SUBMERSIBLE PUMPS & MOTORS

60 HZ BOOKLET

SHAKTI
PUMPING LIFE

www.shaktipumps.com

VISION, MISSION & QUALITY POLICY

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VISION

To become a company that constantly strives for quality and customer satisfaction by providing best pumping solutions with global benchmarks. To excel with an emphasis on best business and ethical practices with strong organizational values justifying the interests of all stakeholders.

MISSION

To work relentlessly towards coming closer to our vision statement by offering best working environment and training focusing on integrity and ethics. To empower the workforce to offer products and services that exceeds customer expectations by providing value for money and ensure handsome return to our employees and shareholders thereby contributing to our mission to cross a $ billion mark by 2021.

QUALITY POLICY

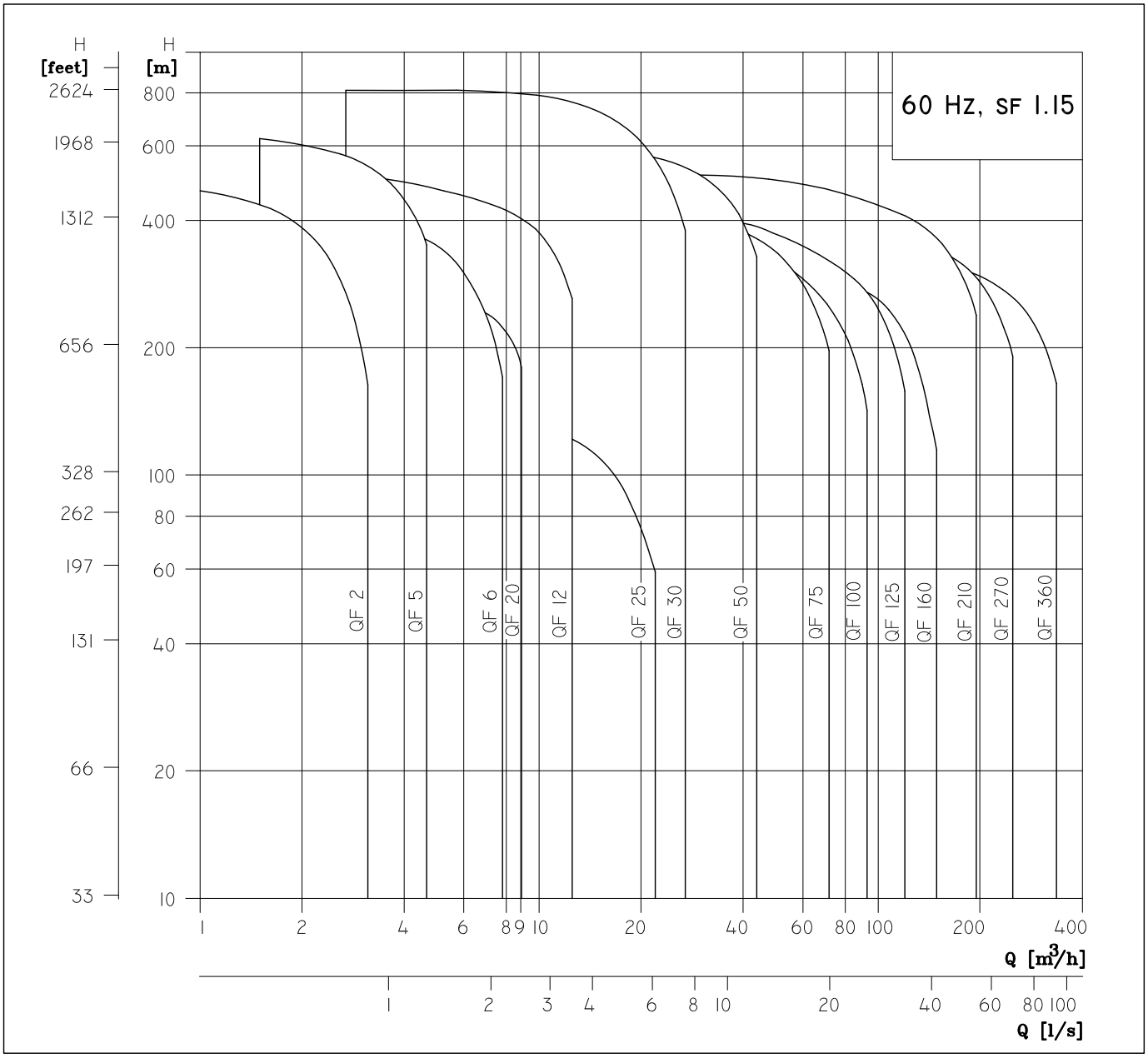
Shakti Pumps (India) Ltd is committed to achieve total customer satisfaction by manufacturing high quality pumps with global bench mark meeting customer expectation by providing timely supply and services to our customers. We shall strive to maintain high degree of goodwill and brand image to emerge as a market leader in domestic and international markets.

We shall strive for providing excellent services to our customers by team work and continual improvement of Quality Management Systems thereby achieving total customer delight.

CONTENT

13010002

PEFORMANCE RANGE



GENERAL DATA

SUBMERSIBLE PUMP QF

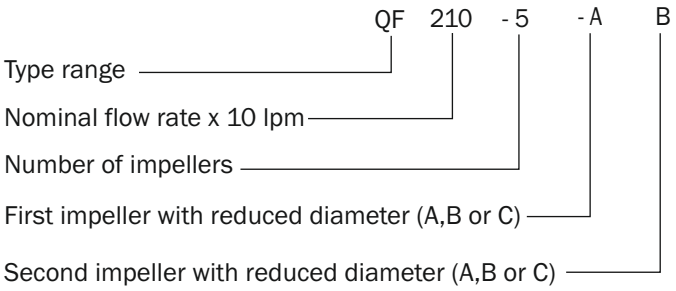
APPLICATIONS

The pumps are suitable for the following applications :

- Raw water supply
- Irrigation systems
- Groundwater lowering
- Pressure boosting
- Industrial applications

TYPE KEY

Example



PUMPED LIQUIDS

Clean, thin, non-aggressive liquids without solid particles or fibres.

OPERATING CONDITIONS

Flow rate, Q : 0.1 - 335 m^3/h.
Head, H: Maximum 810m.

Maximum Liquid Temperature:

Motor	Installation		
	Flow velocity-past motor	Vertical	Horizontal
Shakti 4", 6" & 8"	0.15 m/s	40°c	40°c

Operating pressure: Maximum 810m (81 bar)

CURVE CONDITIONS

The conditions below apply to the curves shown on the following pages :

GENERAL

- Curve tolerance according to ISO 9906, Annex A.
- The performance curves show pump performance at actual speed cf. standard motor range.
  The speed of the motors is approximately :
  4" motors : n=3460 min^{-1}
  6" motors : n=3450 min^{-1}
  8" to 12" motors : n=3500 min^{-1}
- The measurements were made with airless water at a temperature of 20°c.The curves apply to a kinematic viscosity of 1mm^2/s. When pumping liquids with a density higher than that of water, motors with correspondingly higher outputs must be used.
- The bold curves indicate the recommended performance range.
- The performance curves are inclusive of possible losses such as non-return valve loss.

QF2, QF5, QF6, QF12, QF20, QF25 CURVE

- **Q/H :** The curves are inclusive of valve and inlet losses at the actual speed.
- **Power Curve :** BPkW/Stage shows pump power input per stage.
- **Efficiency Curve :** Efficiency shows pump stage efficiency.

QF10, QF15, QF30, QF50, QF75, QF100, QF125, QF160, QF210, QF270, QF360 CURVE

- **Q/H :** The curves are inclusive of valve and inlet losses at the actual speed.
  Operation without non-return valve will increase the actual head at nominal performance by 0.5 to 1.0 m.
- **NPSH** The curve is inclusive of suction case and shows required inlet pressure.
- **Power Curve:** It shows pump power input at the actual speed for each individual pump size.
- **Efficiency Curve :** Efficiency shows pump stage efficiency.

GENERAL DATA

SUBMERSIBLE PUMP QF

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PUMP RANGE

Type	QF 2	QF 5	QF 6	QF 12	QF 20	QF 25	QF 30	QF 50	QF 75	QF 100	QF 125	QF 160	QF 210	QF 270	QF 360
Steel : AISI SS 304	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Connection : Rp (Inches) BSP Thread	$1^1/_4$	$1^1/_4$	$1^1/_2$	2	2	2	$2^1/_2$	3	3 4	3 4	5	5	6	6	6
NPT Thread	$1^1/_4$	$1^1/_4$	$1^1/_2$	2	2	2	3	3	3 4	3 4	5	5	6	6	6
Flange Connection											5"	5"	6"	6"	6"

MOTOR RANGE

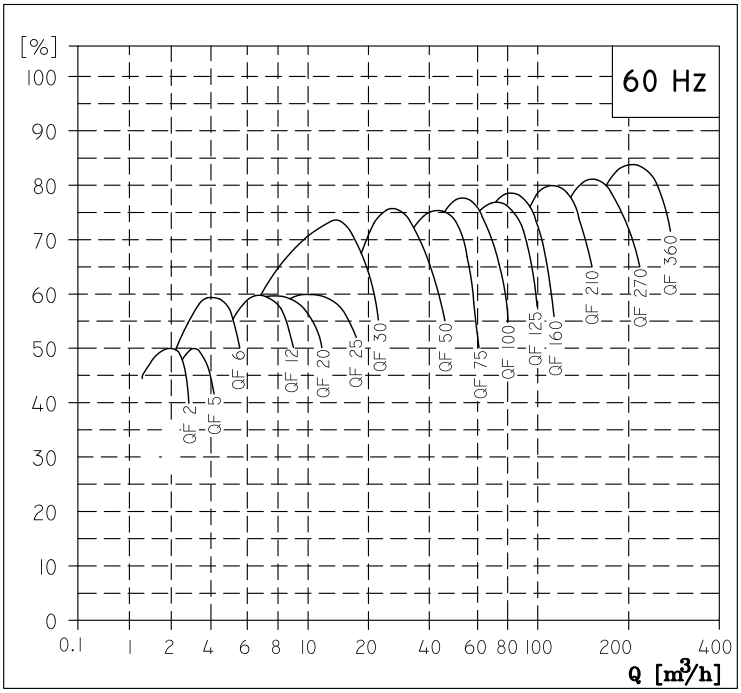
MOTOR OUTPUT [KW]	0.37	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	7.5	9.2	11	13	15	18.5	22	26	30	37	45	55	75	93	110	132	147	170	190	220
Single Phase	+	+	+	+	+	+	+	+																					
Three Phase	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Rewindable Motor	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Steel : AISI 304	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+								
Steel : AISI 304 & Cast Iron	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Direct-on-Line starting is recommended up to 75 kW.
Soft starter or auto transformer is recommended above 75 kW.
Motors with star / delta are available from 4.0 kW.

SUBMERSIBLE PUMPS

SUBMERSIBLE PUMP QF

FEATURES AND BENEFITS



A WIDE PUMP RANGE

We offers submersible pumps with energy- efficient duty points ranging from 0.1 to 335 m^3/h. The pump range consists of many pump sizes - and each pump size is available with an optional number of stages to match any duty point.

HIGH PUMPS EFFICIENCY

Often pump efficiency is a neglected factor compared to the price however, the observant user will notice that price variations are without importance to water supply economics compared to the importance of pump and motor efficiencies.

EXAMPLE:

When pumping 125 m^3/h with a head of 200m for a period of 10 years $ 60,000 will be saved if a pumps and motors having a 10% higher efficiency is chosen and the price is $ 0.10 per kWh.

APPLICATIONS

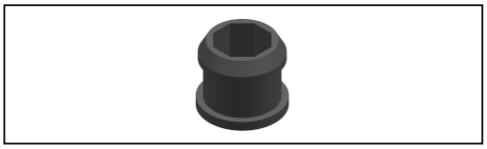
We offers a complete range of pumps and motors which as a standard are made completely of stainless steel AISI - 304. This provides for good wear resisrance and a reduced risk of corrosion when pumping ordinary cold water with a minor content of chloride.

LOW INSTALLATION COSTS

Stainless steel means low weight facilitating the handling of pumps and resulting in low equipment costs and reduced installation and service time. In addition pumps will be as new after service due to the high wear resistance of stainless steel.

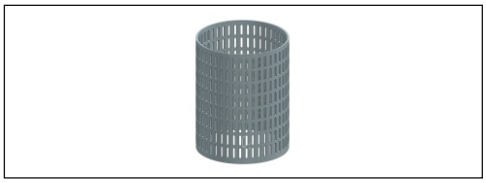
BEARINGS WITH SAND CHANNELS

All bearings are water- lubricated and have a square shape, enabling sand particles, if any, to leave the pump together with the pumped liquid.



INLET STRAINER

The inlet strainer prevents particles over a certain size from entering the pump.

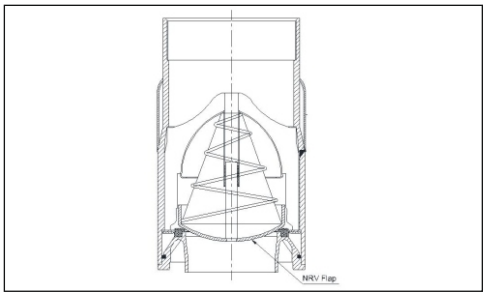


NON - RETURN VALVE

All pumps are equipped with a reliable non-return valve in the valve casing preventing back flow in connection with pump stoppage.

Furthermore , the short closing time of the non-return valve means that the risk of destructive water hammer is reduced to a minimum.

The valve casing is designed for optimum hydraulic properties to minimize the pressure loss across the valve and, thus, contributes to the high efficiency of the pump.

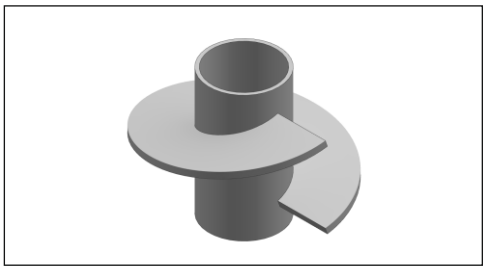


PRIMING SCREW

All QF and QF 30 pumps are fitted with a priming screw. Consequently, dry running is prevented because the priming screw will make sure that pump bearing are always lubricated.

Due to the semi-axial impellers of large QF pumps (except for QF 30) this priming is automatically provided.

However, it applies to all pump types that if the water table is lowered to a level below the pump inlet neither pump nor motor will be protected against dry running.



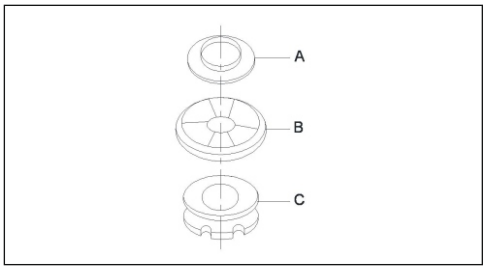
STOP RING

The stop ring prevents damage to the pump during transport and in case of up-thrust in connection with start-up.

The stop ring, which is designed as a thrust bearing limits axial movements of the pump shaft.

EXAMPLE : QF 125

The stationary part of the stop ring (A) is secured in the top bowl (Upper intermediate chamber). The rotating part (B) is fitted above the collet [split cone (C)].



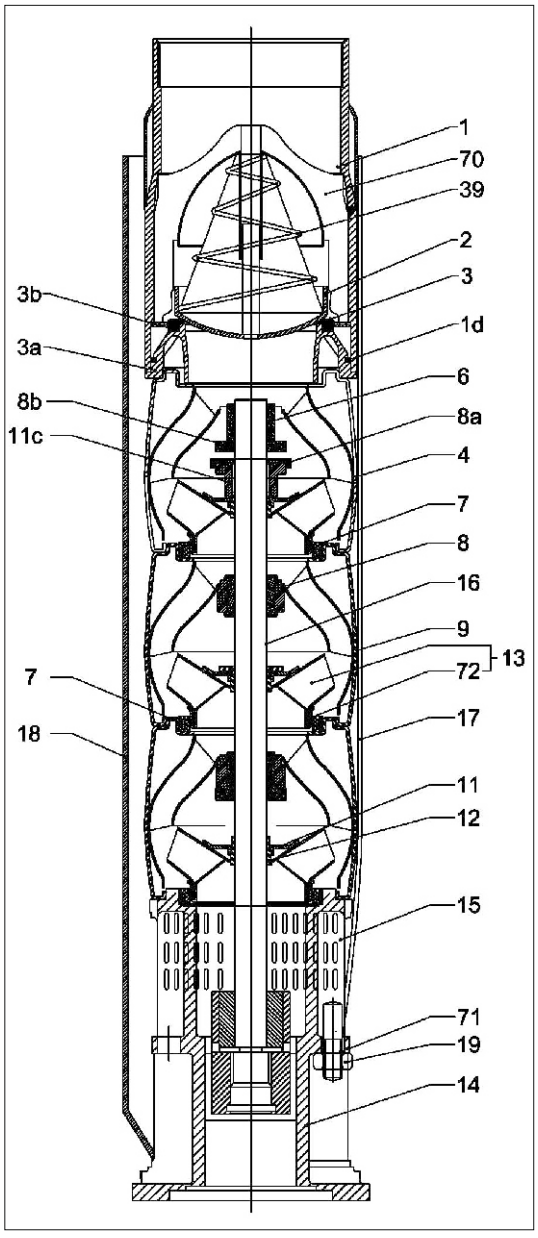
SUBMERSIBLE PUMPS

SUBMERSIBLE PUMP QF

MATERIAL SPECIFICATION

POS.	DESCRIPTION	MATERIAL	STANDARD	N-VERSION
1	VALVE CASING	STAINLESS STEEL	304	316
1d	O-RING	NBR		
2	VALVE CAP	STAINLESS STEEL	304	316
3	VALVE SEAT	STAINLESS STEEL	304	316
3a	LOWER VALVE SEAT RETAINER	STAINLESS STEEL	304	316
3b	UPPER VALVE SEAT RETAINER	STAINLESS STEEL	304	316
4	TOP CHAMBER CUP	STAINLESS STEEL	304	316
6	UPPER BEARING	STAINLESS STEEL	304	316
7	NECKRING	NBR/PPS		
8	BEARING	NBR		
8a	WASHER FOR STOP RING	CARBON/GRAPHITE		
		HY22 IN PTFE MASS		
8b	STOP RING	STAINLESS STEEL	304	316
9	CHAMBER	STAINLESS STEEL	304	316
11	SPLIT CONE NUT	STAINLESS STEEL	304	316
11c	NUT FOR STOP RING	STAINLESS STEEL	304	316
12	SPLIT CONE	STAINLESS STEEL	304	316
13	IMPELLER	STAINLESS STEEL	304	316
14	SUCTION INTERCONNECTOR	STAINLESS STEEL	304	316
15	STRAINER	STAINLESS STEEL	304	316
16	SHAFT COMPLETE	STAINLESS STEEL	304	316
17	STRAP	STAINLESS STEEL	304	316
18	CABLE GAURD	STAINLESS STEEL	304	316
19	NUT FOR STRAP	STAINLESS STEEL	304	316
39	SPRING FOR VALVE CUP	STAINLESS STEEL	304	316
70	VALVE GUIDE	STAINLESS STEEL	304	316
71	WASHER	STAINLESS STEEL	304	316
72	WEAR RING	STAINLESS STEEL	304	316

EXAMPLE : QF - 125



SUBMERSIBLE MOTORS

SUBMERSIBLE MOTOR

SHAKTI PUMPING LIFE

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FEATURES AND BENEFITS

A COMPLETE MOTOR RANGE

We offer a complete submersible motor range in different voltages :

- 4" motors, single - phase up to 4 kW. (Encapsulated & Rewindable)
- 4" motors, three-phase up to 7.5 kW. (Encapsulated & Rewindable)
- 6" motors, three-phase from 2.2 kW to 37 kW. (Rewindable)
- 8" motors, three-phase from 11 kW to 220 kW. (Rewindable)

HIGH MOTOR EFFICIENCY

Within the area of high motor efficiency Star is a market leader. This is due to newly developed motor concept which is introduced with the MS 100, MS 101 and MS 150.

SHAFT SEAL

The choice of material is ceramic/ tungsten carbide providing optimum sealing, optimum wear resistance and long life.

The spring loaded shaft seal is designed with a large surface and a sand shield. The result is a minimum exchange of pumped and motor liquids and no penetration of particles.

PROTECTION AGAINST UPTHRUST

In case of a very small counter pressure in connection with start-up there is a risk that the entire pump body may rise. This is called upthrust. Upthrust may damage both pump and motor. Therefore, both pumps and motors are protected against upthrust as standard, preventing upthrust from occurring in the critical start-up phase. The protection consists of either a built-in stop ring or hydraulic balancing.

BUILT -IN COOLING CHAMBERS

In all submersible motors an efficient cooling is ensured by cooling chambers at the top and at the bottom of the motor, and by an internal circulation of motor liquid. As long as the required flow velocity cooling of the motor will be efficient.

REWINDABLE

REWINDABLE

SUBMERSIBLE MOTORS

SUBMERSIBLE MOTOR

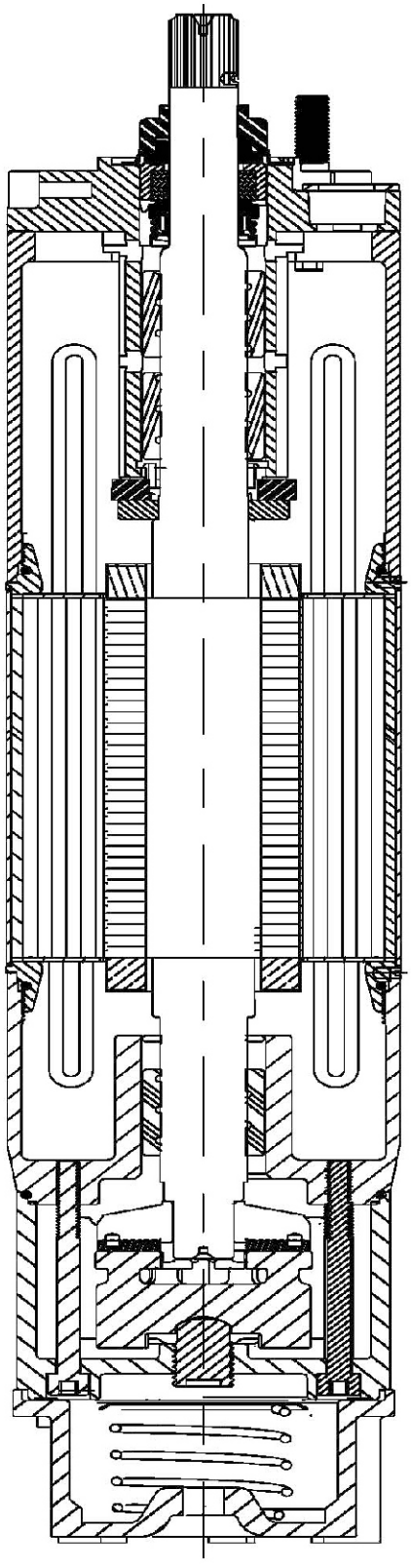
FEATURES AND BENEFITS

OVER TEMPERATURE PROTECTION

For Shakti submersible motors accessories Pt100 for protection against over temperature is available. When the temperature becomes too high, the protection device will cut-out and damage to the pump and motor be avoided.

PROTECTION AGAINST UPTHRUST

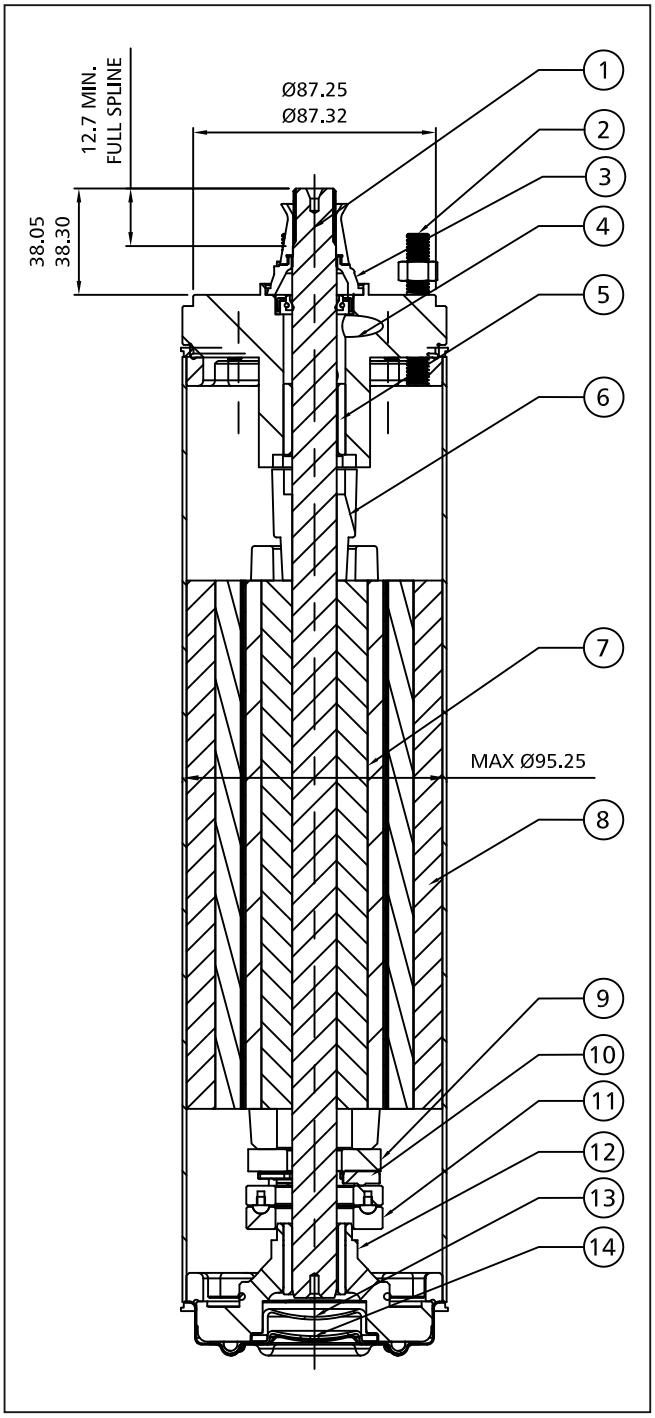
in case of a very small counter pressure in connection with start-up there is a risk that the entire pump body may rise. This is caller upthrust. Upthrust may damage both pump and motor. Therefore both Shakti pumps and motors are protected against upthrust as standard, preventing upthrust form occurring in the critical startup phase. The protection consists of a built-in upthrust ring.



MATERIAL SPECIFICATION MCIP-100

SR.NO	COMPONENT	MATERIAL
1	ROTOR SHAFT	EN 10088-3/1.4542 ASTM A564 TYPE 630
2	STUD	AISI SS-304
3	SEAL COVER	PPS
4	UPPER HOUSING	CI FG -260
5	BUSH	CARBON
6	SHAFT BUSH	NYLON 30%GLASS FILLED
7	ROTOR SUB ASSLY	N/A
8	STATOR SUB ASSLY	N/A
9	THRUST DISK	ANTIMONY CARBON
10	THRUST PAD	AISI SS-420
11	LEVELING DISK	HIGH GRADE CARBON
12	BOTTOM END BELL	CI FG -260
13	DIAPHRAGM	NBR
14	END BELL COVER	AISI SS-304

SECTION VIEW MCIP 100



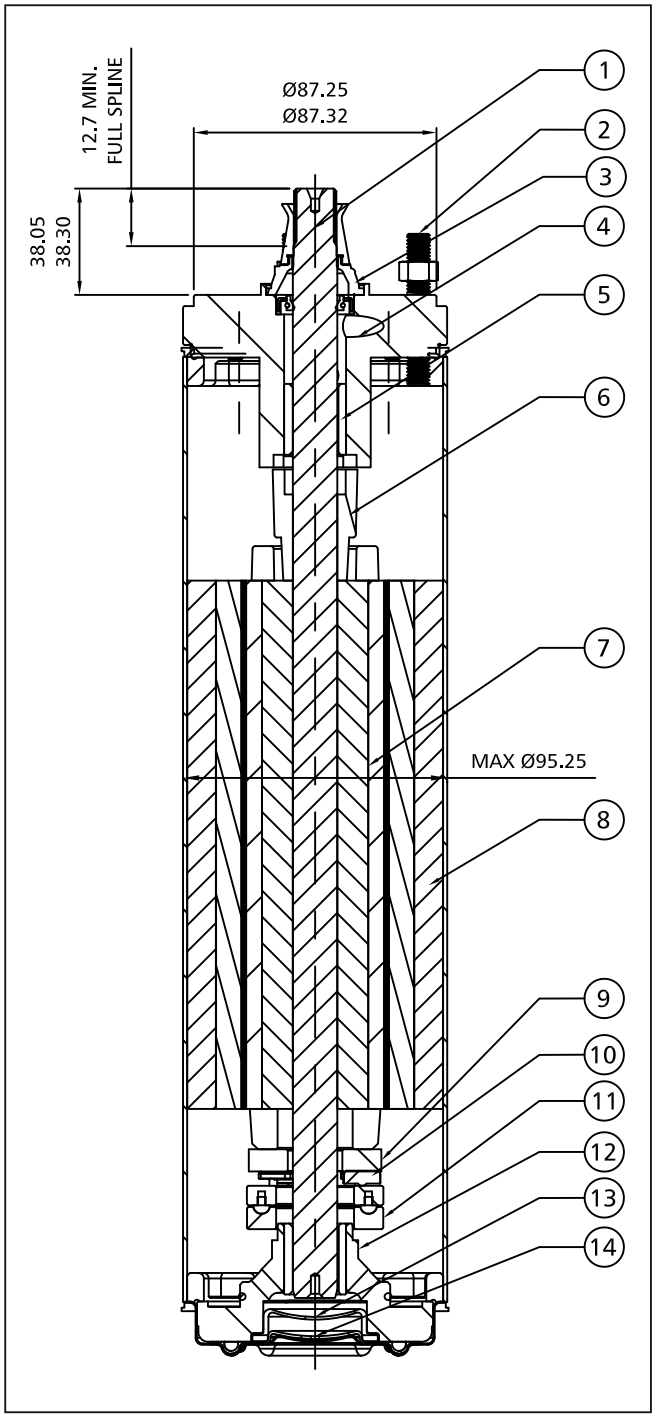
SUBMERSIBLE MOTORS

SUBMERSIBLE MOTOR

MATERIAL SPECIFICATION MCIP-100.5

SR.NO	COMPONENT	MATERIAL
1	ROTOR SHAFT	EN 10088-3/1.4542 ASTM A564 TYPE 630
2	STUD	AISI SS-304
3	SEAL COVER	PPS
4	UPPER HOUSING	CI FG -260
5	BUSH	CARBON
6	SHAFT BUSH	NYLON 30%GLASS FILLED
7	ROTOR SUB ASSLY	N/A
8	STATOR SUB ASSLY	N/A
9	THRUST DISK	ANTIMONY CARBON
10	THRUST PAD	AISI SS-420
11	LEVELING DISK	HIGH GRADE CARBON
12	BOTTOM END BELL	CI FG -260
13	DIAPHRAGM	NBR
14	END BELL COVER	AISI SS-304

SECTION VIEW MCIP 100.5

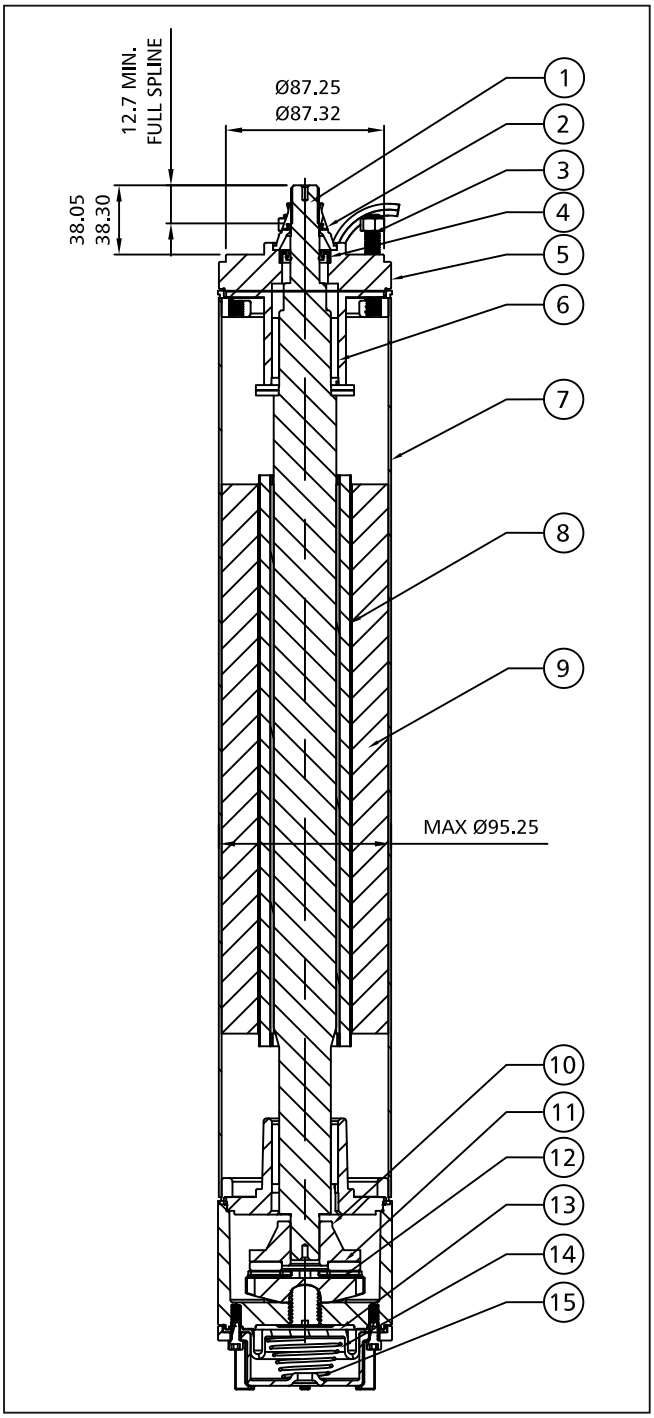


SUBMERSIBLE MOTOR QF

MATERIAL SPECIFICATION MCIP-101

SR.NO	COMPONENT	MATERIAL
1	ROTOR SHAFT	EN 10088-3/1.4542 ASTM A564 TYPE 630
2	SAND SLINGER	NBR
3	STUD	AISI SS-304
4	OIL SEAL	STD
5	UPPER HOUSING	CI FG -260
6	BUSH	CARBON
7	S.S. MOTOR OUTER SHELL	STAINLESS STEEL
8	ROTOR SUB ASSLY	N/A
9	STATOR SUB ASSLY	N/A
10	THRUST DISK	CI FG-260
11	SEGMENT	AISI SS-520
12	LEVELING DISK	SPRING STEEL
13	DIAPHRAGM	NBR
14	DIAPHRAGM SPRING	SPRING STEEL
15	DIAPHRAGM COVER	STAINLESS STEEL

SECTION VIEW MCIP 101



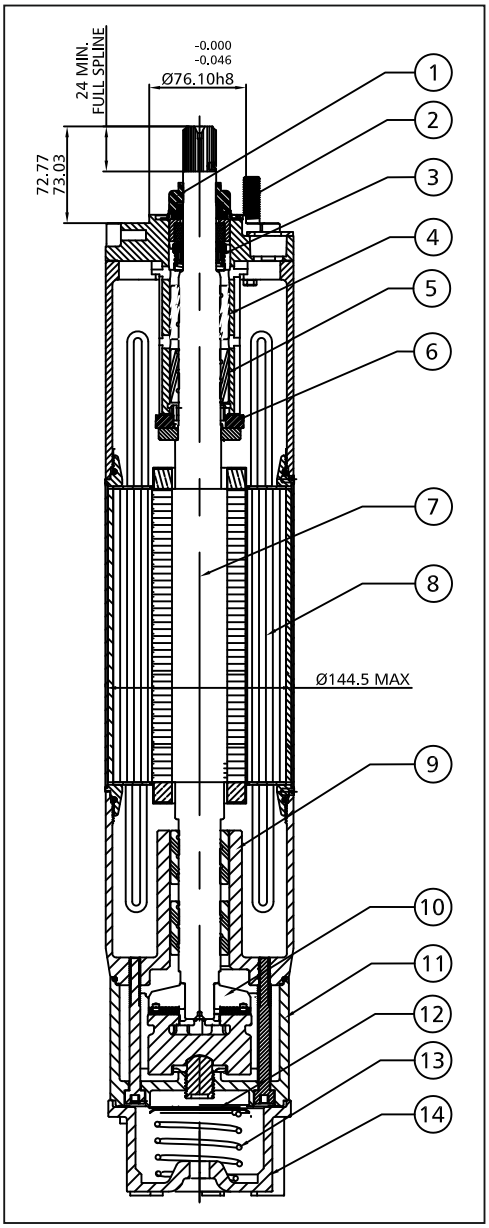
SUBMERSIBLE MOTORS

SUBMERSIBLE MOTOR QF

MATERIAL SPECIFICATION MTSF-150

S No.	COMPONENT	MATERIAL		
		CIFG-260	**SS AISI 304**	**SS AISI 316**
1	SAND SLINGER	NBR	NBR	NBR
2	STUD	CI FG -260	SS AISI 304	SS AISI 316
3	MECH SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	END BELL UPPER	CI FG -260 SS	AISI 304	SS AISI 316
5	BUSH	CARBON	CARBON	CARBON
6	UP THRUST	NYLON 30% GLASS FILLED	NYLON 30% GLASS FILLED	NYLON 30% GLASS FILLED
7	ROTOR SHAFT	EN 10088-3/ 1.4542 ASTMA564 TYPE 630	EN 10088-3/ 1.4542 ASTMA564 TYPE 630	EN 10088-3/ 1.4542 ASTMA564 TYPE 630
8	STATOR SUB ASSLY	N/A	N/A	N/A
9	END BELL LOWER HOUSING	CI FG -260	SS AISI 304	SS AISI 316
10	REVOLVING PLATE ASSLY	N/A	N/A	N/A
11	THRUST BEARING	CI FG -260	SS AISI 304	SS AISI 316
12	DIAPHRAGM	NBR	NBR	NBR
13	DIAPHRAGM SPRING	SPRING STEEL	SPRING STEEL	SPRING STEEL
14	MOTOR BASE	CI FG -260	SS AISI 304	SS AISI 316

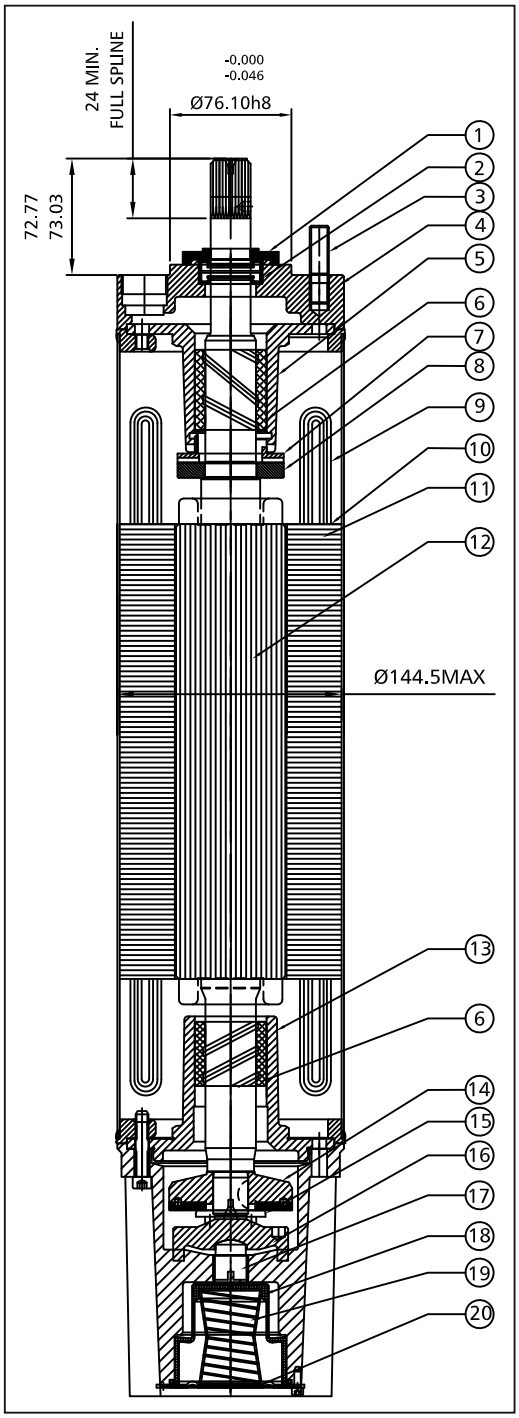
SECTION VIEW MTSF 150



MATERIAL SPECIFICATION SML-150

SR. NO.	COMPONENT	MATERIAL
1	SAND SLINGER	NBR
2	STUD	AISI SS-304
3	SEAL	STD
4	UPPER HOUSING	CI FG-260
5	END BELL UPPER	CI FG-260
6	BUSH	CARBON
7	UP THRUST BEARING	NYLON 30% GLASS FILLED
8	THRUST PLATE	CI FG-260
9	WINDING WIRE	STD
10	ENDLAMINATION	MS PPS
11	STATOR SUB ASSLY	N/A
12	ROTOR SUB ASSLY	N/A
13	END BELL LOWER	CI FG-260
14	REVOLVING PLATE ASSLY	N/A
15	SEGMENT	AISI SS-304
16	THRUST BEARING PLATE	CI FG-260
17	ADJUSTING STUD	DUPLEX
18	DIAPHRAGM	NBR
19	DIAPHRAGM SPRING	SPRING STEEL
20	MOTOR BASE COVER	CI FG-260

SECTION VIEW SML 150



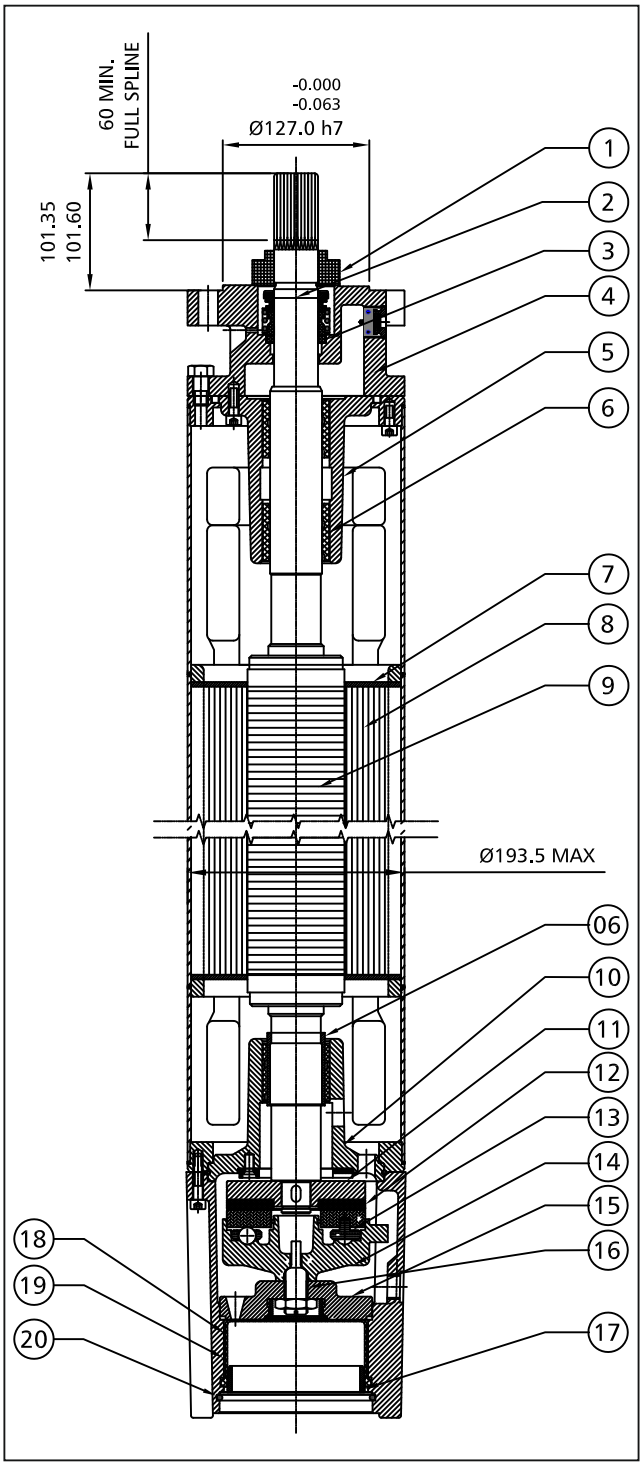
SUBMERSIBLE MOTORS

SUBMERSIBLE MOTOR QF

MATERIAL SPECIFICATION MTSF-200

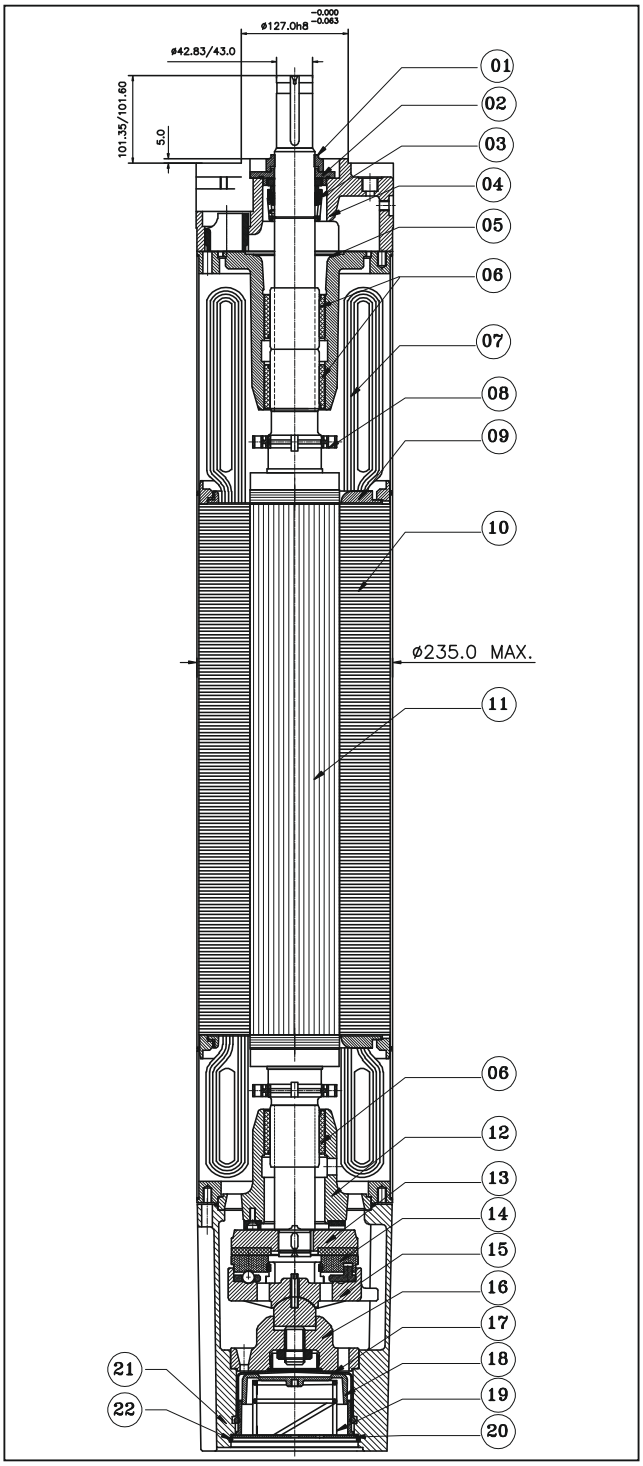
SR.NO	COMPONENT	MATERIAL
1	SAND SLINGER	NBR
2	ROTOR SHAFT	AISI SS-420+DUPLEX
3	SEAL	STD
4	UPPER HOUSING	CI FG-260
5	END BELL UPPER	CI FG-260
6	BUSH	CARBON
7	ENDLAMINATION	PPS
8	STATOR SUB ASSLY	N/A
9	ROTOR SUB ASSLY	N/A
10	END BELL LOWER	CI FG-260
11	REVOLVING PLATE ASSLY	N/A
12	REVOLVING PLATE	N/A
13	SEGMENT	AISI SS-420
14	THRUST BEARING ASSLY	CI FG-260
15	THRUST SUPPORT	CI FG-260
16	ADJUSTING STUD	DUPLEX
17	DIAPHRAGM	NBR
18	DIAPHRAGM SPRING	SPRING STEEL
19	MOTOR BASE COVER	CI FG-260
20	MOTOR BASE	CI FG-260

SECTION VIEW MTSF 200



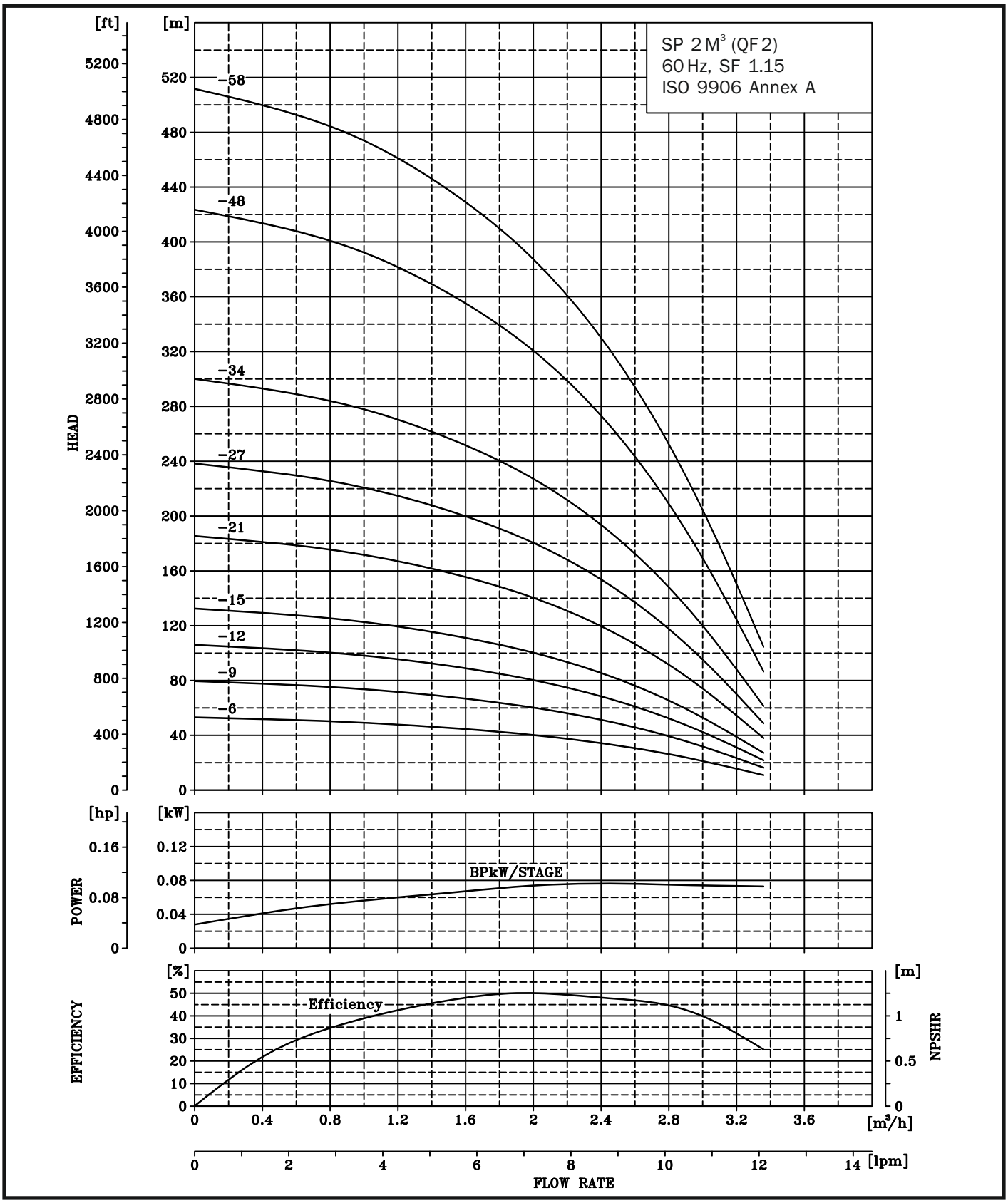
MATERIAL SPECIFICATION MTSF 10

SR. NO.	COMPONENT	MATERIAL
1	SAND SLINGER	NITRILE RUBBER
2	DUST COVER	MS
3	MECHANICAL SEAL	STD
4	ADOPTER	CI FG-260
5	BEARING BODY UPPER	CI FG-260
6	BUSH	CARBON
7	WINDING WIRE	STD
8	AUX!LLARY IMPELLER	PPS
9	END LAMINATION	MS
10	STATOR	N/A
11	ROTOR	N/A
12	BEARING BODY LOWER	CI FG-260
13	THRUST BEARING ASSLY.	CI FG-260
14	SEGMENT	SS AISI 420
15	BEARING SEGEMENT CARRIER	CI FG-260
16	THRUST SUPPORT	CI FG-260
17	DIAPHRAGM	NITRI LE RUBBER
18	SPRING BASE CUP	ABS
19	DIAPHRAGM SPRING	SPRING STEEL
20	COVER DIAPHRAGM	SS AISI 304
21	THRUST HOUSING	CI FG-260
22	CIRCLIP	SS AISI 302

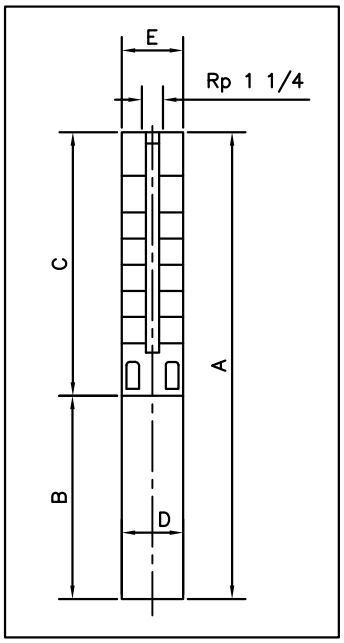


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 2



DIMENSIONS AND WEIGHTS



QF 2-58 are mounted in sleeve
for Rp 1¼ connection

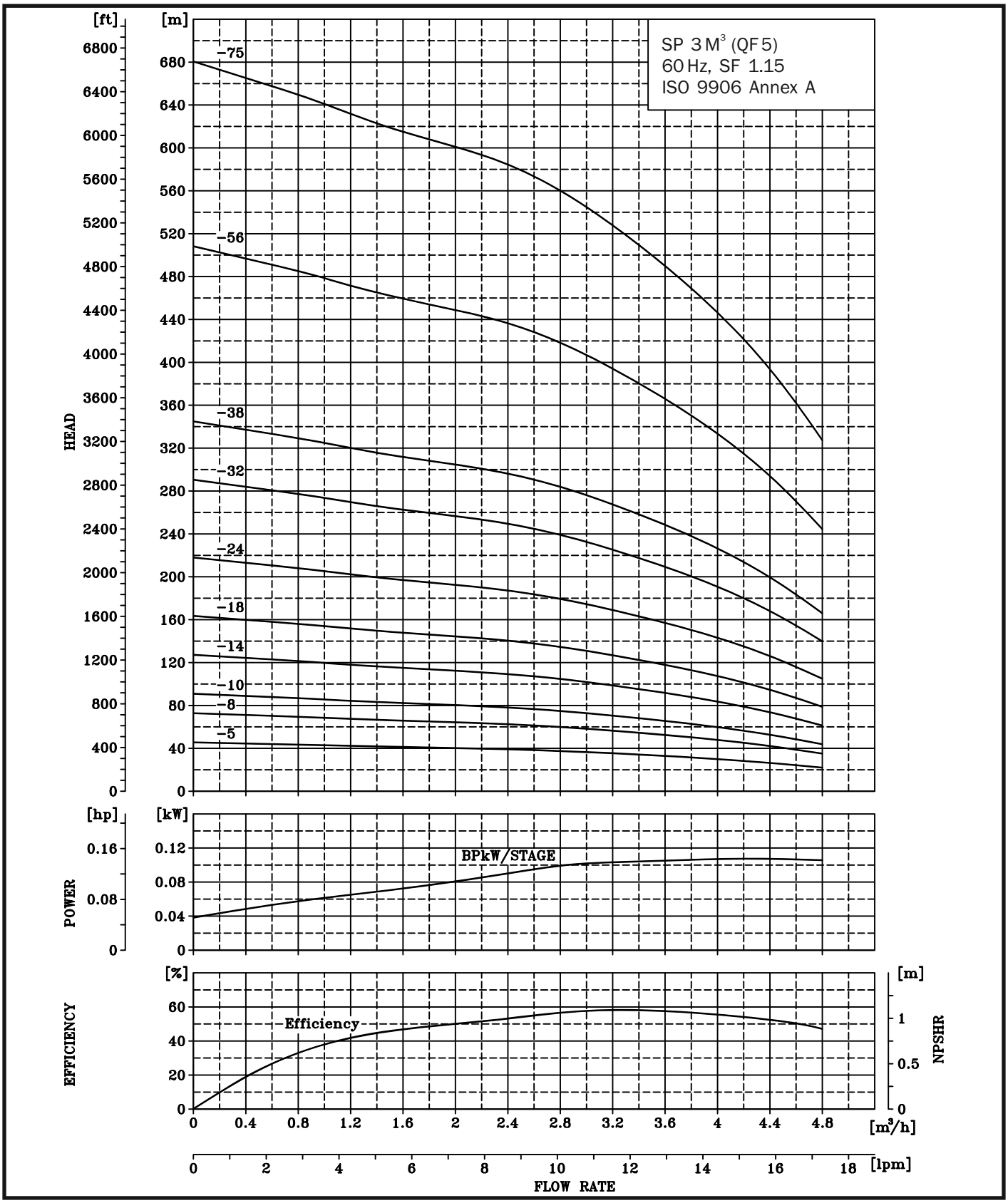
Pump Type	Motor		Dimensions [mm]							Net Weight [Kg]	
	Type	Power [kW]	C	B		A		D	E		
				1x220V	3x220 V 3x380V 3x460V	1x220V	3x220 V 3x380V 3x460V			1x220V	3x220 V 3x380V 3x460V
QF 2-6	MCIP 100	0.37	312	311	311	623	623	95	101	13	13
QF 2-9	MCIP 100	0.37	375	311	311	686	686	95	101	14	14
QF 2-12	MCIP 100	0.55	438	311	311	749	749	95	101	15	15
QF 2-15	MCIP 100	0.75	501	332	332	833	833	95	101	17	17
QF 2-21	MCIP 100	1.1	627	380	380	1007	1007	95	101	21	21
QF 2-27	MCIP 100.5	1.5	774	425	425	1199	1199	95	101	28	28
QF 2-34	MCIP 100.5	2.2	921	493	455	1414	1376	95	101	29	29
QF 2-48	MCIP 101	4.0	1215	680	566	1895	1781	95	101	43	43
QF 2-58	MCIP 101	4.0	1425	680	566	2105	1991	95	101	46	46

E = Maximum diameter of pump inclusive of cable guard & motor.

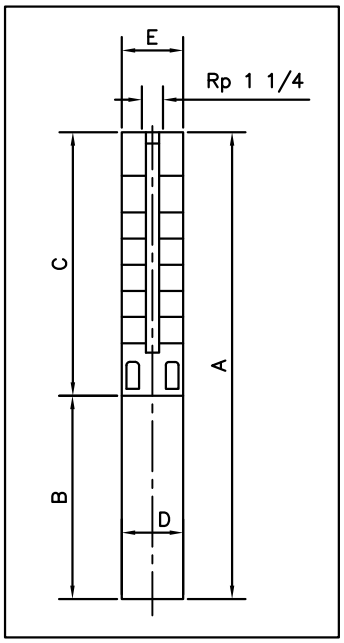
* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 5



DIMENSIONS AND WEIGHTS



QF 5 - 56 to QF 5 - 75 are mounted in sleeve for Rp 1¼ connection

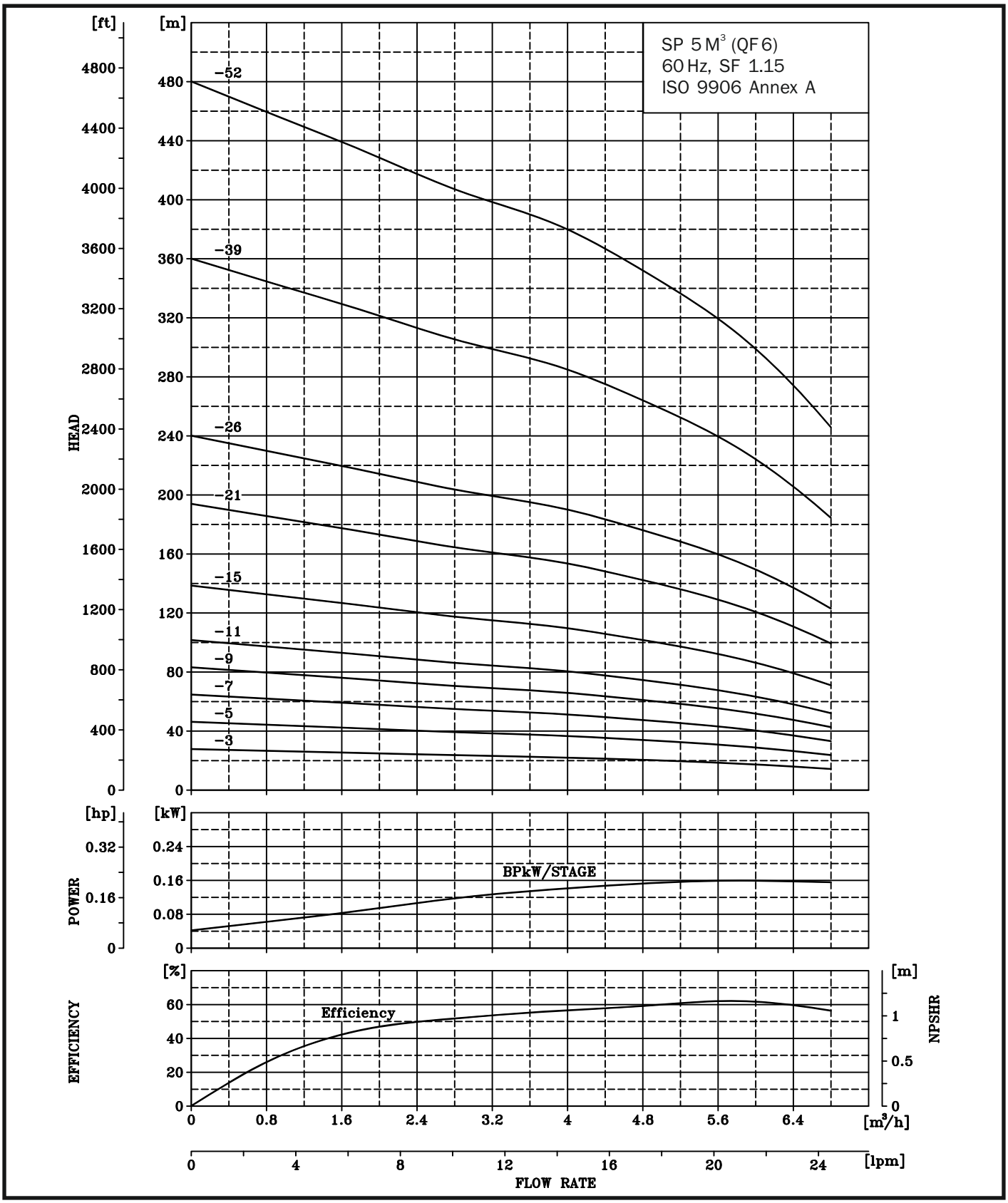
Pump Type	Motor		Dimensions [mm]							Net Weight [Kg]	
	Type	Power [Kw]	C	B		A		D	E		
				1x220V	3x220 V 3x380V 3x460V	1x220V	3x220 V 3x380V 3x460V			1x220V	3x220 V 3x380V 3x460V
QF 5-5	MCIP 100	0.37	291	311	311	602	602	95	101	12	12
QF 5-8	MCIP 100	0.55	354	311	311	665	665	95	101	14	14
QF 5-10	MCIP 100	0.75	396	332	332	728	728	95	101	16	16
QF 5-14	MCIP 100	1.1	480	380	380	860	860	95	101	20	20
QF 5-18	MCIP 100.5	1.5	564	425	425	989	989	95	101	26	26
QF 5-24	MCIP 100.5	2.2	690	493	455	1183	1145	95	101	28	28
QF 5-32	MCIP 100.5	3.0	858	-	493	-	1351	95	101	-	30
QF 5-38	MCIP 101	4.0	984	680	566	1664	1550	95	101	43	42
QF 5-56	MCIP 101	5.5	1362	-	680	-	2042	95	101	-	49
QF 5-56	MTSF 150	5.5	1362	-	699	-	2061	138	140	-	67
QF 5-75	MTSF 150	7.5	1761	-	719	-	2480	138	140	-	75

E = Maximum diameter of pump inclusive of cable guard and motor.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 6



TECHNICAL DATA

SUBMERSIBLE PUMP QF 6

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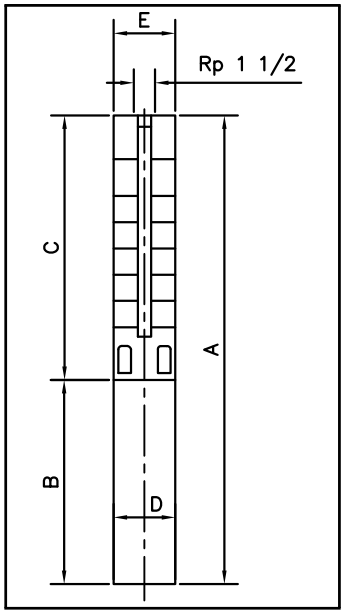
DIMENSIONS AND WEIGHTS



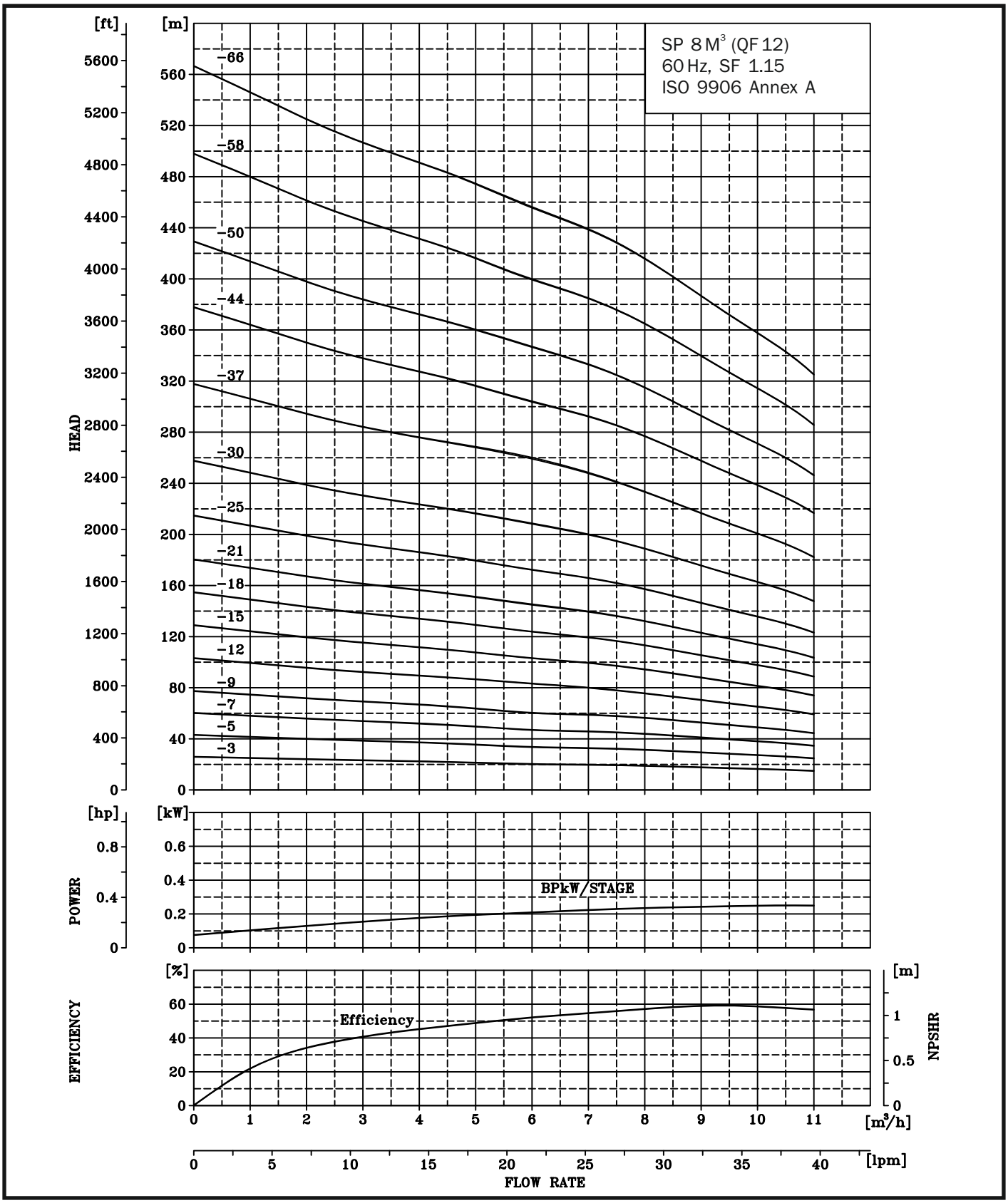
QF 6 - 52 are mounted in sleeve
for Rp 1½ connection.

Pump Type	Motor		Dimensions [mm]							Net Weight [Kg]	
	Type	Power [Kw]	C	B		A		D	E		
				1x220V	3x220 V 3x380V 3x460V	1x220V	3x220 V 3x380V 3x460V			1x220V	3x220 V 3x380V 3x460V
QF 6 -3	MCIP 100	0.37	249	311	311	560	560	95	101	13	13
QF 6 -5	MCIP 100	0.55	291	311	311	602	602	95	101	13	13
QF 6 -7	MCIP 100	0.75	333	332	332	665	665	95	101	15	15
QF 6 -9	MCIP 100	1.1	375	380	380	755	755	95	101	14	18
QF 6 -11	MCIP 100.5	1.5	417	425	425	842	842	95	101	24	24
QF 6 -15	MCIP 100.5	2.2	501	493	455	994	956	95	101	25	25
QF 6 -21	MCIP 100.5	3.0	627	-	493	-	1120	95	101	-	26
QF 6 -26	MCIP 101	4.0	732	680	566	1412	1298	95	101	38	37
QF 6 - 39	MCIP 101	5.5	1005	-	680	-	1685	95	101	-	41
QF 6 - 39	MTSF 150	5.5	1005	-	699	-	1704	138	138	-	59
QF 6 - 52	MTSF 150	7.5	1278	-	719	-	1997	138	140	-	64

E = Maximum diameter of pump inclusive of cable guard and motor.
* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 12



TECHNICAL DATA

SUBMERSIBLE PUMP QF 12

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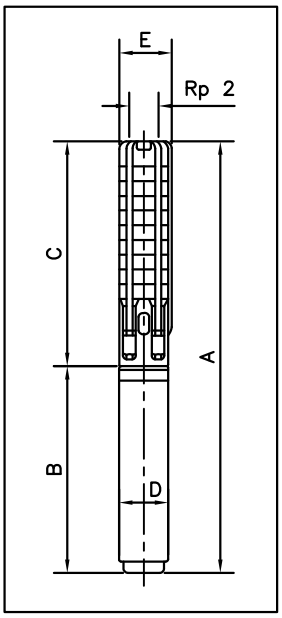
DIMENSIONS AND WEIGHTS



QF 12 - 50 to QF 12 - 66
are mounted in sleeve for
Rp 2 connection

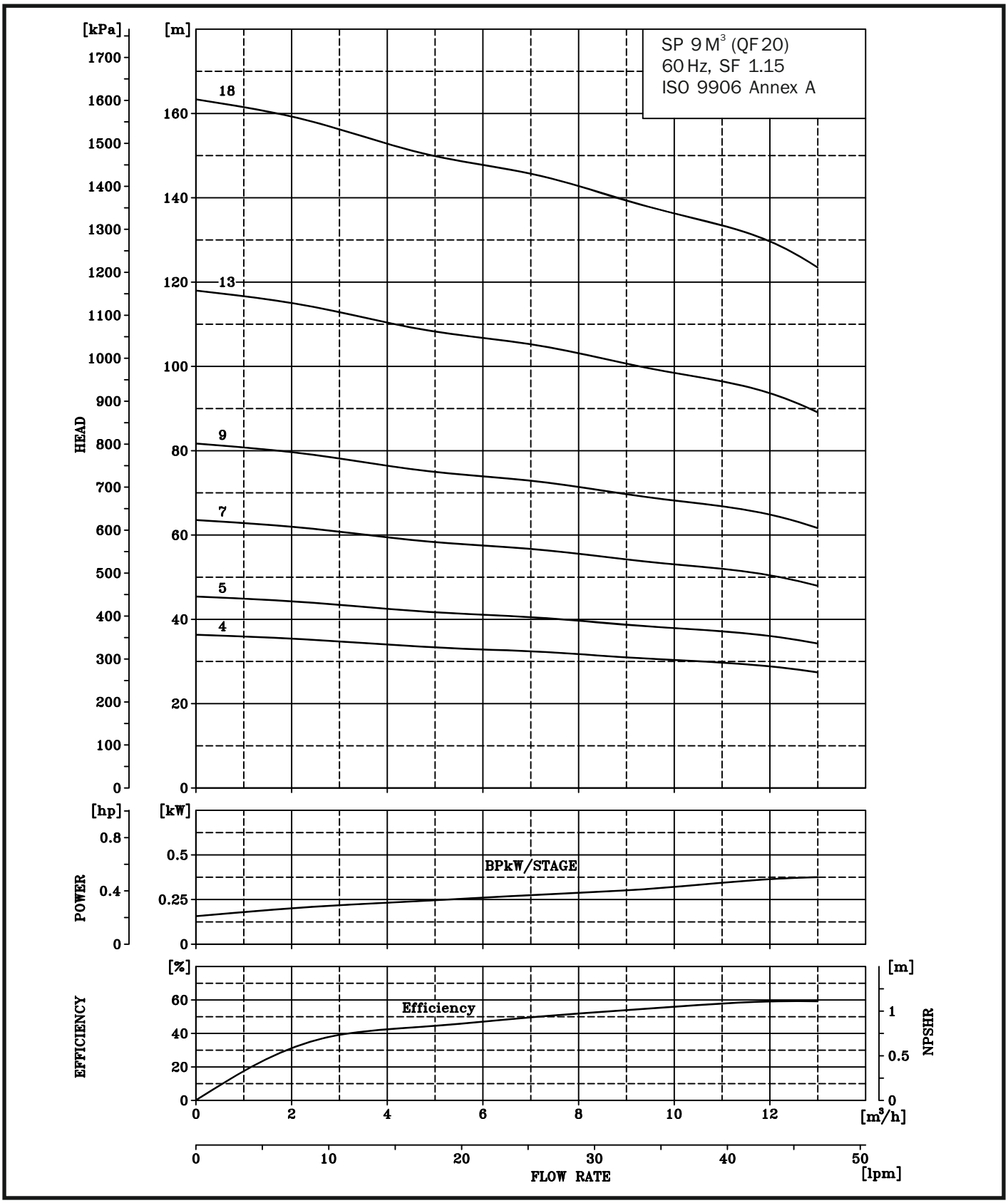
Pump Type	Motor		Dimensions [mm]							Net Weight [Kg]	
	Type	Power [Kw]	C	B		A		D	E		
				1x220V	3x220 V 3x380V 3x460V	1x220V	3x220 V 3x380V 3x460V			1x220V	3x220 V 3x380V 3x460V
QF 12 -3	MCIP 100	0.55	341	311	311	652	652	95	101	13	13
QF 12-5	MCIP 100	1.1	425	380	380	805	805	95	101	18	18
QF 12-7	MCIP 100.5	1.5	509	425	425	934	934	95	101	24	24
QF 12-9	MCIP 100.5	2.2	593	493	455	1086	1048	95	101	25	25
QF 12-12	MCIP 100.5	3.0	719	-	493	-	1212	95	101	-	26
QF 12-15	MCIP 101	4.0	845	680	566	1525	1411	95	101	39	38
QF 12-18	MCIP 101	5.5	971	-	680	-	1651	95	101	-	40
QF 12-21	MCIP 101	5.5	1097	-	680	-	1777	95	101	-	41
QF 12-25	MCIP 101	5.5	1265	-	680	-	1945	95	101	-	43
QF 12-30	MCIP 101	7.5	1475	-	722	-	2197	95	101	-	46
QF 12-18	MTSF 150	5.5	1046	-	699	-	1745	138	138	-	58
QF 12-21	MTSF 150	5.5	1172	-	699	-	1871	138	138	-	59
QF 12-25	MTSF 150	5.5	1340	-	699	-	2039	138	138	-	61
QF 12-30	MTSF 150	7.5	1550	-	719	-	2269	138	138	-	65
QF 12-37	MTSF 150	9.2	1844	-	749	-	2593	138	138	-	71
QF 12-44	MTSF 150	11.0	2138	-	779	-	2917	138	138	-	77
QF 12-50	MTSF 150	13.0	2390	-	829	-	3219	138	140	-	85
QF 12-58	MTSF 150	15.0	2726	-	874	-	3600	138	140	-	93
QF 12-66	MTSF 150	15.0	3062	-	874	-	3936	138	140	-	97

E = Maximum diameter of pump inclusive of cable guard and motor.

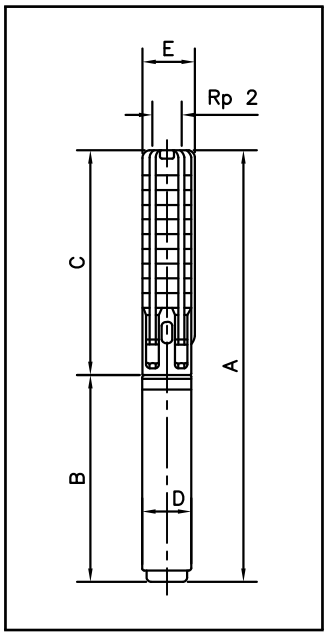
* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 20



DIMENSIONS AND WEIGHTS



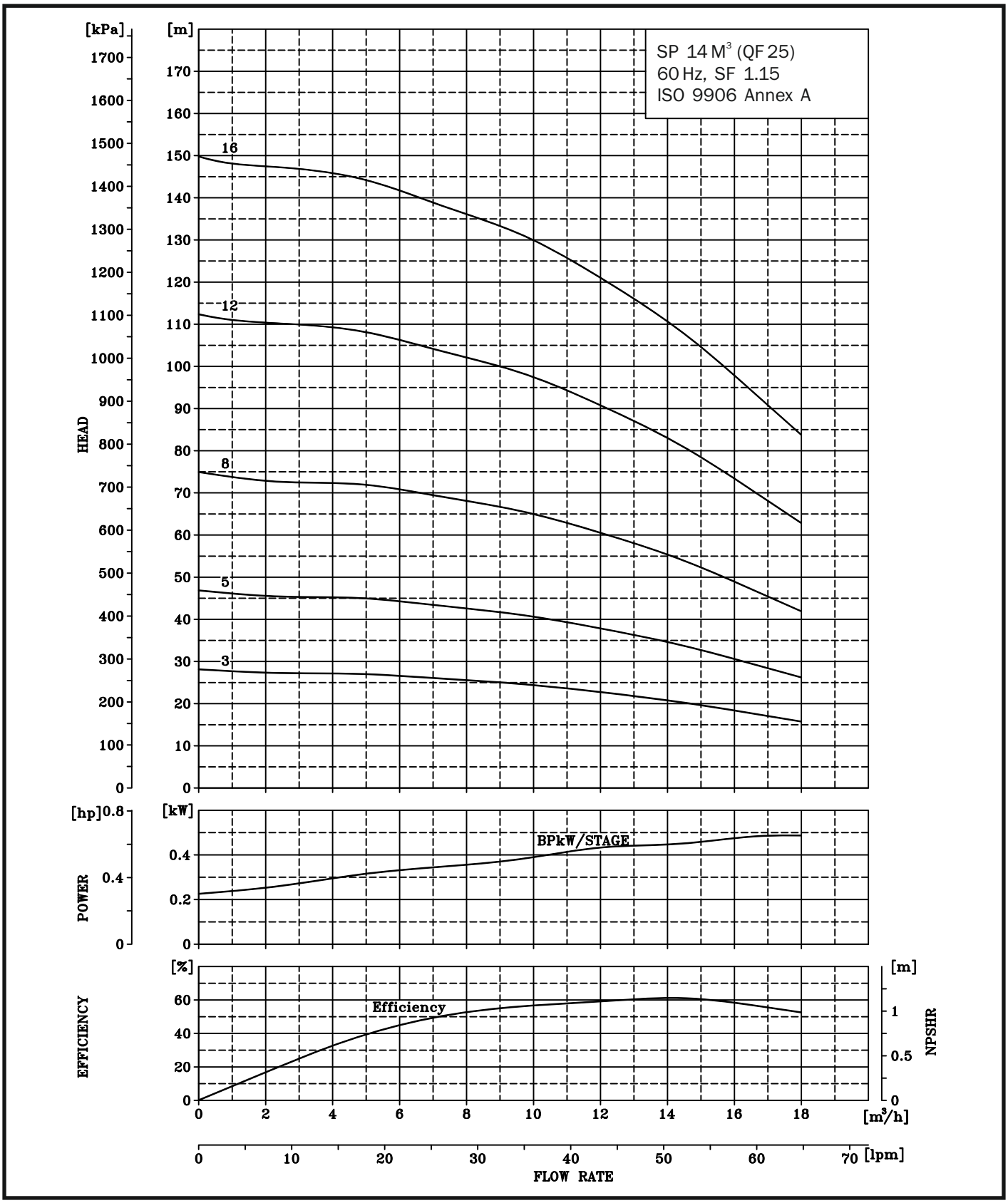
Pump Type	Motor		Dimensions [mm]							Net Weight [Kg]
	Type	Power [Kw]	C	B		A		D	E	
				1x220V	3x220 V 3x400V 3x460V	1x220V	3x220 V 3x400V 3x460V			
QF 20-4	MCIP 100.5	1.5	445	425	425	870	870	95	101	25
QF 20-5	MCIP 100.5	2.2	510	493	425	1003	935	95	101	25
QF 20-7	MCIP 101	3.7	640	680	566	1320	1206	95	101	36
QF 20-9	MCIP 101	3.7	770	680	566	1450	826	95	101	37
QF 20-13*	MCIP 101	5.5	1030	-	680	-	1710	95	101	41
QF 20-18*	MCIP 101	7.5	1355	-	722	-	2077	95	101	45

E = Maximum diameter of pump inclusive of cable guard and motor.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 25



TECHNICAL DATA

SUBMERSIBLE PUMP QF 25

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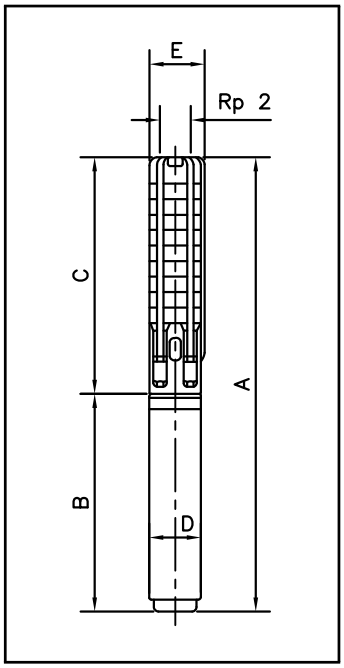
DIMENSIONS AND WEIGHTS

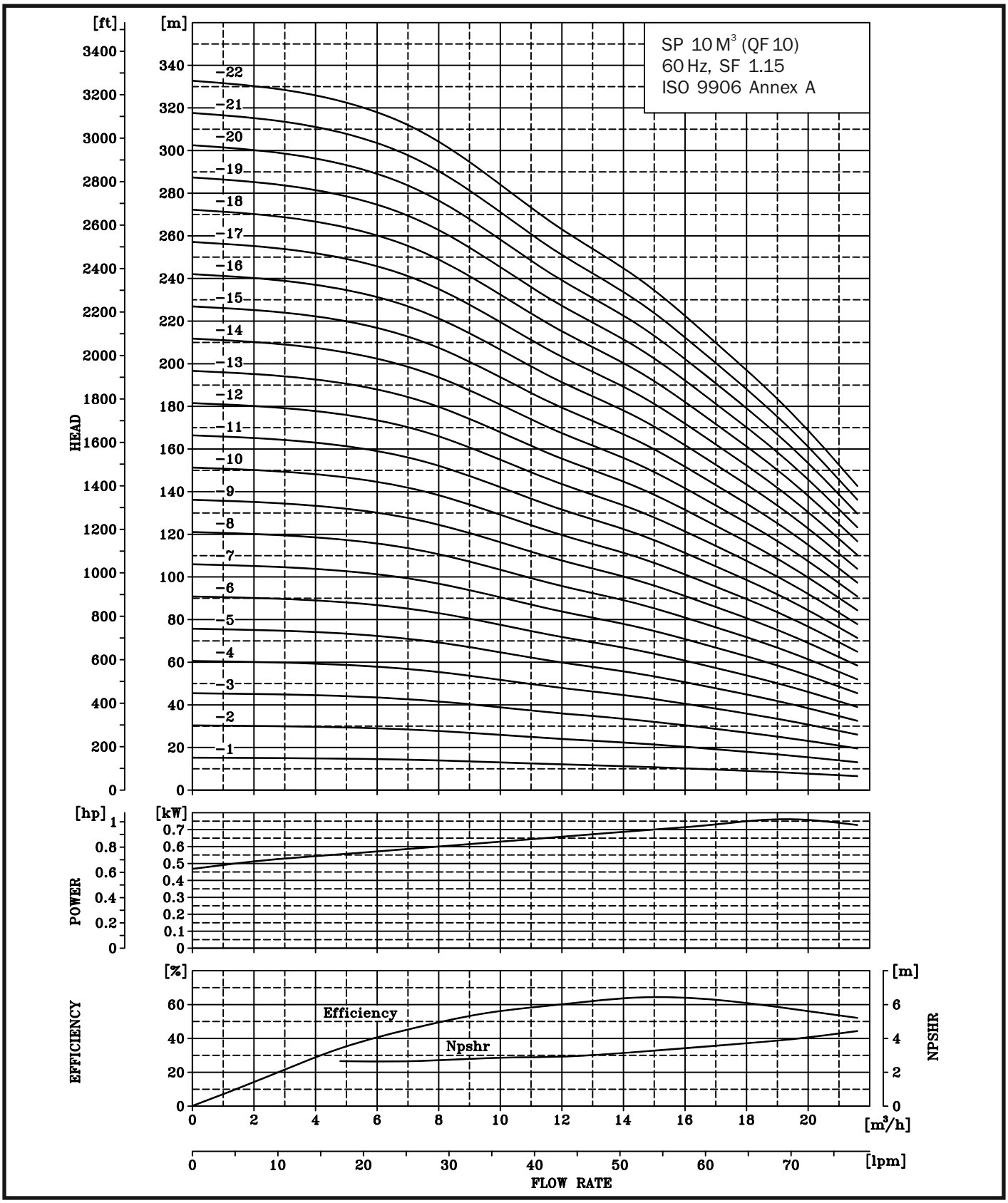


Pump Type	Motor		Dimensions [mm]					Net
	Type	Power [Kw]	C	B 3x220 V 3x380V 3x460V	A 3x220 V 3x380V 3x460V	D	E	Weight [Kg]
QF 25-3	MCIP 100.5	1.5	380	425	805	95	101	22
QF 25-5	MCIP 100.5	2.2	510	455	965	95	101	22
QF 25-8	MCIP 101	4.0	705	566	1271	95	101	33
QF 25-12	MCIP 101	5.5	965	680	1645	95	101	34
QF 25-16	MCIP 101	7.5	1225	722	1947	95	101	55
QF 25-12	MTSF 150	5.5	1035	699	1734	138	138	52
QF 25-16	MTSF 150	7.5	1295	719	2014	138	138	55

E = Maximum diameter of pump inclusive of cable guard and motor.
* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 10



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 10

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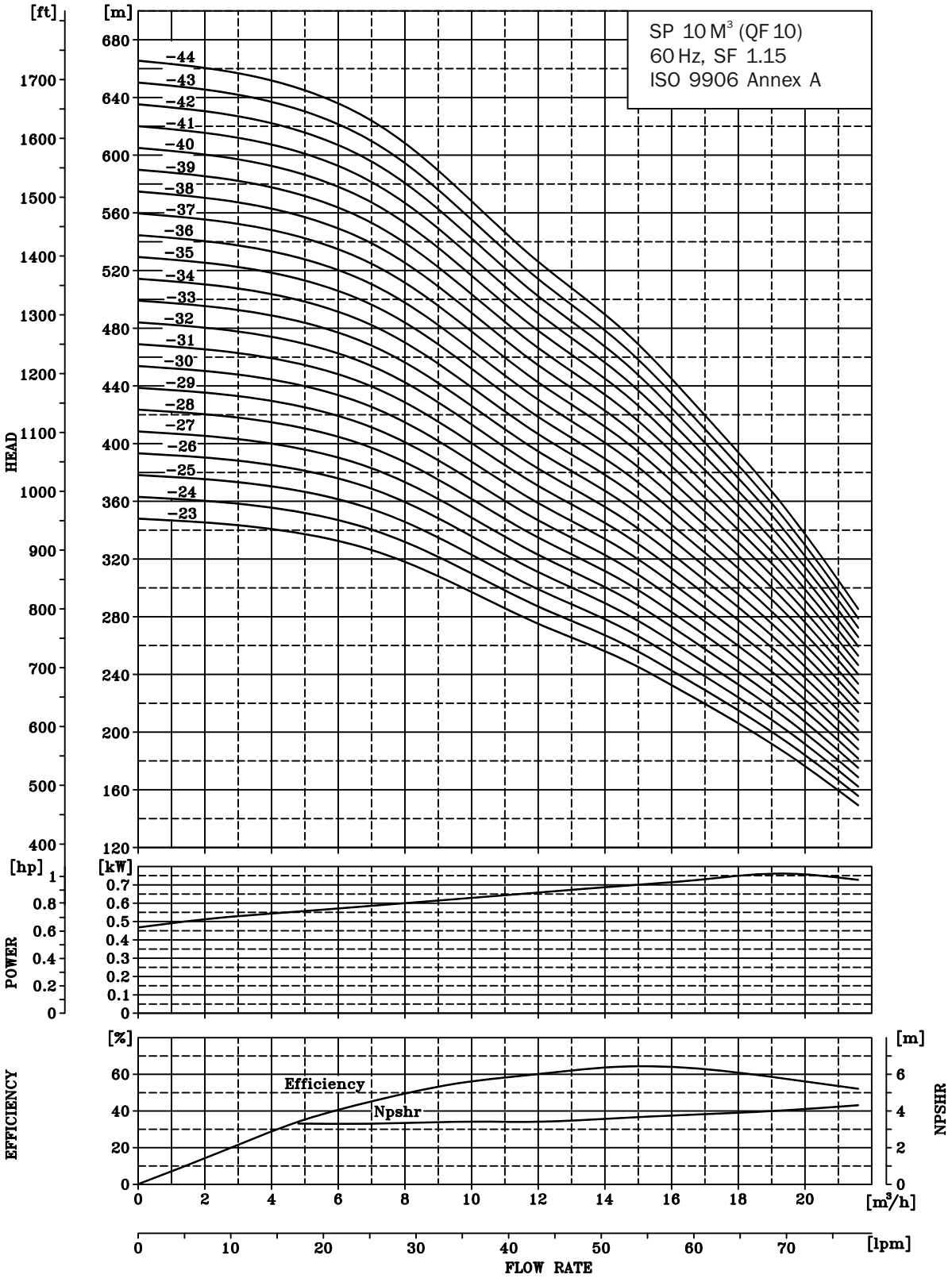
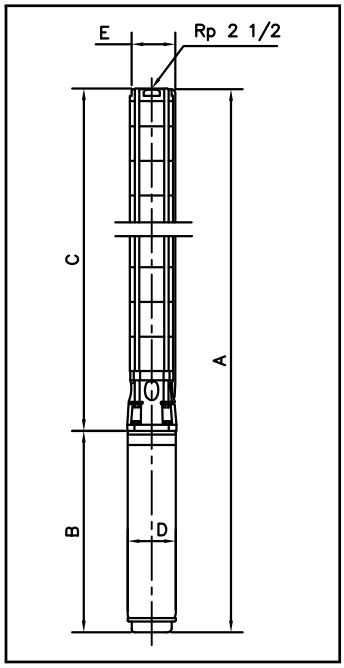


TECHNICAL DATA

SUBMERSIBLE PUMP QF 10

DIMENSIONS AND WEIGHTS



QF 10 - 33 to QF 10-50 are mounted

Pump Type	Motor		Dimensions [mm]					Net Weight Kg
	Type	Power [Kw]	C	B	A	D	E*	
QF 10-1	MCIP 100	0.75	318	332	650	95	131	16
QF 10-2	MCIP 100.5	1.5	378	425	803	95	131	25
QF 10-3	MCIP 100.5	2.2	439	455	894	95	131	26
QF 10-4	MCIP 100.5	3.0	499	493	992	95	131	28
QF 10-5	MCIP 100.5	3.0	560	493	1053	95	131	29
QF 10-6	MCIP 101	4.0	620	566	1186	95	131	40
QF 10-7	MCIP 101	5.5	681	680	1361	95	131	42
QF 10-8	MCIP 101	5.5	741	680	1421	95	131	44
QF 10-9	MCIP 101	5.5	802	680	1482	95	131	45
QF 10-10	MTSF 150	7.5	862	732	1594	138	142	66
QF 10-11	MTSF 150	7.5	923	732	1655	138	142	67
QF 10-12	MTSF 150	7.5	983	732	1715	138	142	68
QF 10-13	MTSF 150	9.3	1061	762	1823	138	142	73
QF 10-14	MTSF 150	9.3	1121	762	1883	138	142	74
QF 10-15	MTSF 150	9.3	1182	762	1944	138	142	75
QF 10-16	MTSF 150	11.0	1242	792	2034	138	142	79
QF 10-17	MTSF 150	11.0	1303	792	2095	138	142	81
QF 10-18	MTSF 150	11.0	1363	792	2155	138	142	82
QF 10-19	MTSF 150	13.0	1424	842	2266	138	142	88
QF 10-20	MTSF 150	13.0	1484	842	2326	138	142	89
QF 10-21	MTSF 150	13.0	1545	842	2387	138	142	90
QF 10-22	MTSF 150	13.0	1605	842	2447	138	142	92
QF 10-23	MTSF 150	15.0	1666	887	2553	138	142	98
QF 10-24	MTSF 150	15.0	1726	887	2613	138	142	99
QF 10-25	MTSF 150	15.0	1787	887	2674	138	142	100
QF 10-26	MTSF 150	18.5	1847	932	2779	138	142	106
QF 10-27	MTSF 150	18.5	1908	932	2840	138	142	107
QF 10-28	MTSF 150	18.5	1968	932	2900	138	142	109
QF 10-29	MTSF 150	18.5	2029	932	2961	138	142	109
QF 10-30	MTSF 150	18.5	2089	932	3021	138	142	111
QF 10-31	MTSF 150	18.5	2150	932	3082	138	142	112
QF 10-32	MTSF 150	22.0	2210	1022	3232	138	142	122
QF 10-33	MTSF 150	22.0	2271	1022	3293	138	142	123
QF 10-34	MTSF 150	22.0	2331	1022	3353	138	142	124
QF 10-35	MTSF 150	22.0	2392	1022	3414	138	142	126
QF 10-36	MTSF 150	22.0	2452	1022	3474	138	142	127
QF 10-37	MTSF 150	22.0	2513	1022	3535	138	142	128
QF 10-38	MTSF 150	26.0	2573	1127	3700	138	142	140
QF 10-39	MTSF 150	26.0	2634	1127	3761	138	142	142
QF 10-40	MTSF 150	26.0	2694	1127	3821	138	142	143
QF 10-41	MTSF 150	26.0	2755	1127	3882	138	142	144
QF 10-42	MTSF 150	26.0	2815	1127	3942	138	142	145
QF 10-43	MTSF 150	26.0	2876	1127	4003	138	142	147
QF 10-44	MTSF 150	26.0	2936	1127	4063	138	142	148

E* = Maximum diameter of pump inclusive of cable guard and motor.
* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 15

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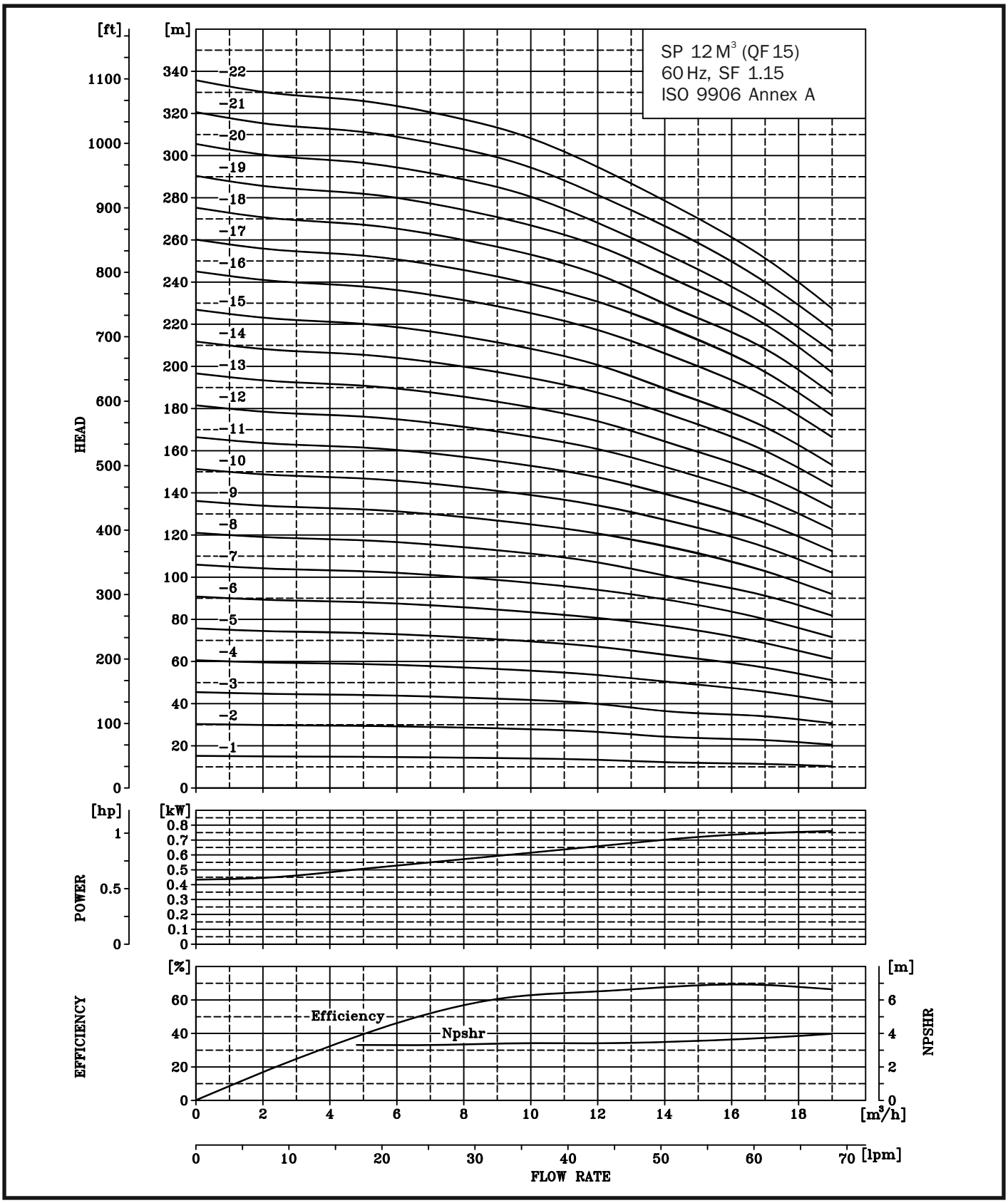
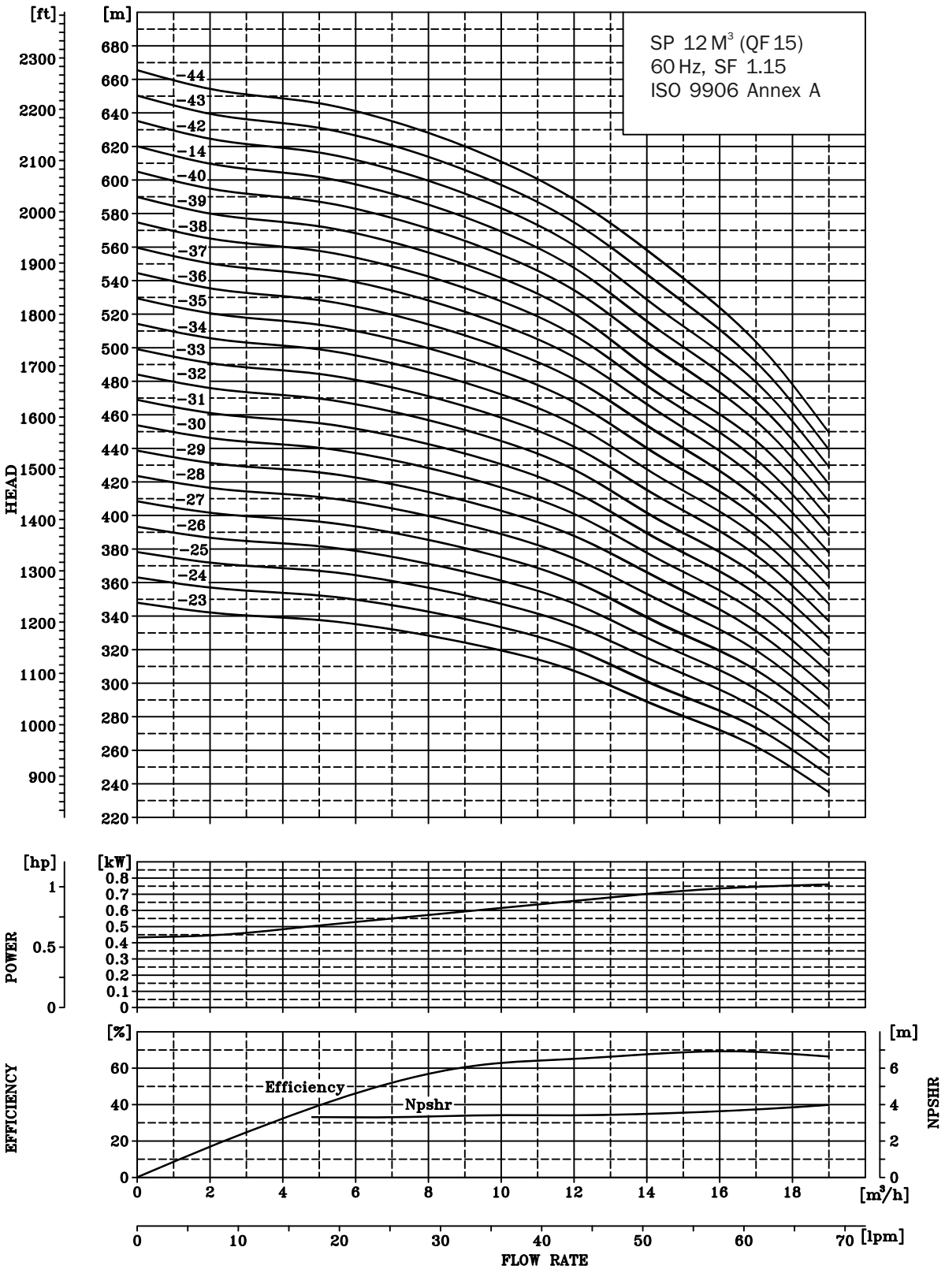


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 15



TECHNICAL DATA

SUBMERSIBLE PUMP QF 15

SHAKTI PUMPING LIFE

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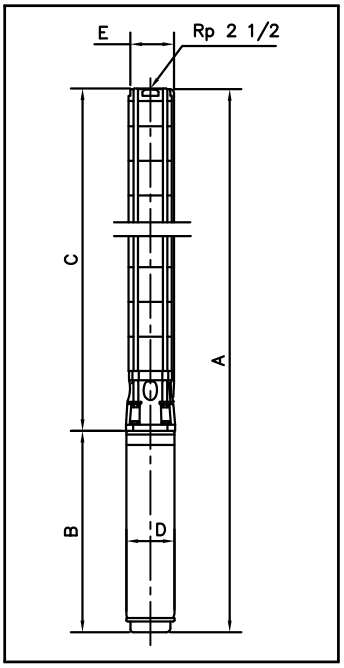
DIMENSIONS AND WEIGHTS



QF 15 - 33 to QF 15-50 are mounted

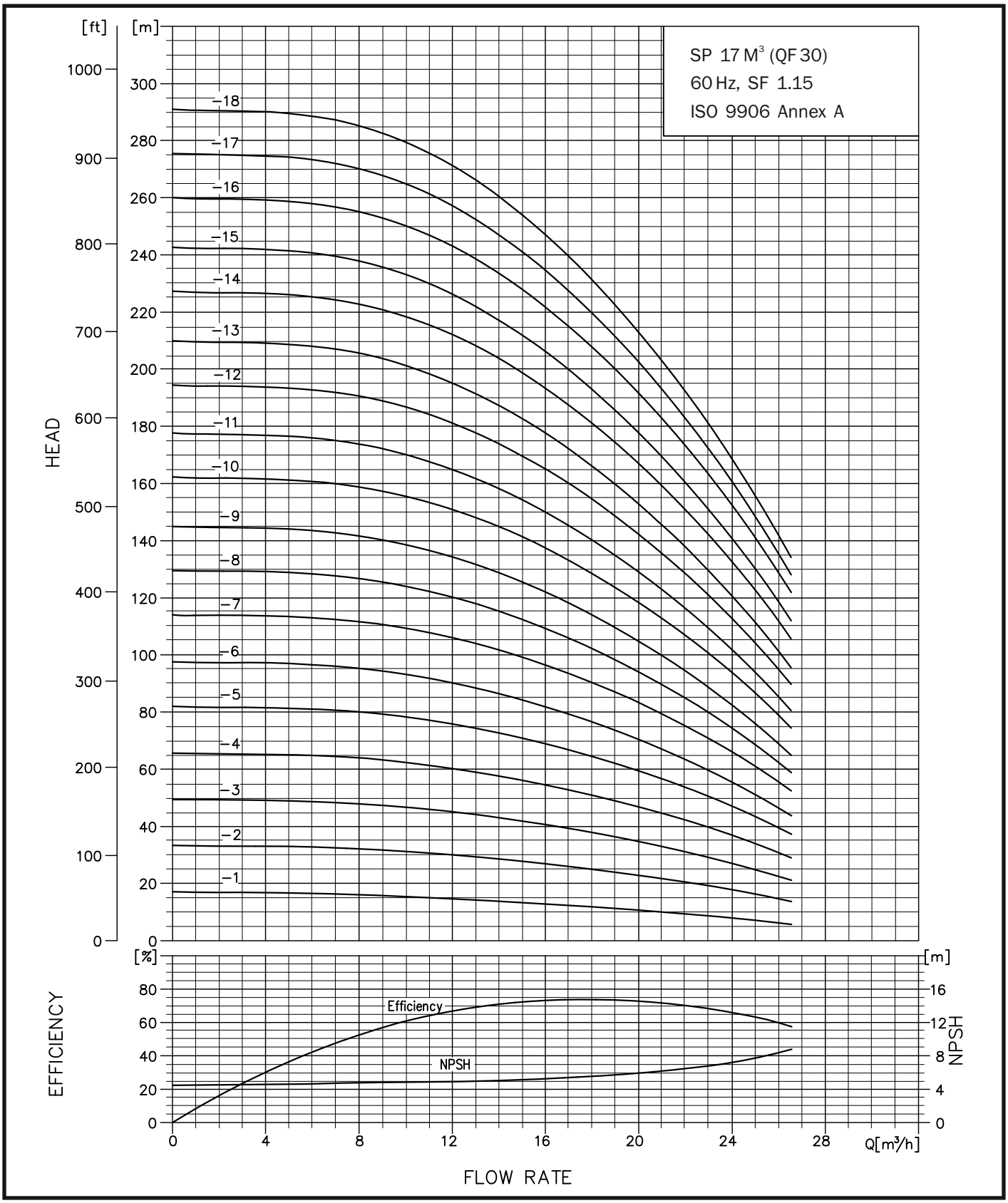
Pump Type	Motor		Dimensions [mm]					Net
	Type	Power	C	B	A	D	E*	Weight
		[Kw]						Kg
QF 15-1	MCIP 100	0.75	318	332	650	95	131	16
QF 15-2	MCIP 100.5	1.5	378	425	803	95	131	25
QF 15-3	MCIP 100.5	2.2	439	455	894	95	131	26
QF 15-4	MCIP 100.5	3	499	493	992	95	131	28
QF 15-5	MCIP 101	4	560	566	1126	95	131	39
QF 15-6	MCIP 101	5.5	620	680	1300	95	131	41
QF 15-7	MCIP 101	5.5	681	680	1361	95	131	42
QF 15-8	MCIP 101	7.5	741	722	1463	95	131	45
QF 15-9	MCIP 101	7.5	802	722	1524	95	131	46
QF 15-10	MTSF 150	7.5	862	732	1594	138	142	66
QF 15-11	MTSF 150	9.3	923	762	1685	138	142	70
QF 15-12	MTSF 150	9.3	1000	762	1762	138	142	71
QF 15-13	MTSF 150	9.3	1061	762	1823	138	142	73
QF 15-14	MTSF 150	11	1121	792	1913	138	142	77
QF 15-15	MTSF 150	11	1182	792	1974	138	142	78
QF 15-16	MTSF 150	13	1242	842	2084	138	142	84
QF 15-17	MTSF 150	13	1303	842	2145	138	142	86
QF 15-18	MTSF 150	13	1363	842	2205	138	142	87
QF 15-19	MTSF 150	15	1424	887	2311	138	142	93
QF 15-20	MTSF 150	15	1484	887	2371	138	142	94
QF 15-21	MTSF 150	15	1545	887	2432	138	142	95
QF 15-22	MTSF 150	18.5	1605	932	2537	138	142	101
QF 15-23	MTSF 150	18.5	1666	932	2598	138	142	102
QF 15-24	MTSF 150	18.5	1726	932	2658	138	142	103
QF 15-25	MTSF 150	18.5	1787	932	2719	138	142	104
QF 15-26	MTSF 150	18.5	1847	932	2779	138	142	106
QF 15-27	MTSF 150	22	1908	1022	2930	138	142	116
QF 15-28	MTSF 150	22	1968	1022	2990	138	142	117
QF 15-29	MTSF 150	22	2029	1022	3051	138	142	118
QF 15-30	MTSF 150	22	2089	1022	3111	138	142	120
QF 15-31	MTSF 150	22	2150	1022	3172	138	142	121
QF 15-32	MTSF 150	26	2210	1127	3337	138	142	133
QF 15-33	MTSF 150	26	2271	1127	3398	138	142	134
QF 15-34	MTSF 150	26	2331	1127	3458	138	142	135
QF 15-35	MTSF 150	26	2392	1127	3519	138	142	137
QF 15-36	MTSF 150	26	2452	1127	3579	138	142	138
QF 15-37	MTSF 150	26	2513	1127	3640	138	142	139
QF 15-38	MTSF 150	30	2573	1127	3700	138	142	150
QF 15-39	MTSF 150	30	2634	1127	3761	138	142	152
QF 15-40	MTSF 150	30	2694	1127	3821	138	142	153
QF 15-41	MTSF 150	30	2755	1127	3882	138	142	154
QF 15-42	MTSF 150	30	2815	1127	3942	138	142	155
QF 15-43	MTSF 150	37	2876	1307	4183	138	142	164
QF 15-44	MTSF 150	37	2936	1307	4243	138	142	165

E = Maximum diameter of pump inclusive of cable guard and motor.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 30



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 30

SHAKTI PUMPING LIFE

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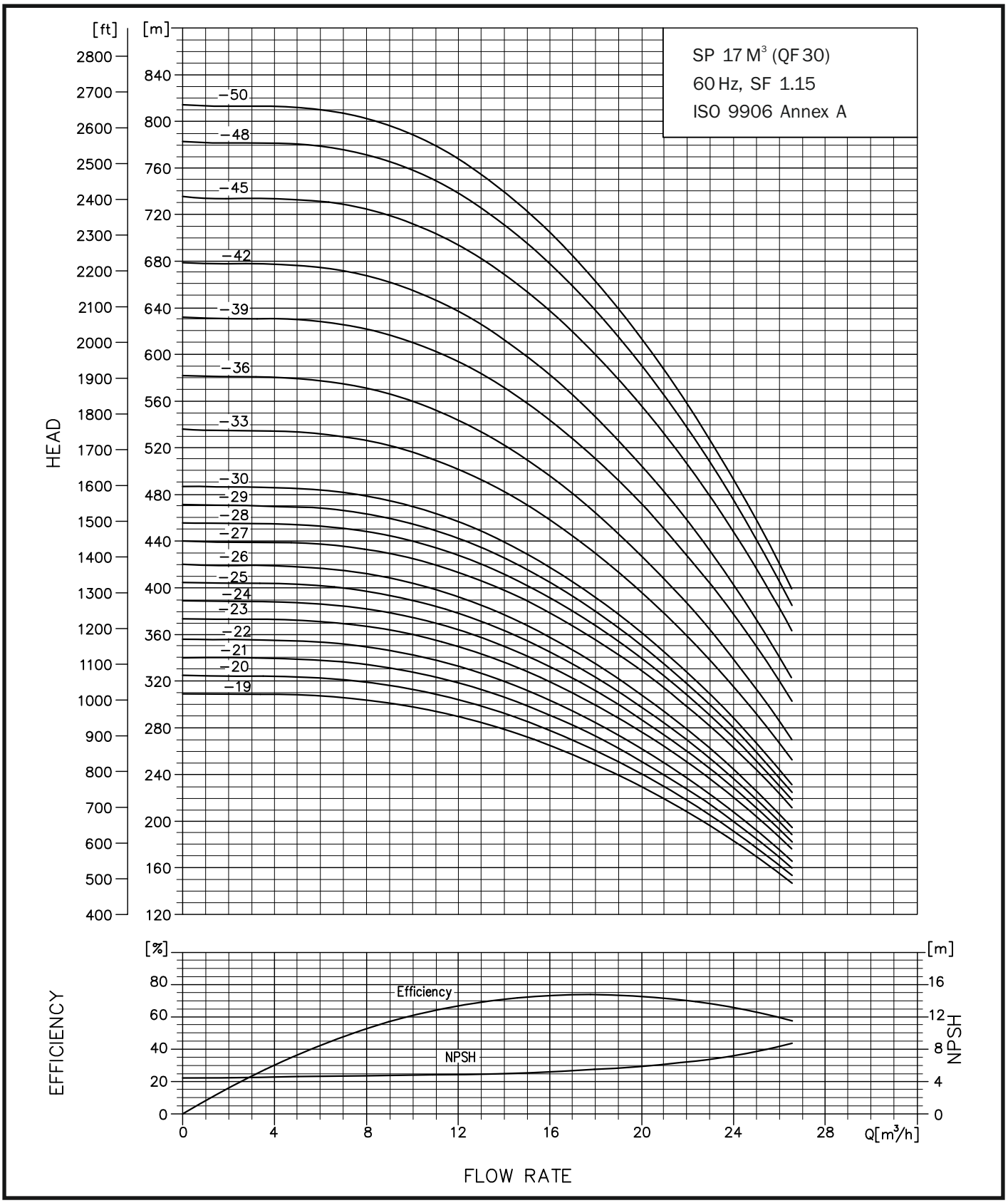
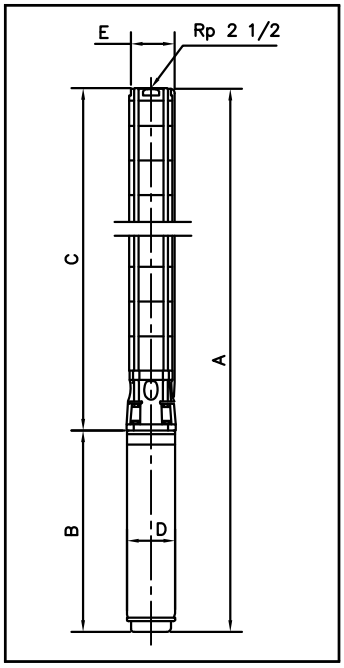


TECHNICAL DATA

SUBMERSIBLE PUMP QF 30

DIMENSIONS AND WEIGHTS



Qf30 - 33 to QF30 -50 are mounted in sleeve for Rp 3 connection.

Pump Type	Motor		Dimensions [mm]					Net Weight Kg
	Type	Power [Kw]	C	B	A	D	E*	
QF 30-1	MCIP 100	1.1	335	380	715	95	131	21
QF 30-2	MCIP 100.5	2.2	395	455	850	95	131	28
QF 30-3	MCIP 100.5	3	456	493	949	95	131	29
QF 30-4	MCIP 101	4	516	566	1082	95	131	40
QF 30-5	MCIP 101	5.5	577	680	1257	95	131	42
QF 30-6	MCIP 101	5.5	637	680	1317	95	131	44
QF 30-7	MCIP 101	7.5	698	722	1420	95	131	46
QF 30-8	MCIP 101	7.5	758	722	1480	95	131	47
QF 30-9	MCIP 101	7.5	819	722	1541	95	131	48
QF 30-5	MTSF 150	5.5	577	699	1276	138	142	60
QF 30-6	MTSF 150	5.5	637	699	1336	138	142	62
QF 30-7	MTSF 150	7.5	698	719	1417	138	142	65
QF 30-8	MTSF 150	7.5	758	719	1477	138	142	66
QF 30-9	MTSF 150	7.5	819	719	1538	138	142	67
QF 30-10	MTSF 150	9.2	879	749	1628	138	142	71
QF 30-11	MTSF 150	9.2	940	749	1689	138	142	73
QF 30-12	MTSF 150	11	1000	779	1779	138	142	77
QF 30-13	MTSF 150	11	1061	779	1840	138	142	78
QF 30-14	MTSF 150	13	1121	829	1950	138	142	84
QF 30-15	MTSF 150	13	1182	829	2011	138	142	86
QF 30-16	MTSF 150	15	1242	874	2116	138	142	92
QF 30-17	MTSF 150	15	1303	874	2177	138	142	93
QF 30-18	MTSF 150	15	1363	874	2237	138	142	94
QF 30-19	MTSF 150	18.5	1424	919	2343	138	142	100
QF 30-20	MTSF 150	18.5	1484	919	2403	138	142	101
QF 30-21	MTSF 150	18.5	1545	919	2464	138	142	102
QF 30-22	MTSF 150	18.5	1605	919	2524	138	142	103
QF 30-23	MTSF 150	22	1666	1009	2675	138	142	113
QF 30-24	MTSF 150	22	1726	1009	2735	138	142	115
QF 30-25	MTSF 150	22	1787	1009	2796	138	142	116
QF 30-26	MTSF 150	22	1847	1009	2856	138	142	117
QF 30-27	MTSF 150	26	1908	1114	3022	138	142	129
QF 30-28	MTSF 150	26	1968	1114	3082	138	142	131
QF 30-29	MTSF 150	26	2029	1114	3143	138	142	132
QF 30-30	MTSF 150	26	2089	1114	3203	138	142	133
QF 30-33	MTSF 150	30	2271	1214	3485	138	142	147
QF 30-36	MTSF 150	30	2452	1214	3666	138	142	150
QF 30-39	MTSF 150	37	2634	1294	3928	138	142	161
QF 30-42	MTSFC 200	37	2634	1140	3774	192	192	164
QF 30-45	MTSFC 200	45	2997	1230	4227	192	192	218
QF 30-48	MTSFC 200	45	3178	1230	4408	192	192	221
QF 30-50	MTSFC 200	45	3299	1230	4529	192	192	223

E = Maximum diameter of pump inclusive of cable guard and motor.
* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 30

SHAKTI PUMPING LIFE

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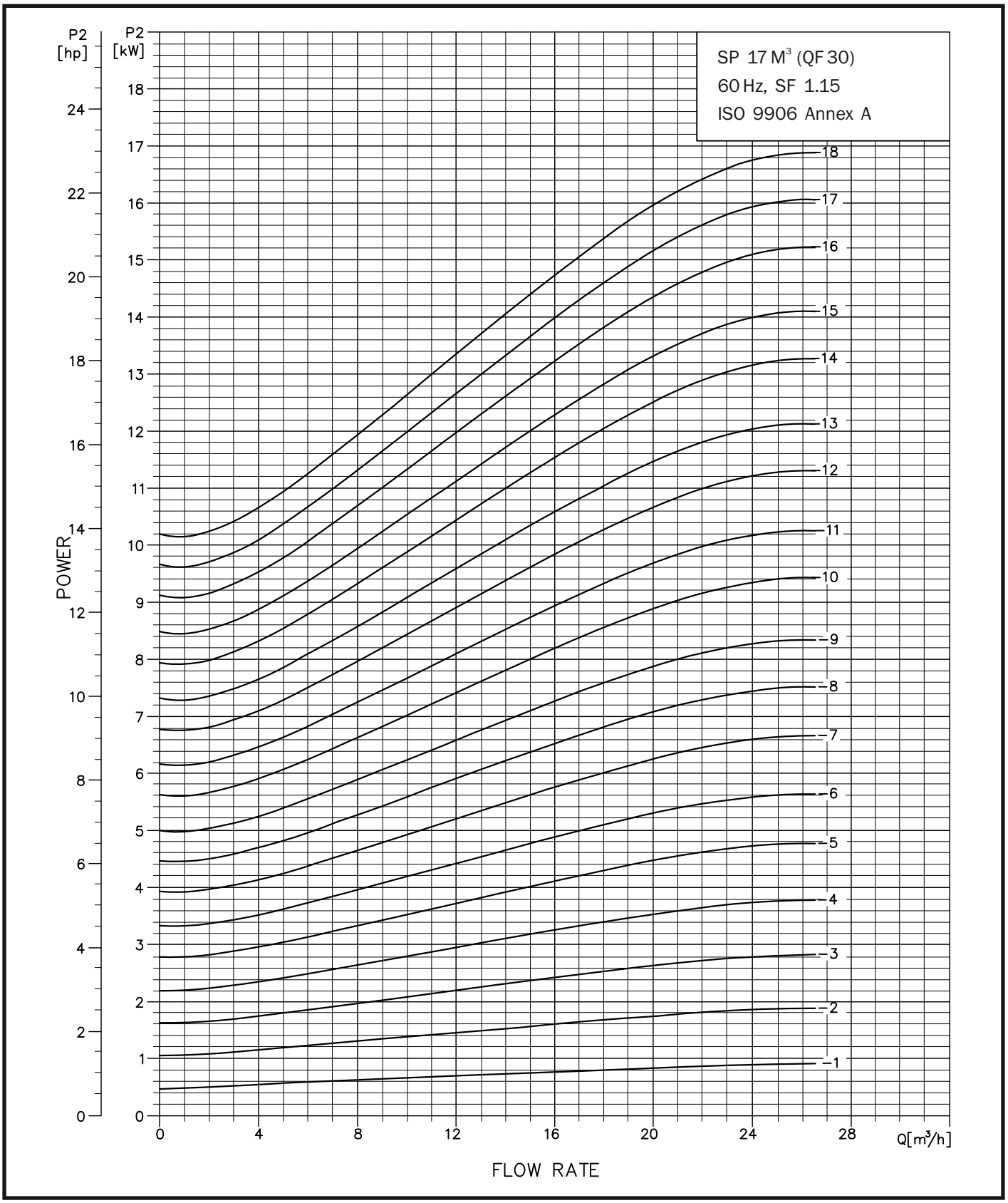
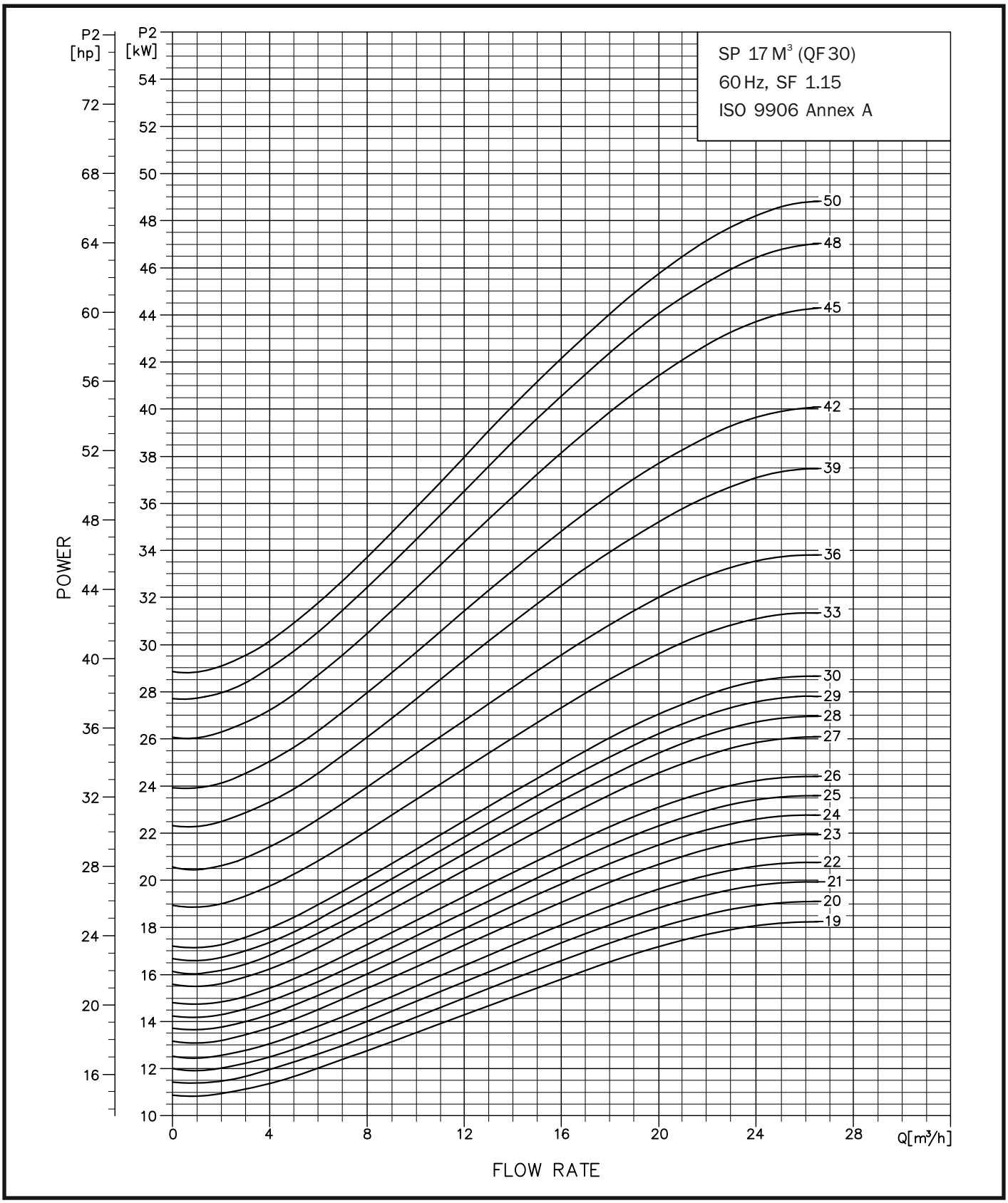


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 30



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 50

SHAKTI PUMPING LIFE

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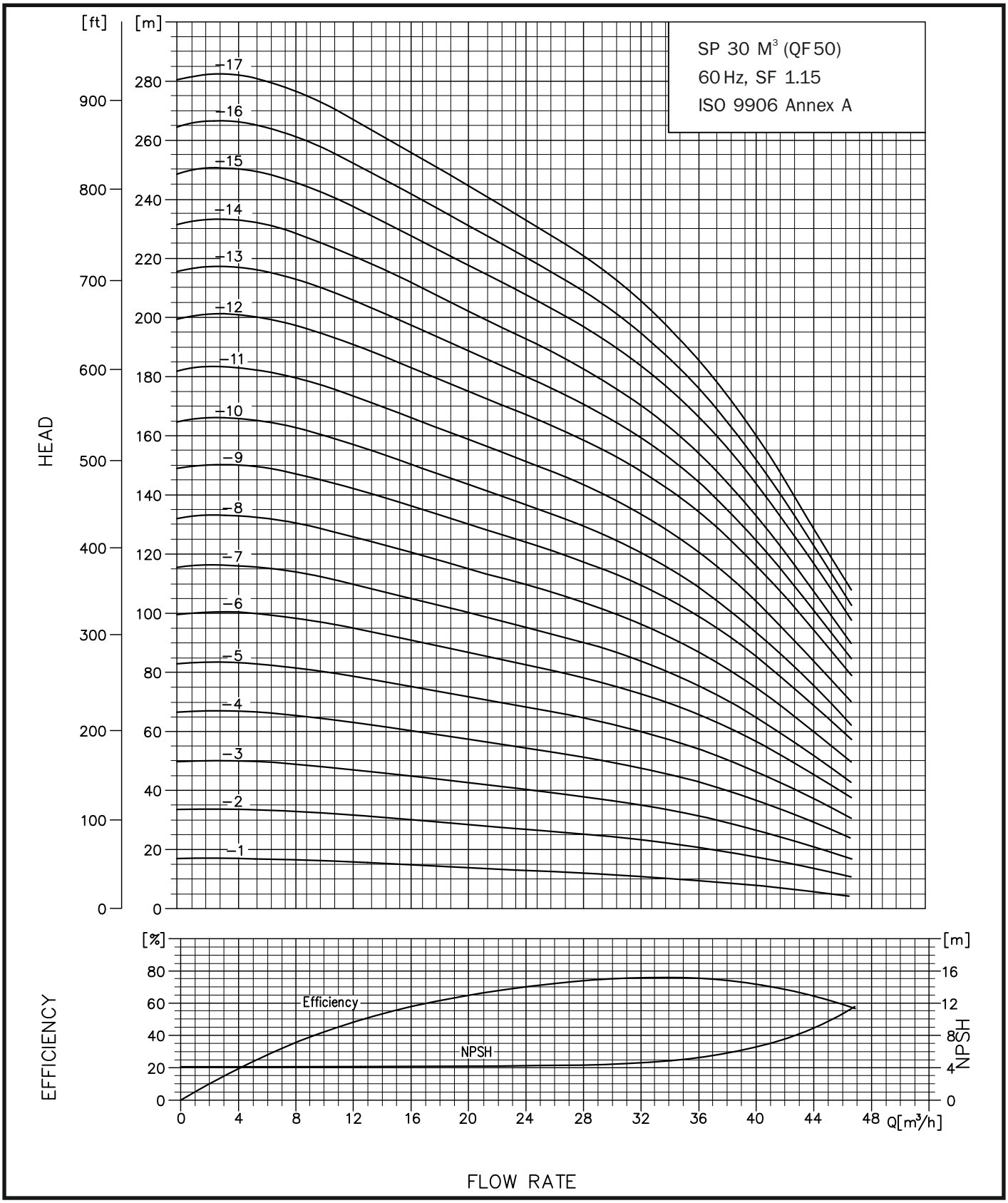
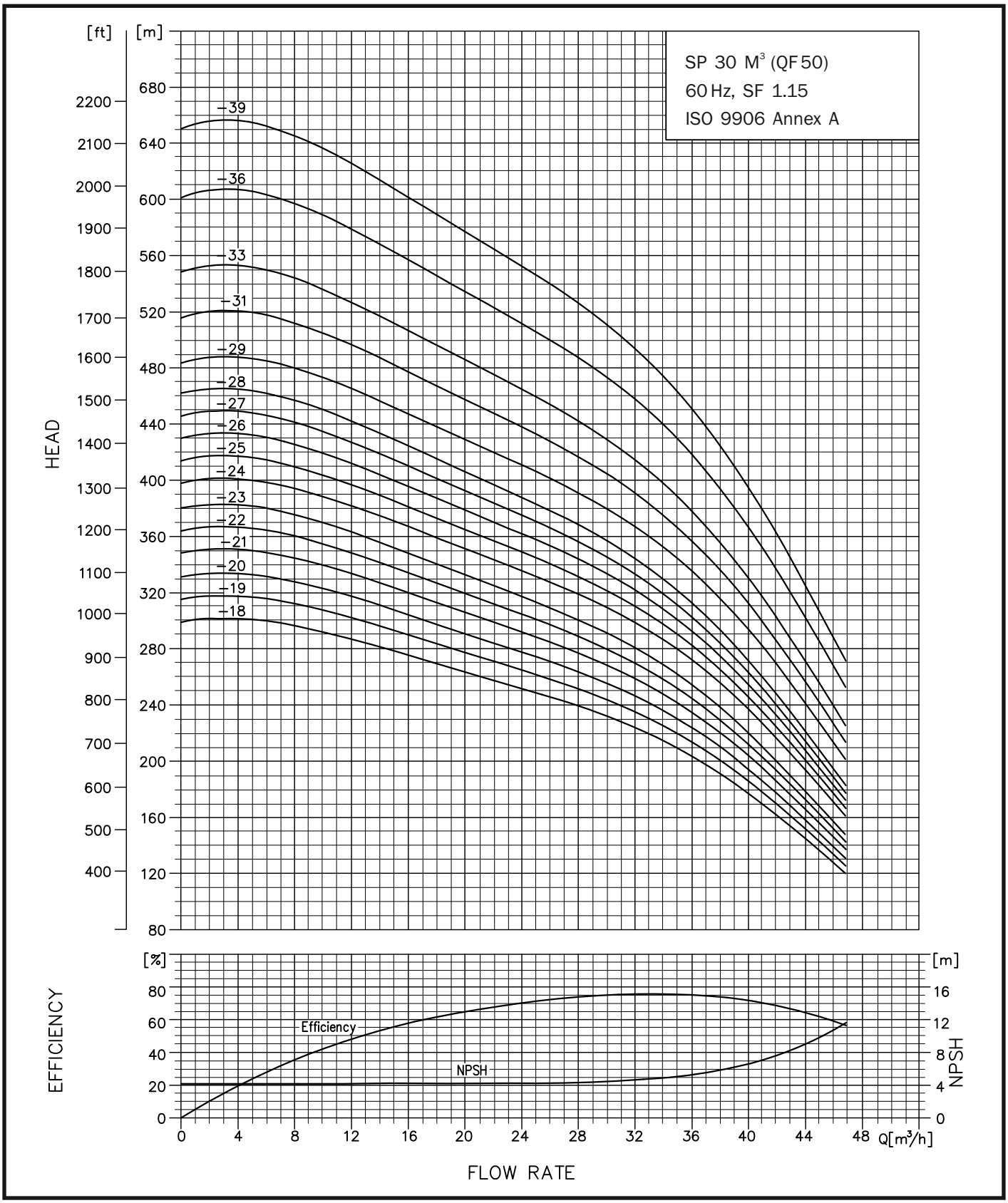


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 50

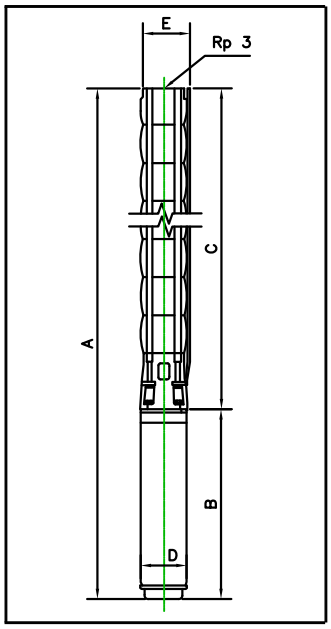


TECHNICAL DATA

SUBMERSIBLE PUMP QF 50

SHAKTI PUMPING LIFE
www.shaktipumps.com

DIMENSIONS AND WEIGHTS



QF 50-24 to QF 50-39 are mounted in sleeve for Rp 3 connection.

Pump Type	Motor		Dimensions [mm]						Net Weight Kg
	Type	Power [Kw]	C	B	A	D	E*	E**	
QF 50-1	MCIP 100.5	1.5	370	425	795	95	131	-	27
QF 50-2	MCIP 100.5	3.0	466	493	959	95	131	-	29
QF 50-3	MCIP 101	4.0	562	566	1128	95	131	-	41
QF 50-4	MCIP 101	5.5	658	680	1338	95	131	-	44
QF 50-5	MCIP 101	7.5	754	722	1476	95	131	-	47
QF 50-4	MTSF 150	5.5	658	699	1357	138	142	142	62
QF 50-5	MTSF 150	7.5	754	719	1473	138	142	142	66
QF 50-6	MTSF 150	9.2	850	749	1599	138	142	142	71
QF 50-7	MTSF 150	9.2	946	749	1695	138	142	142	73
QF 50-8	MTSF 150	11.0	1042	779	1821	138	142	142	78
QF 50-9	MTSF 150	13.0	1138	829	1967	138	142	142	85
QF 50-10	MTSF 150	13.0	1234	829	2063	138	142	142	86
QF 50-11	MTSF 150	15.0	1330	874	2204	138	142	142	93
QF 50-12	MTSF 150	18.5	1426	919	2345	138	142	142	99
QF 50-13	MTSF 150	18.5	1522	919	2441	138	142	142	101
QF 50-14	MTSF 150	18.5	1618	919	2537	138	142	142	103
QF 50-15	MTSF 150	22.0	1714	1009	2723	138	142	142	114
QF 50-16	MTSF 150	22.0	1810	1009	2819	138	142	142	116
QF 50-17	MTSF 150	22.0	1906	1009	2915	138	142	142	118
QF 50-18	MTSF 150	26.0	2002	1114	3116	138	142	142	131
QF 50-19	MTSF 150	26.0	2098	1114	3212	138	142	142	132
QF 50-20	MTSF 150	26.0	2194	1114	3308	138	142	142	134
QF 50-21	MTSF 150	30.0	2290	1214	3504	138	142	145	146
QF 50-22	MTSF 150	30.0	2386	1214	3600	138	142	145	148
QF 50-23	MTSF 150	30.0	2482	1214	3696	138	142	145	150
QF 50-24	MTSF 150	37.0	2578	1294	3872	138	142	145	159
QF 50-25	MTSF 150	37.0	2674	1294	3968	138	142	145	161
QF 50-26	MTSF 150	37.0	2770	1294	4064	138	142	145	163
QF 50-27	MTSF 150	37.0	2866	1294	4160	138	142	145	165
QF 50-28	MTSF 150	37.0	2962	1294	4256	138	142	145	166
QF 50-29	MTSFC 200	45.0	3058	1230	4288	192	192	192	217
QF 50-31	MTSFC 200	45.0	3250	1230	4480	192	192	192	221
QF 50-33	MTSFC 200	45.0	3442	1230	4672	192	192	192	225
QF 50-36	MTSFC 200	55.0	3634	1340	4974	192	192	192	254
QF 50-39	MTSFC 200	55.0	4018	1340	5358	192	192	192	259

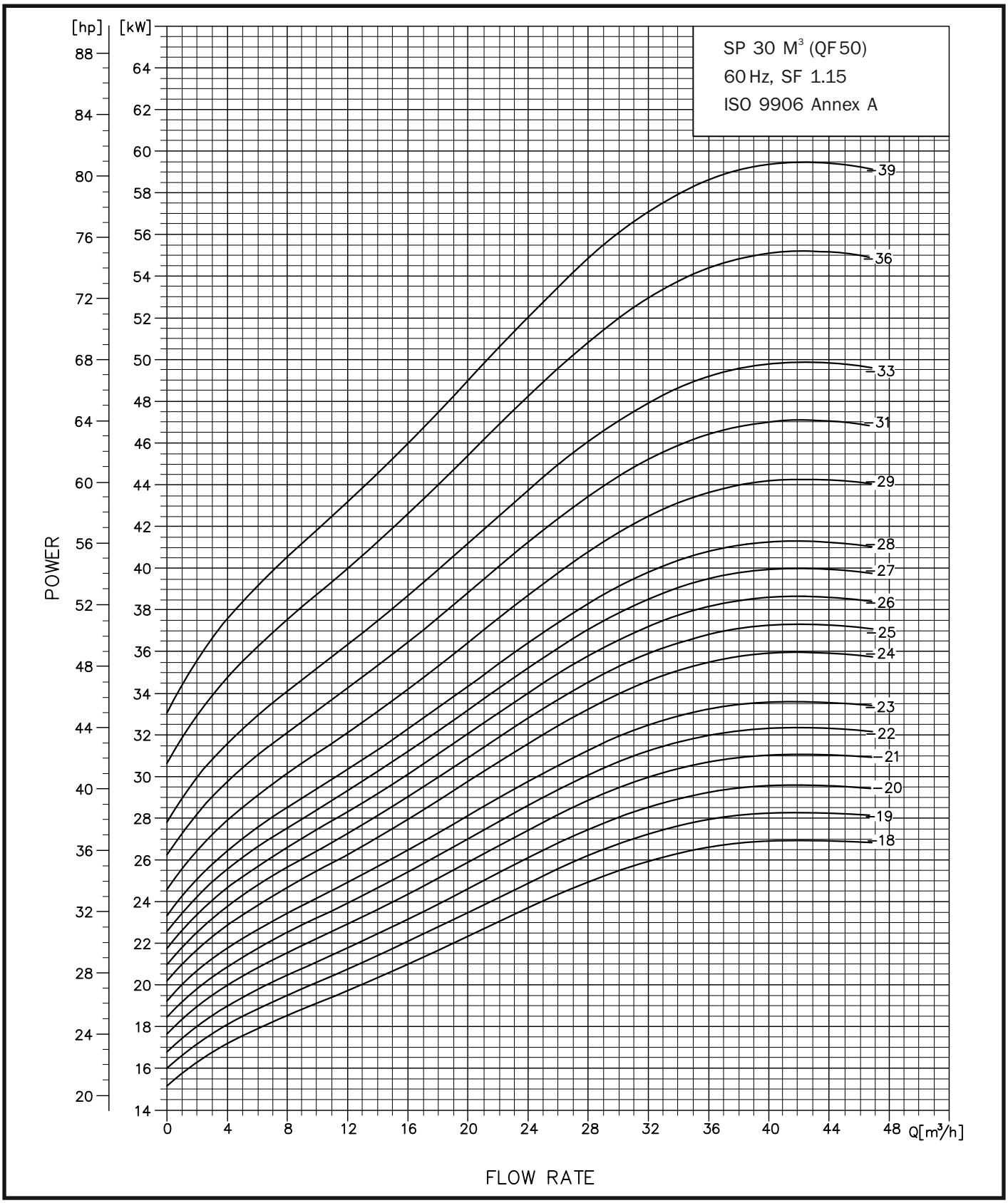
E* = Maximum diameter of pump inclusive of one cable guard and motor.

E** = Maximum diameter of pump inclusive of two cable guard and motor.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 50



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 50

SHAKTI PUMPING LIFE

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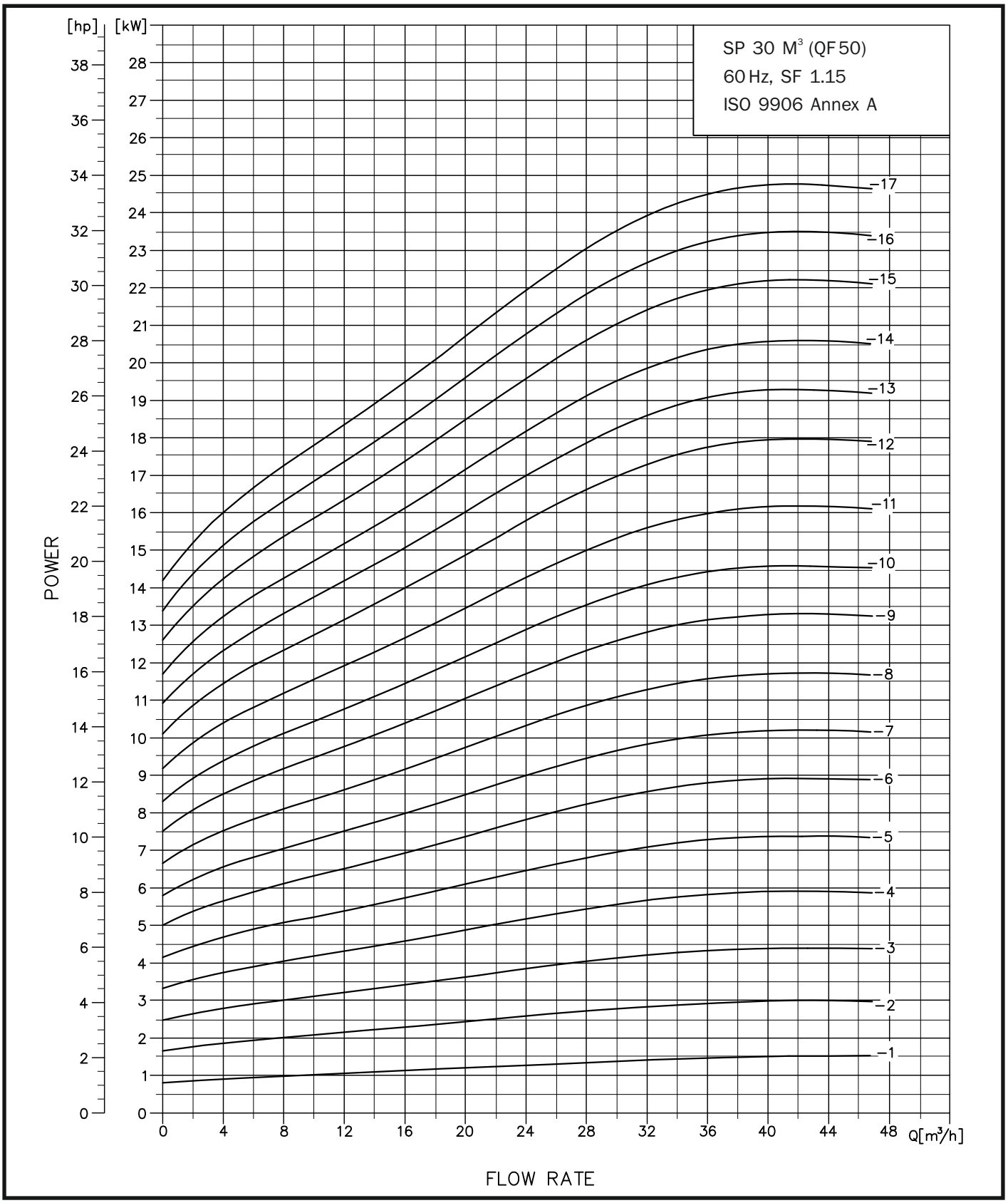
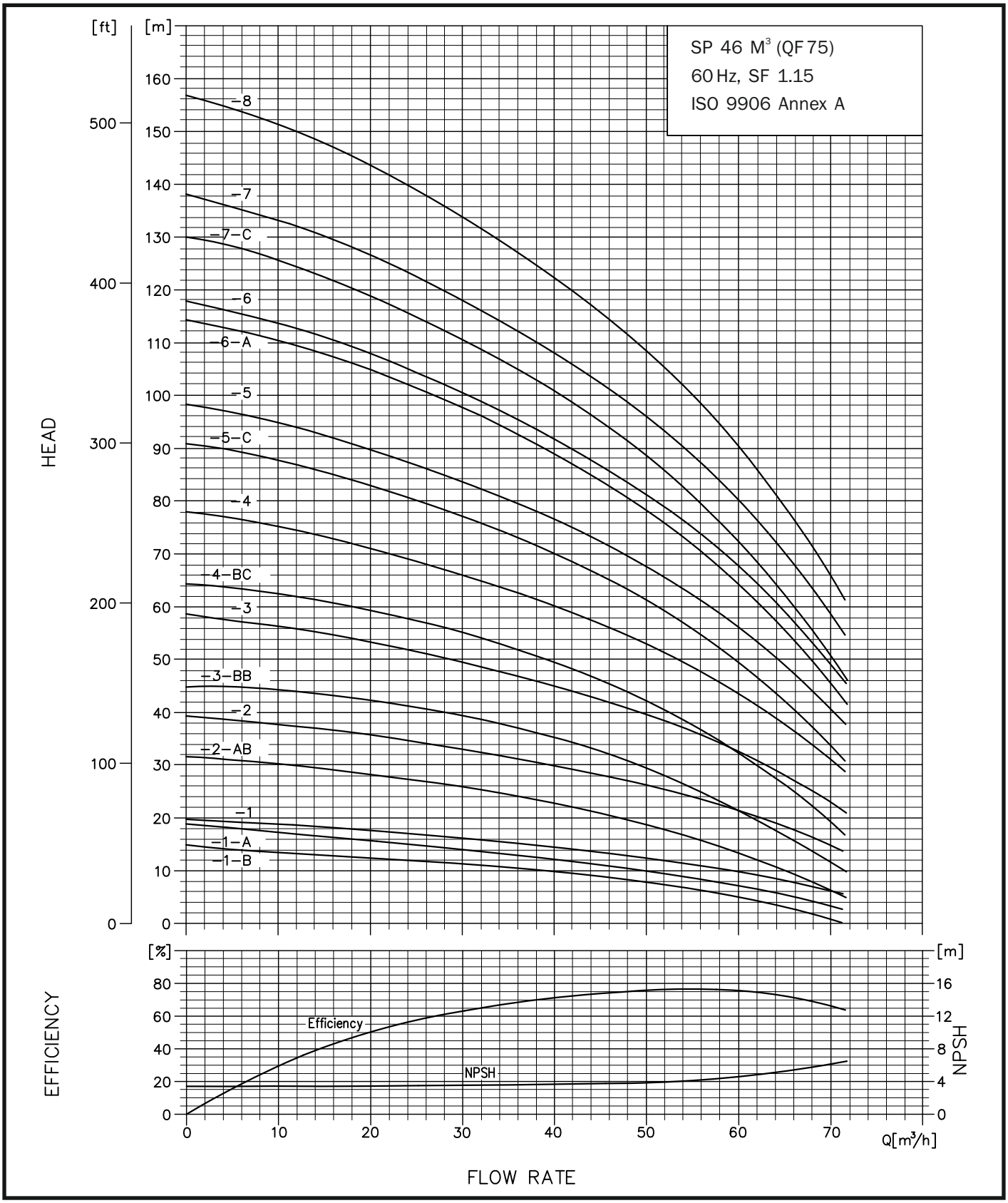


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 75



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 75

SHAKTI PUMPING LIFE

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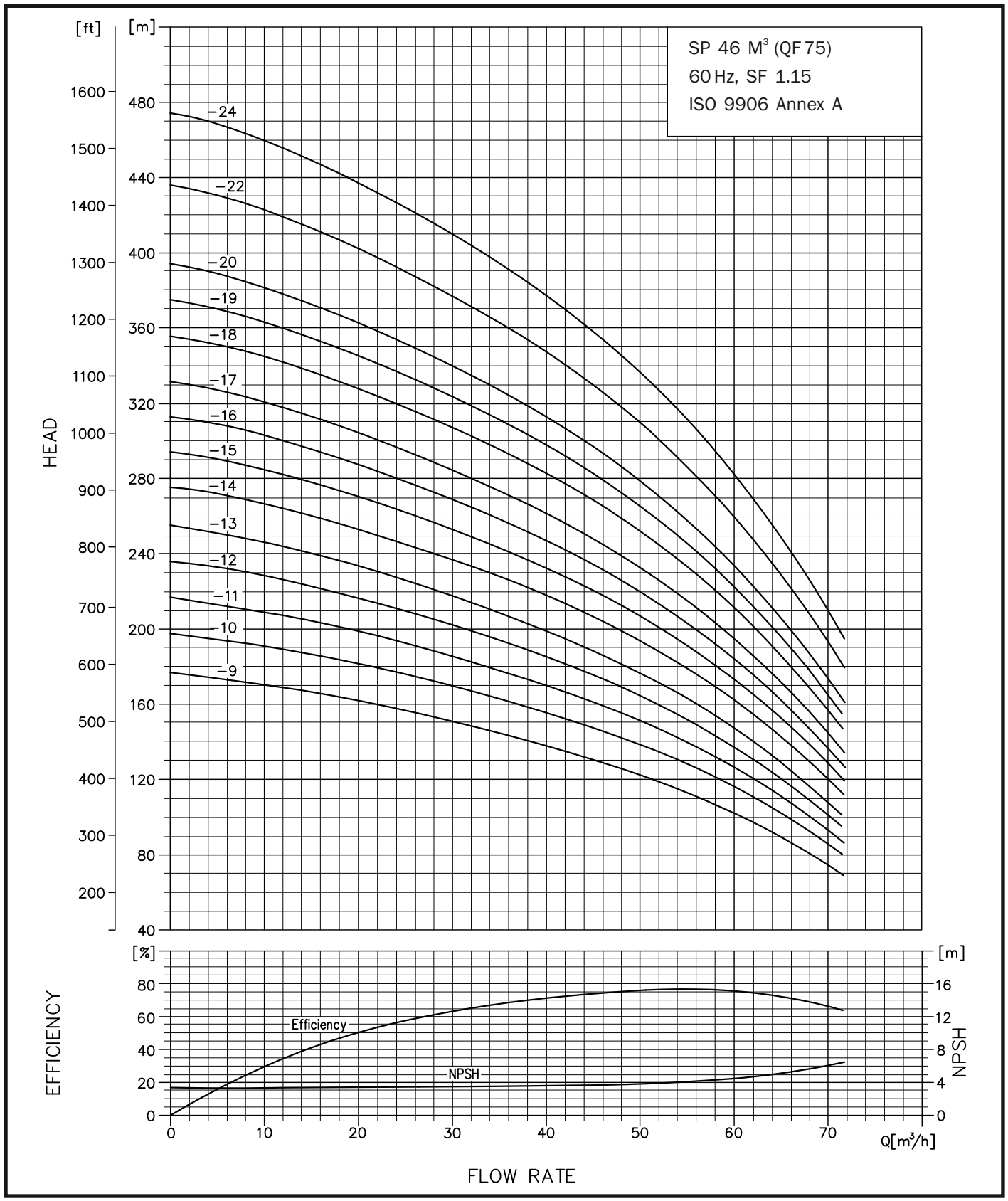
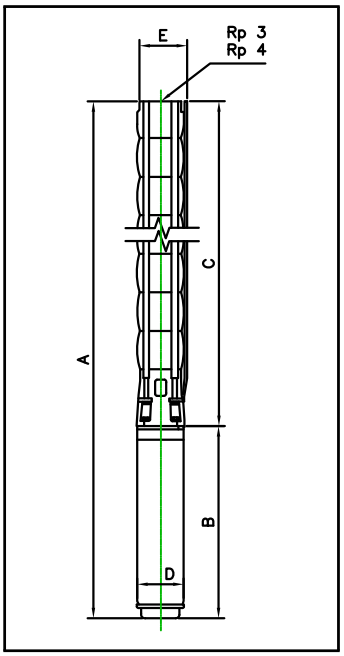


TECHNICAL DATA

SUBMERSIBLE PUMP QF 75

DIMENSIONS AND WEIGHTS



QF 75 - 20 to QF 75 - 24 are mounted in sleeve for Rp 3 connection.

Pump Type	Motor		Dimensions [mm]										Net Weight
	Type	Power	Rp 3 Connection				Rp 4 Connection				B	D	
		[Kw]	A	C	E*	E**	A	C	E*	E**			Kg
QF 75-1-B	MCIP 100.5	1.5	815	390	146	148	815	390	146	148	425	95	25
QF 75-1-A	MCIP 100.5	2.2	845	390	146	148	845	390	146	148	455	95	25
QF 75-1	MCIP 100.5	3.0	883	390	146	148	883	390	146	148	493	95	25
QF 75-2-AB	MCIP 101	3.7	1069	503	146	148	1069	503	146	148	566	95	37
QF 75-2	MCIP 101	5.5	1183	503	146	148	1183	503	146	148	680	95	38
QF 75-3-BB	MCIP 101	5.5	1296	616	146	148	1296	616	146	148	680	95	42
QF 75-3	MCIP 101	7.5	1338	616	149	152	1338	616	149	152	722	95	61
QF 75-3	MCIP 150	7.5	1473	616	149	152	1473	616	149	152	857	138	61
QF 75-4-BC	MCIP 150	7.5	1586	729	149	152	1586	729	149	152	857	138	63
QF 75-4	MTSF 150	9.2	1478	729	149	152	1478	729	149	152	749	138	66
QF 75-5-C	MTSF 150	11.0	1621	842	149	152	1621	842	149	152	779	138	71
QF 75-5	MTSF 150	13.0	1671	842	149	152	1671	842	149	152	829	138	76
QF 75-6-A	MTSF 150	13.0	1784	955	149	152	1784	955	149	152	829	138	79
QF 75-6	MTSF 150	15.0	1829	955	149	152	1829	955	149	152	874	138	84
QF 75-7-C	MTSF 150	15.0	1942	1068	149	152	1942	1068	149	152	874	138	86
QF 75-7	MTSF 150	18.5	1987	1068	149	152	1987	1068	149	152	919	138	90
QF 75-8	MTSF 150	18.5	2100	1181	149	152	2100	1181	149	152	919	138	92
QF 75-9	MTSF 150	22.0	2303	1294	149	152	2303	1294	149	152	1009	138	103
QF 75-10	MTSF 150	22.0	2416	1407	149	152	2416	1407	149	152	1009	138	106
QF 75-11	MTSF 150	26.0	2634	1520	149	152	2634	1520	149	152	1114	138	119
QF 75-12	MTSF 150	30.0	2847	1633	149	152	2847	1633	149	152	1214	138	131
QF 75-13	MTSF 150	30.0	2960	1746	149	152	2960	1746	149	152	1214	138	134
QF 75-14	MTSF 150	37.0	3153	1859	149	152	3153	1859	149	152	1294	138	143
QF 75-15	MTSF 150	37.0	3266	1972	149	152	3266	1972	149	152	1294	138	145
QF 75-16	MTSF 150	37.0	3379	2085	149	152	3379	2085	149	152	1294	138	148
QF 75-17	MTSF 150	37.0	3492	2198	149	152	3492	2198	149	152	1294	138	150
QF 75-18	MTSFC 200	45.0	3541	2311	192	192	3541	2311	192	192	1230	192	201
QF 75-19	MTSFC 200	45.0	3654	2424	192	192	3654	2424	192	192	1230	192	203
QF 75-20	MTSFC 200	45.0	3767	2537	192	192	3767	2537	192	192	1230	192	206
QF 75-22	MTSFC 200	55.0	4103	2763	193	195	4103	2763	193	195	1340	192	233
QF 75-24	MTSFC 200	55.0	-	-	-	-	4329	2989	193	195	1340	192	238

E* = Maximum diameter of pump inclusive of one cable guard and motor.

E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 75

SHAKTI PUMPING LIFE

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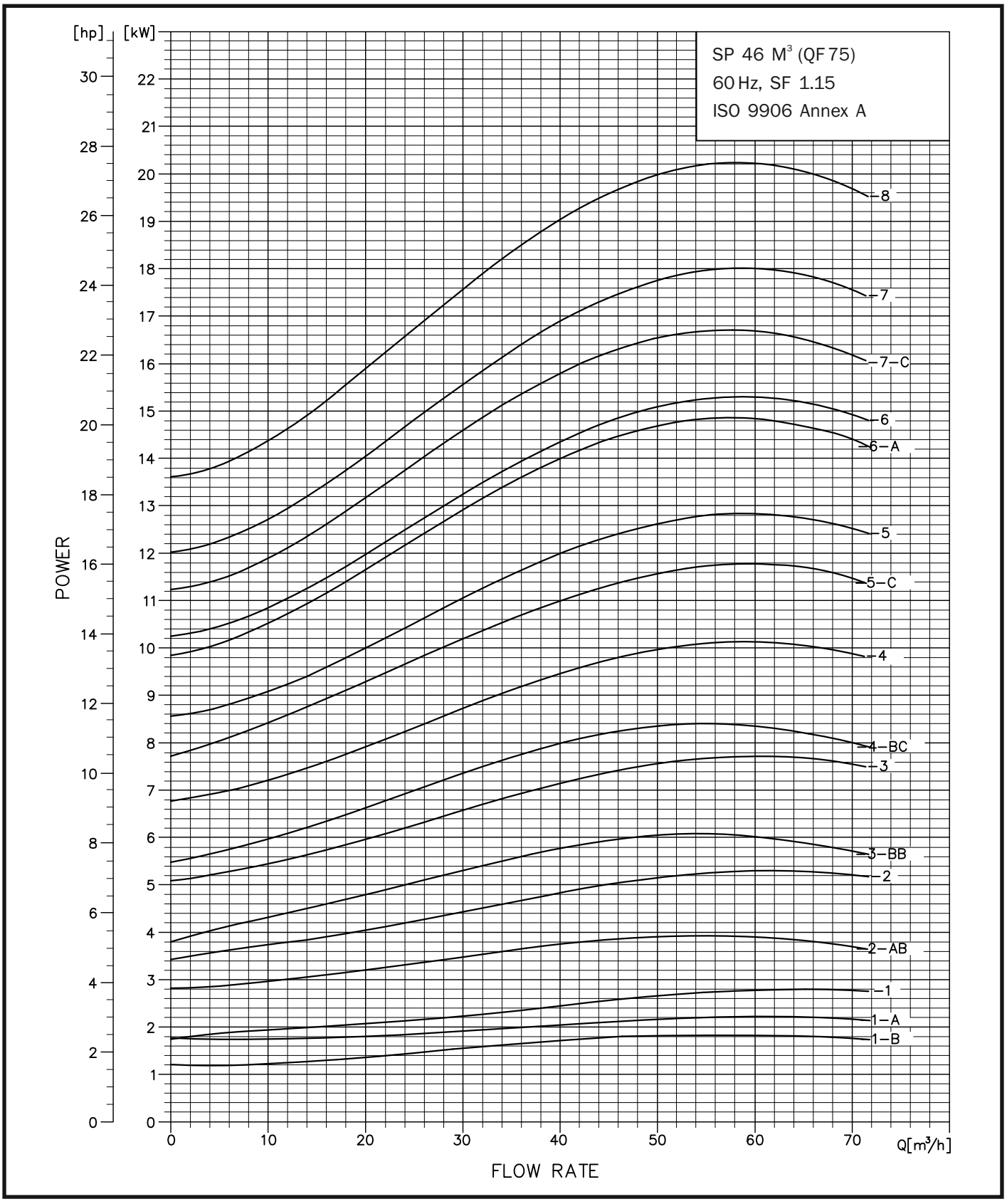
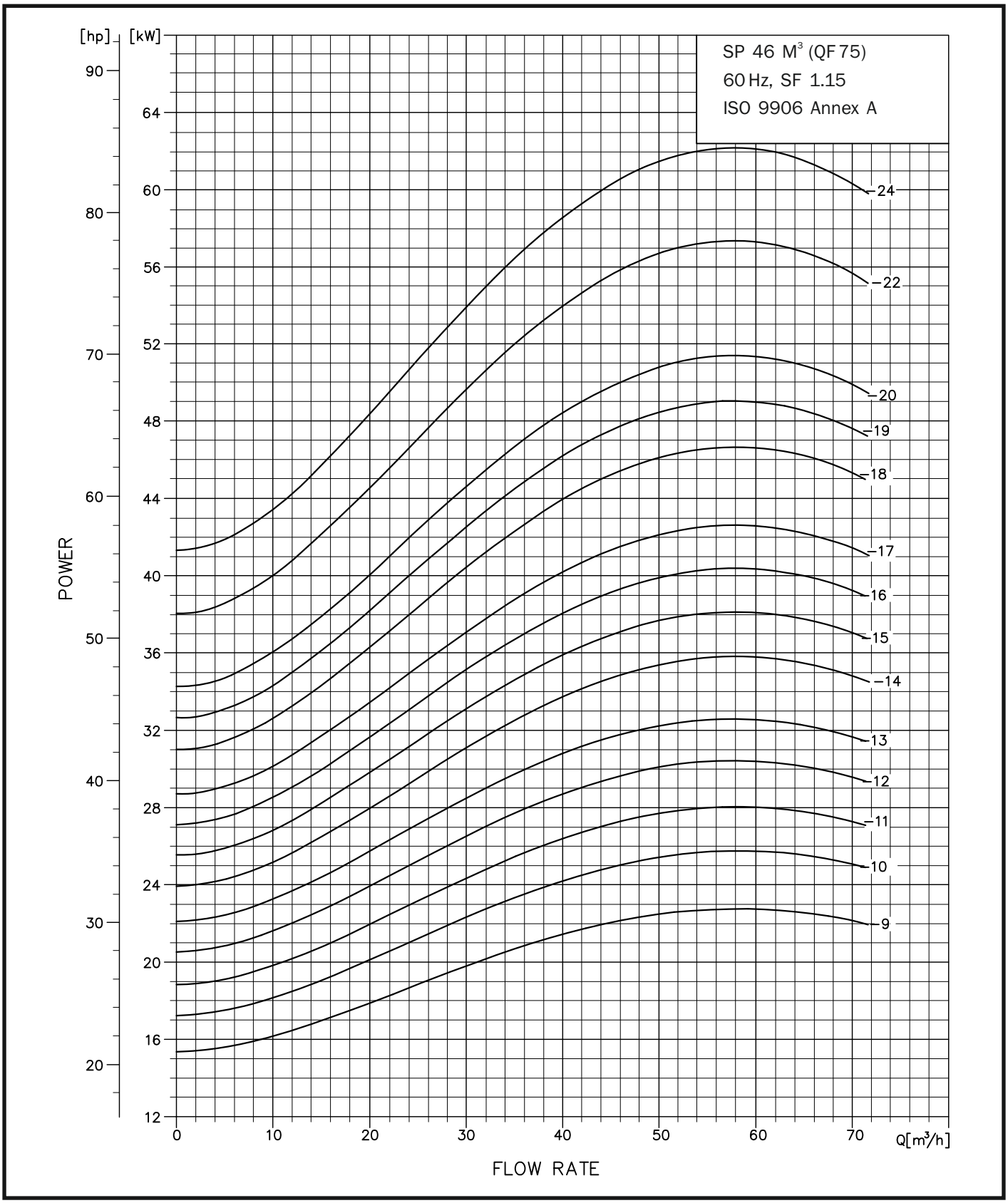


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 75



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 100

SHAKTI PUMPING LIFE

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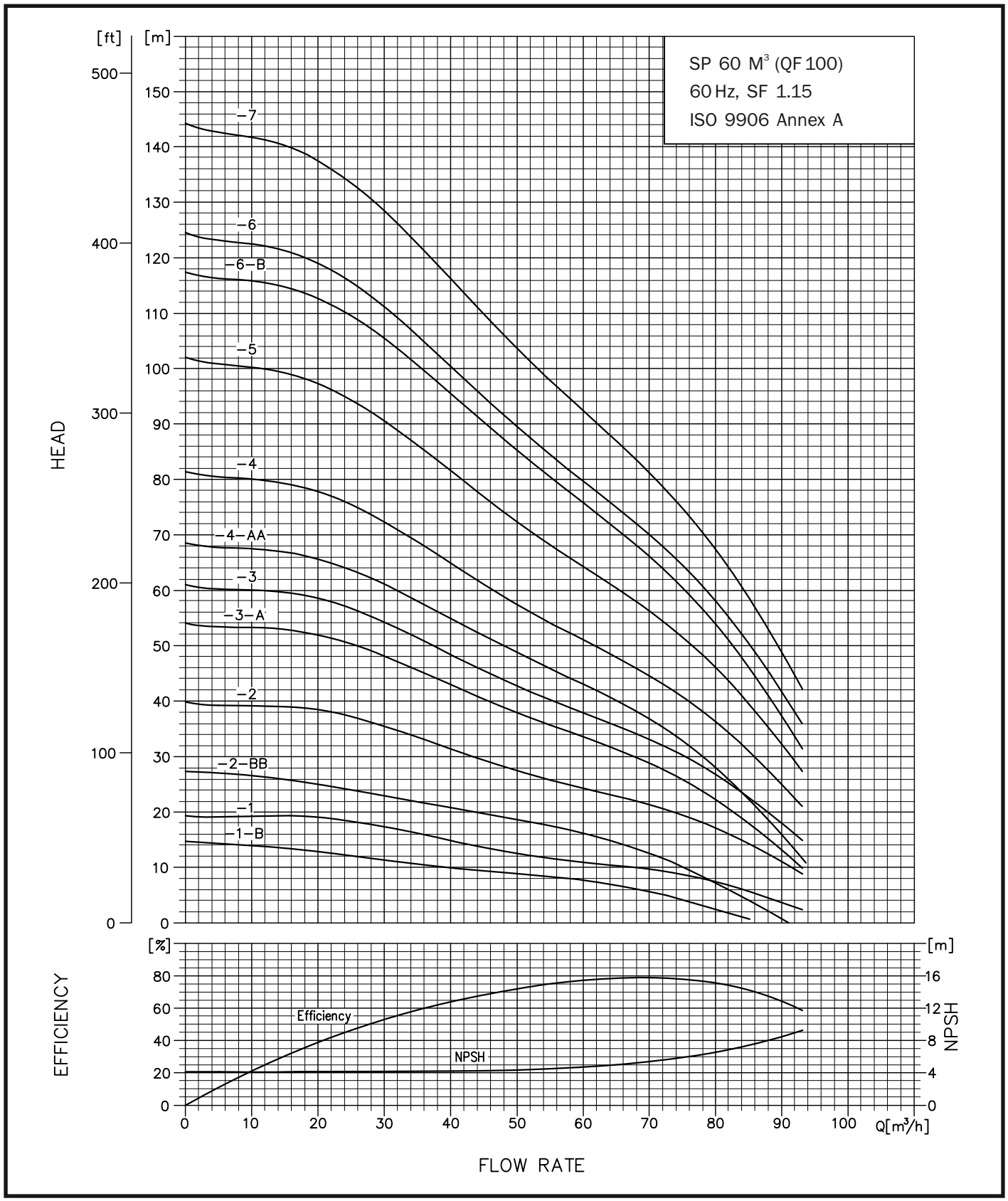
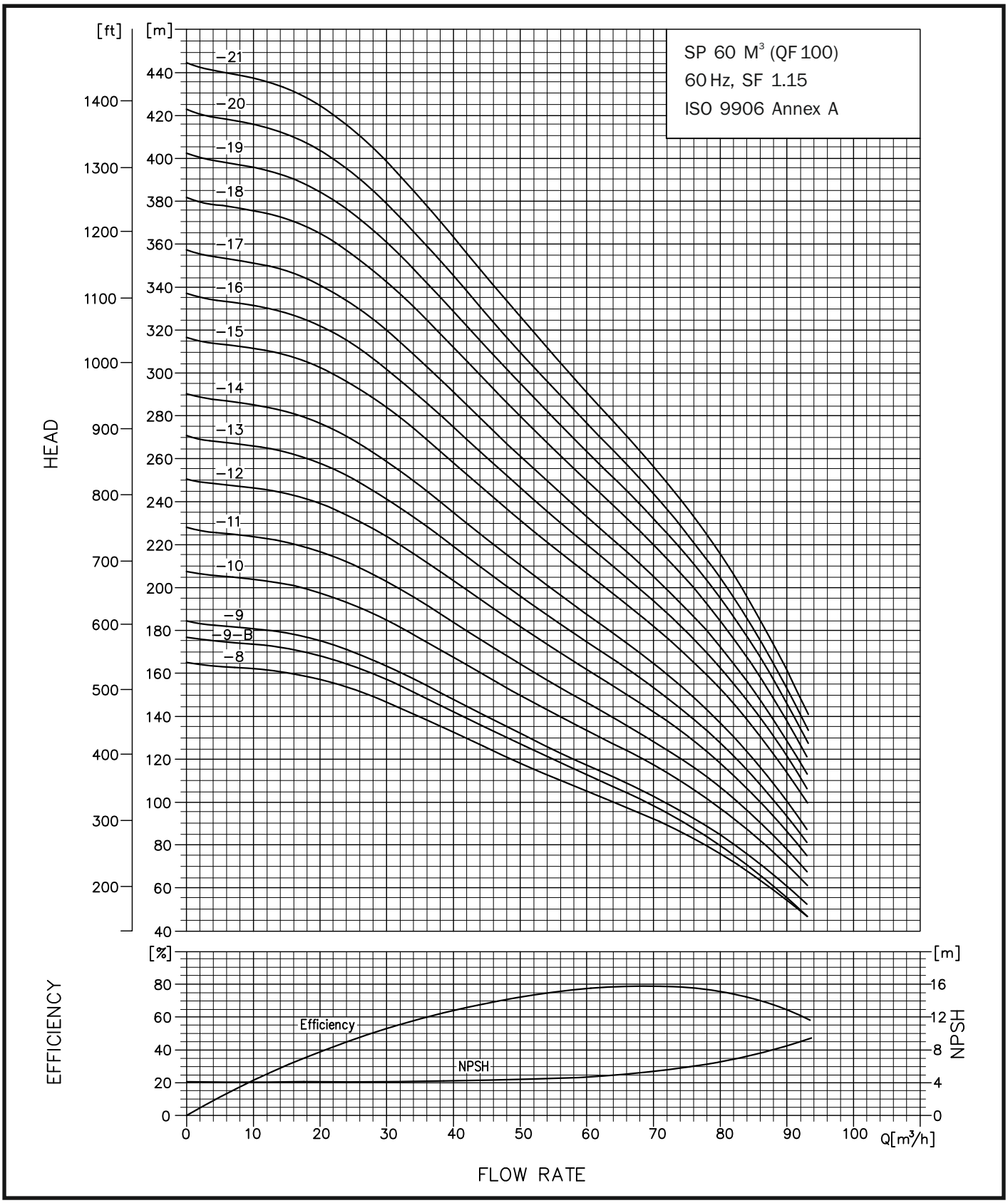


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 100



TECHNICAL DATA

SUBMERSIBLE PUMP QF 100

SHAKTI PUMPING LIFE
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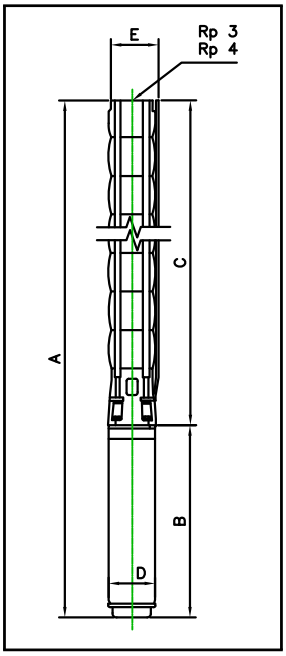
DIMENSIONS AND WEIGHTS



Pump Type	Motor		Dimensions [mm]										Net Weight
	Type	Power [Kw]	Rp 3 Connection				Rp 4 Connection				B	D	Kg
			A	C	E*	E**	A	C	E*	E**			
QF 100-1-B	MCIP 100.5	2.2	845	390	146	148	845	390	146	148	455	95	25
QF 100-1	MCIP 101	4	956	390	146	148	956	390	146	148	566	95	35
QF 100-2-BB	MCIP 101	3.7	1069	503	146	148	1069	503	146	148	566	95	37
QF 100-2	MCIP 101	5.5	1183	503	146	148	1183	503	146	148	680	95	38
QF 100-3-A	MCIP 101	7.5	1338	616	146	148	1338	616	146	148	722	95	42
QF 100-3-A	MTSF 150	7.5	1335	616	152	156	1335	616	152	156	719	138	61
QF 100-3	MTSF 150	9.2	1365	616	152	156	1365	616	152	156	749	138	64
QF 100-4-AA	MTSF 150	9.2	1478	729	152	156	1478	729	152	156	749	138	66
QF 100-4	MTSF 150	11	1508	729	152	156	1508	729	152	156	779	138	69
QF 100-5	MTSF 150	13	1671	842	152	156	1671	842	152	156	829	138	76
QF 100-6-B	MTSF 150	15	1829	955	152	156	1829	955	152	156	874	138	83
QF 100-6	MTSF 150	18.5	1874	955	152	156	1874	955	152	156	919	138	87
QF 100-7	MTSF 150	18.5	1987	1068	152	156	1987	1068	152	156	919	138	90
QF 100-8	MTSF 150	22	2190	1181	152	156	2190	1181	152	156	1009	138	101
QF 100-9-B	MTSF 150	22	2303	1294	152	156	2303	1294	152	156	1009	138	103
QF 100-9	MTSF 150	26	2408	1294	152	156	2408	1294	152	156	1114	138	114
QF 100-10	MTSF 150	26	2521	1407	152	156	2521	1407	152	156	1114	138	116
QF 100-11	MTSF 150	30	2734	1520	152	156	2734	1520	152	156	1214	138	129
QF 100-12	MTSF 150	37	2927	1633	152	156	2927	1633	152	156	1294	138	138
QF 100-13	MTSF 150	37	3040	1746	152	156	3040	1746	152	156	1294	138	140
QF 100-14	MTSF 150	37	-	-	-	-	3153	1859	152	156	1294	138	142
QF 100-15	MTSFC 200	45	-	-	-	-	3202	1972	192	192	1230	192	194
QF 100-16	MTSFC 200	45	-	-	-	-	3315	2085	192	192	1230	192	196
QF 100-17	MTSFC 200	45	-	-	-	-	3428	2198	192	192	1230	192	198
QF 100-18	MTSFC 200	55	-	-	-	-	3651	2311	192	192	1340	192	223
QF 100-19	MTSFC 200	55	-	-	-	-	3764	2424	193	195	1340	192	226
QF 100-20	MTSFC 200	55	-	-	-	-	3877	2537	193	195	1340	192	228
QF 100-21	MTSFC 200	63	-	-	-	-	4120	2650	193	195	1470	192	249

E* = Maximum diameter of pump inclusive of one cable guard and motor.

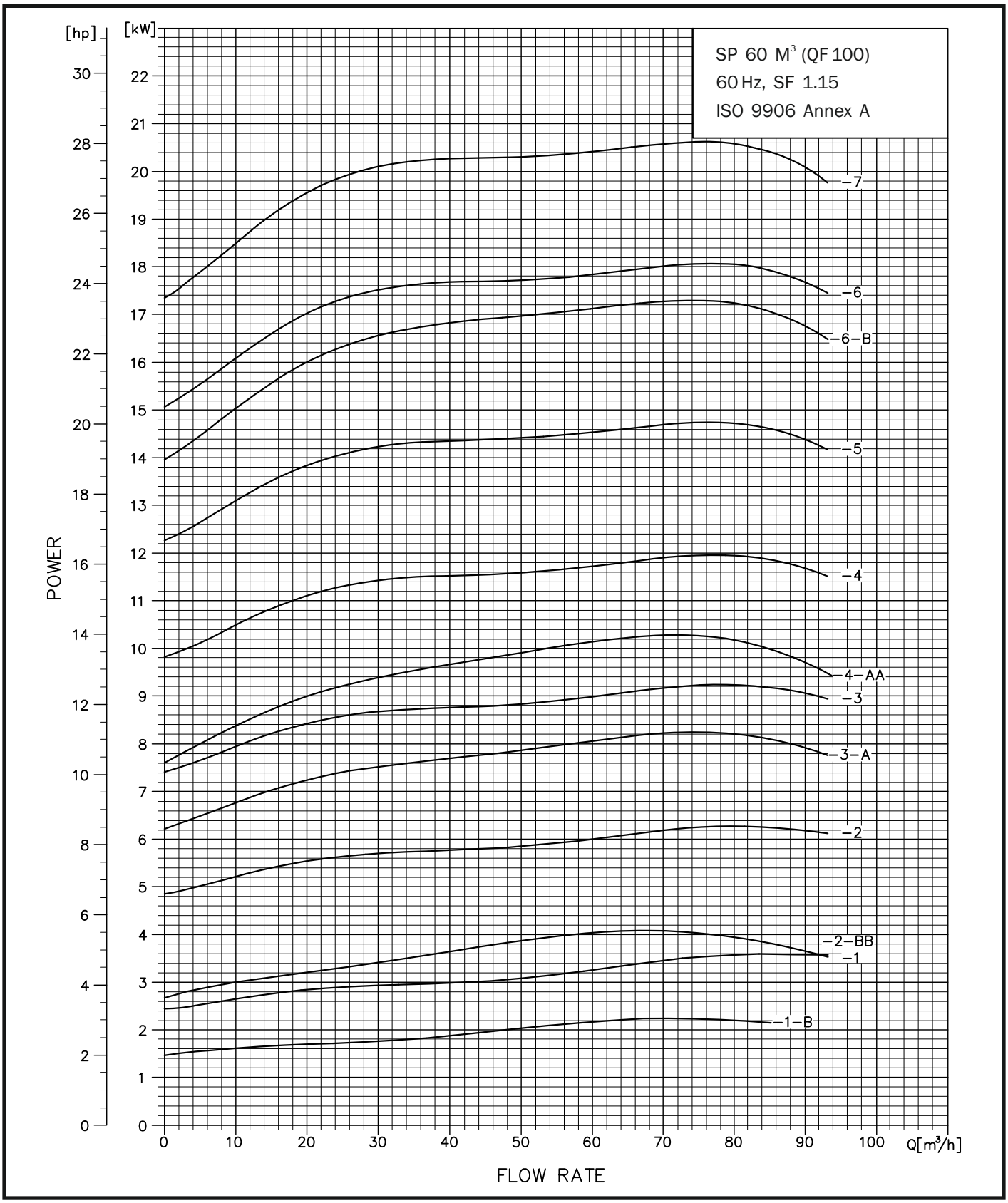
E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 100



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 100

SHAKTI PUMPING LIFE

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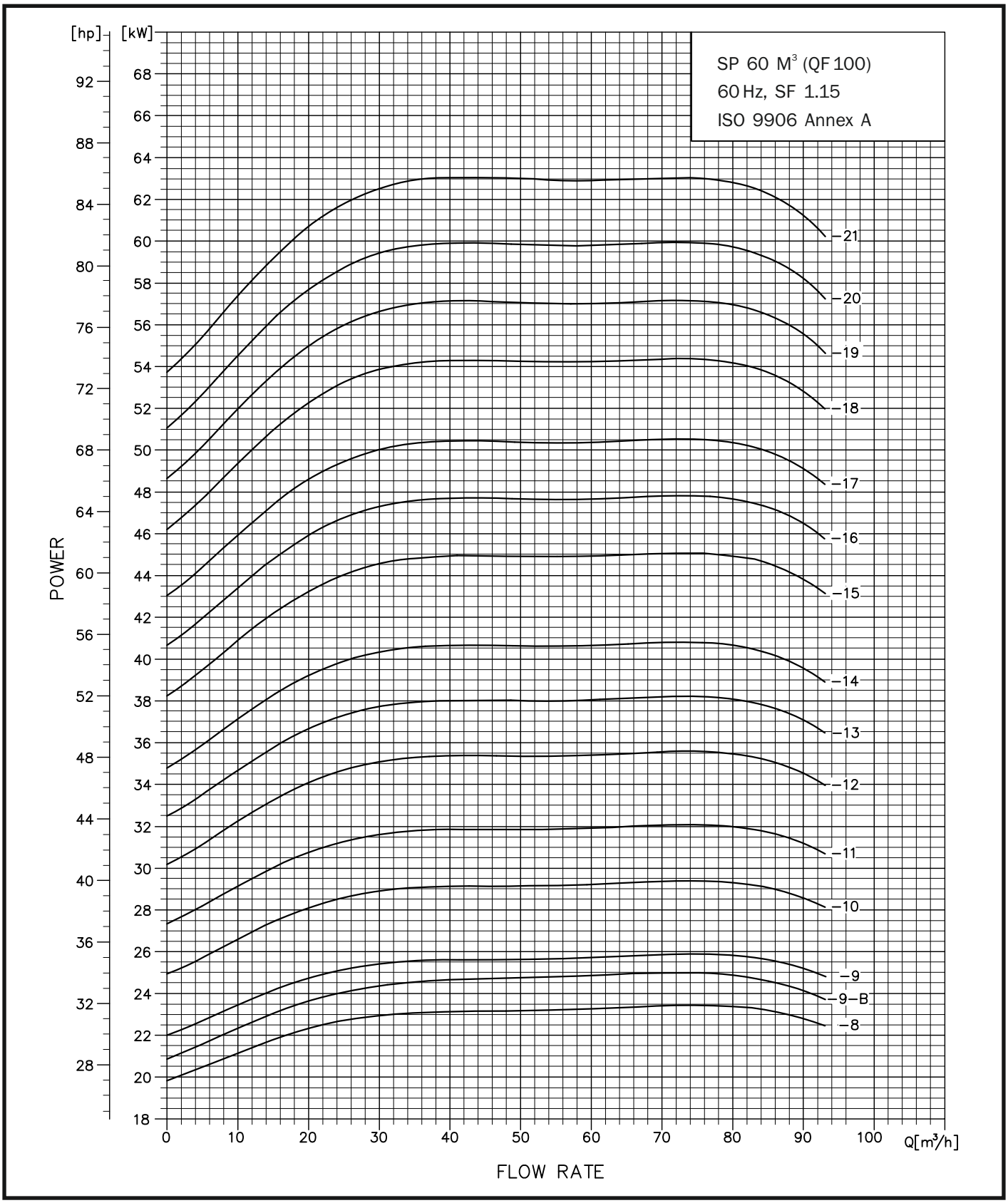
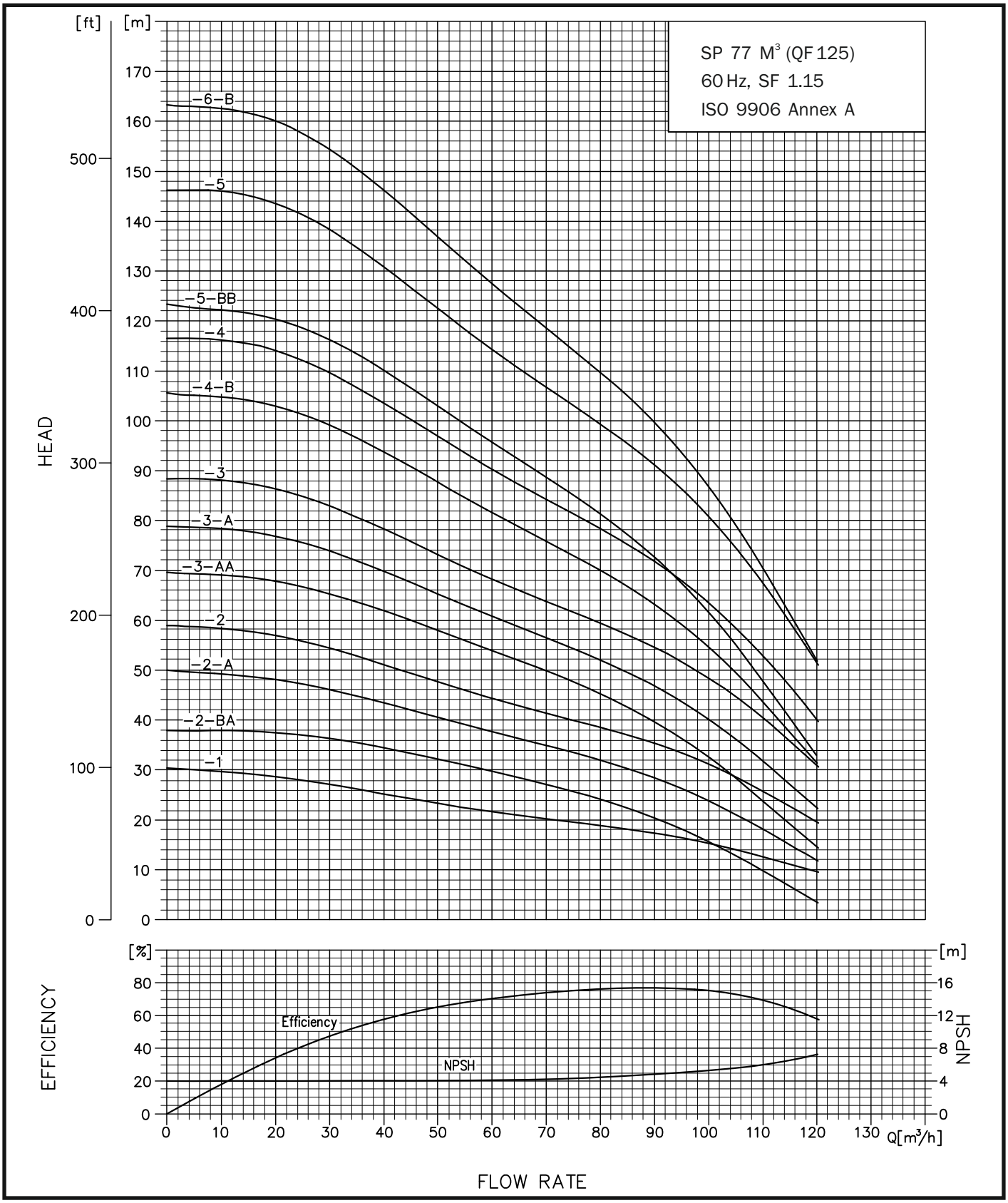


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 125

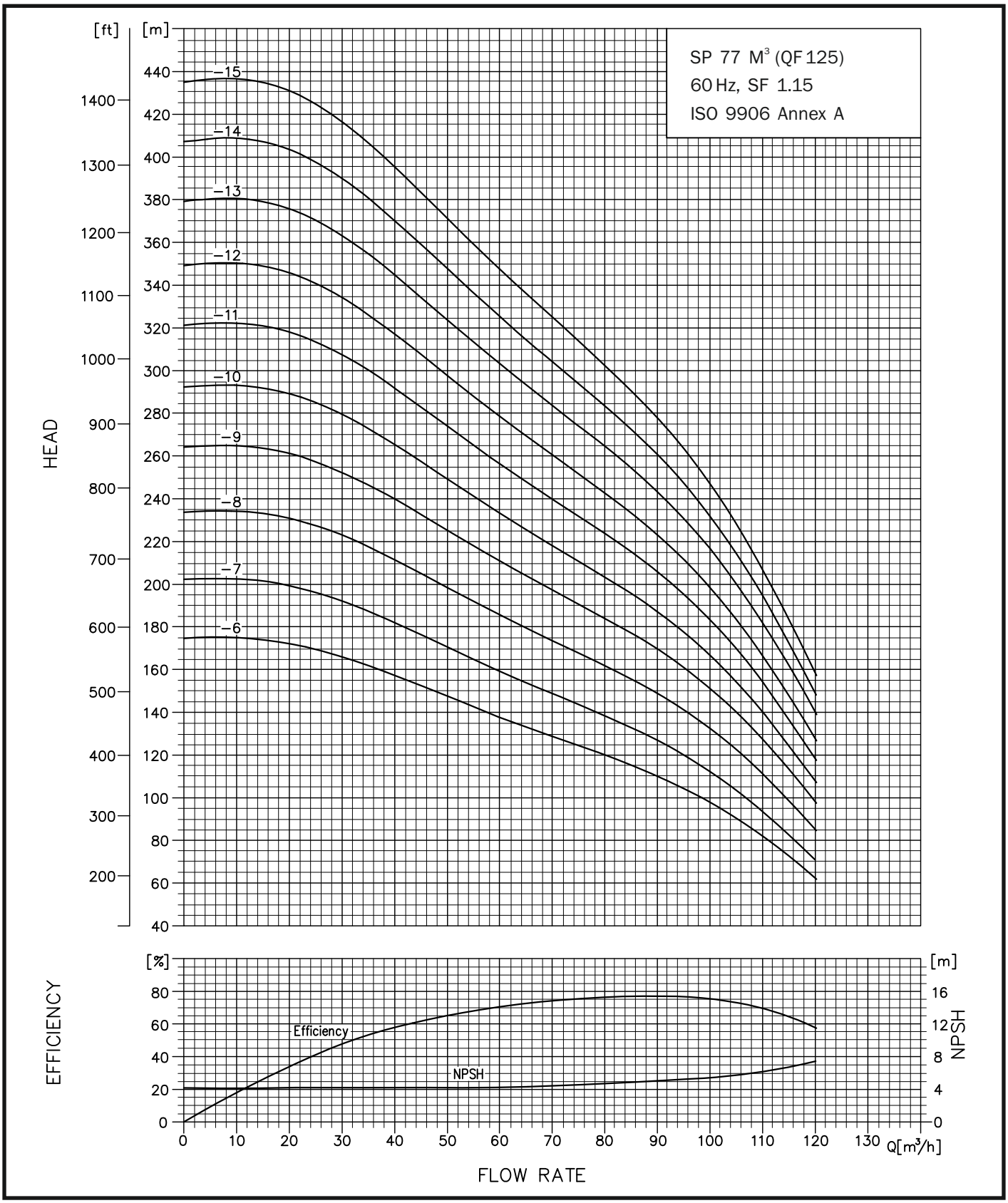


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 125

SHAKTI PUMPING LIFE

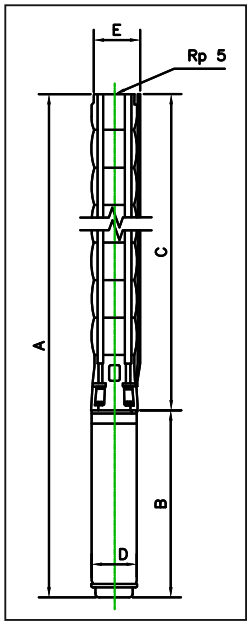
www.shaktipumps.com

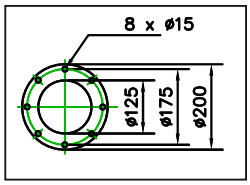


TECHNICAL DATA

SUBMERSIBLE PUMP QF 125

DIMENSIONS AND WEIGHTS





Pump Type	Motor		Dimensions [mm]										Net Weight Kg
	Type	Power [Kw]	Rp 5 Connection				5" flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
QF 125-1	MTSF 150	5.5	1318	619	178	186	1318	619	200	200	699	138	69
QF 125-2-BA	MTSF 150	7.5	1466	747	178	186	1466	747	200	200	719	138	74
QF 125-2-A	MTSF 150	9.2	1496	747	178	186	1496	747	200	200	749	138	77
QF 125-2	MTSF 150	11	1526	747	178	186	1526	747	200	200	779	138	80
QF 125-3-AA	MTSF 150	13	1704	875	178	186	1704	875	200	200	829	138	89
QF 125-3-A	MTSF 150	15	1749	875	178	186	1749	875	200	200	874	138	94
QF 125-3	MTSF 150	18.5	1794	875	178	186	1794	875	200	200	919	138	98
QF 125-4-B	MTSF 150	18.5	1922	1003	178	186	1922	1003	200	200	919	138	101
QF 125-4	MTSF 150	22	2012	1003	178	186	2012	1003	200	200	1009	138	110
QF 125-5-BB	MTSF 150	22	2140	1131	178	186	2140	1131	200	200	1009	138	114
QF 125-5	MTSF 150	26	2245	1131	178	186	2245	1131	200	200	1114	138	125
QF 125-6-B	MTSF 150	30	2473	1259	178	186	2473	1259	200	200	1214	138	138
QF 125-6	MTSF 150	37	2553	1259	178	186	2553	1259	200	200	1294	138	145
QF 125-7	MTSF 150	37	2681	1387	178	186	2681	1387	200	200	1294	138	149
QF 125-8	MTSFC 200	45	2745	1515	200	204	2745	1515	205	205	1230	192	202
QF 125-9	MTSFC 200	55	2983	1643	200	204	2983	1643	205	205	1340	192	228
QF 125-10	MTSFC 200	55	3111	1771	200	204	3111	1771	205	205	1340	192	232
QF 125-11	MTSFC 200	63	3369	1899	200	204	3369	1899	205	205	1470	192	255
QF 125-12	MTSFC 200	63	3497	2027	200	204	3497	2027	205	205	1470	192	258
QF 125-13	MTSFC 200	75	3715	2155	200	204	3715	2155	205	205	1560	192	279
QF 125-14	MTSFC 200	92	4023	2283	200	202	-	-	-	-	1740	192	315
QF 125-15	MTSFC 200	92	4151	2411	200	202	-	-	-	-	1740	192	318

E* = Maximum diameter of pump inclusive of one cable guard and motor.

E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 125

SHAKTI PUMPING LIFE

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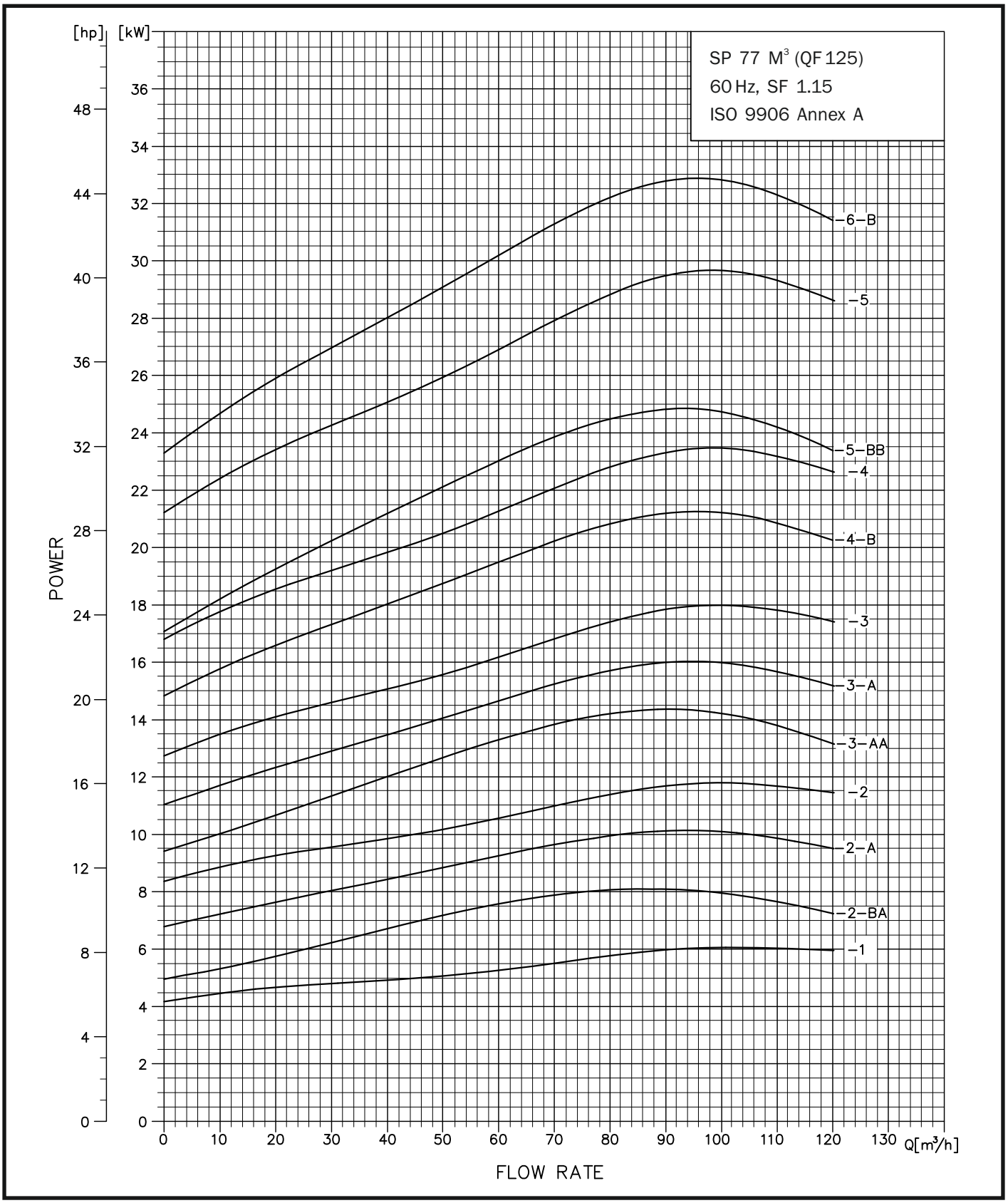
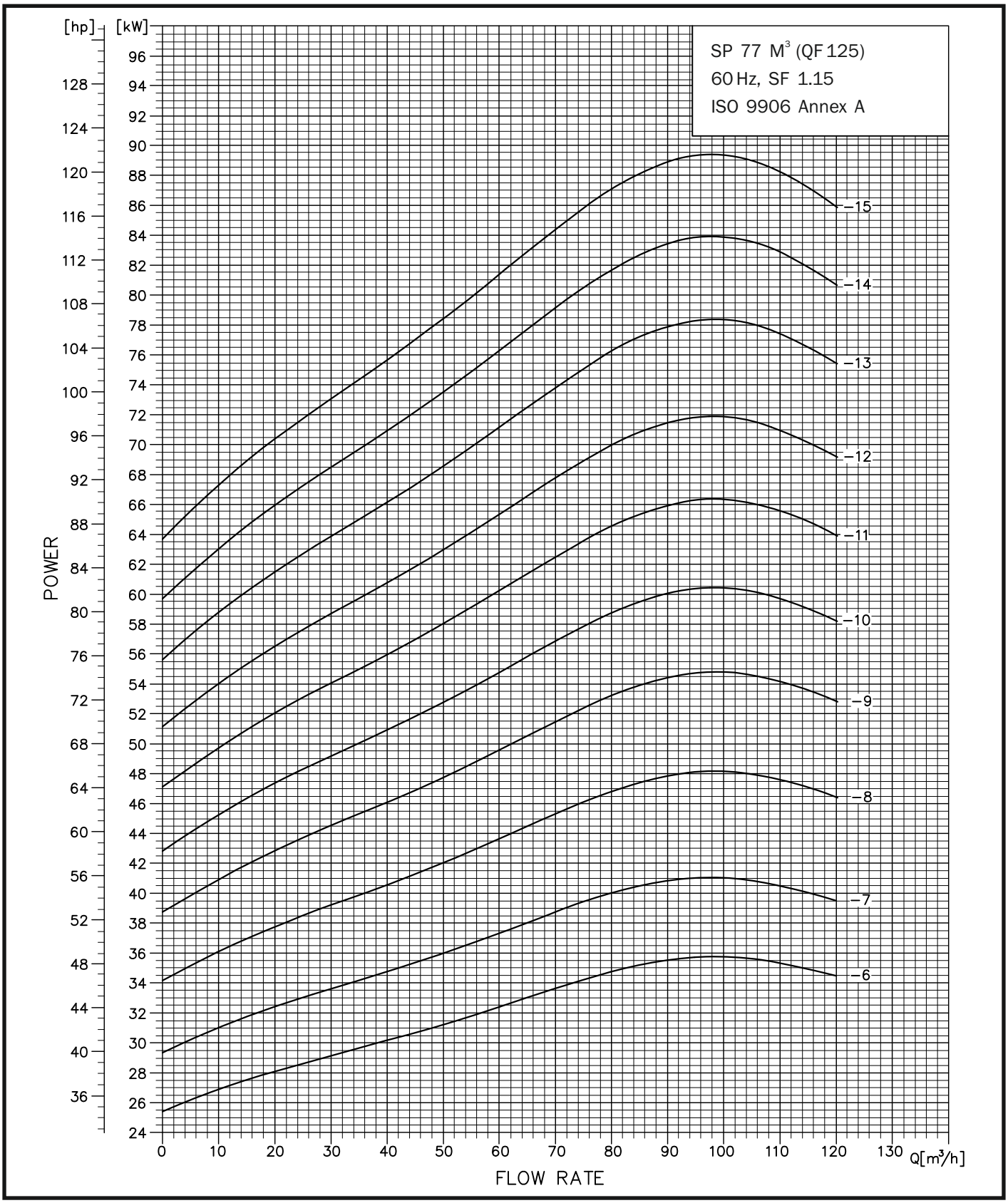


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 125



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 160

SHAKTI PUMPING LIFE

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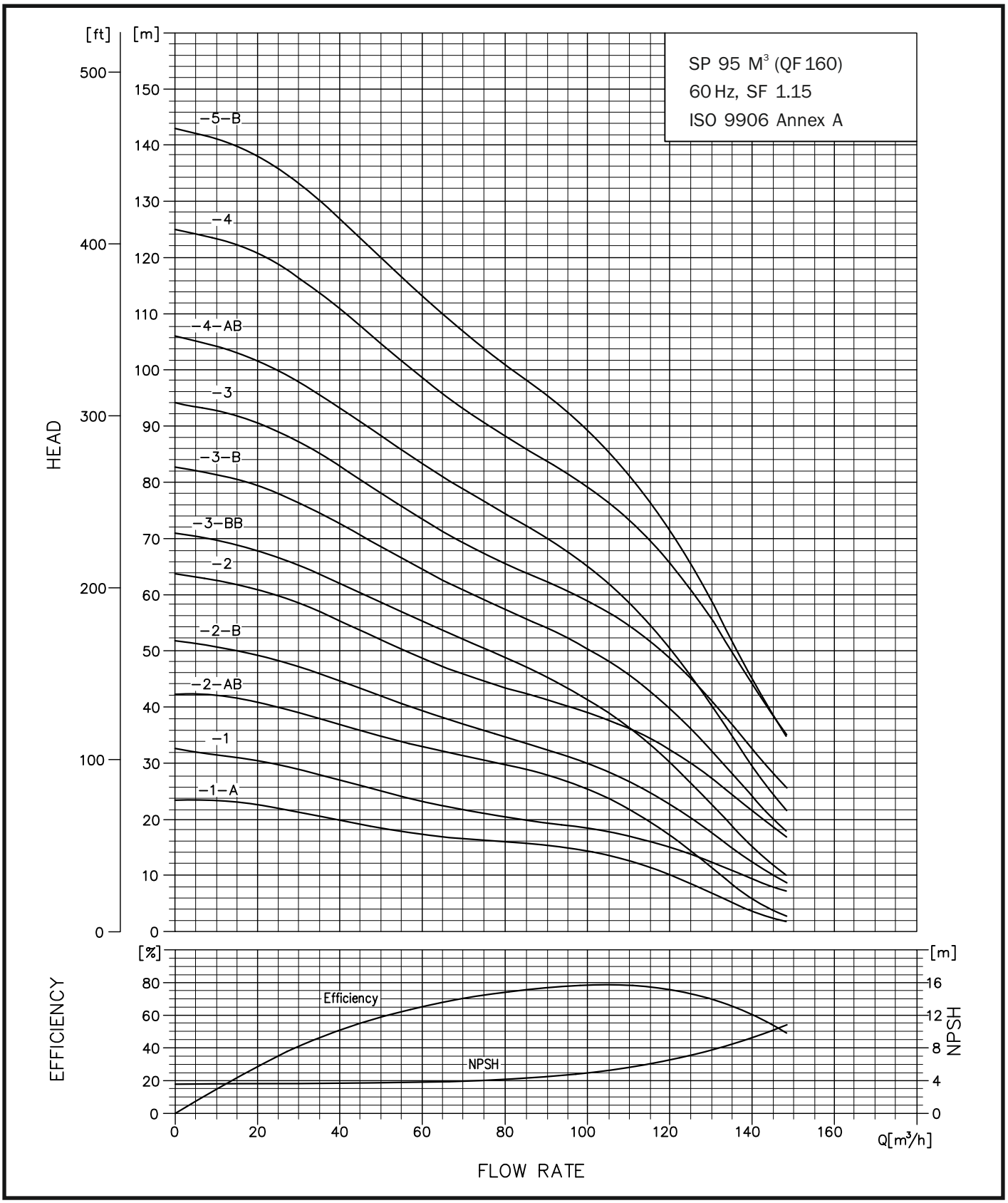
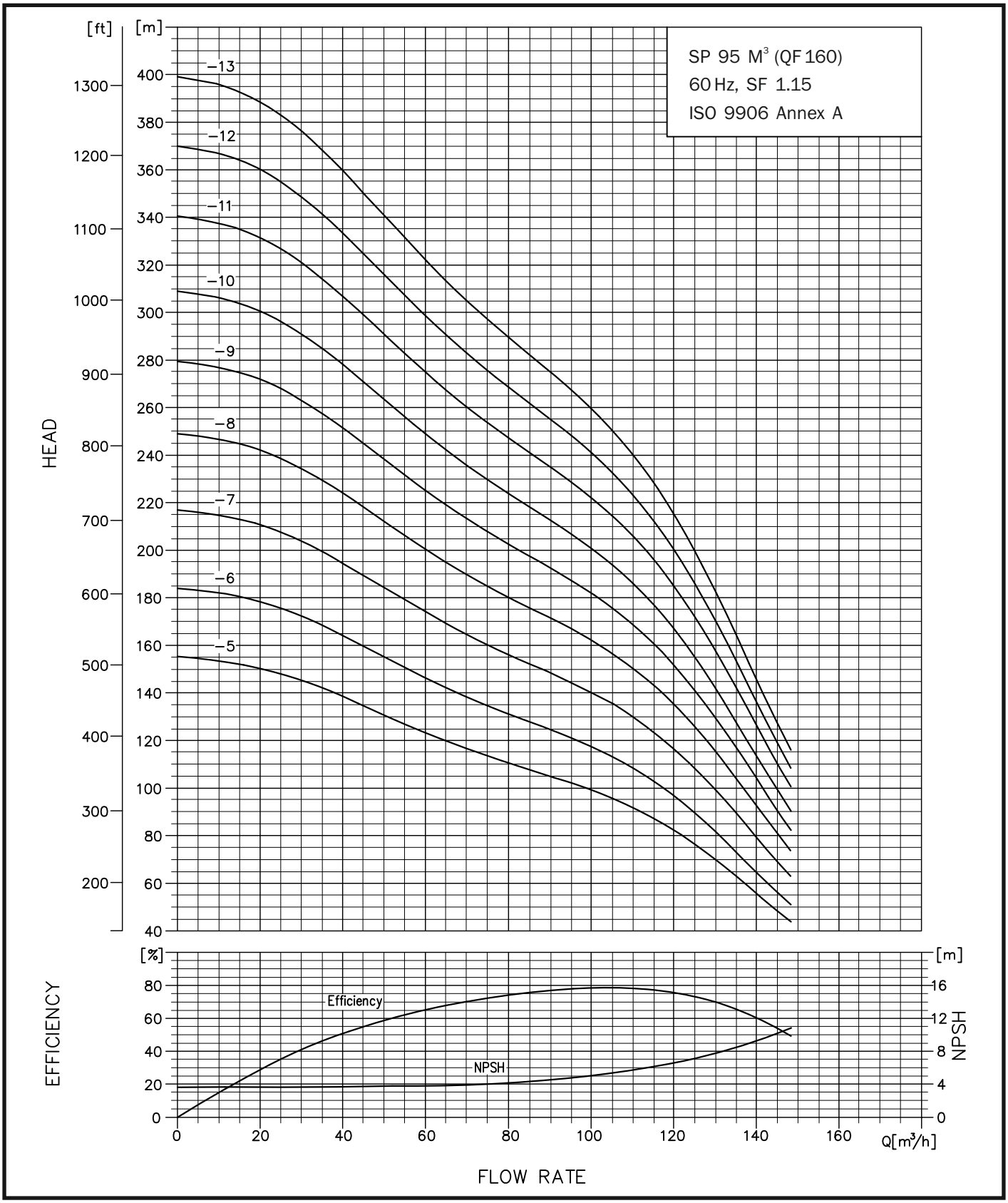


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 160

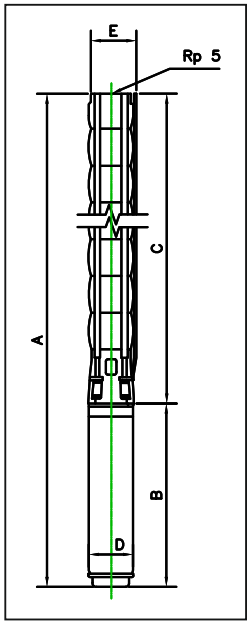


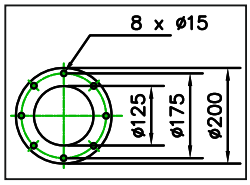
TECHNICAL DATA

SUBMERSIBLE PUMP QF 160

SHAKTI PUMPING LIFE
www.shaktipumps.com

DIMENSIONS AND WEIGHTS





Pump Type	Motor		Dimensions [mm]										Net Weight Kg
	Type	Power [Kw]	Rp 5 Connection				5" flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
QF 160-1-A	MTSF 150	5.5	1318	619	179	183	1318	619	200	200	699	138	69
QF 160-1	MTSF 150	7.5	1338	619	179	183	1338	619	200	200	719	138	71
QF 160-2-AB	MTSF 150	9.2	1496	747	179	183	1496	747	200	200	749	138	77
QF 160-2-B	MTSF 150	11	1526	747	179	183	1526	747	200	200	779	138	80
QF 160-2	MTSF 150	13	1576	747	179	183	1576	747	200	200	829	138	85
QF 160-3-BB	MTSF 150	15	1749	875	179	183	1749	875	200	200	874	138	94
QF 160-3-B	MTSF 150	18.5	1794	875	179	183	1794	875	200	200	919	138	98
QF 160-3	MTSF 150	22	1884	875	179	183	1884	875	200	200	1009	138	107
QF 160-4-AB	MTSF 150	22	2012	1003	179	183	2012	1003	200	200	1009	138	110
QF 160-4	MTSF 150	26	2117	1003	179	183	2117	1003	200	200	1114	138	121
QF 160-5-B	MTSF 150	30	2345	1131	179	183	2345	1131	200	200	1214	138	135
QF 160-5	MTSF 150	37	2425	1131	179	183	2425	1131	200	200	1294	138	142
QF 160-6	MTSF 150	37	2553	1259	179	183	2553	1259	200	200	1294	138	145
QF 160-7	MTSFC 200	45	2617	1387	205	205	2617	1387	200	200	1230	192	198
QF 160-8	MTSFC 200	55	2855	1515	205	205	2855	1515	200	202	1340	192	225
QF 160-9	MTSFC 200	63	3113	1643	205	205	3113	1643	200	202	1470	192	248
QF 160-10	MTSFC 200	63	3241	1771	205	205	3241	1771	200	202	1470	192	251
QF 160-11	MTSFC 200	75	3459	1899	205	205	-	-	-	-	1560	192	272
QF 160-12	MTSFC 200	92	3767	2027	205	205	-	-	-	-	1740	192	307
QF 160-13	MTSFC 200	92	3895	2155	205	205	-	-	-	-	1740	192	311

E* = Maximum diameter of pump inclusive of one cable guard and motor.

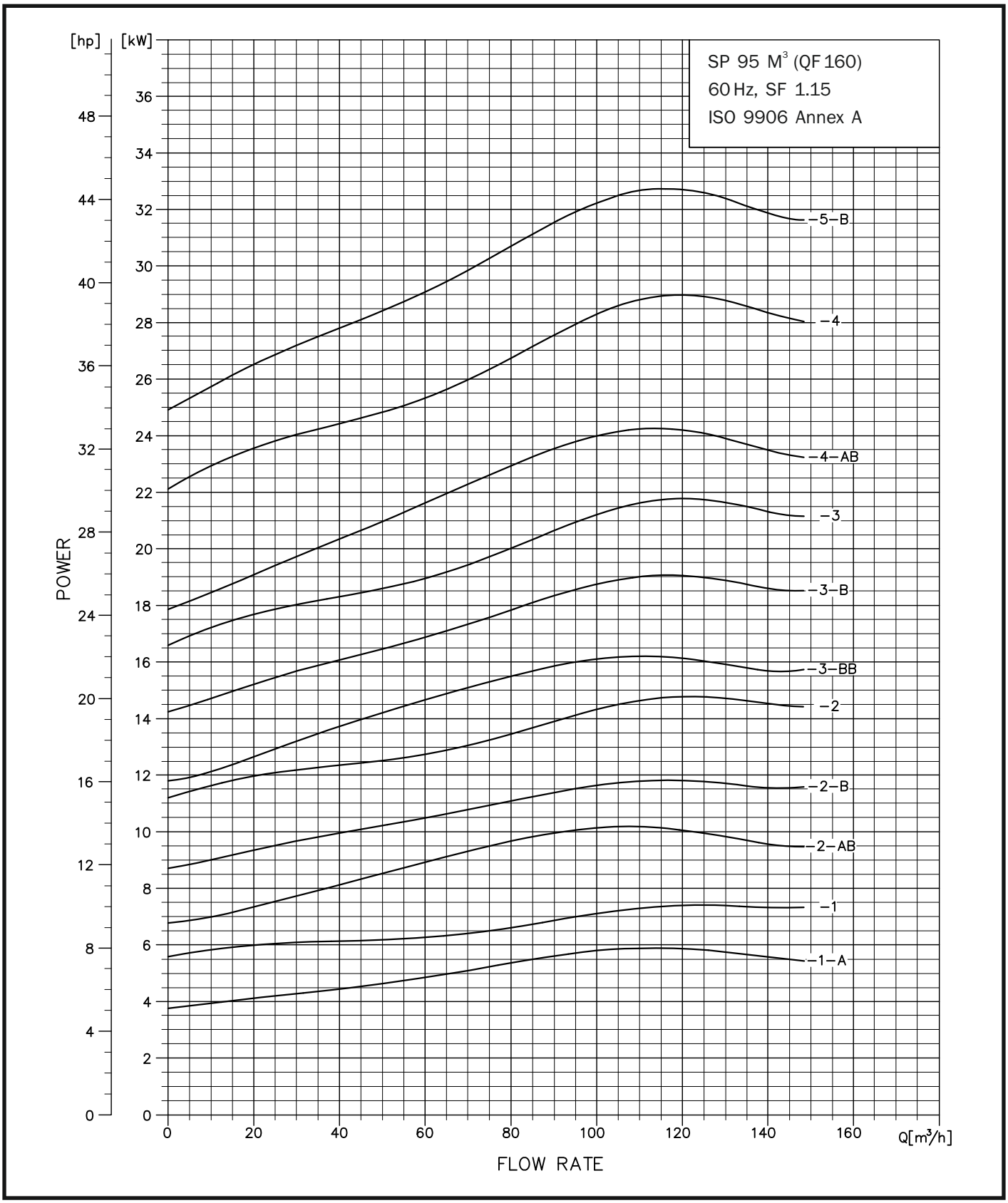
E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 160



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 160

SHAKTI PUMPING LIFE

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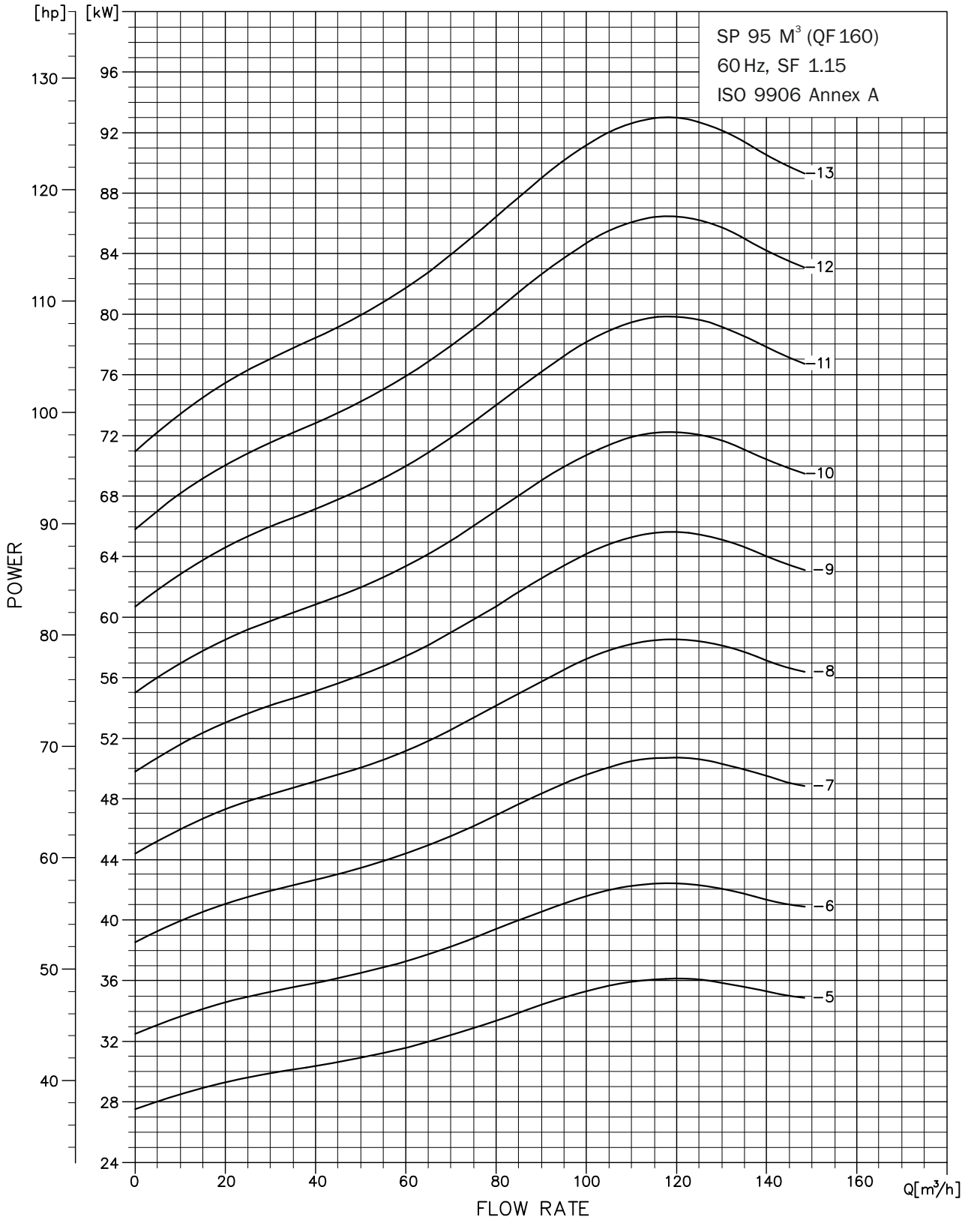
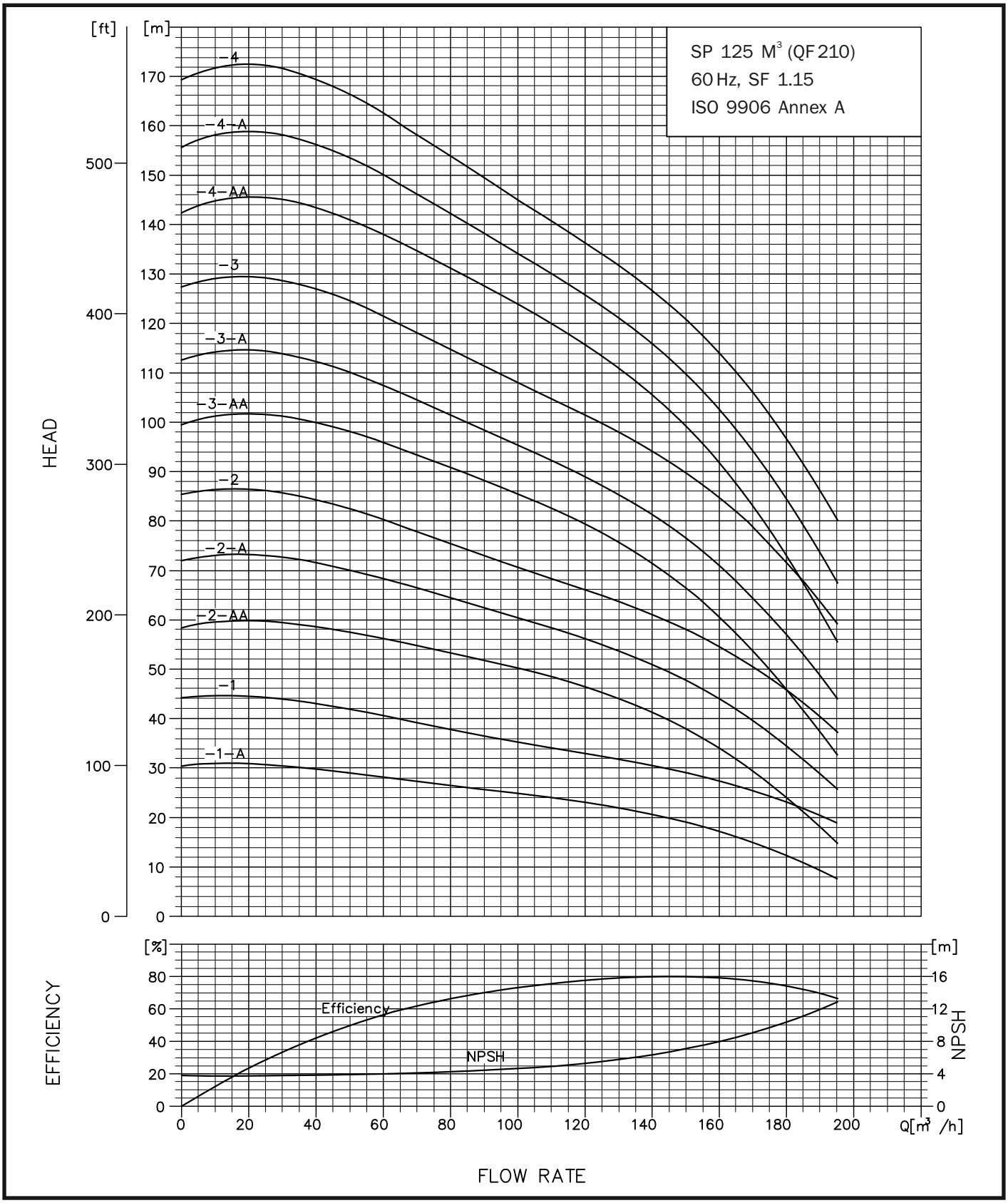


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 210



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 210

SHAKTI PUMPING LIFE

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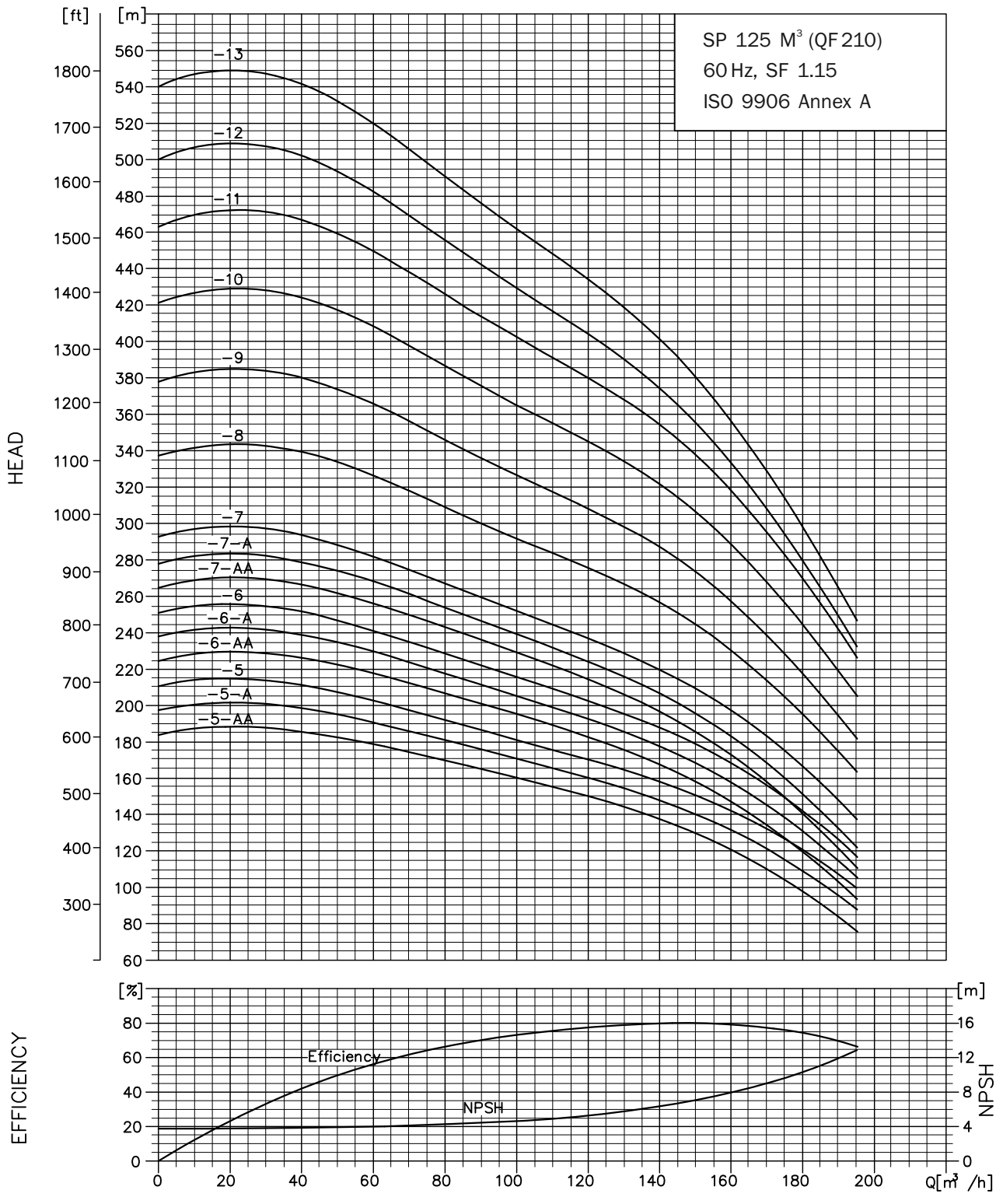
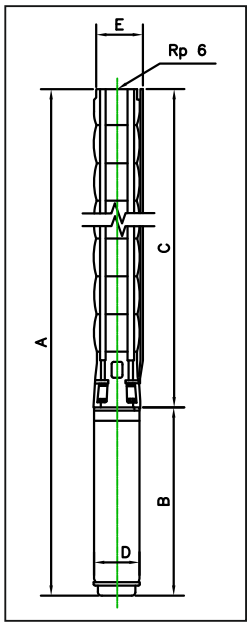
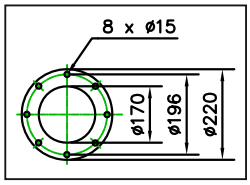


TECHNICAL DATA

SUBMERSIBLE PUMP QF 210

DIMENSIONS AND WEIGHTS





Pump Type	Motor		Dimensions [mm]										Net Weight
	Type	Power [Kw]	Rp 5 Connection				6" flange				B	D	Kg
			A	C	E*	E**	A	C	E*	E**			
QF 210-1-A	MTSF 150	11	1431	652	211	215	1431	652	222	226	779	138	82
QF 210-1	MTSF 150	18.5	1571	652	211	215	1571	652	222	226	919	138	96
QF 210-2-AA	MTSF 150	22	1806	797	211	215	1806	797	222	226	1009	138	112
QF 210-2-A	MTSF 150	26	1911	797	211	215	1911	797	222	226	1114	138	123
QF 210-2	MTSF 150	30	2011	797	211	215	2011	797	222	226	1214	138	133
QF 210-3-AA	MTSF 150	37	2247	953	211	215	2247	953	222	226	1294	138	146
QF 210-3-A	MTSF 150	37	2247	953	211	215	2247	953	222	226	1294	138	146
QF 210-3	MTSFC 200	45	2183	953	213	219	2183	953	229	232	1230	192	195
QF 210-4-AA	MTSFC 200	55	2449	1109	213	219	2449	1109	229	232	1340	192	224
QF 210-4-A	MTSFC 200	55	2449	1109	213	219	2449	1109	229	232	1340	192	224
QF 210-4	MTSFC 200	63	2579	1109	213	219	2579	1109	229	232	1470	192	243
QF 210-5-AA	MTSFC 200	75	2825	1265	213	219	-	-	-	-	1560	192	266
QF 210-5-A	MTSFC 200	75	2825	1265	213	219	-	-	-	-	1560	192	266
QF 210-5	MTSFC 200	75	2825	1265	213	219	-	-	-	-	1560	192	266
QF 210-6-AA	MTSFC 200	75	2981	1421	213	219	-	-	-	-	1560	192	273
QF 210-6-A	MTSFC 200	92	3161	1421	213	219	-	-	-	-	1740	192	305
QF 210-6	MTSFC 200	92	3161	1421	213	219	-	-	-	-	1740	192	305
QF 210-7-AA	MTSFC 200	92	3317	1577	213	219	-	-	-	-	1740	192	311
QF 210-7-A	MTSFC 200	92	3317	1577	213	219	-	-	-	-	1740	192	311
QF 210-7	MOTOR 10"	110	3106	1577	213	219	-	-	-	-	1529	192	379
QF 210-8	MOTOR 10"	132	3392	1733	237	237	-	-	-	-	1659	237	432
QF 210-9	MOTOR 10"	132	3548	1889	237	237	-	-	-	-	1659	237	442
QF 210-10	MOTOR 10"	147	3814	2045	237	237	-	-	-	-	1769	237	499
QF 210-11	MOTOR 10"	170	4120	2201	237	237	-	-	-	-	1919	237	542
QF 210-12	MOTOR 12"	185	4091	2357	286	286	-	-	-	-	1734	286	548
QF 210-13	MOTOR 12"	185	4247	2513	286	286	-	-	-	-	1734	286	554

E* = Maximum diameter of pump inclusive of one cable guard and motor.

E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 210

SHAKTI PUMPING LIFE

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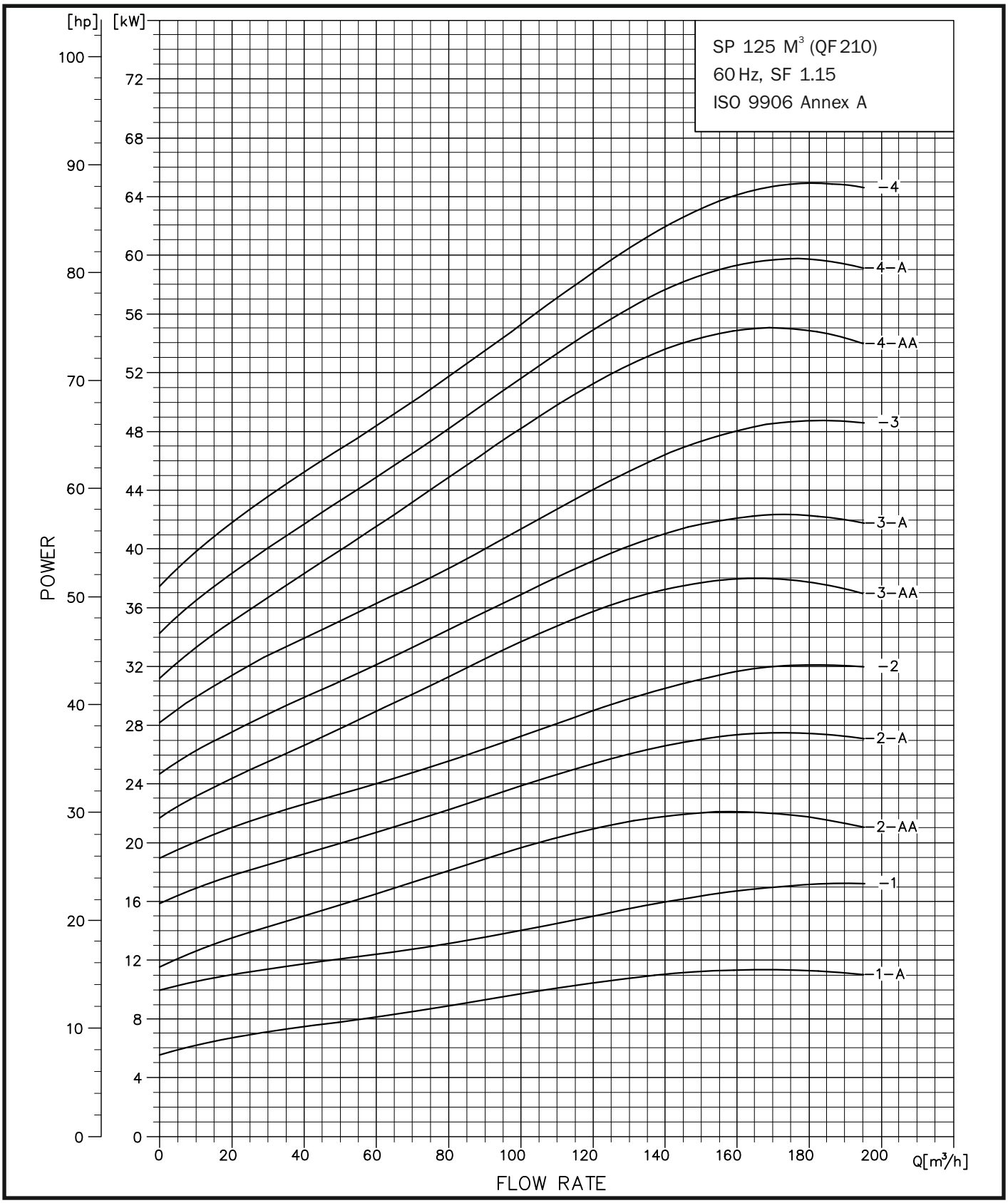
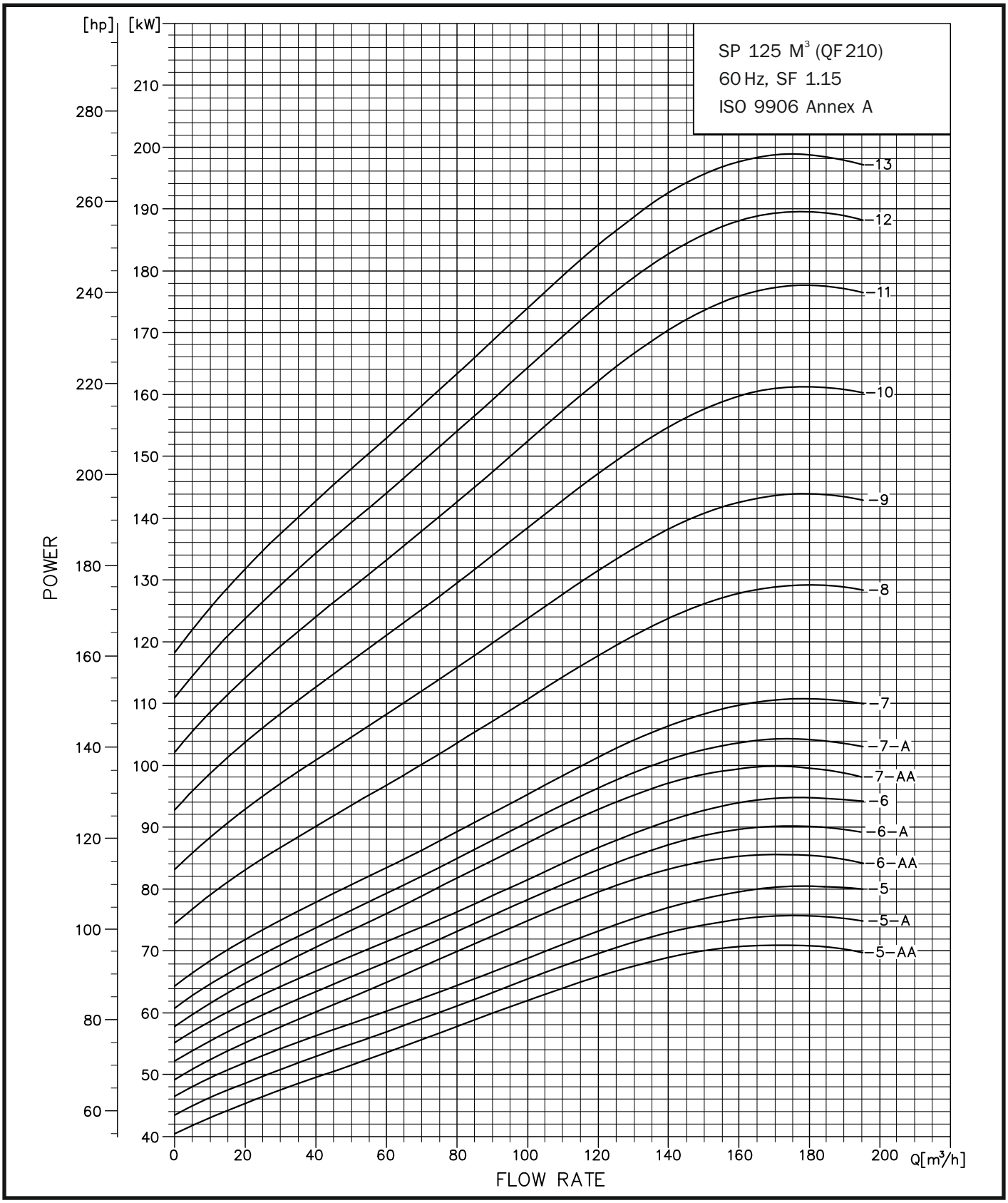


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 210



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 270

SHAKTI PUMPING LIFE

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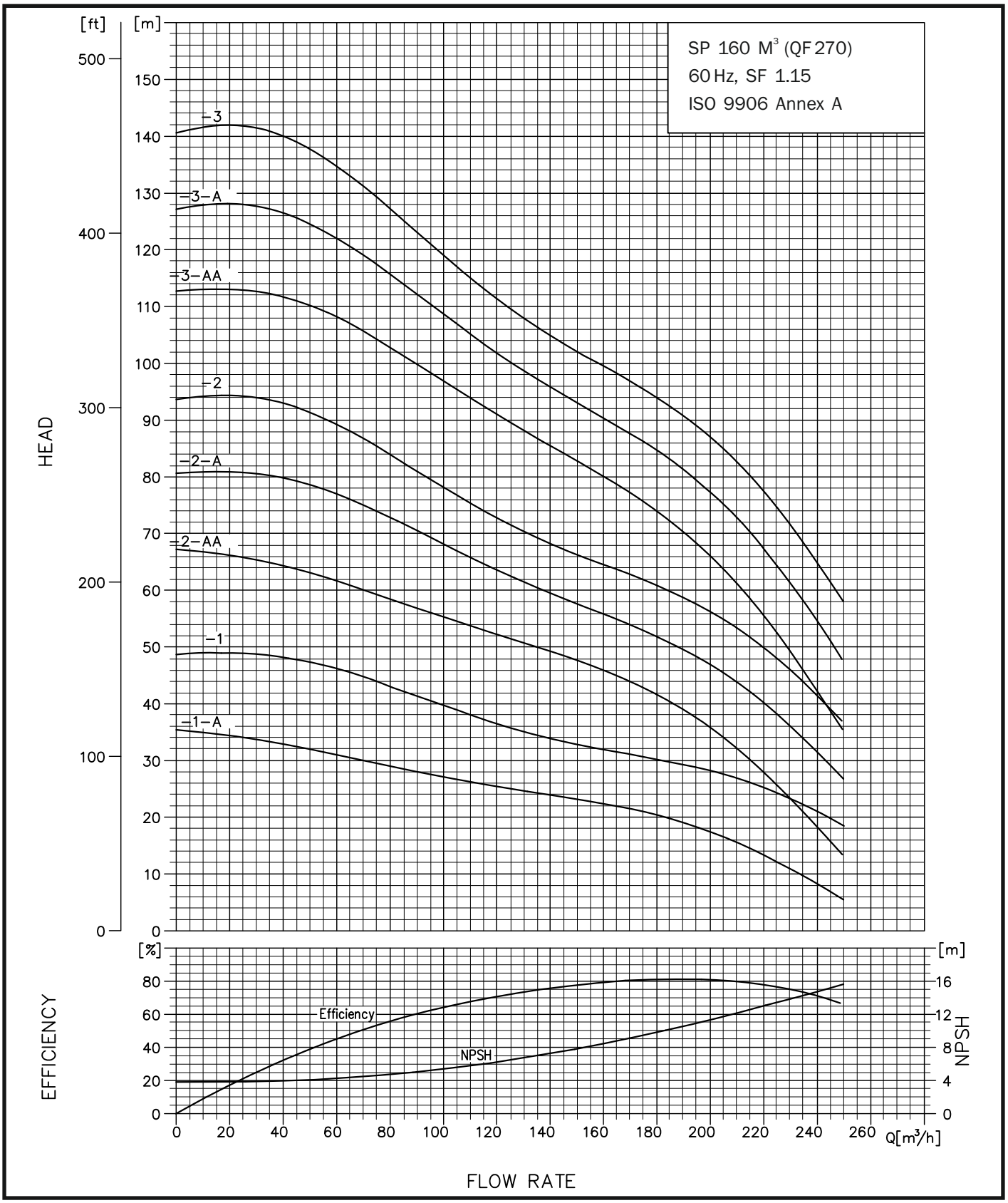
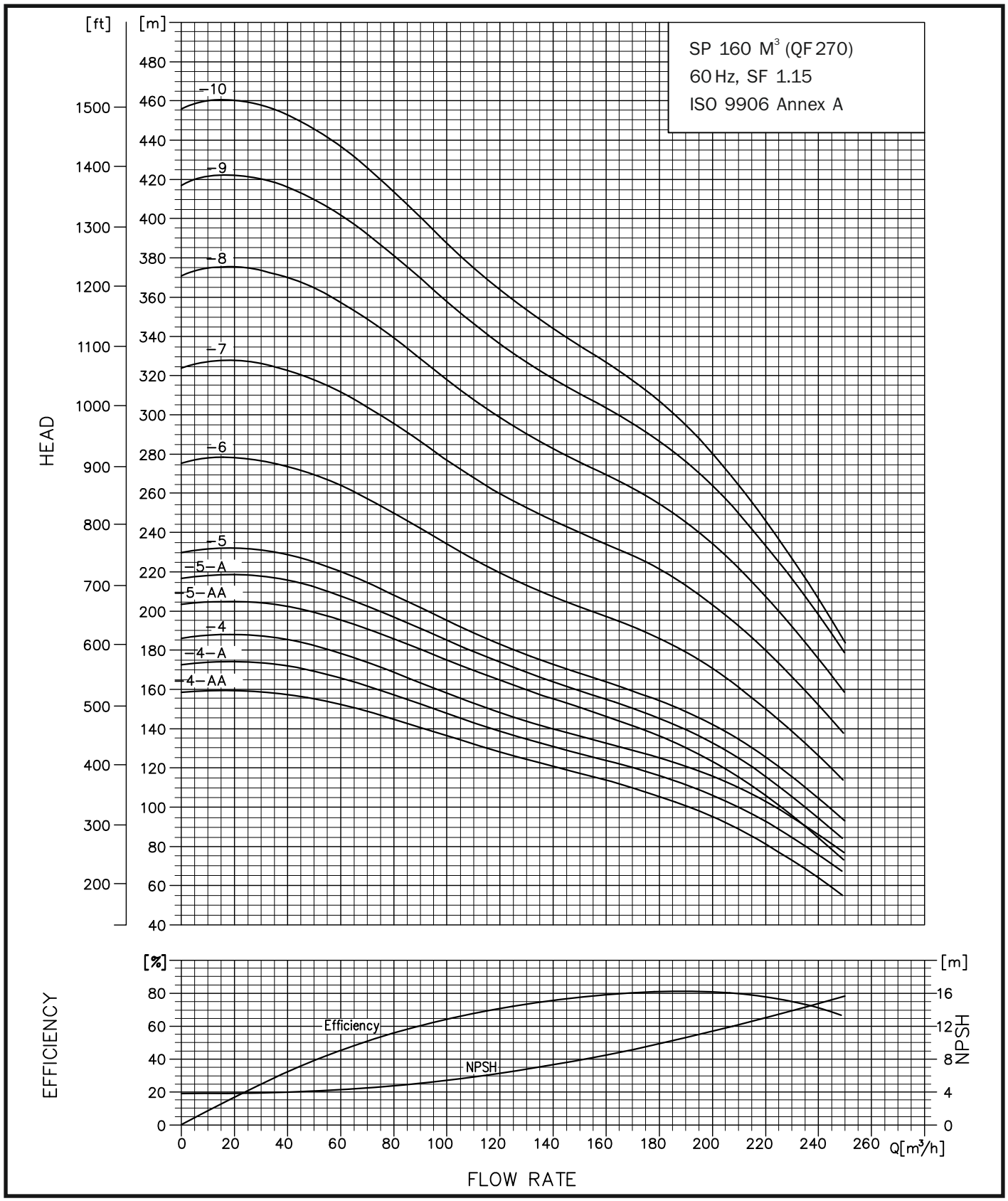


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 270

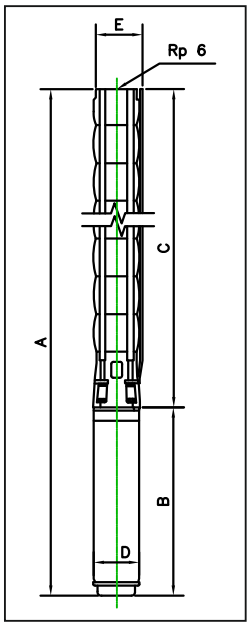


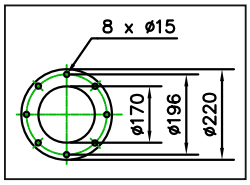
TECHNICAL DATA

SUBMERSIBLE PUMP QF 270

SHAKTI PUMPING LIFE
www.shaktipumps.com

DIMENSIONS AND WEIGHTS





Pump Type	Motor		Dimensions [mm]										Net Weight Kg
	Type	Power [Kw]	Rp 6 Connection				6" flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
QF 270-1-A	MTSF 150	15	1515	641	211	215	1515	641	222	226	874	138	92
QF 270-1	MTSF 150	22	1650	641	211	215	1650	641	222	226	1009	138	105
QF 270-2-AA	MTSF 150	26	1911	797	211	215	1911	797	222	226	1114	138	123
QF 270-2-A	MTSF 150	37	2091	797	211	215	2091	797	222	226	1294	138	140
QF 270-2	MTSF 150	37	2091	797	211	215	2091	797	222	226	1294	138	140
QF 270-3-AA	MTSFC 200	45	2183	953	213	219	2183	953	229	232	1230	192	195
QF 270-3-A	MTSFC 200	55	2293	953	213	219	2293	953	229	232	1340	192	218
QF 270-3	MTSFC 200	55	2293	953	213	219	2293	953	229	232 C	1340	192	218
QF 270-4-AA	MTSFC 200	63	2579	1109	213	219	-	-	-	-	1470	192	243
QF 270-4-A	MTSFC 200	75	2669	1109	213	219	-	-	-	-	1560	192	260
QF 270-4	MTSFC 200	75	2669	1109	213	219	-	-	-	-	1560	192	260
QF 270-5-AA	MTSFC 200	92	3005	1265	213	219	-	-	-	-	1740	192	298
QF 270-5-A	MTSFC 200	92	3005	1265	213	219	-	-	-	-	1740	192	298
QF 270-5	MTSFC 200	92	3005	1265	213	219	-	-	-	-	1740	192	298
QF 270-6	MOTOR 10"	110	2950	1421	213	219	-	-	-	-	1529	192	373
QF 270-7	MOTOR 10"	132	3236	1577	237	237	-	-	-	-	1659	237	426
QF 270-8	MOTOR 10"	147	3502	1733	237	237	-	-	-	-	1769	237	483
QF 270-9	MOTOR 10"	170	3808	1889	237	237	-	-	-	-	1919	237	529
QF 270-10	MOTOR 12"	185	3779	2045	286	286	-	-	-	-	1734	286	535

E* = Maximum diameter of pump inclusive of one cable guard and motor.

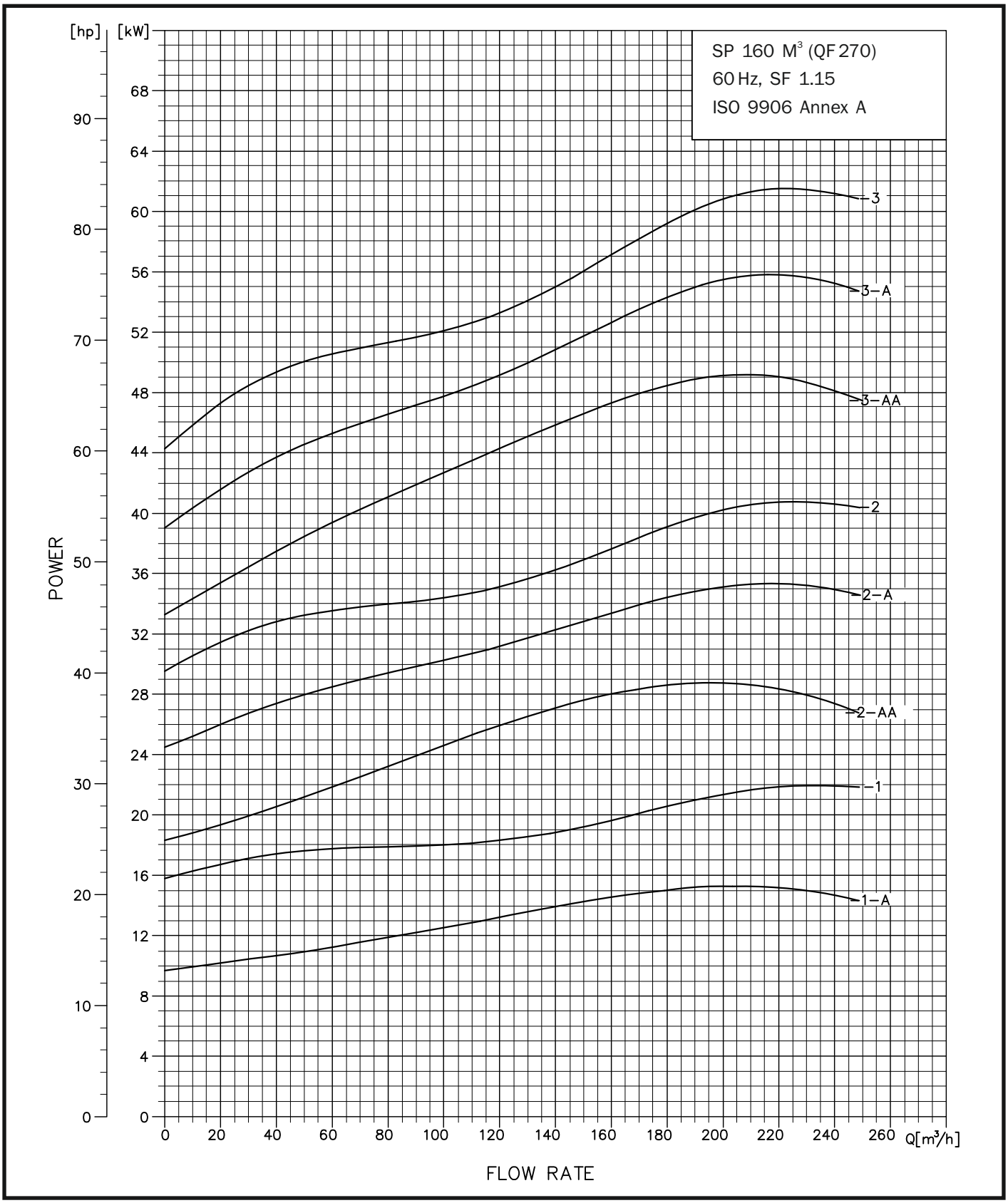
E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 270



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 270

SHAKTI PUMPING LIFE

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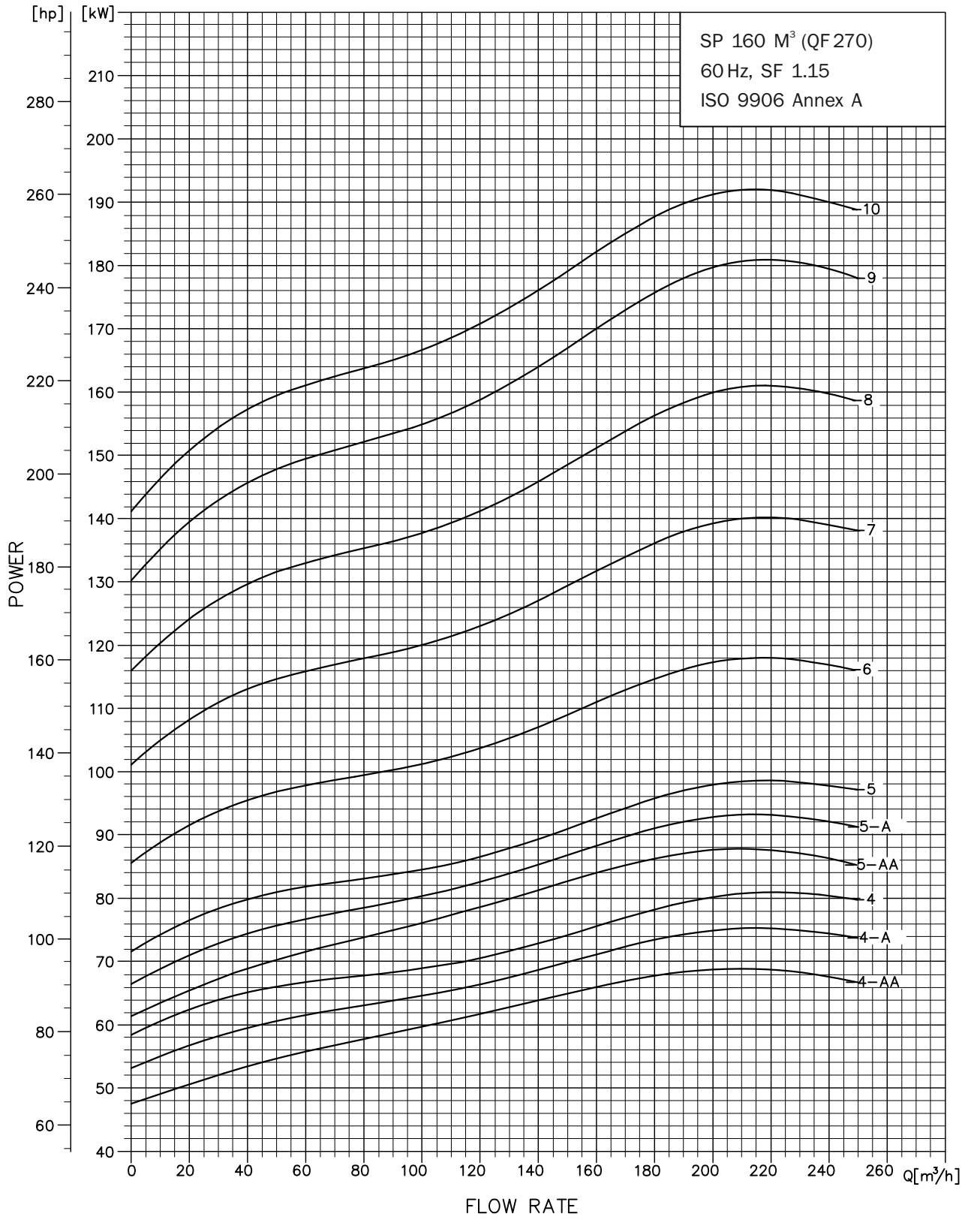
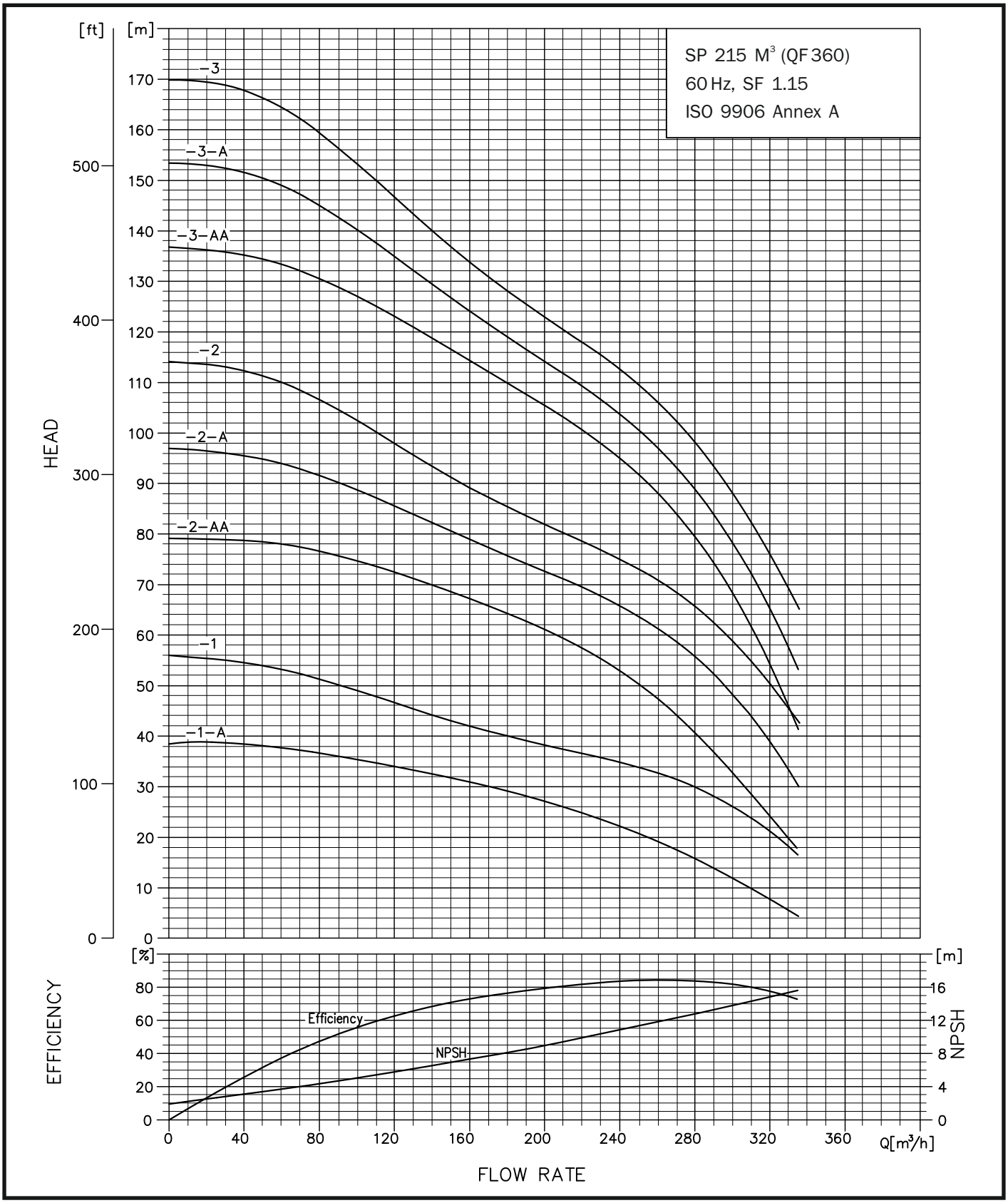


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 360



PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 360

SHAKTI PUMPING LIFE

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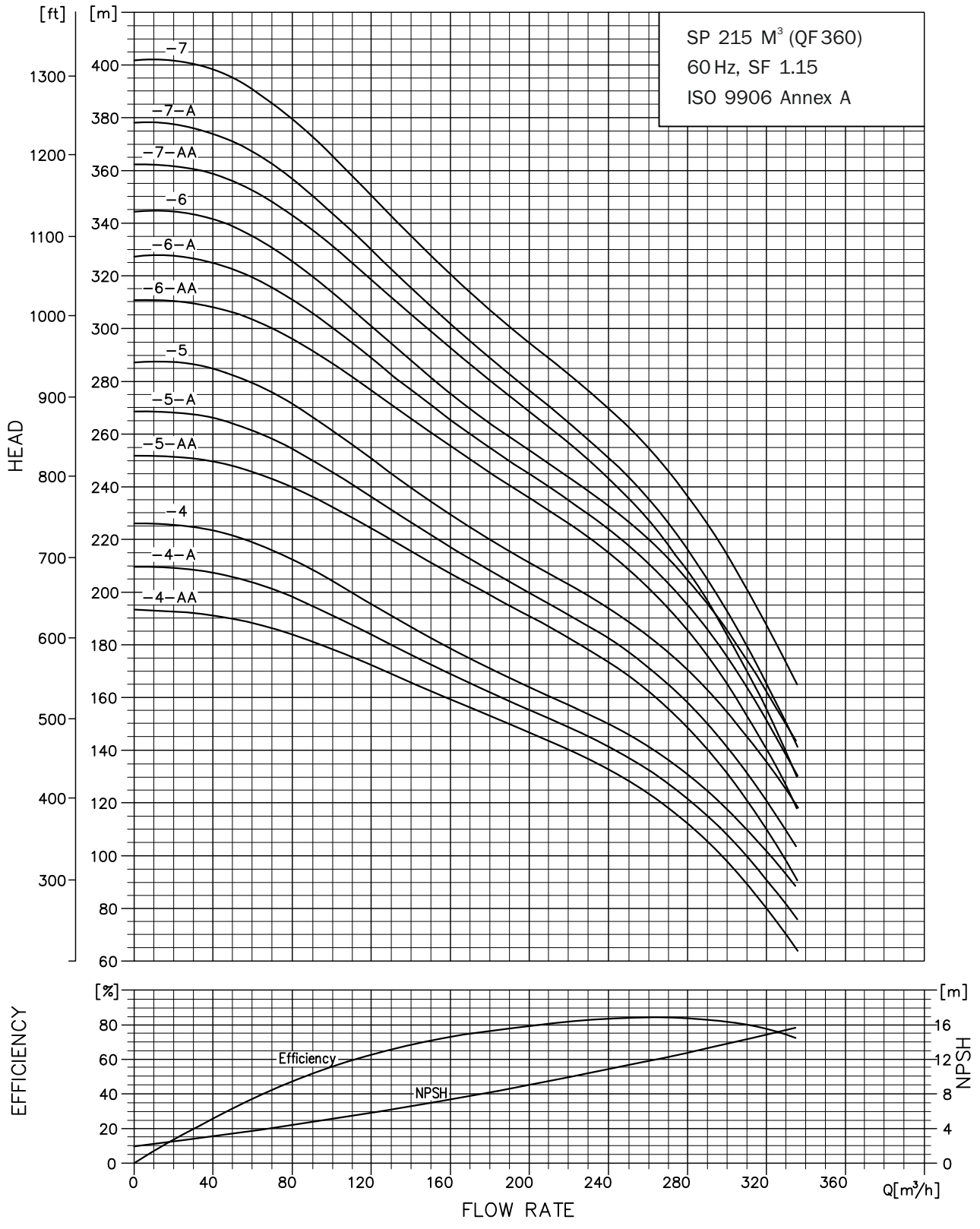
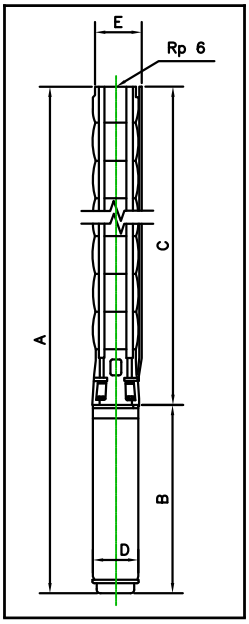
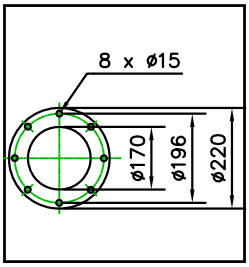


TECHNICAL DATA

SUBMERSIBLE PUMP QF 360

DIMENSIONS AND WEIGHTS





Pump Type	Motor		Dimensions [mm]										Net
	Type	Power	Rp 5 Connection				6" flange				B	D	Weight
		[Kw]	A	C	E*	E**	A	C	E*	E**			Kg
QF 360-1-A	MTSF 150	22	1620	611	236	239	1620	611	241	247	1009	138	107
QF 360-1	MTSF 150	30	1825	611	236	239	1825	611	241	247	1214	138	128
QF 360-2-AA	MTSFC 200	45	2017	787	239	244	2017	787	241	247	1230	192	212
QF 360-2-A	MTSFC 200	55	2127	787	239	244	2127	787	241	247	1340	192	235
QF 360-2	MTSFC 200	63	2257	787	239	244	2257	787	241	247	1470	192	254
QF 360-3-AA	MTSFC 200	75	2523	963	239	244	2523	963	241	247	1560	192	299
QF 360-3-A	MTSFC 200	92	2703	963	239	244	2703	963	241	247	1740	192	331
QF 360-3	MTSFC 200	92	2703	963	239	244	2703	963	241	247	1740	192	331
QF 360-4-AA	MTSFC 200	110	3272	1212	239	244	3272	1212	241	247	2060	192	426
QF 360-4-A	MTSFC 200	110	3272	1212	239	244	3272	1212	241	247	2060	192	426
QF 360-4	MOTOR 10"	110	2741	1212	239	254	2741	1212	241	247	1529	192	426
QF 360-5-AA	MOTOR 10"	132	3047	1388	250	254	-	-	-	-	1659	237	501
QF 360-5-A	MOTOR 10"	132	3047	1388	250	254	-	-	-	-	1659	237	501
QF 360-5	MOTOR 10"	147	3157	1388	250	254	-	-	-	-	1769	237	552
QF 360-6-AA	MOTOR 10"	170	3505	1586	250	254	-	-	-	-	1919	237	616
QF 360-6-A	MOTOR 10"	170	3505	1586	250	254	-	-	-	-	1919	237	616
QF 360-6	MOTOR 10"	170	3505	1586	250	254	-	-	-	-	1919	237	616
QF 360-7-AA	MOTOR 12"	185	3518	1784	286	286	-	-	-	-	1734	286	644
QF 360-7-A	MOTOR 12"	185	3518	1784	286	286	-	-	-	-	1734	286	644
QF 360-7	MOTOR 12"	220	3668	1784	286	286	-	-	-	-	1884	286	848

E* = Maximum diameter of pump inclusive of one cable guard and motor.

E** = Maximum diameter of pump inclusive of two cable guard and motor.

Other type of connection are possible by means of connecting flanges.

* Motor type may change as per requirement .

PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 360

SHAKTI PUMPING LIFE

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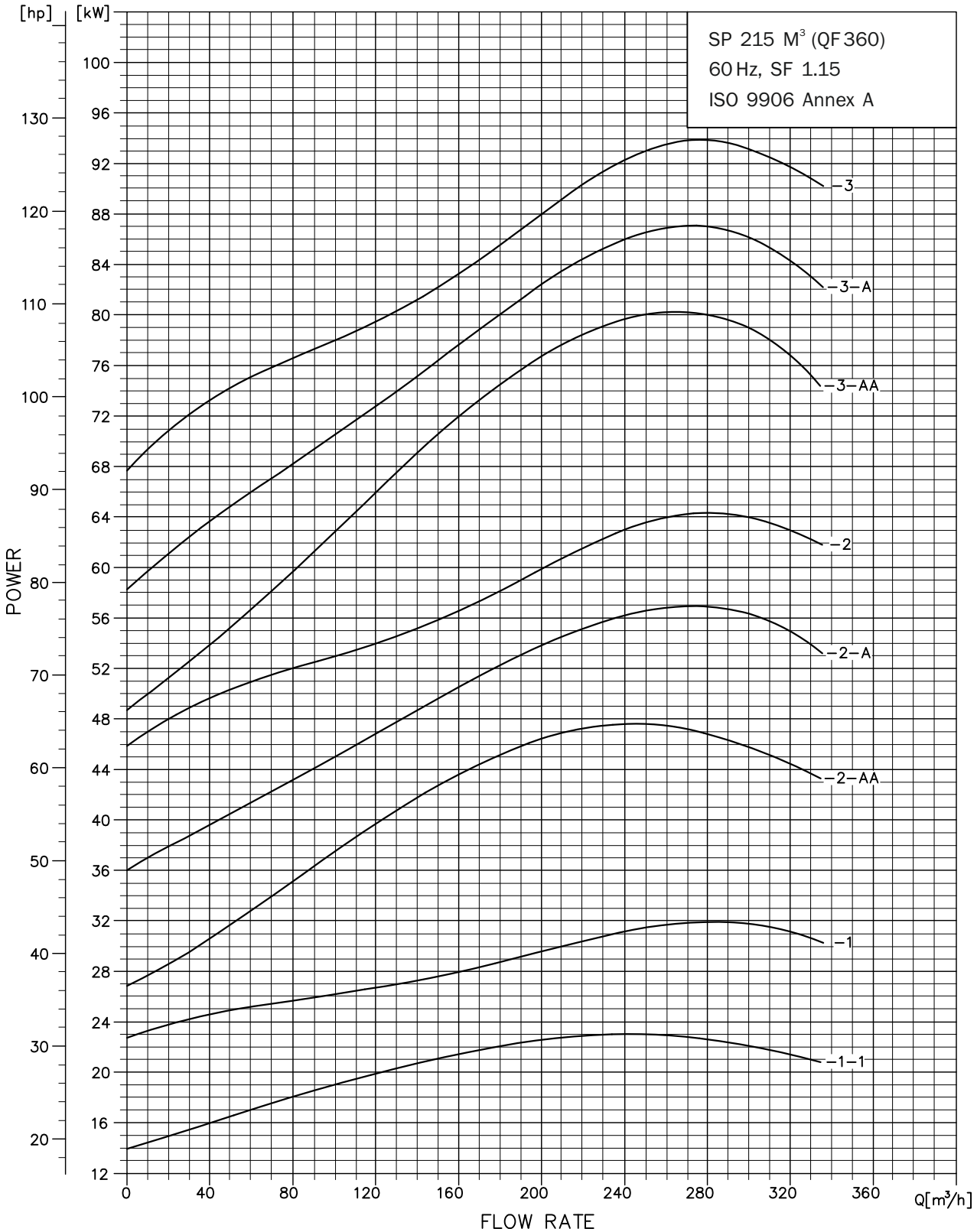
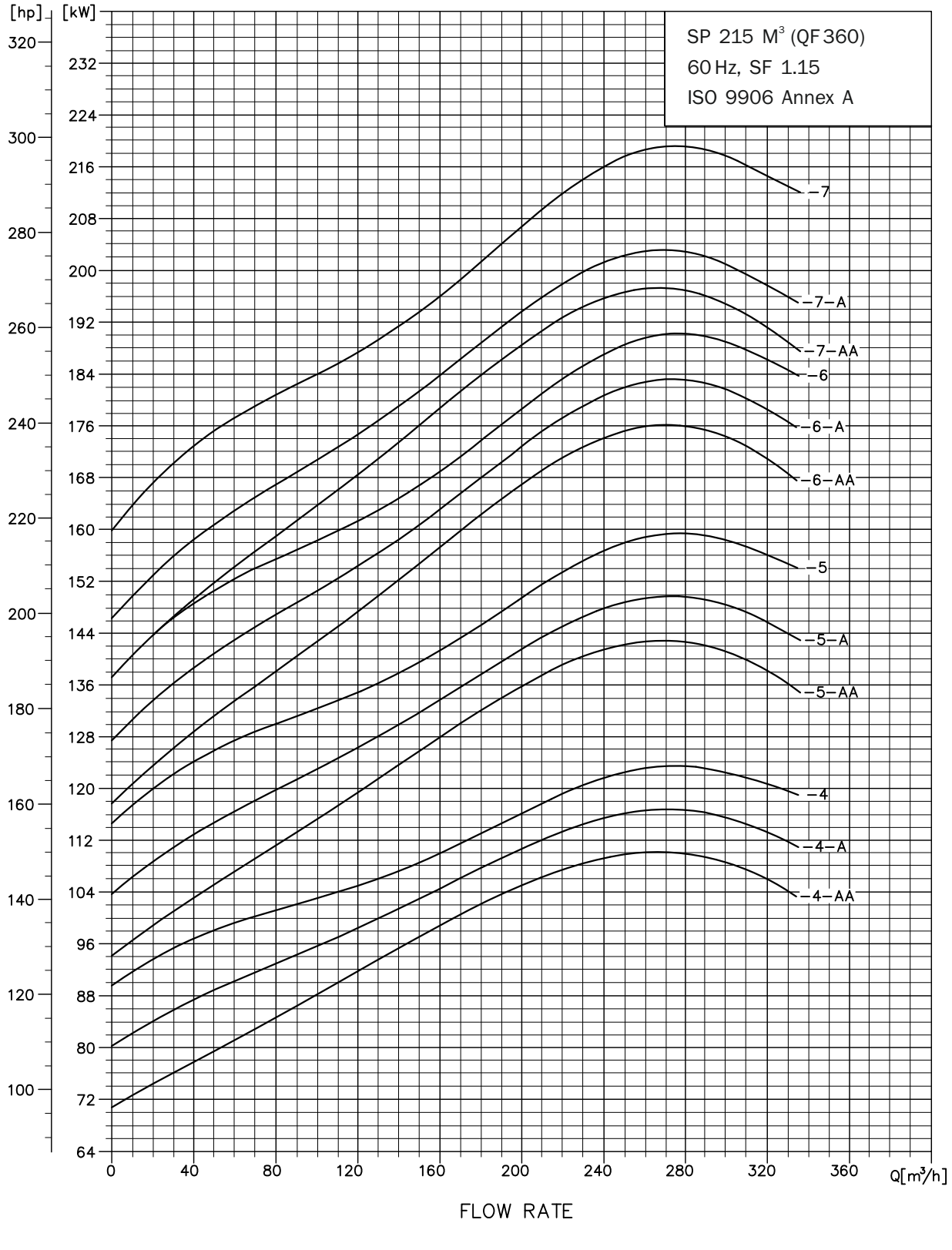


PERFORMANCE CURVE

SUBMERSIBLE PUMP QF 360



SINGLE -PHASE MOTOR SPECIFICATION (60 HZ) 3450 RPM

TYPE	RATING					FULL LOAD	MAXIMUM	EFFICIENCY %		POWER FACTOR		LOCK
	HP	KW	VOLTS	HZ	S.F	AMPS	LOAD	S.F	F.L	S.F	F.L	ROTOR
4" 3-WIRE	0.5	0.37	230	60	1.6	Y5.0	Y6.0	62	56	0.70	0.60	23
						B5.0	B6.0					
						R0	R0					
	0.75	0.5	230	60	1.5	Y6.8	Y8.0	64	59	0.70	0.60	34.2
						B6.8	B8.0					
						R0	R0					
	1	0.75	230	60	1.4	Y8.2	Y10.4	65	62	0.70	0.60	41.8
						B8.2	B10.4					
						R0	R0					
4" 3-WIRE	0.5	0.37	230	60	1.6	Y3.6	Y4.3	67	57	0.90	0.80	23
						B3.7	B4.0					
						R2.0	R2.0					
	0.75	0.5	230	60	1.5	Y4.9	Y5.7	69	60	0.90	0.80	34.2
						B5.0	B5.2					
						R3.2	R3.1					
	1	0.75	230	60	1.4	Y6.0	Y7.1	70	64	0.90	0.80	41.8
						B5.7	B6.4					
						R3.4	R3.3					
4" 3-WIRE	1.5	1.1	230	60	1.3	Y10.0	Y11.5	70	69	0.85	0.80	51.4
						B9.9	B11					
						R1.3	R1.3					
	2	1.5	230	60	1.25	Y10.0	Y13.2	73	74	0.95	0.90	53.1
						B9.3	B11.9					
						R2.6	R2.6					
	3	2.2	230	60	1.15	Y14	Y17.0	75	75	0.90	0.90	83.4
						B11.2	B12.6					
						R6.1	R6.0					
	5	3.7	230	60	1.15	Y23	Y27.5	78	77	0.90	0.90	129
						B15.9	B19.1					
						R11	R10.8					

Y Yellow lead Line amps
B Black lead main winding amps
R Red lead Start or auxiliary winding amps

SUBMERSIBLE MOTORS

SUBMERSIBLE MOTORS QF

THREE -PHASE MOTOR SPECIFICATION (60 HZ) 3450 RPM

TYPE	RATING					FULL	MAXIMUM	EFFICIENCY %		POWER		LOCK
	HP	KW	VOLTS	HZ	S.F	LOAD	LOAD AMPS	S.F	F.L	S.F	F.L	ROTOR
4" 3-WIRE	0.5	0.37	230	60	1.6	2.4	2.9	70	64	0.7	0.6	15.2
			380	60	1.6	1.4	2.1	70	64	0.7	0.6	9.2
			460	60	1.6	1.2	1.5	70	64	0.7	0.6	7.6
	0.75	0.5	230	60	1.5	3.1	3.8	73	69	0.7	0.6	21.4
			380	60	1.5	1.9	2.5	73	69	0.7	0.6	13
			460	60	1.5	1.6	1.9	73	69	0.7	0.6	10.7
	1.0	0.75	230	60	1.4	3.9	4.7	72	70	0.7	0.6	26.9
			380	60	1.4	2.3	2.8	72	70	0.7	0.6	16.3
			460	60	1.4	2	2.4	72	70	0.7	0.6	13.5
	1.5	1.1	230	60	1.3	5	5.9	76	76	0.8	0.7	33.2
			380	60	1.3	3	3.6	76	76	0.8	0.7	20.1
			460	60	1.3	2.5	3.1	76	76	0.8	0.7	16.6
	2	1.5	230	60	1.25	6.7	8.1	76	76	0.8	0.7	45
			380	60	1.25	4.1	4.9	76	76	0.8	0.7	26.6
			460	60	1.25	3.4	4.1	76	76	0.8	0.7	22.5
	3	2.2	230	60	1.15	9.5	10.9	77	77	0.8	0.7	60.3
			380	60	1.15	5.8	6.6	77	77	0.8	0.7	37.5
			460	60	1.15	4.8	5.5	77	77	0.8	0.7	31
	5	3.7	230	60	1.15	15.9	17.8	78	78	0.9	0.9	102
			380	60	1.15	9.6	10.8	78	78	0.9	0.9	60.2
			460	60	1.15	8	8.9	78	78	0.9	0.9	53.7
	7.5	5.5	230	60	1.15	23	26.4	78	78	0.9	0.9	152
			380	60	1.15	13.9	16	78	78	0.9	0.9	92.7
			460	60	1.15	11.5	13.2	78	78	0.9	0.9	83.8
	10	7.5	230	60	1.15	30	35	75	75	0.9	0.9	200
			380	60	1.15	19.3	21	75	75	0.9	0.9	140
			460	60	1.15	15.9	17.3	75	75	0.9	0.9	116

6" REWINDABLE MOTORS PERFORMANCE DATA 60Hz

HP	P_N [kW]	P_{max} [kW]	Thrust F [N]	U_N [V]	[min-1]	I_N [A]	I_A [A]	η (Eff.) [%] at % load			COSØ [PF] at % load			T_N [Nm]	T_A [Nm]
								50	75	100	50	75	100		
5.5	4.0	4.6	15500	230	3520	21.0	106.0	0.70	0.75	0.77	0.52	0.64	0.73	12.5	18.6
				380	3530	13.3	61.0	0.66	0.72	0.77	0.51	0.63	0.71	12.4	15.0
				460	3520	10.1	51.0	0.70	0.76	0.78	0.56	0.67	0.75	12.5	15.3
7.5	5.5	6.3	15500	230	3490	26.1	106.0	0.74	0.78	0.78	0.61	0.73	0.80	17.3	15.9
				380	3480	15.4	61.0	0.76	0.78	0.78	0.64	0.75	0.81	17.3	15.0
				460	3480	12.9	51.0	0.74	0.77	0.77	0.65	0.76	0.82	17.3	15.1
10	7.5	8.6	15500	230	3490	35.9	146.0	0.75	0.79	0.79	0.58	0.71	0.78	23.6	22.4
				380	3480	20.8	81.0	0.76	0.79	0.79	0.64	0.75	0.81	23.6	20.2
				460	3470	17.2	64.0	0.75	0.78	0.78	0.67	0.77	0.82	23.7	19.4
12.5	9.3	10.7	15500	230	3490	44.4	183.0	0.75	0.79	0.79	0.59	0.71	0.78	29.3	28.9
				380	3470	25.6	100.0	0.77	0.80	0.80	0.64	0.75	0.81	29.4	25.9
				460	3460	20.8	78.0	0.78	0.80	0.80	0.67	0.78	0.82	29.4	24.4
15	11.0	12.7	15500	230	3490	51.2	220.0	0.77	0.80	0.81	0.60	0.72	0.79	34.6	35.6
				380	3490	30.3	129.0	0.77	0.81	0.81	0.62	0.74	0.80	34.5	34.3
				460	3480	25.0	98.0	0.78	0.81	0.80	0.68	0.77	0.83	34.7	31.5
17.5	13.0	15	15500	230	3500	62.4	288.0	0.76	0.80	0.81	0.55	0.68	0.76	40.7	50.5
				380	3500	36.3	164.0	0.77	0.81	0.82	0.59	0.71	0.78	40.7	47.2
				460	3490	29.0	125.0	0.78	0.81	0.81	0.65	0.76	0.82	40.9	43.3
20	15.0	17.3	15500	230	3500	65.9	325.0	0.80	0.83	0.83	0.63	0.74	0.81	47.0	49.5
				380	3490	39.1	188.0	0.81	0.83	0.83	0.66	0.77	0.82	47.2	56.5
				460	3490	32.1	151.0	0.80	0.83	0.83	0.68	0.78	0.84	47.1	55.6
25	18.5	21.3	27500	230	3490	85.4	402.0	0.77	0.81	0.82	0.59	0.71	0.78	58.1	81.8
				380	3490	52.5	249.0	0.76	0.80	0.81	0.58	0.70	0.77	58.1	83.6
				460	3480	40.6	184.0	0.80	0.82	0.82	0.65	0.76	0.81	58.4	74.5
30	22.0	25.3	27500	230	3510	100.2	520.0	0.82	0.84	0.84	0.65	0.74	0.77	68.8	96.6
				380	3510	59.9	309.0	0.82	0.84	0.84	0.67	0.75	0.78	68.8	94.9
				460	3500	47.1	232.0	0.83	0.84	0.84	0.72	0.79	0.82	69.1	85.8
35	26.0	29.9	27500	230	3510	118.3	657.0	0.83	0.85	0.85	0.63	0.72	0.76	81.3	135.0
				380	3500	67.5	360.0	0.83	0.85	0.85	0.62	0.74	0.81	81.6	121.4
				460	3500	55.7	287.0	0.83	0.85	0.85	0.64	0.76	0.84	81.6	117.2
40	30.0	34.5	27500	230	3510	135.7	758.0	0.78	0.82	0.83	0.58	0.71	0.78	93.8	139.6
				380	3510	79.6	436.0	0.79	0.83	0.84	0.64	0.75	0.82	94.0	126.4
				460	3500	64.4	346.0	0.81	0.84	0.83	0.58	0.71	0.78	93.8	139.6
50	37.0	42.6	27500	230	3510	135.7	758.0	0.78	0.82	0.83	0.58	0.71	0.78	93.8	139.6
				380	3510	102.8	567.0	0.77	0.81	0.82	0.59	0.71	0.78	115.8	193.6
				460	3500	79.1	430.0	0.82	0.84	0.85	0.63	0.75	0.81	116.0	177.8

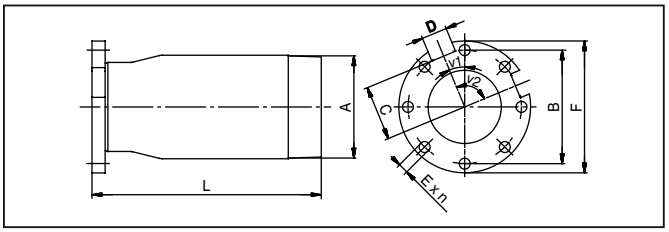
ACCESSORIES

SUBMERSIBLE PUMPS QF

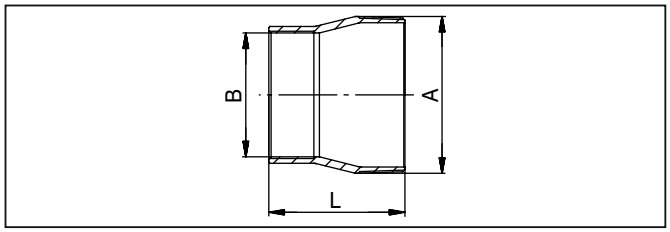
CONNECTING PIECES

The tables below show the range of connecting pieces for connection of thread to flange and thread to thread.

Thread - Flange



Thread



Type	Pump outlet	Connecting piece	Thread - Flange										Product number	
			A	Dimensions [mm]						V_1	V_2	n	DIN W - Nr 1.4301	DIN W - Nr 1.4401
				B	C	D	E	F	L					
QF 30	Rp 2.5	R 2½ → JIS 2	R 2½	100	50.5	30	ø11	125	200	30	120	6	32420220	32420260
		R 2½ → JIS 2.5	R 2½	115	57	30	ø11	140	200	22.5	90	8	32420221	32420261
		R 2½ → DIN 50 PN 16	R 2½	125	62.5	22	ø18	165	95	45	180	4	32420222	32420262
		R 2½ → DIN 50 PN 40	R 2½	125	62.5	22	ø18	165	97	45	180	4	32420223	32420263
		R 2½ → DIN 65 PN 16	R 2½	145	72.5	22	ø18	185	100	45	180	4	32420224	32420264
		R 2½ → DIN 65 PN 40	R 2½	145	72.5	25	ø18	185	110	22.5	180	8	32420225	32420265
		R 2½ → DIN 80 PN 16	R 2½	160	80	25	ø18	200	95	22.5	180	8	32420226	32420266
		R 2½ → DIN 80 PN 40	R 2½	160	80	25	ø18	200	99	22.5	180	8	32420227	32420267
QF 50	Rp 3	R 3 → JIS 3	R3	136	66	35	ø15	165	200	22.5	90	8	32420228	32420268
		R 3 → DIN 65 PN 16	R 3	145	72.5	22	ø18	185	105	45	180	4	32420229	32420269
		R 3 → DIN 65 PN 40	R 3	145	72.5	25	ø18	185	109	22.5	180	8	32420230	32420270
		R 3 → DIN 80 PN 16	R 3	160	80	25	ø18	200	110	22.5	180	8	32420231	32420271
		R 3 → DIN 80 PN 40	R 3	160	80	25	ø18	200	120	22.5	180	8	32420232	32420272
		R 3 → DIN 100 PN 16	R 3	180	90	25	ø18	220	107	22.5	180	8	32420233	32420273
		R 3 → DIN 100 PN 40	R 3	190	95	25	ø22	220	109	22.5	180	8	32420234	32420274
QF 75 QF 100	Rp3 Rp4	R 4 → JIS 4	R 4	155	72	35	ø15	180	200	22.5	90	8	32420235	32420275
		R 3 → DIN 65 PN 16	R 3	145	72.5	22	ø18	185	105	45	180	4	32420236	32420276
		R 3 → DIN 65 PN 40	R 3	145	72.5	25	ø18	185	109	22.5	180	4	32420237	32420277
		R 3 → DIN 80 PN 16	R 3	160	80	25	ø18	200	110	22.5	180	8	32420238	32420278
		R 3 → DIN 80 PN 40	R 3	160	80	25	ø18	200	120	22.5	180	8	32420239	32420279
		R 3 → DIN 100 PN 16	R 3	180	90	25	ø18	220	107	22.5	180	8	32420240	32420280
		R 3 → DIN 100 PN 40	R 3	190	95	25	ø22	220	109	22.5	180	8	32420241	32420281
		R 4 → DIN 100 PN 40	R 4	180	90	25	ø18	220	120	22.5	180	8	32420242	32420282
		R 4 → DIN 100 PN 40	R 4	190	95	25	ø22	235	130	22.5	180	8	32420243	32420283
QF 125 QF 160	Rp 5	R 5 → JIS 4	R 5	155	75	35	ø15	180	313	22.5	90	8	32420244	32420284
		R 5 → JIS 5	R 5	190	97	45	ø19	225	315	22.5	90	8	32420245	32420285
		R 5 → DIN 100 PN 16	R 5	180	95	45	ø18	225	315	22.5	90	8	32420246	32420286
		R 5 → DIN 100 PN 40	R 5	190	102.5	45	ø22	240	314	22.5	90	8	32420247	32420287
		R 5 → DIN 125 PN 16	R 5	210	110	45	ø18	250	317	22.5	90	8	32420248	32420288
		R 5 → DIN 125 PN 40	R 5	220	120	45	ø26	270	317	22.5	90	8	32420249	32420289
		R 5 → DIN 150 PN 16	R 5	240	127.5	45	ø22	285	317	22.5	90	8	32420250	32420290
		R 5 → DIN 150 PN 40	R 5	250	135	45	ø26	300	323	22.5	90	8	32420251	32420291
QF 210 QF 270 QF 360	Rp 6	R 6 → JIS 5	R 6	190	97	45	ø19	225	316	22.5	90	8	32420252	32420292
		R 6 → JIS 6	R 6	224	111	45	ø19	252	317	22.5	90	8	32420253	32420293
		R 6 → DIN 125 PN 16	R 6	210	110	45	ø18	250	317	22.5	90	8	32420254	32420294
		R 6 → DIN 125 PN 40	R 6	220	120	45	ø26	270	321	22.5	90	8	32420255	32420295
		R 6 → DIN 150 PN 16	R 6	240	127.5	45	ø22	285	317	22.5	90	8	32420256	32420296
		R 6 → DIN 150 PN 40	R 6	250	1385	45	ø26	300	323	22.5	90	8	32420257	32420297
		R 6 → DIN 200 PN 16	R 6	295	155	45	ø22	340	317	15	90	12	32420258	32420298
		R 6 → DIN 200 PN 40	R 6	320	172.5	45	ø30	375	327	15	90	12	32420259	32420299

Type	Pump outlet	Connecting piece	Thread - Flange		Product number	
			A	Dimension [mm]	DIN W - Nr 1.4301	DIN W - Nr 1.4401
QF 125 QF 160	Rp 5	R 5 → Rp 5	R 5	121	32420301	32420307
		R 5 → Rp 6	R 5	150	32420302	32420308
	NPT 5	NPT5 → NPT4	NPT 5	121	32420303	32420309
		NPT5 → NPT6	NPT 5	150	32420304	32420310
QF 210 QF 270 QF 360	Rp 6	R 6 → Rp 5	R 5	150	32420305	32420311
	NPT 6	NPT6 → NPT5	NPT 6	150	32420306	32420312

Flow sleeves

Shakti offers a complete range of stainless steel flow sleeves for both vertical and horizontal operation. Flow sleeves are recommended for all applications in which motor cooling is insufficient. The result is a general extension of motor life. Flow sleeves are to be fitted:

- if the submersible pump is exposed to high thermal load like current unbalance, dry running, overload, high ambient temperature, bad cooling conditions.
- if aggressive liquids are pumped, since corrosion is doubled for every 10°C the temperature rises.
- If sedimentation or deposits occur around and/or on the motor.

Note : More information about accessories is available on request.

ZINC ANODES

Application

Cathodic protection by means of zinc can be used for corrosion protection of SP pumps in chloride-containing liquids such as brackish water and sea water.

Sacrificial anodes are placed on the outside of the pump and motor as protection against corrosion.

The number of anodes required depends on the pump and motor in question.

Please contact Shakti for further details.

Liquid temperatures

Sea water: Up to 35°C.

Brackish water (min. 1500 g/m³ chloride): Up to 35°C.

Anode life

The zinc anodes have a life of one to four years, depending on operating conditions (temperature, flow and chloride content).

Product numbers of zinc anodes

Zinc anodes for pumps									
Product Number	Used for pump type								
	QF 30	QF 50	QF 75	QF 100	QF 125	QF 150	QF 210	QF 270	QF 300
ZA 01	●	●	●	●					
ZA 02					●	●			
ZA 03						●			
ZA 04							●		
ZA 05							●	●	●

Zinc anodes for motors			
4" Motors	6" Motors	6" Motors	6" Motors
ZA 06	ZA 07	ZA 07	ZA 08

SUBMERSIBLE PUMPS

MISCELLANEOUS

HEAD LOSSES IN ORDINARY WATER PIPES

UPPER FIGURES INDICATE THE VELOCITY OF WATER IN M/SEC.
LOWER FIGURES INDICATE HEAD IN METERS PER 100 METERS STRAIGHT PIPES

QUANTITY OF WATER			HEAD LOSSES IN ORDINARY WATER PIPES											
			NOMINAL PIPE DIAMETER IN INCHES AND INTERNAL DIAMETER IN (MM)											
m^3/h	Litres/min.	Litres/sec.	½"	¾"	1	11/4"	11/2	2"	21/2"	3"	3 ½"	4"	5"	6"
			15.75	21.25	27.00	35.75	41.25	52.50	68.00	80.25	92.50	105.0	130.0	155.5
0.6	10	0.16	0.855 9.910	0.470 2.470	0.292 0.784									
0.9	15	0.25	1.282 20.11	0.705 4.862	0.438 1.570	0.249 0.416								
1.2	20	0.33	1.710 33.53	0.940 8.035	0.584 2.588	0.331 0.677	0.249 0.346							
1.5	25	0.42	2.138 49.93	1.174 11.91	0.730 0.834	0.415 1.004	0.312 0.510							
1.8	30	0.50	2.565 69.34	1.491 16.50	0.876 5.277	0.498 1.379	0.374 0.700	0.231 0.223						
2.1	35	0.58	2.993 91.54	1.644 21.75	1.022 6.949	0.581 1.811	0.436 0.914	0.269 0.291						
2.4	40	0.67		1.879 27.66	1.168 8.820	0.664 2.290	0.499 1.160	0.380 0.368						
3	50	0.83		2.349 41.40	1.460 13.14	0.830 3.403	0.623 1.719	0.385 0.544	0.229 0.159					
3.6	60	1.00		2.819 57.74	1.751 18.28	0.996 4.718	0.748 2.375	0.462 0.751	0.275 0.218					
4.2	70	1.12		3.288 76.49	2.043 24.18	1.162 6.231	0.873 3.132	0.539 0.988	0.321 0.287	0.231 0.131				
4.8	80	1.33			2.335 30.87	1.328 7.940	0.997 3.988	0.616 1.551	0.367 0.363	0.263 6.164				
5.4	90	1.50			2.627 38.30	1.494 9.828	1.122 4.927	0.770 1.875	0.413 0.449	0.269 0.203				
6	100	1.67			2.919 46.49	1.660 11.90	1.247 5.972	0.962 2.802	0.459 0.542	0.329 0.244	0.248 0.124			
7.5	125	2.08			3.649 70.41	2.075 17.93	1.558 8.967	1.154 3.903	0.574 0.809	0.412 0.365	0.310 1.185	0.241 0.101		
9	150	2.50				2.490 25.11	1.870 12.53	1.347 5.179	0.668 1.124	0.494 0.506	0.372 0.256	0.289 0.140		
10.5	175	2.92				2.904 33.32	2.182 16.66	1.539 6.624	0.803 1.488	0.576 0.670	0.434 0.338	0.337 0.184		
12	200	3.33				3.319 42.75	2.493 21.36	1.924 10.03	0.918 1.901	0.659 0.855	0.496 0.431	0.385 0.234	0.251 0.084	
15	250	4.17				4.149 64.86	3.117 32.32	2.309 14.04	1.147 2.860	0.823 1.282	0.620 0.646	0.481 0.350	0.314 0.126	
18	300	5.00					3.740 15.52	3.078 24.04	1.377 4.009	0.988 1.792	0.744 0.903	0.577 0.488	0.377 0.175	0.263 0.074
24	400	6.67					4.987 78.17	3.848 36.71	1.836 6.828	1.317 3.053	0.992 1.530	0.770 0.829	0.502 0.294	0.351 0.124
30	500	8.33						3.848 36.71	2.295 10.40	1.647 4.622	1.240 2.315	0.962 1.254	0.628 0.445	0.439 0.187
36	600	10.0						46.18 51.84	2.753 14.62	1.976 6.505	1.488 3.261	1.155 1.757	0.753 0.623	0.526 0.260
42	700	11.7							3.212 19.52	2.306 8.693	1.736 4.356	1.347 2.345	0.879 0.831	0.614 0.347
48	800	13.3							3.671 25.20	2.635 11.18	1.984 5.582	1.540 3.009	1.005 1.066	0.702 0.445
54	900	15.0							4.130 31.51	2.964 13.97	2.232 6.983	1.732 3.762	1.130 1.328	0.790 0.555
60	1000	16.7							4.589 38.43	3.294 17.06	2.480 8.521	1.925 4.595	1.256 1.616	0.877 0.674
75	1250	20.8								4.117 26.10	3.100 13.00	2.406 7.010	1.570 2.458	1.097 1.027
90	1500	25.0								4.941 36.97	3.720 18.42	2.887 9.892	1.883 3.458	1.316 1.444
105	1750	29.2									4.340 24.76	3.368 13.30	1.883 3.468	1.535 1.934
120	2000	33.3									4.960 31.94	3.850 17.16	2.197 4.665	1.754 2.496
150	2500	41.7										4.812 26.26	2.511 5.995	2.193 3.807
180	3000	50.5											3.139 9.216	2.632 5.417
240	4000	66.7											3.767 13.05	3.509 8.926
300	5000	83.3											5.523 22.72	4.386 14.42
900C BENDS SLIDE VALVES			½"	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.6	1.7	2.5
T-PIECES, NON –RETURN VALVES			15.75	4.0	4.0	5.0	5.0	5.0	6.0	6.0	6.0	6.0	7.0	9.0

The table is calculated in accordance with H. Lang's new formula a=0.02 and for a water temperature of 10°C

The head loss in bends, slide valves. T-Pieces and non-return is equivalent to the meters of straight of straight pipes stated in the last two lines of the table. To fine the head loss in foot valves multiply the loss in T-pieces by two.

TABLE OF HEAD LOSSES

MISCELLANEOUS

SHAKTI PUMPING LIFE

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HEAD LOSSES IN PLASTIC PIPES

FIGURES INDICATE HEAD LOSS IN METRES PER 100 METRES OF STRAIGHT PIPES														
QUANTITY OF WATER			HEAD LOSSES IN PLASTIC PIPES											
			PELM/PEH PN 10											
			PELM				PEH							
m^3/h	Litres/min.	Litres/sec.	NOMINAL PIPE SIZE IN MM											
			25	32	40	50	63	75	90	110	125	140	160	180
			20.4	26.2	32.6	40.8	51.4	61.4	73.6	90.0	102.2	114.6	130.8	147.2
0.6	10	0.16	1.80	0.66	0.27	0.09								
0.9	15	0.25	4.00	1.14	0.60	0.18	0.63							
1.2	20	0.33	6.40	2.20	0.90	0.28	0.11							
1.5	25	0.42	10.00	3.50	1.40	0.43	0.17	0.07						
1.8	30	0.50	13.00	4.60	1.90	0.57	0.22	0.09						
2.1	35	0.58	16.00	6.00	2.00	0.7	0.27	0.12						
2.4	40	0.67	22.00	7.50	3.30	0.93	0.35	0.16	0.06					
3	50	0.83	37.00	11.00	4.80	1.4	0.5	0.22	0.09					
3.6	60	1.00	43.00	15.00	6.50	1.9	0.7	0.32	0.13	0.05				
4.2	70	1.12	50.00	18.00	8.00	2.5	0.83	0.38	0.17	0.07				
4.8	80	1.33		25.00	10.50	3	1.2	0.5	0.22	0.08				
5.4	90	1.50		30.00	12.00	3.5	1.3	0.57	0.26	0.09	0.05			
6	100	1.67		39.00	16.00	4.6	1.8	0.73	0.3	0.12	0.07			
7.5	125	2.08		50.00	24.00	6.6	2.5	1.1	0.5	0.18	0.1	0.06		
9	150	2.50			33.00	8.6	3.5	1.4	0.63	0.24	0.13	0.08		
10.5	175	2.92			38.00	11	4.3	1.8	0.78	0.3	0.18	0.09		
12	200	3.33			50.00	14	5.5	2.4	1	0.4	0.22	0.12	0.07	
15	250	4.17				21	8	3.7	1.5	0.57	0.34	0.18	0.11	0.06
18	300	5.00				28	10.5	4.6	1.95	0.77	0.45	0.25	0.13	0.09
24	400	6.67					19	8	3.6	1.4	0.78	0.44	0.23	0.15
30	500	8.33					28	11.5	5	2	1.2	0.63	0.33	0.21
36	600	10.00					37	15	6.6	2.6	1.5	0.82	0.45	0.28
42	700	11.70					47	24	8	3.5	1.9	1.1	0.6	0.4
48	800	13.30						26	11	4.5	2.6	1.4	0.81	0.48
54	900	15.00						33	13.5	5.5	3.2	1.7	0.95	0.58
60	1000	16.70						40	16	6.7	3.9	2.2	1.2	0.75
75	1250	20.80							25	9	5	3	1.6	0.95
90	1500	25.00							33	13	8	4.1	2.3	1.4
105	1750	29.20							44	17.5	9.7	5.7	3.2	1.9
120	2000	33.30								23	13	7	4	2.4
150	2500	41.70								34	18	10.5	6	3.5
180	3000	50.00								45	27	14	7.6	4.4
240	4000	66.70									43	24	13	7.5
300	5000	83.30										33	18	11

The table is based on a nomogram.
Roughness: K = 0.01 mm.
Water temperature: t = 10 °C.

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