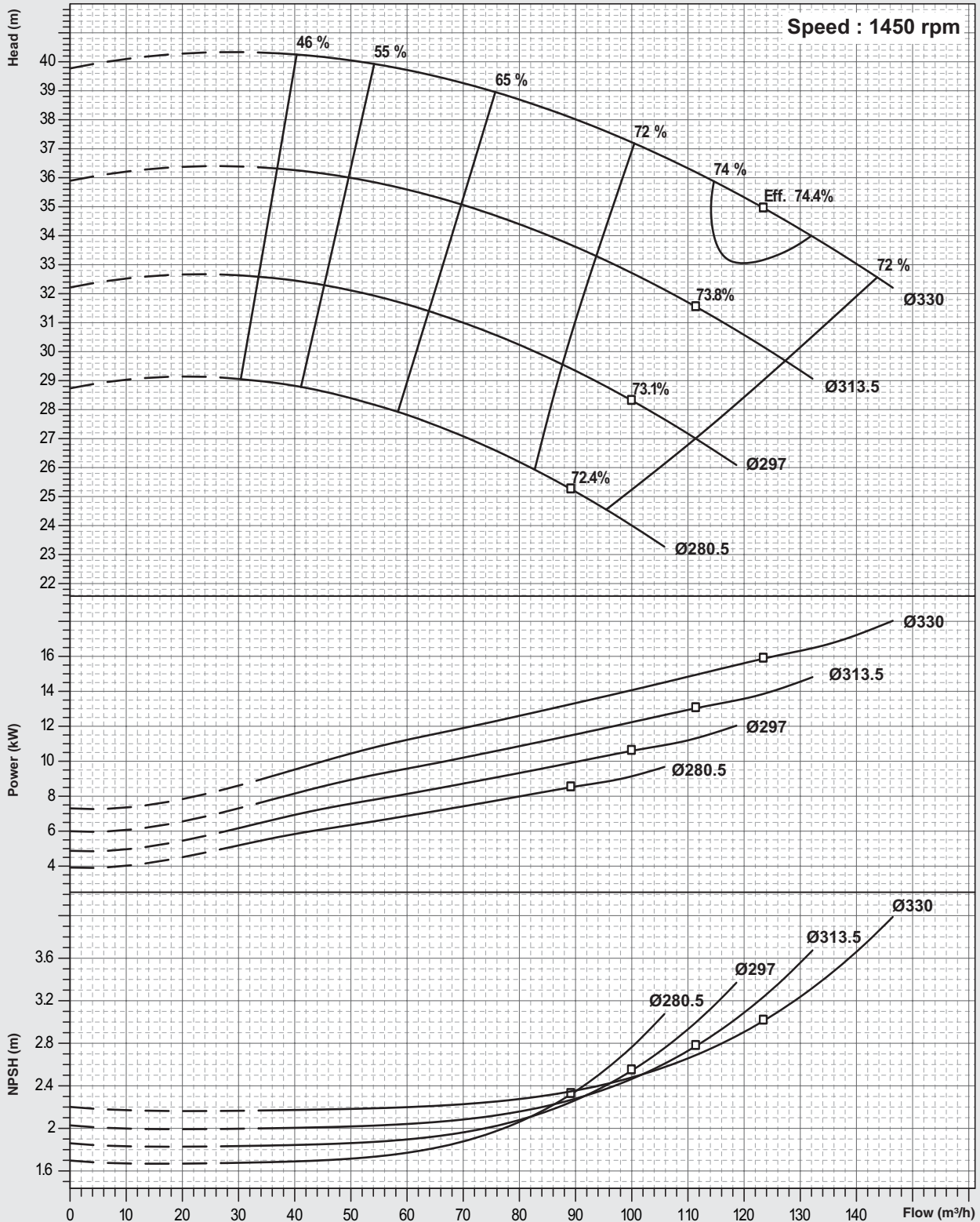
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 4 x 3 x 13

Pump Size in mm (Suc X Del X Max. Imp Ø) : 4 x 3 x 13
(100 x 80 x 330)



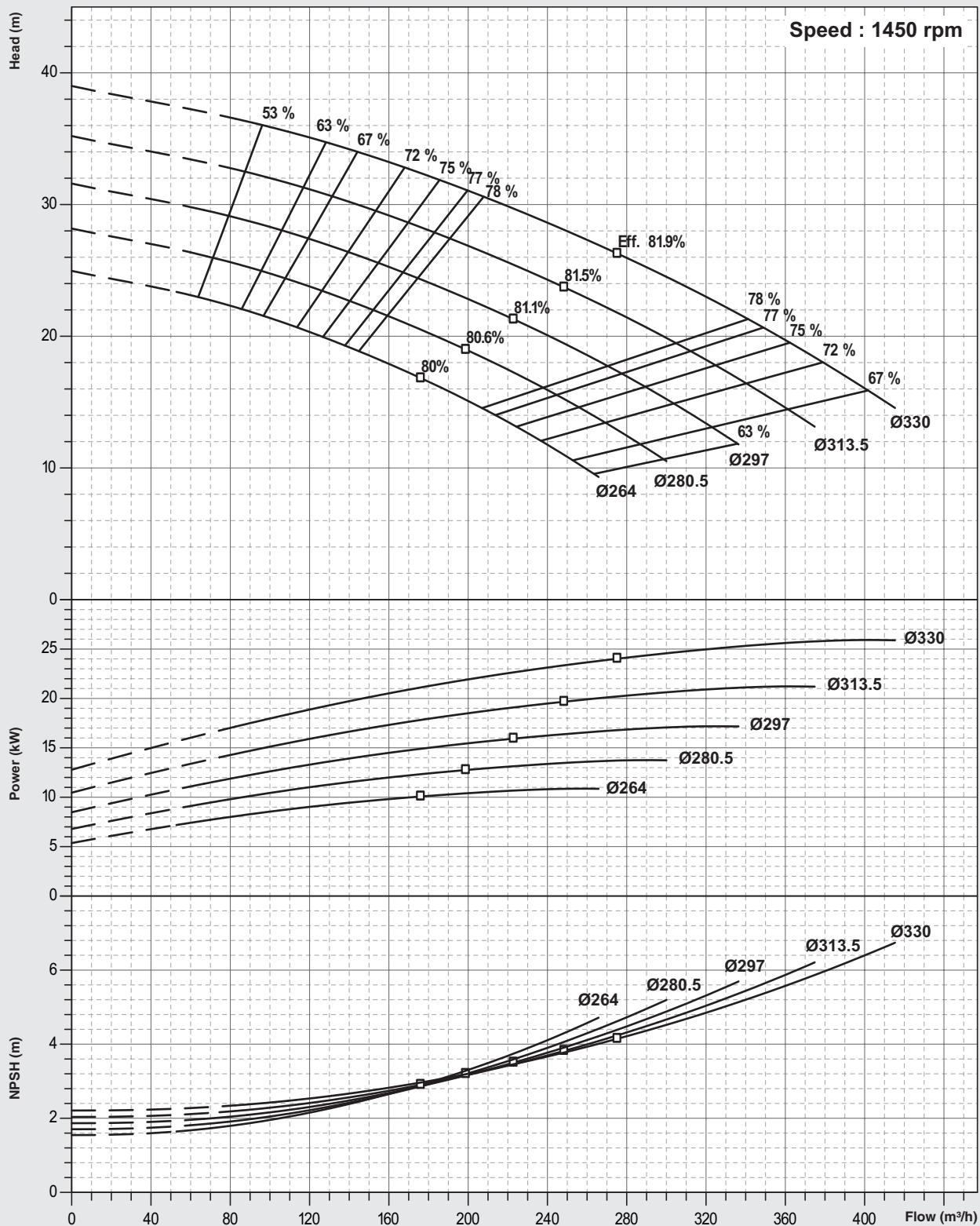
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 6 x 4 x 13

Pump Size in mm (Suc X Del X Max. Imp Ø) : 6 x 4 x 13
(150 x 100 x 330)



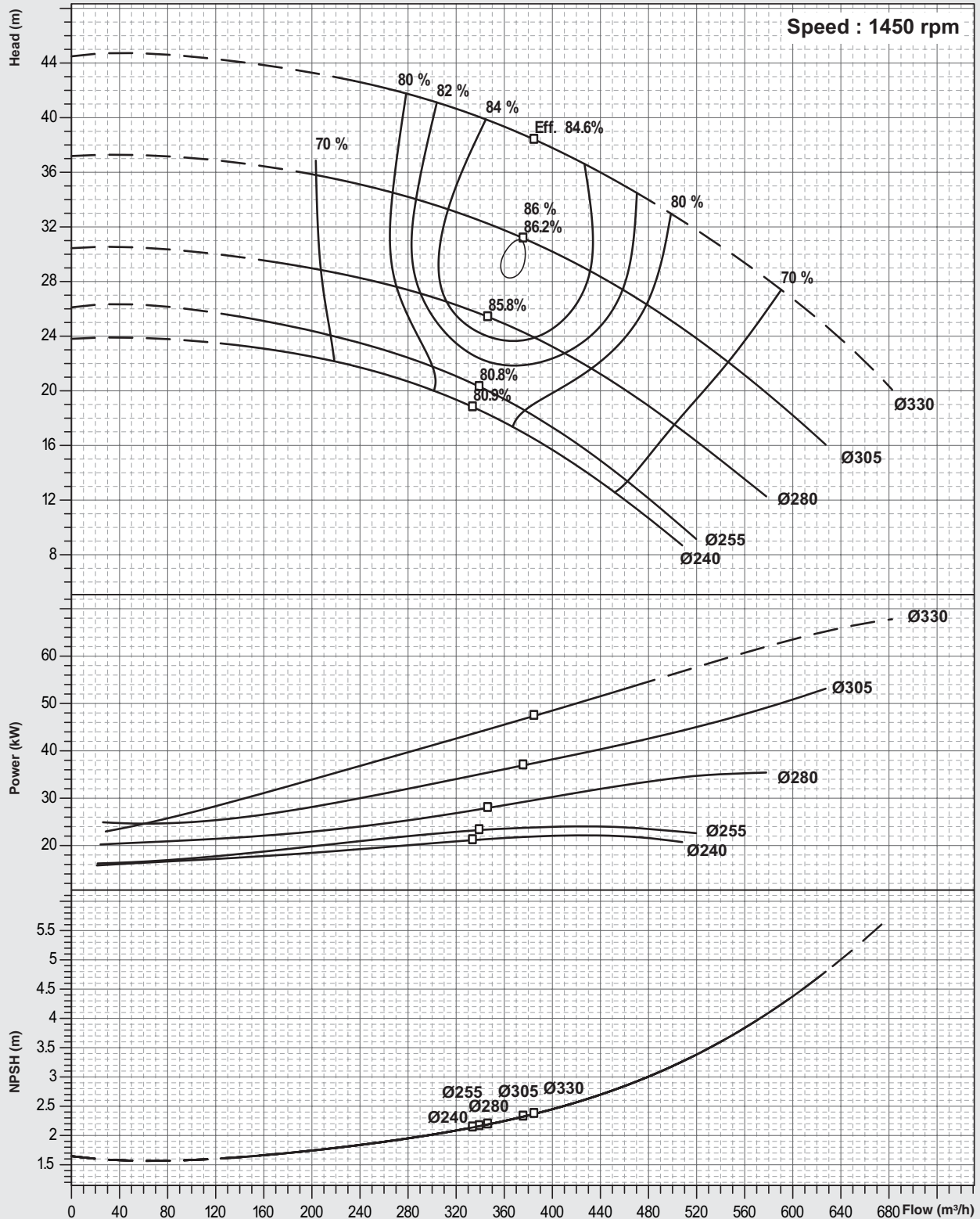
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : **FECC - 8 x 6 x 13**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **8 x 6 x 13**
(200 x 150 x 330)



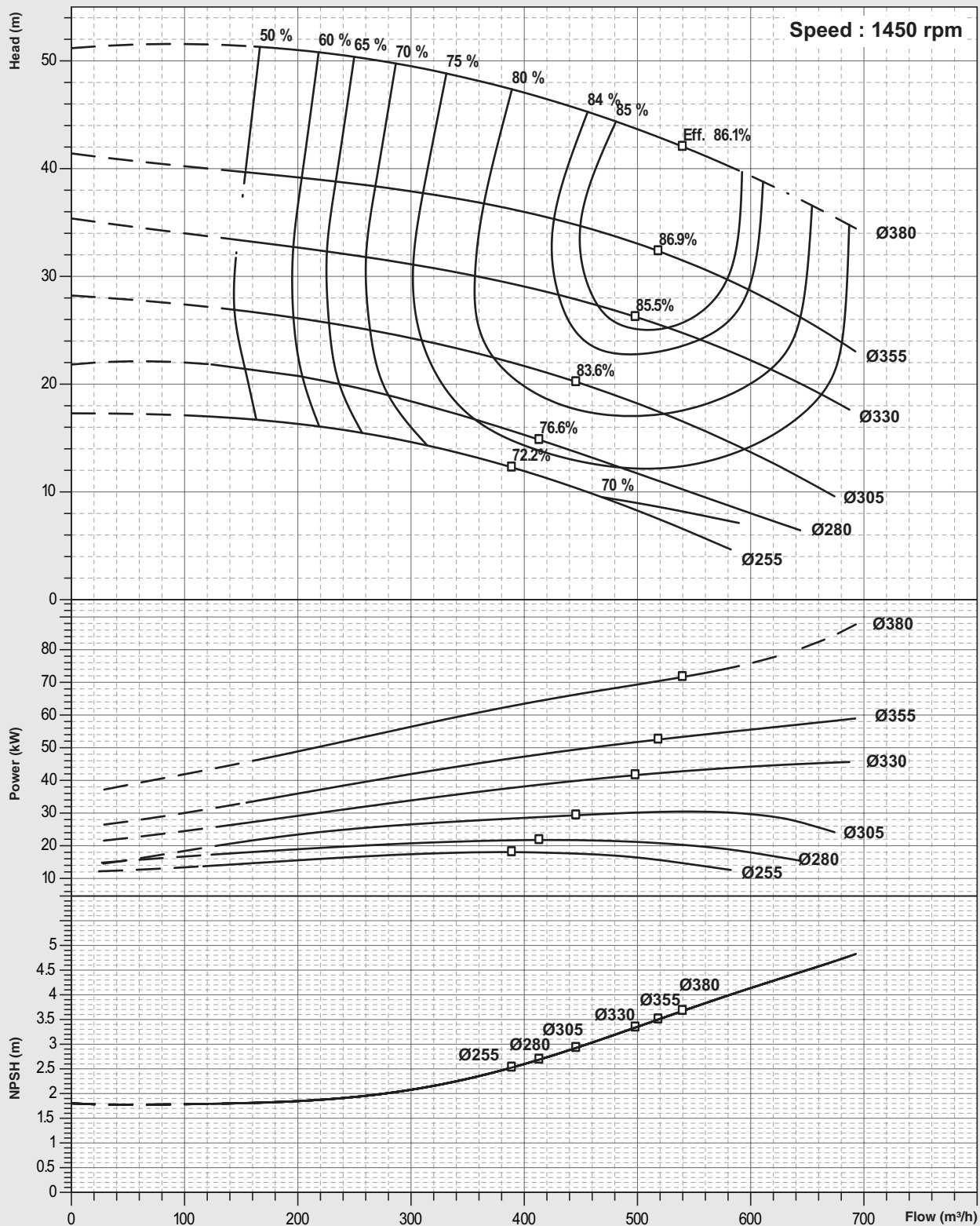
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

In view of continuous developments the information / Performance / descriptions / specifications / illustrations mentioned in this catalogues are subject to change without notice .

PERFORMANCE CURVE

Pump Model : FECC - 8 x 6 x 15

Pump Size in mm (Suc X Del X Max. Imp Ø) : 8 x 6 x 15
(200 x 150 x 380)



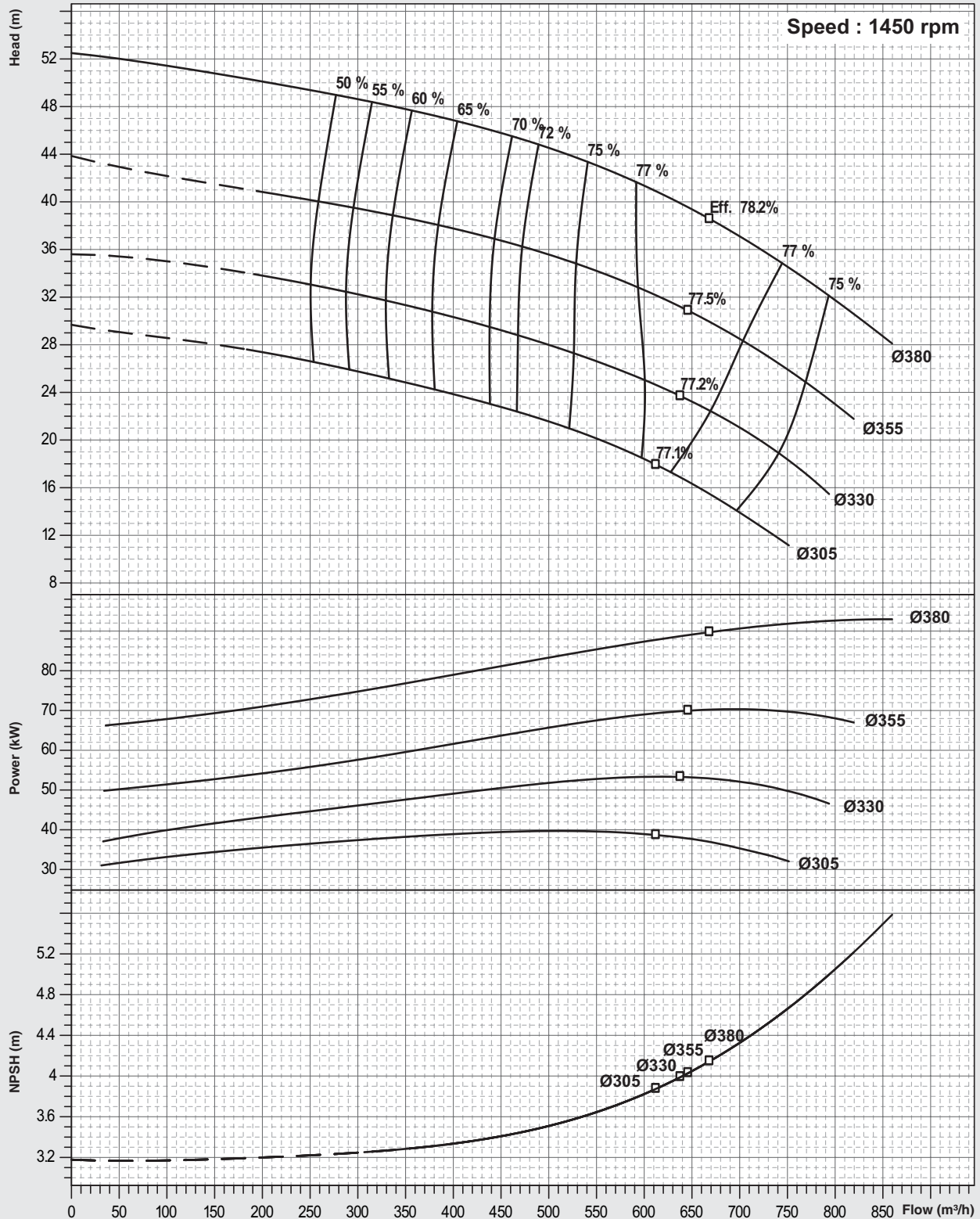
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC - 10 x 8 x 15

Pump Size in mm (Suc X Del X Max. Imp Ø) : 10 x 8 x 15
(250 x 200 x 380)



Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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END SUCTION LIGHT CHEMICAL & PROCESS LOW FLOW PUMPS FECC - IL SERIES

FECC - IL series are horizontal, end suction, single stage centre line discharge type for low flow requirements. These pumps are Non ANSI specially designed to handle corrosive, abrasive or high temperature liquids. A semi open scallop cut impeller is used for pumping low viscous fluids without suspended solids and is easy to clean and maintain. This type of pumps comes in a wide range of materials depending on the application. IL low flow pumps are specially designed for industrial dosing applications.



KEY FEATURES

- Fitted with non clog semi open impeller
- Robust shaft and bearing design
- Gland packing or mechanical seal
- Different material options
- Modular design helps reduce spare parts inventory

APPLICATIONS

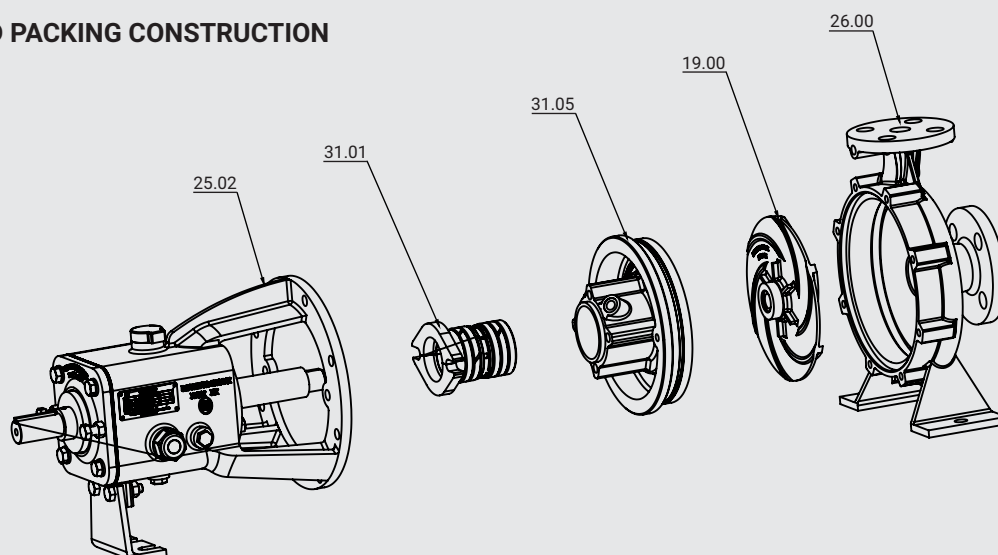
- Chemical dosing and injection
- Additive and solvent transfer
- Brine Transfer
- Pharma and food industry
- Beverage & Distilled liquid transfer
- Water Treatment Plants

TECHNICAL SPECIFICATIONS

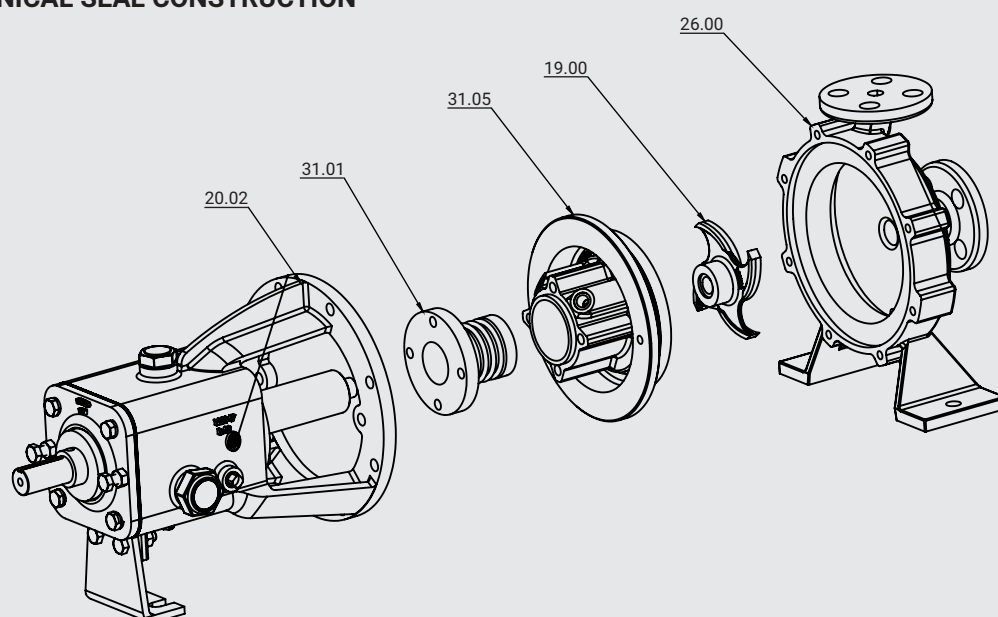
Head Range	5 - 64m
Flow Range	2 - 27.6m³/h
Speed	1450 / 2850 rpm
Impeller Type	Semi Open Impeller
Outlet Size	¾" - 1 ¼"
Power Range	0.37 - 5.5kW
Maximum Liquid Temperature	-10°C to 90°C
Shaft Seal	Standard : Gland Packing Optional : Mechanical Seal
Bearing Lubrication	Oil
Flange Standard	DIN / ANSI
Maximum working Pressure	3-6 bar

EXPLODED VIEW

GLAND PACKING CONSTRUCTION



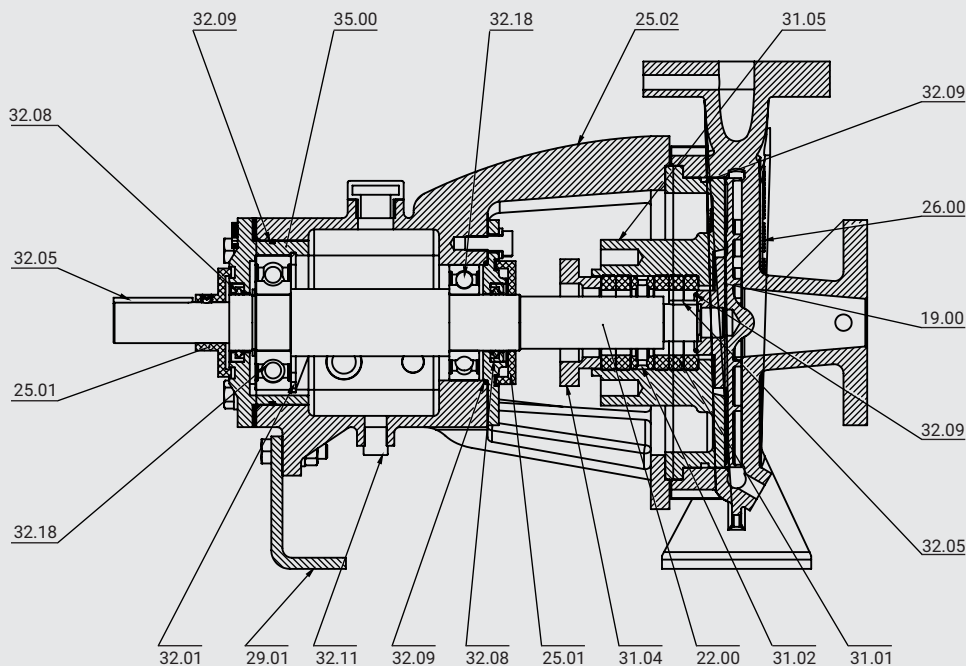
MECHANICAL SEAL CONSTRUCTION



PART NO	PART NAME
26.00	CASING
19.00	IMPELLER
31.05	STUFFING BOX
31.01	PACKING / MECHANICAL SEAL
25.02	CONNECTING FRAME
20.02	BEARING FRAME

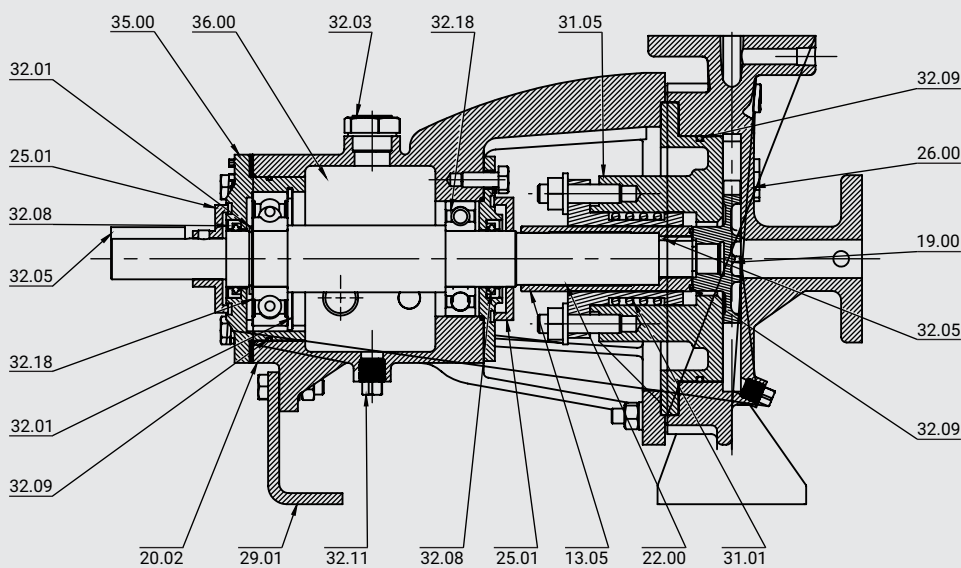
CROSS SECTIONAL DRAWING

GLAND PACKING CONSTRUCTION



Part No	Part Name
32.09	O - RING
26.00	CASING
19.00	IMPELLER
32.05	KEY
31.01	PACKING / MECHANICAL SEAL
31.02	LANTERN RING
22.00	PUMP SHAFT
31.04	GLAND
13.05	SLEEVE
25.01	DEFLECTOR
32.08	OIL SEAL
29.01	FRAME SUPPORT
32.11	PLUG
20.02	BEARING FRAME
32.01	CIRCLIP
32.18	BEARING
35.00	BEARING HOUSING
25.02	CONNECTING FRAME
31.05	STUFFING BOX
32.03	OIL BREATHER
36.00	OIL CHAMBER

MECHANICAL SEAL CONSTRUCTION



INTERCHANGEABILITY CHART

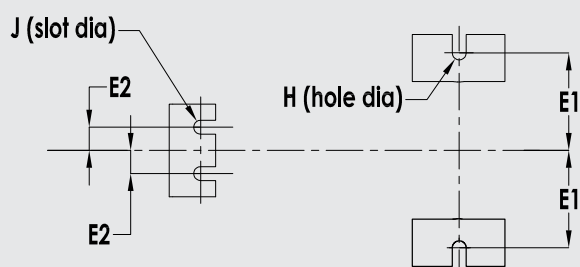
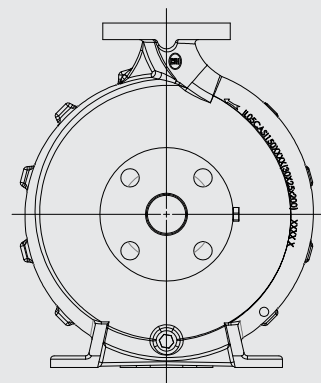
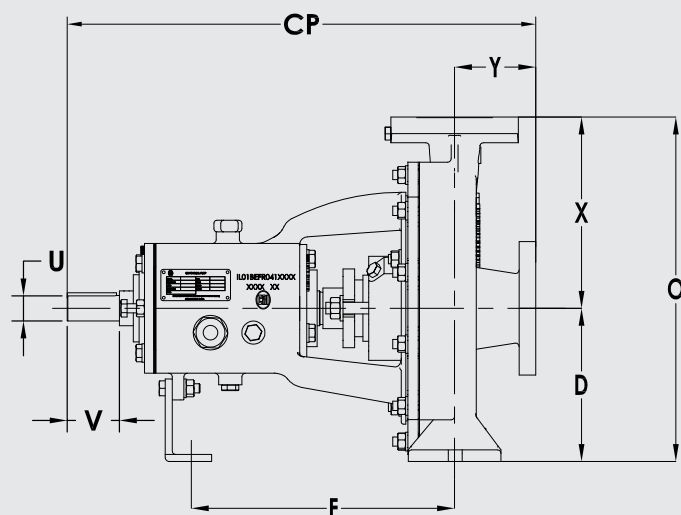
IL SERIES					
PUMP NAME	1 X 0.75 X 6	1.25 X 1 X 6	1.5 X 1.25 X 6	1 X 0.75 X 8	1.25 X 1 X 8
	25 X 20 X 150	32 X 25 X 150	40 X 32 X 150	25 X 20 X 200	32 X 25 X 200
CASING					
IMPELLER					
STUFFING BOX					
BEARING FRAME					
BEARING FRAME ASSEMBLY					

DETAILS OF STANDARD COMPONENTS

SHAFT AND BEARING DATA	FRAME
	0
SHAFT DIAMETER (mm)	
At Coupling	Ø 22.23
At 'NDE' Bearings	Ø 30
At 'DE' Bearings	Ø 30
Between bearings	Ø 51
Under Sleeve	Ø 27.97
Stuffing Box Details	
Shaft sleeve OD	Ø 35
Stuffing Box Bore Diameter	Ø 51
Stuffing Box Depth	57
SHAFT LENGTHS (mm)	
Impeller end of shaft to 'NDE' Bearing	156.5
Between bearings	85
'DE' Bearing. To Coupling end	95
BEARINGS	
'NDE'	6206
'DE'	6306
KEYWAY AT COUPLING (mm)	
Width	4.76
Depth	2.38
Length	40
SHAFT THREAD AT IMPELLER	M16X2 RH

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BARE SHAFT PUMP - MOUNTING DIMENSIONS



Pump Series	Pump Size - Suc x Del / Imp Ø (inch)	Mounting Dimensions (mm)												
		CP	D	E1	E2	F	X	Y	O	V	U (DIA)	H	J	M
FECC-IL	1 x 0.75 x 6	404	132	84	20	223	140	70	272	45	22	12	12	112
FECC-IL	1.25 x 1 x 6	404	132	84	20	223	140	70	272	45	22	12	12	112
FECC-IL	1.5 x 1.25 x 6	404	132	84	20	223	140	70	272	45	22	12	12	112
FECC-IL	1 x 0.75 x 8	404	132	84	20	223	165	70	297	45	22	12	12	112
FECC-IL	1.25 x 1 x 8	404	132	84	20	223	165	70	297	45	22	12	12	112

* Non Standard Models.

Note : All Dimensions are in mm, Unless Otherwise Specified

OVERALL RANGE & PERFORMANCE DETAILS

Pump performance curve details at 1450 rpm

Sl. No.	Pump Size - Suction x Discharge / Impeller Sizes (inch) (mm)	Suction Nozzle Dia. (mm)	Discharge Nozzle (mm)	Max. Power (kW)	Speed (rpm)	Max. Flow Rate (m³/hr)	Max. Head (m)	Maximum Suspended Solid Size (mm)	Pump Weight (Kg)
1	1 x 0.75 x 6 (25 x 20 x 150)	25	20	0.35	1450	6.6	8.4	4.5	22.5
2	1.25 x 1 x 6 (32 x 25 x 150)	32	25	0.30	1450	9.8	9.2	6.5	23
3	1.5 x 1 x 6 (40 x 32 x 15)	40	32	0.32	1450	13.6	8.9	8	24
4	1 x 0.75 x 8 (25 x 20 x 200)	25	20	0.60	1450	6.3	16	6	28
5	1.25 x 1 x 8 (32 x 25 x 200)	32	25	0.80	1450	11.2	15.06	9	29.5

* Non Standard Models.

Pump performance curve details at 2900 rpm

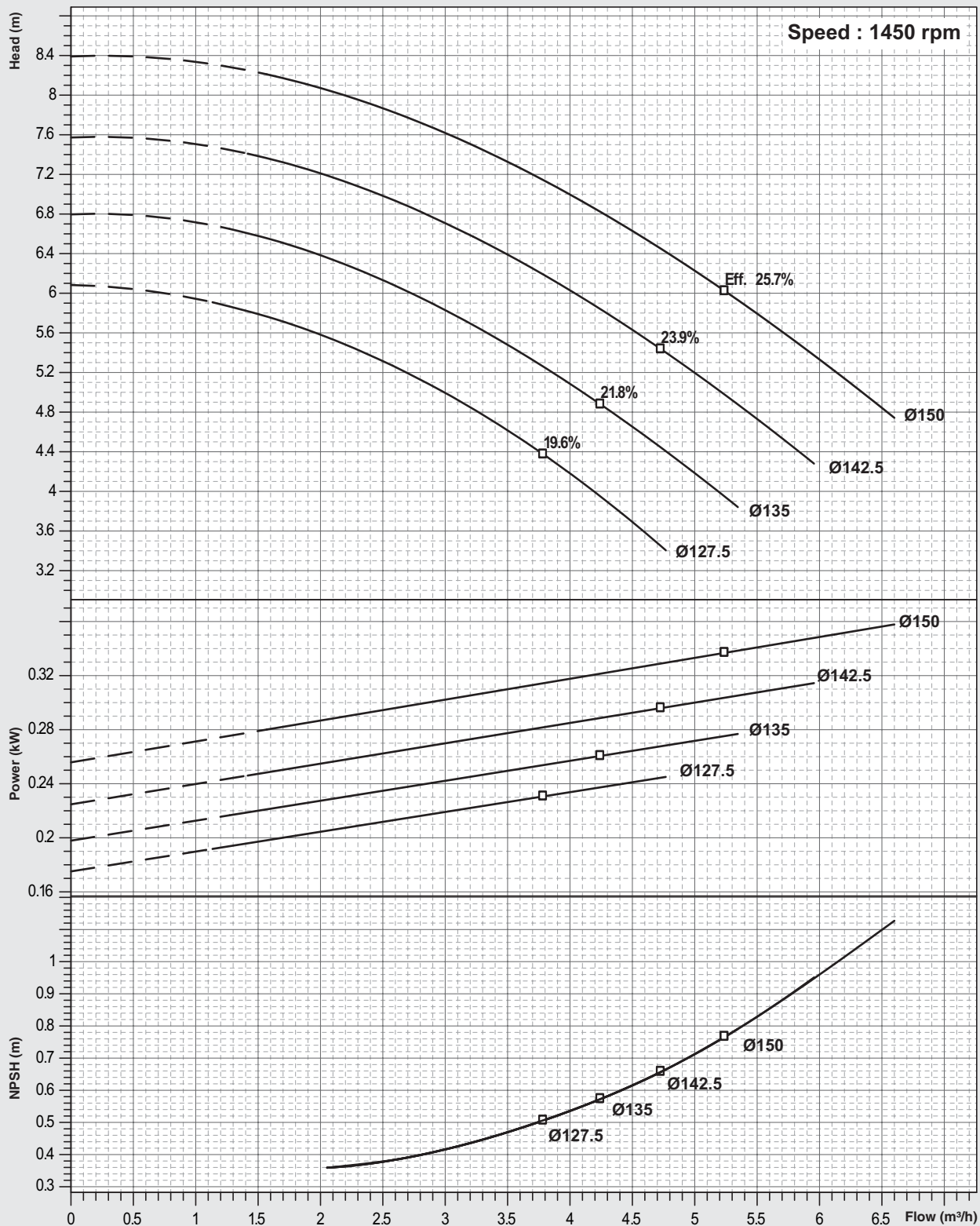
Sl. No.	Pump Size - Suction x Discharge / Impeller Sizes (inch) (mm)	Suction Nozzle Dia. (mm)	Discharge Nozzle (mm)	Max. Power (kW)	Speed (rpm)	Max. Flow Rate (m³/hr)	Max. Head (m)	Maximum Suspended Solid Size (mm)	Pump Weight (Kg)
1	1 x 0.75 x 6 (25 x 20 x 150)	25	20	1.6	2900	12.2	36	4.5	22.5
2	1.25 x 1 x 6 (32 x 25 x 150)	32	25	2.47	2900	19.7	36.8	6.5	23
3	1.5 x 1 x 6 (40 x 32 x 15)	40	32	2.6	2900	27.5	36.5	8	24
4	1 x 0.75 x 8 (25 x 20 x 200)	25	20	4.8	2900	12.5	63	6	28
5	1.25 x 1 x 8 (32 x 25 x 200)	32	25	5.77	2900	22.8	64.2	9	30

* Non Standard Models.

PERFORMANCE CURVE

Pump Model : FECC-IL - 1 x 0.75 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1 x 0.75 x 6
(25 x 18.75 x 150)



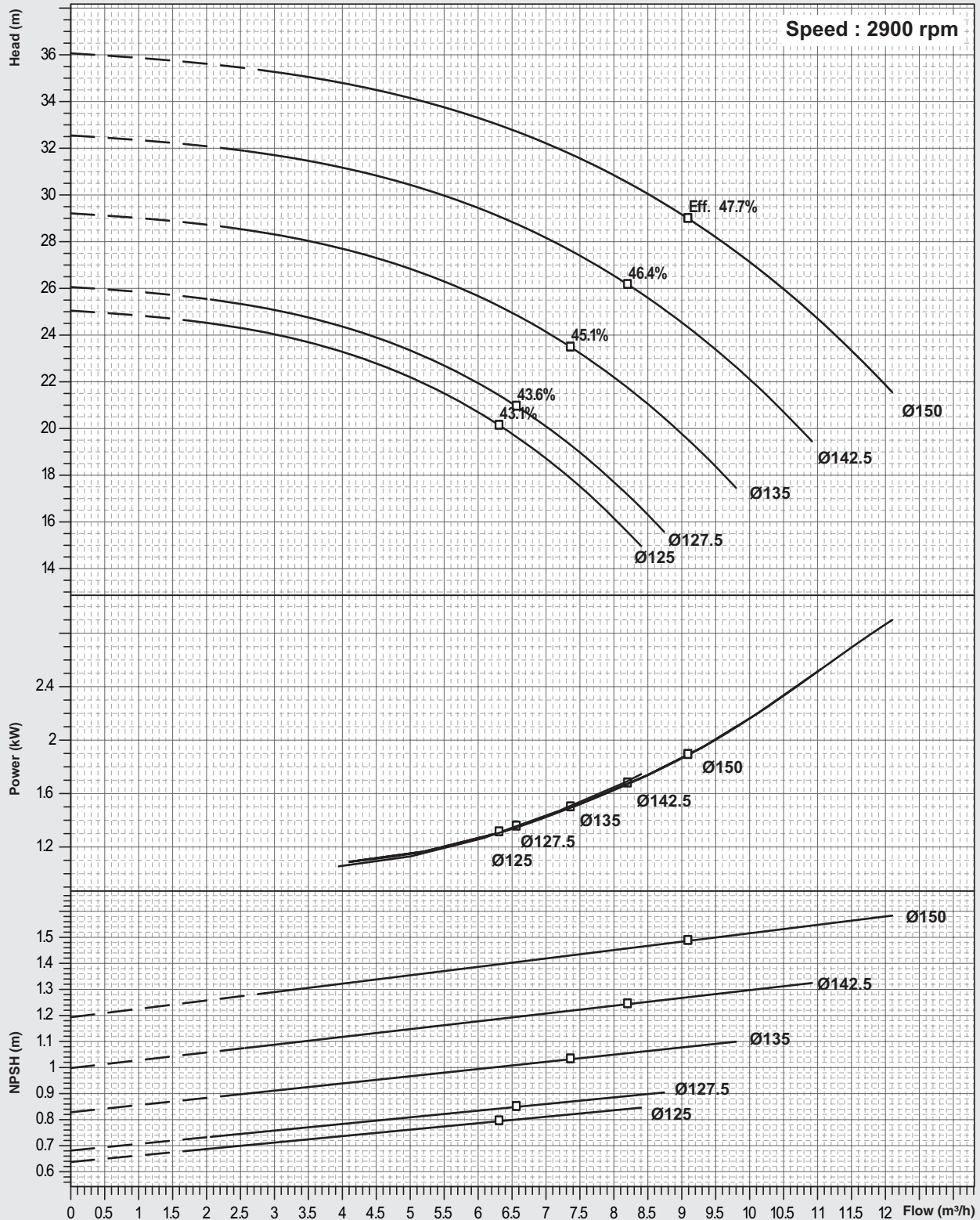
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC-IL - 1 x 0.75 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1 x 0.75 x 6
(25 x 18.75 x 150)



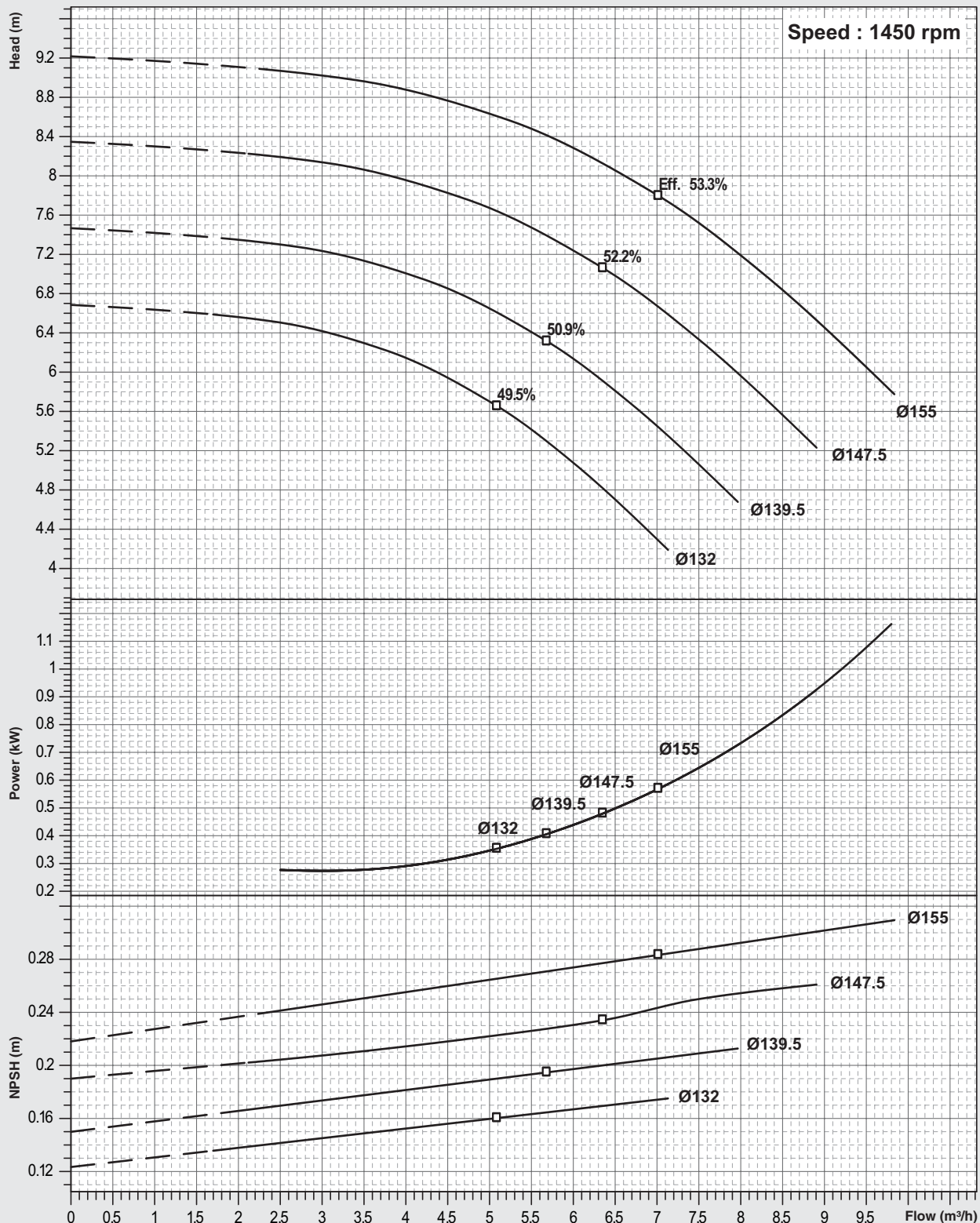
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC-IL - 1.25 x 1 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.25 x 1 x 6
(32 x 25 x 155)



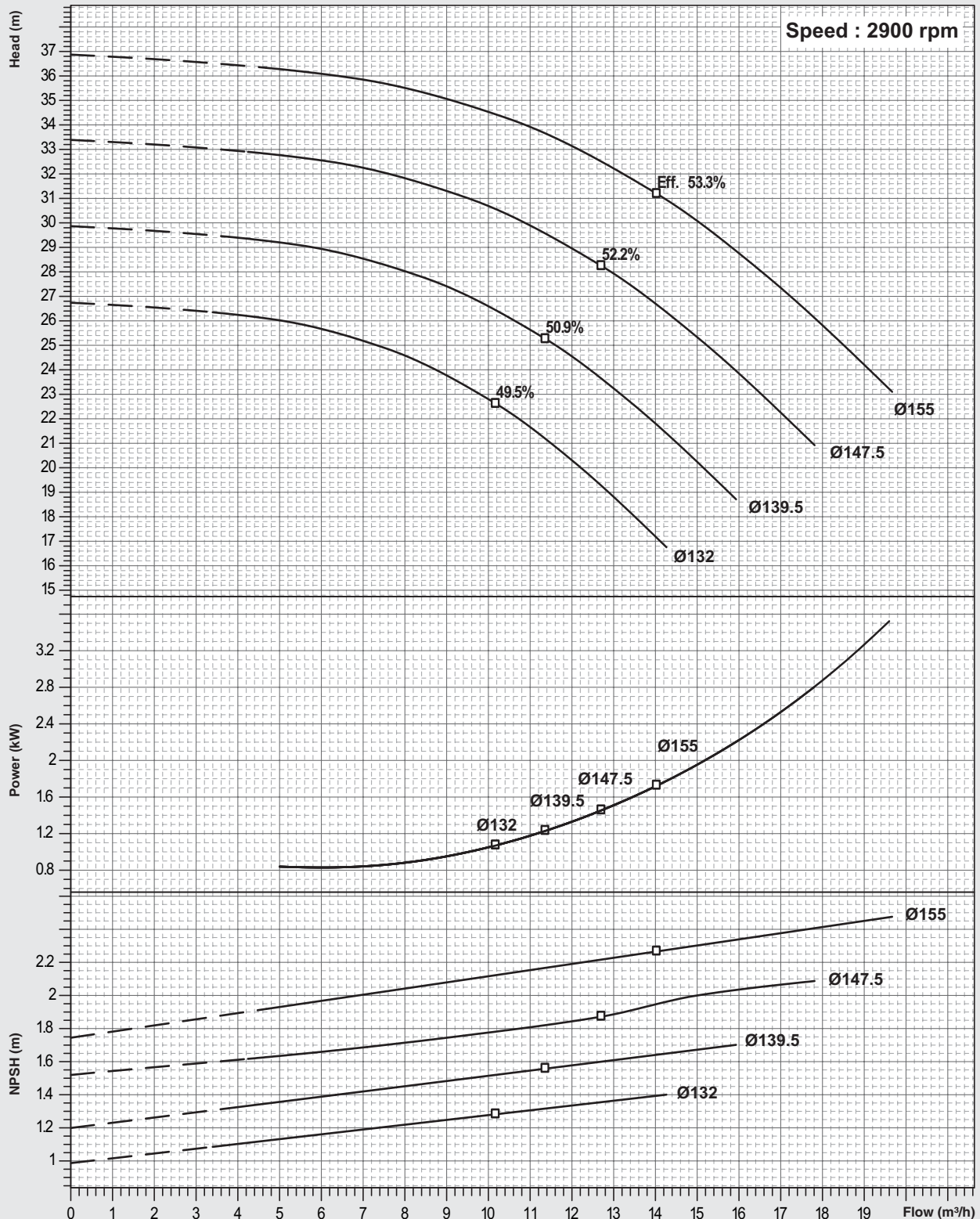
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PERFORMANCE CURVE

Pump Model : **FECC - 1.25 x 1 x 6**

Pump Size in mm (Suc X Del X Max. Imp Ø) : **1.5 x 1 x 6**
(32 x 25 x 155)



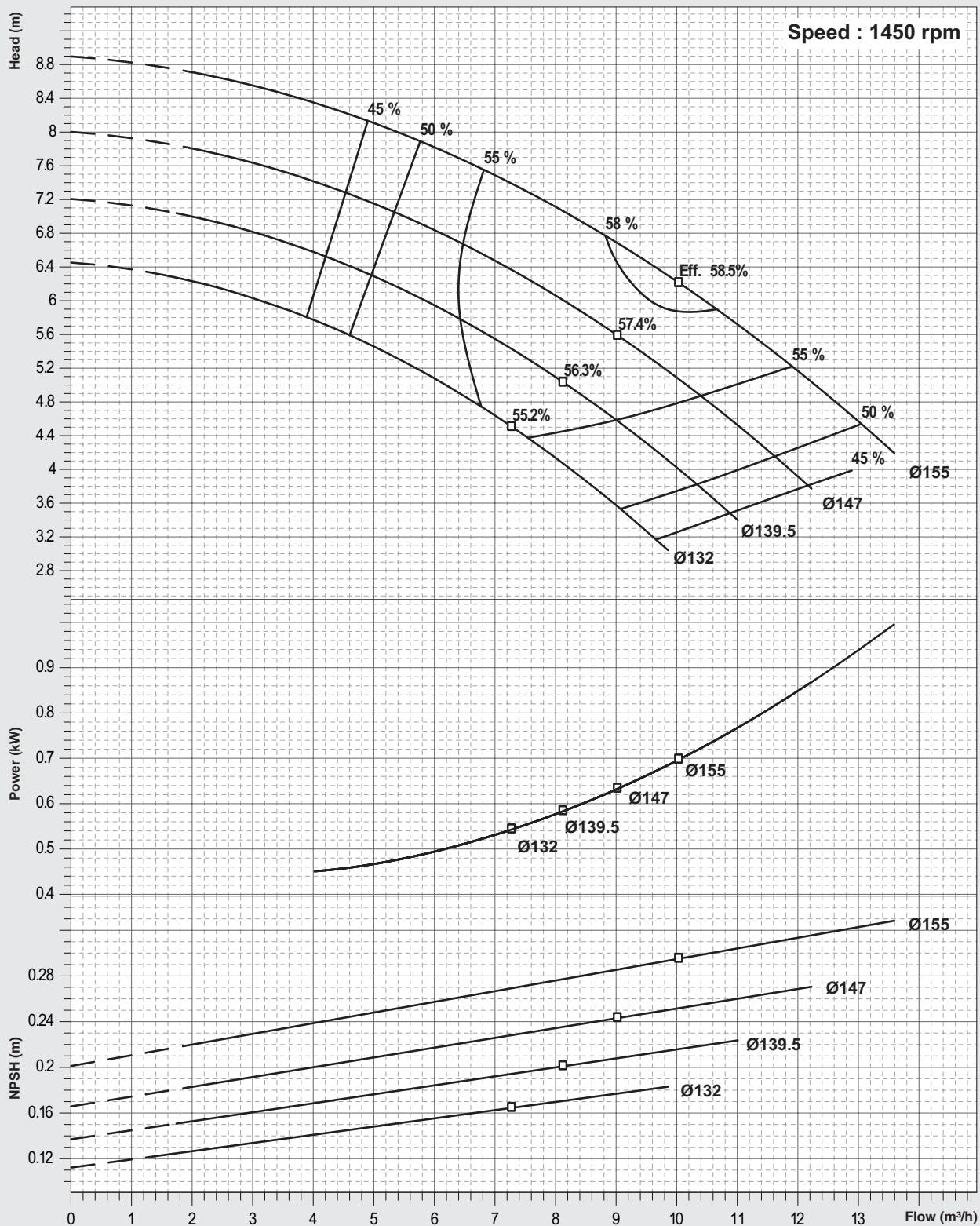
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PERFORMANCE CURVE

Pump Model : FECC-IL - 1.5 x 1.25 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.5 x 1.25 x 6
(37.5 x 32 x 155)



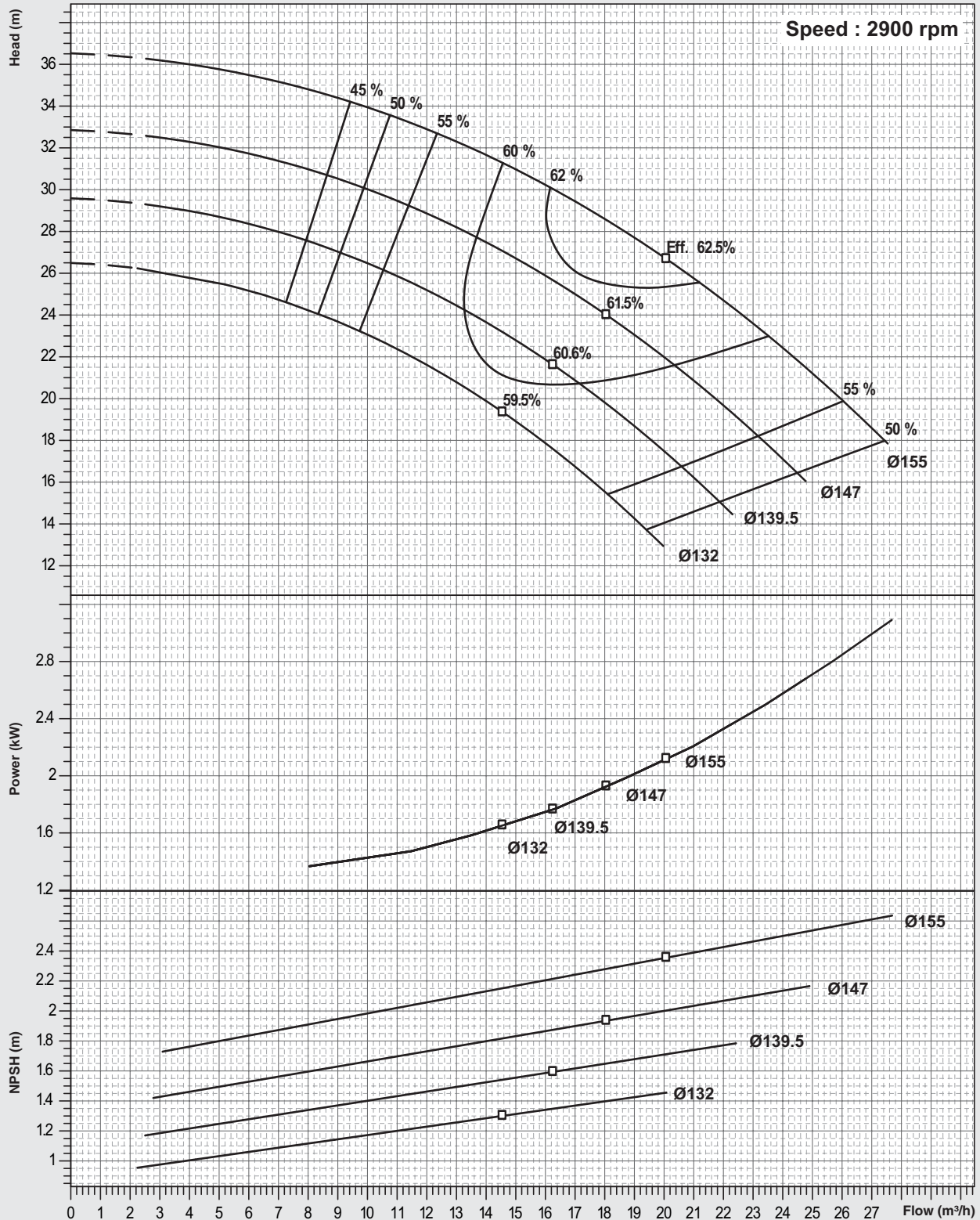
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PERFORMANCE CURVE

Pump Model : FECC-IL - 1.5 x 1.25 x 6

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.5 x 1.25 x 6
(37.5 x 32 x 155)



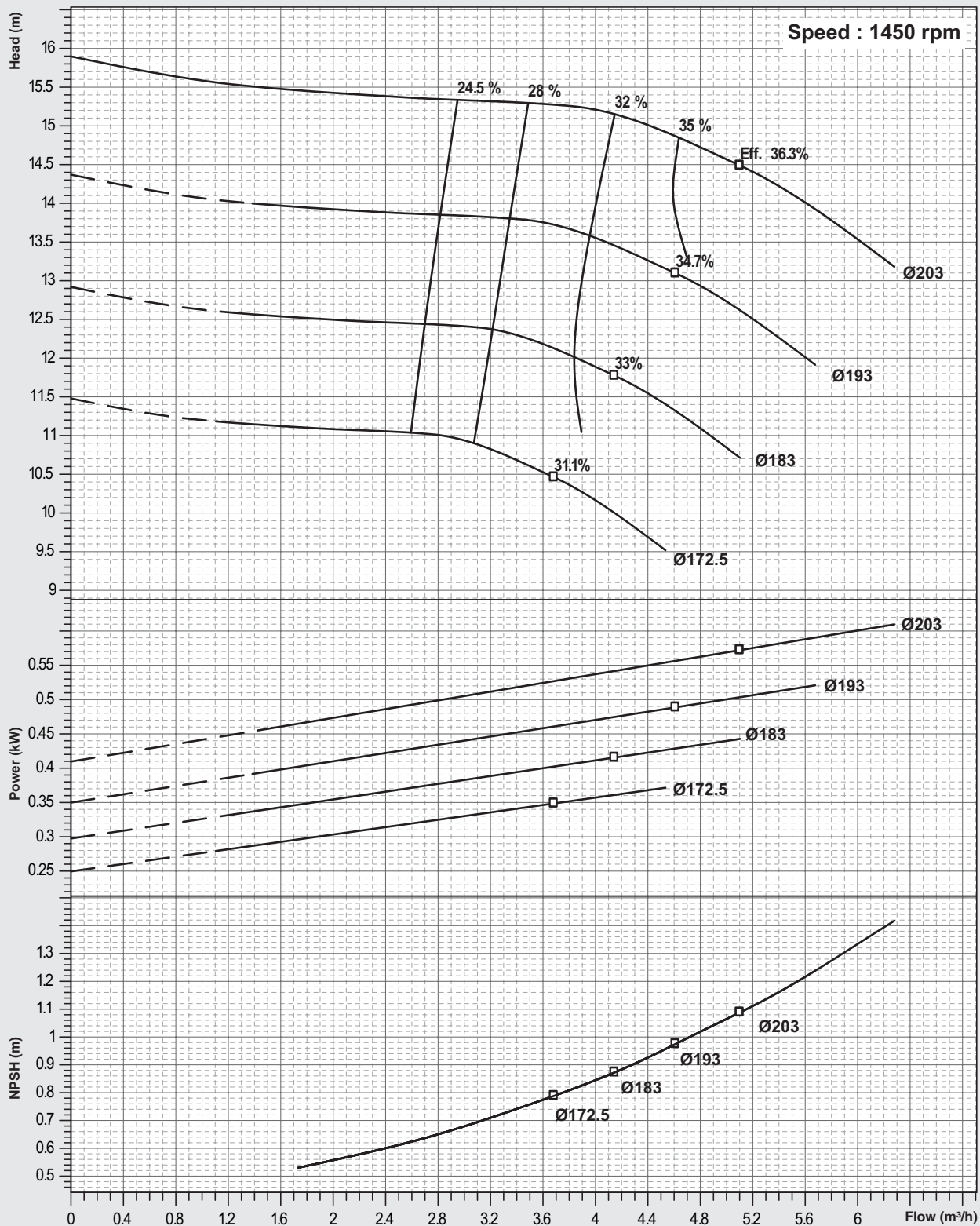
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC-IL - 1 x 0.75 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1 x 0.75 x 8
(25 x 18.75 x 203)



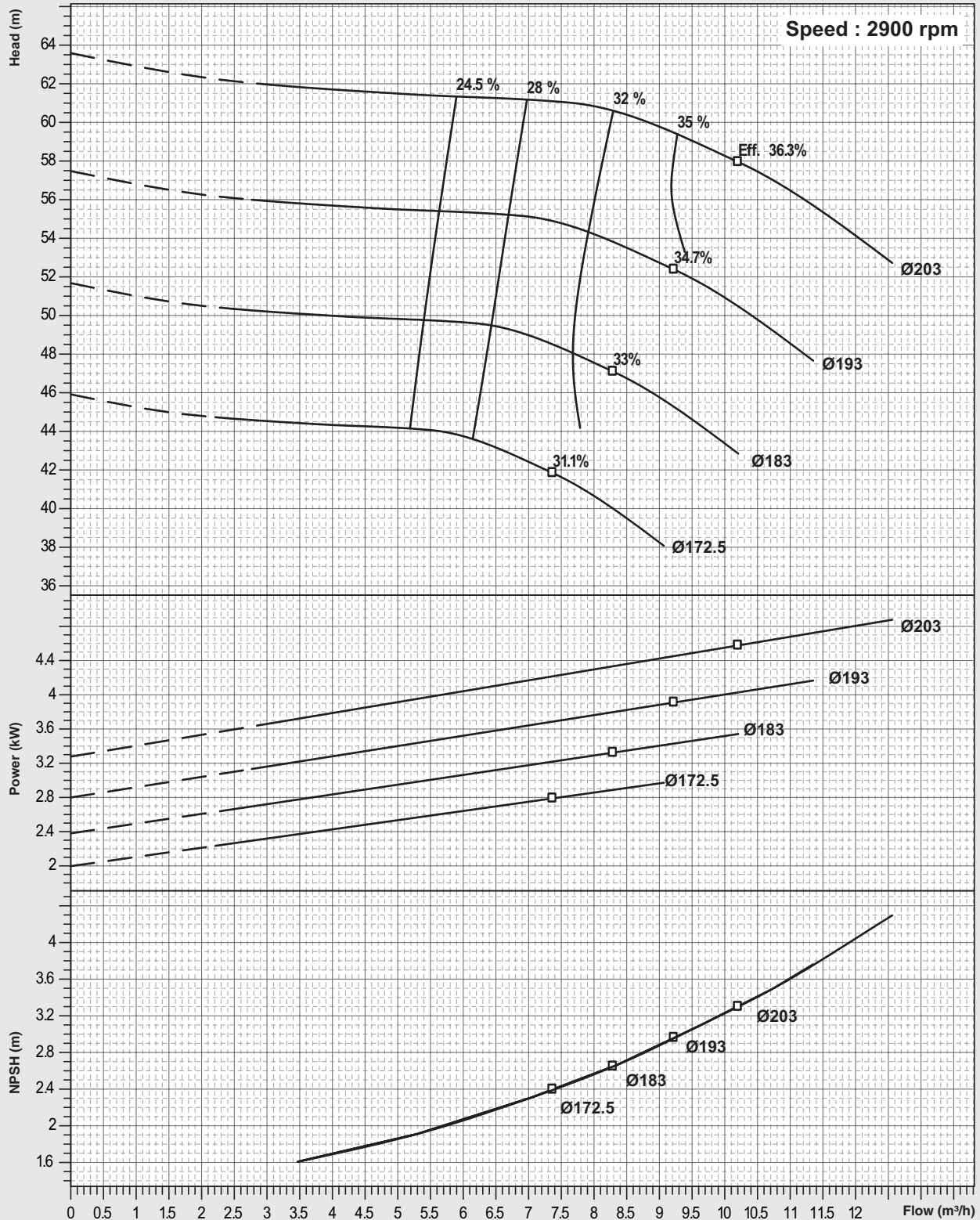
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PERFORMANCE CURVE

Pump Model : FECC-IL - 1 x 0.75 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1 x 0.75 x 8
(25 x 18.75 x 203)



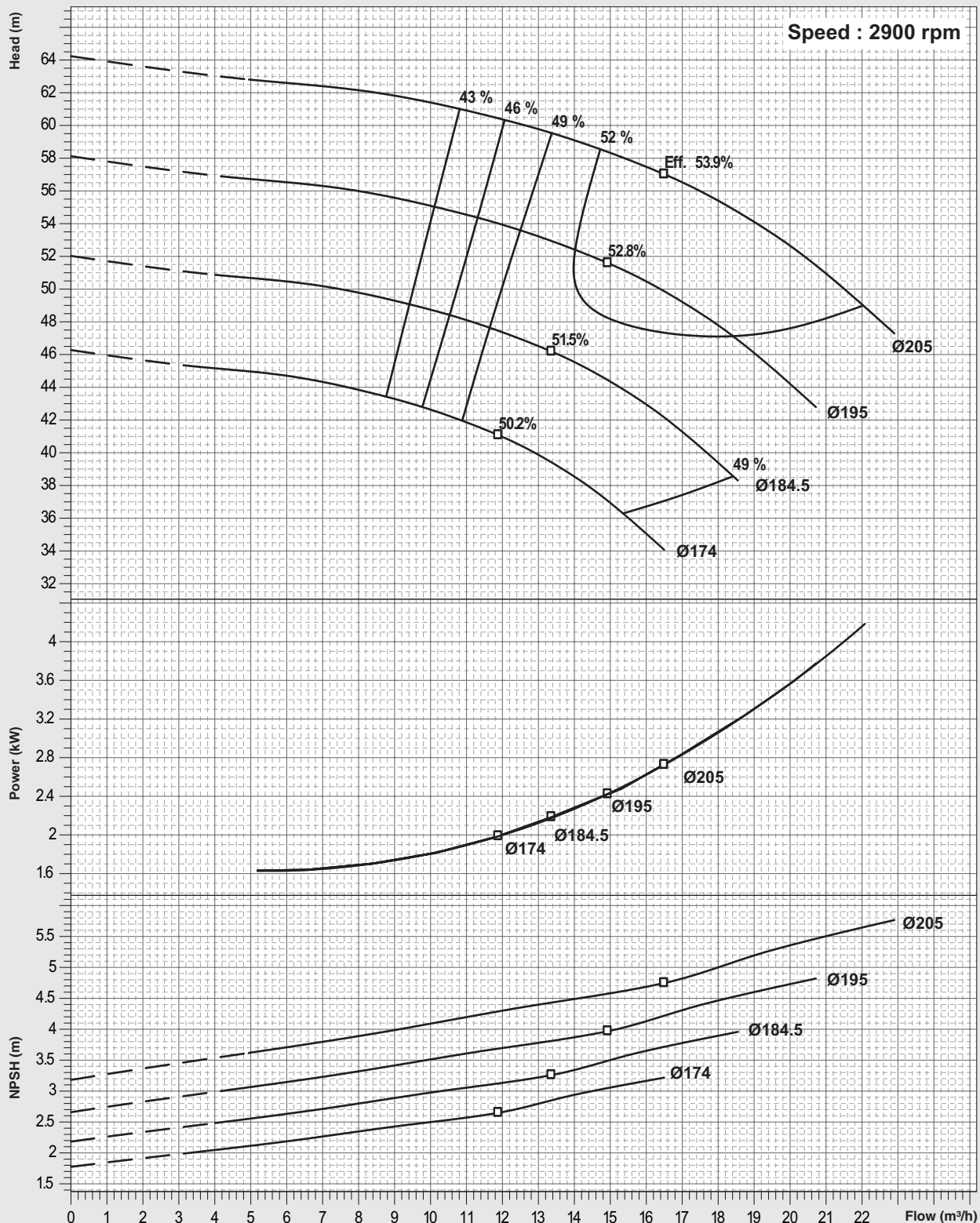
Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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PERFORMANCE CURVE

Pump Model : FECC-IL - 1.25 x 1 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.25 x 1 x 8
(32 x 25 x 205)



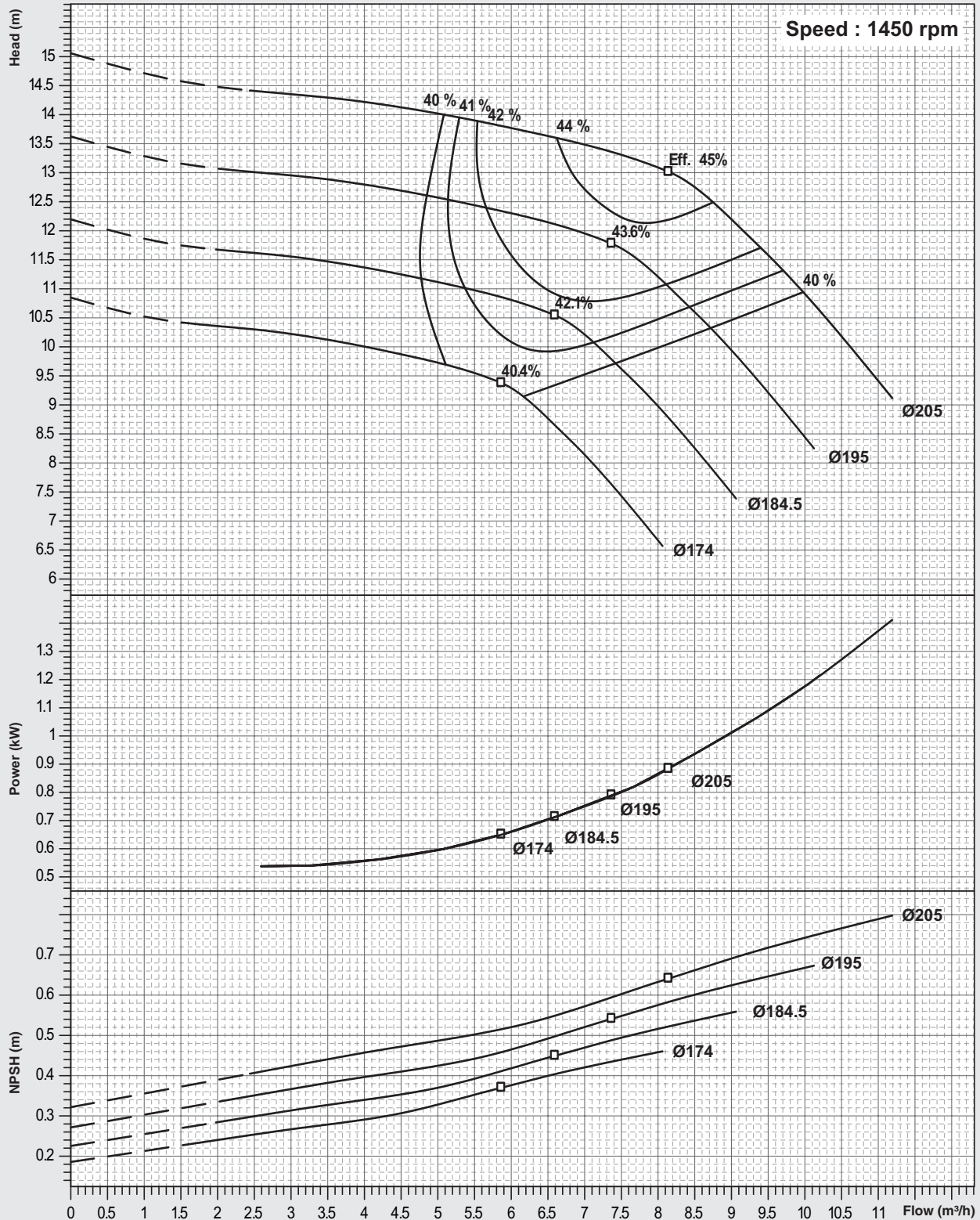
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PERFORMANCE CURVE

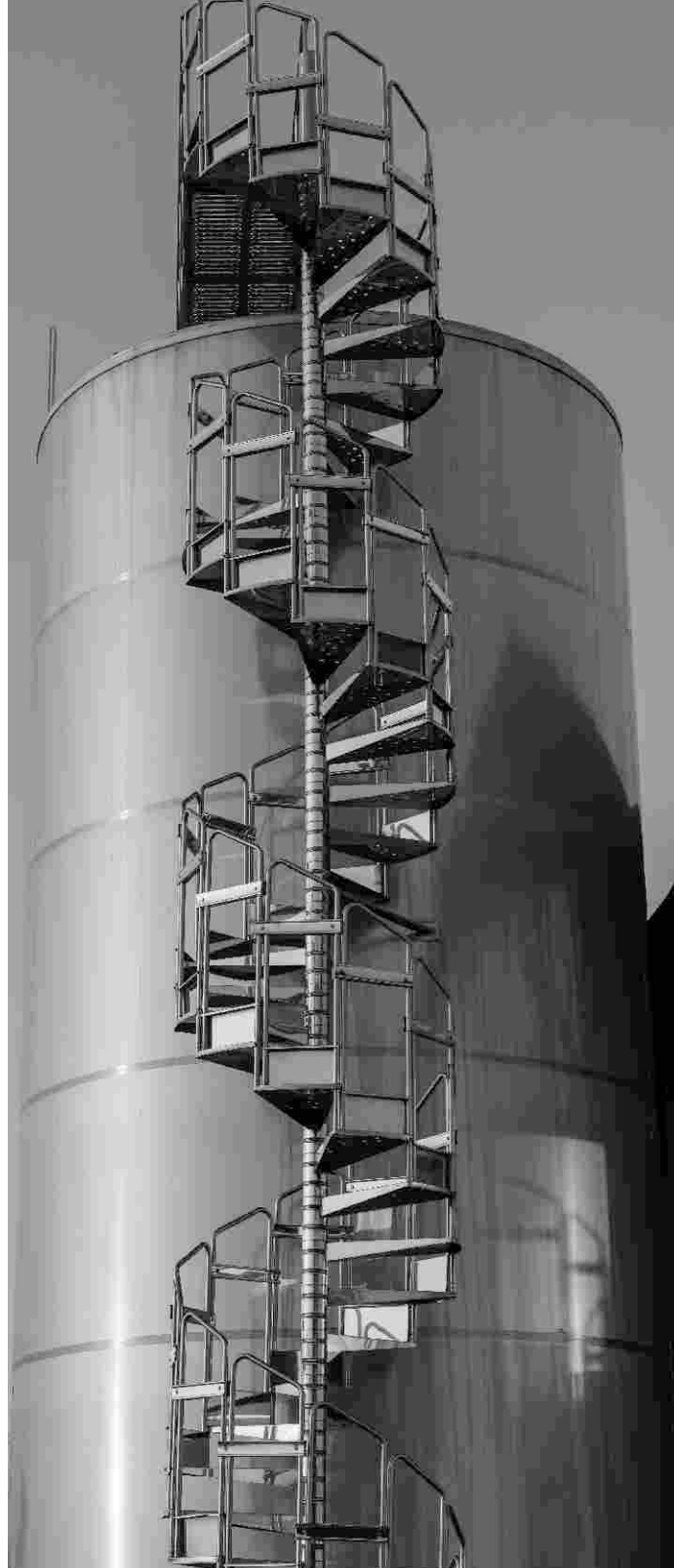
Pump Model : FECC-IL - 1.25 x 1 x 8

Pump Size in mm (Suc X Del X Max. Imp Ø) : 1.25 x 1 x 8
(32 x 25 x 205)



Performance curve tolerances are as per HI : 14.6 / ISO: 9906, Grade 2B

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