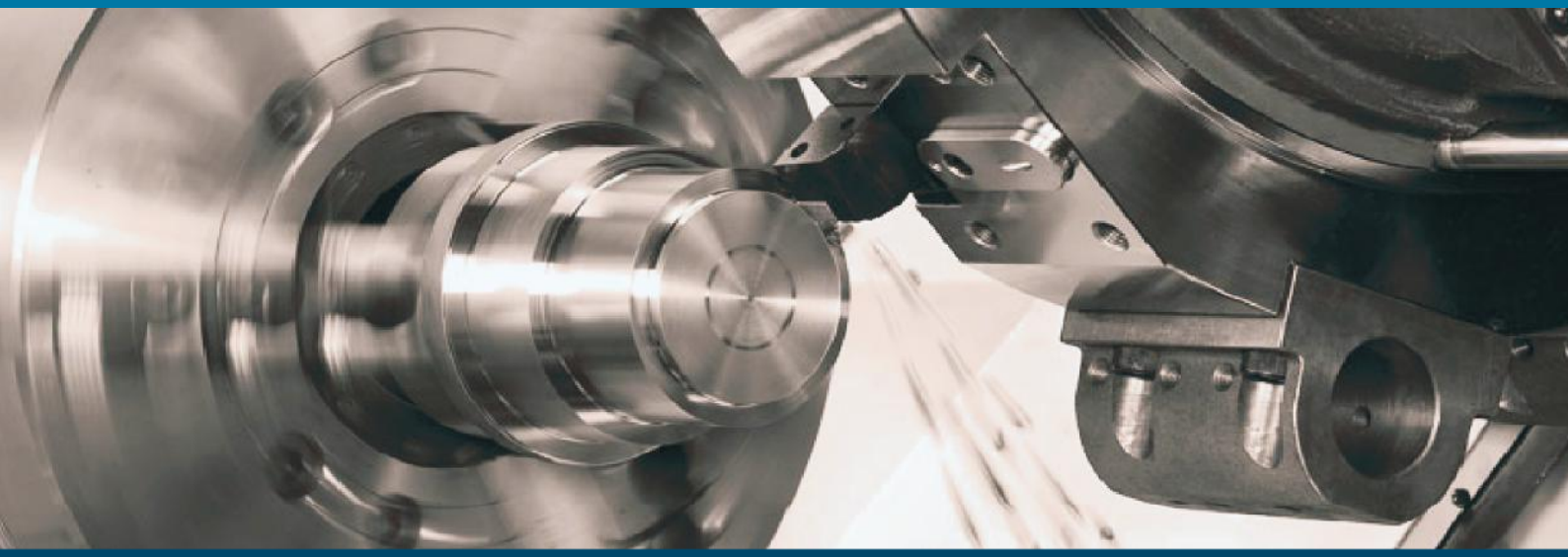
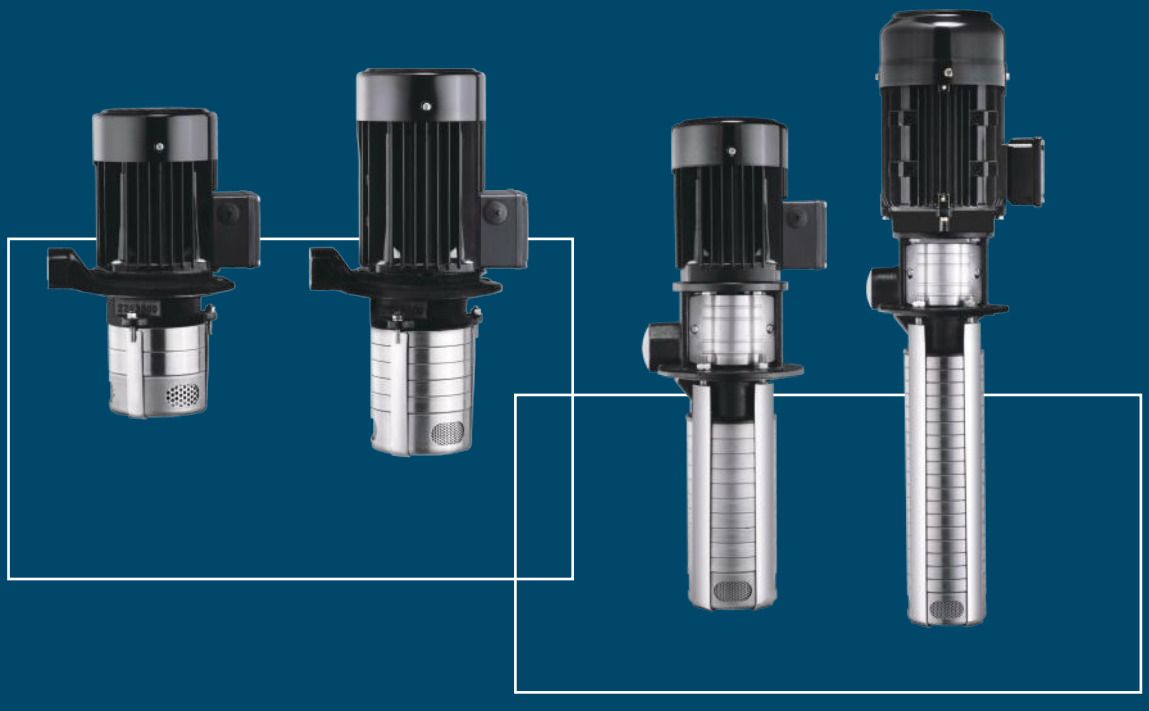
STAIRS

SBK 1,3,5,10,15,20 series
CBK 2,4,8,12 series
Immersible pump

50/60Hz





STAIRS INDUSTRIAL CO., LTD.

SBK/CBK-series

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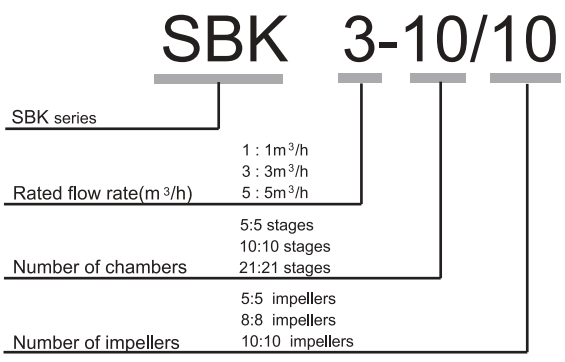
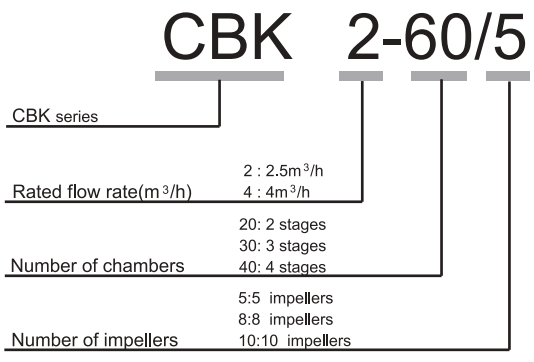
Type Keys





SBK

Feature

Compact design / High Efficiency Reliability /
Easy installation / Wide Range

Application

Cooling units / Grinding machines /
Machine centers / Spark machine tools /
Filtering systems /
Industrial washing machines

SBK pumps are vertical multistage centrifugal pumps especially designed for pumping of cooling lubricants for machine tools , and to be mounted on top of tanks with the pump stack immerged in the pumped liquid. STAIRS SBK pumps are available with various pump sizes and various numbers of stages to provide the flow, the pressure and the length required.

SBK 50Hz Product Data

Range	1	3	5	10	15	20
Frequency	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Rated fiow rate(m³/h)	1	3	5	10	17	21
Flow range (m³/h)	0.7~2.4	1.2~4.5	2.5~8.5	5~13	8.5~23.5	10.5~29
Maximum head (bar)	22	23	24	23	23	24
Motor power (kW)	0.37~2.2	0.37~3.0	0.37~5.5	0.75~7.5	1.1~15	1.1~18.5
Temperature range (˚C)	-10 to +90					

Pipe connection		
Union	RP 1 1/4	RP2”

SBK 60Hz Product Data

Range	1	3	5	10	15	20
Frequency	60Hz	60Hz	60Hz	60Hz	60Hz	60Hz
Rated fiow rate(m³/h)	1.2	3.6	6	12.1	20.5	25.3
Flow range (m³/h)	0.8~2.9	1.4~5.4	3~10	6~15.7	10.2~28.4	12.6~35
Maximum head (bar)	24	23	23	26	23	21
Motor power (kW)	0.37~2.2	0.37~4.0	0.55~7.5	0.75~11	1.5~18.5	2.2~18.5
Temperature range (˚C)	-10 to +90					

Pipe connection		
Union	RP 1 1/4	RP2”

Pumped Liquids

Do not pump the explosive or aggressive liquids and the liquids should be free of fibers.The SBK pumps have the strainer in the suction chamber with inlet to prevent large particles from entering and damaging the pump. In order to avoid the larger particles block the filters, we suggest to filtrate elementarily before pumping the liquids with particles.

Pump Type	Particles handling of filter[mm]	Particles handling of impeller[max. mm]
SBK 1	2	2.5
SBK 3	2	3.1
SBK 5	4	5.5
SBK 10	4	5.5
SBK 15	4	6
SBK 20	4	7.9

NOTE:Do not remove the filters.

Mechanical Seals

Standard Cartridge type mechanical seal made of Tungsten carbide/Tungsten carbide Viton.

The cartridge type mechanical seal can be replaced in minutes without special tools and without dismantling the pump.

List of materials

U:Tungsten carbide V:Viton

Type of Seal

SUUV	Standard

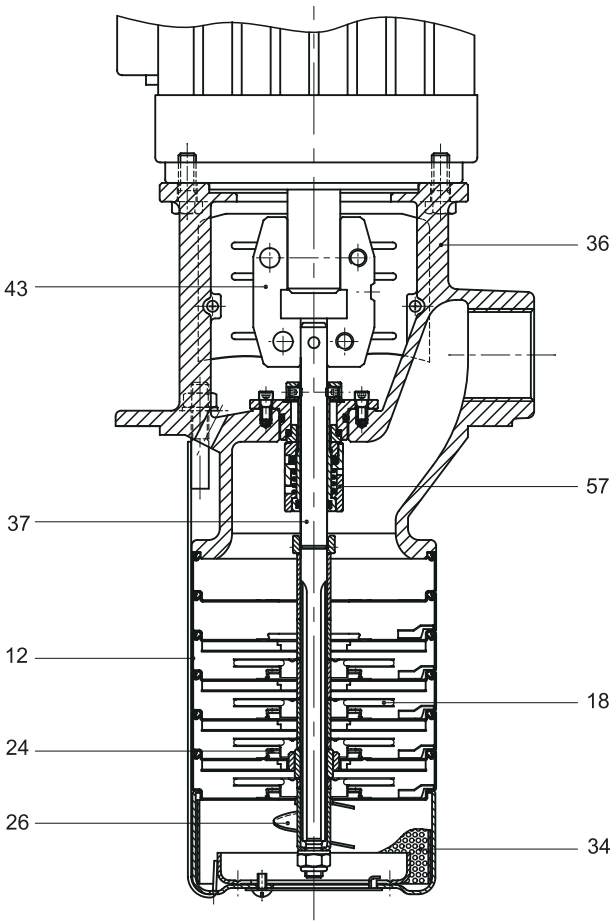
Mechnical seal is available in different material per customer's demand.

Motor Data

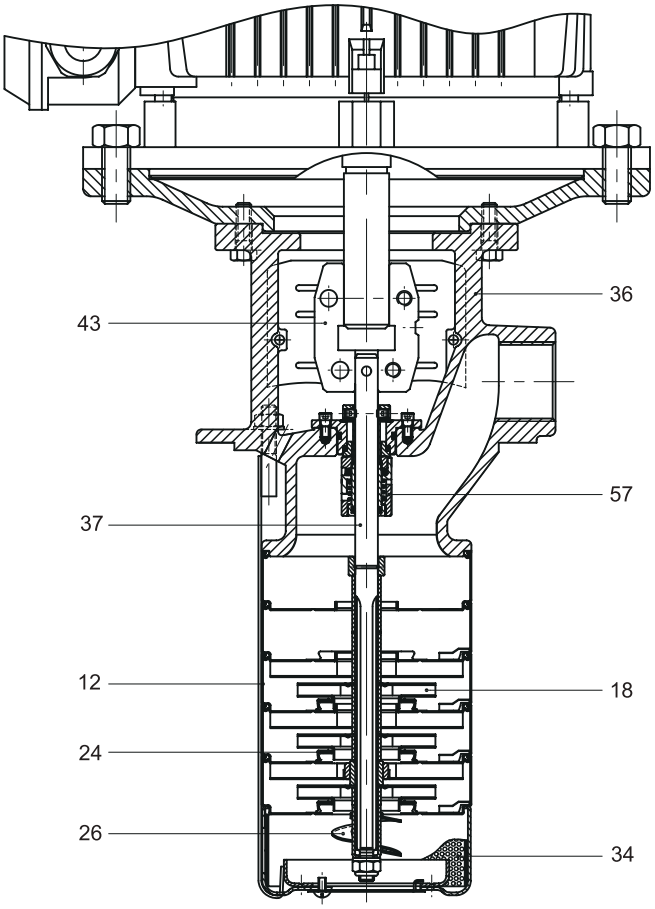
SBK is fitted with totally enclosed fan-cooled, 2-pole standard motor.

Enclosure class : IP 55
Insulation class : F
Ambient temperature : Max. + 50°C
Supply voltage 50 Hz: 3X220-240/380-415V
Supply voltage 60 Hz: 0.37-1.1kW 3X220-255/380-440V
1.5-7.5 kW 3X220-277/380-480V
11-18.5 kW 3X220-277/380-480V

SBK 1,3

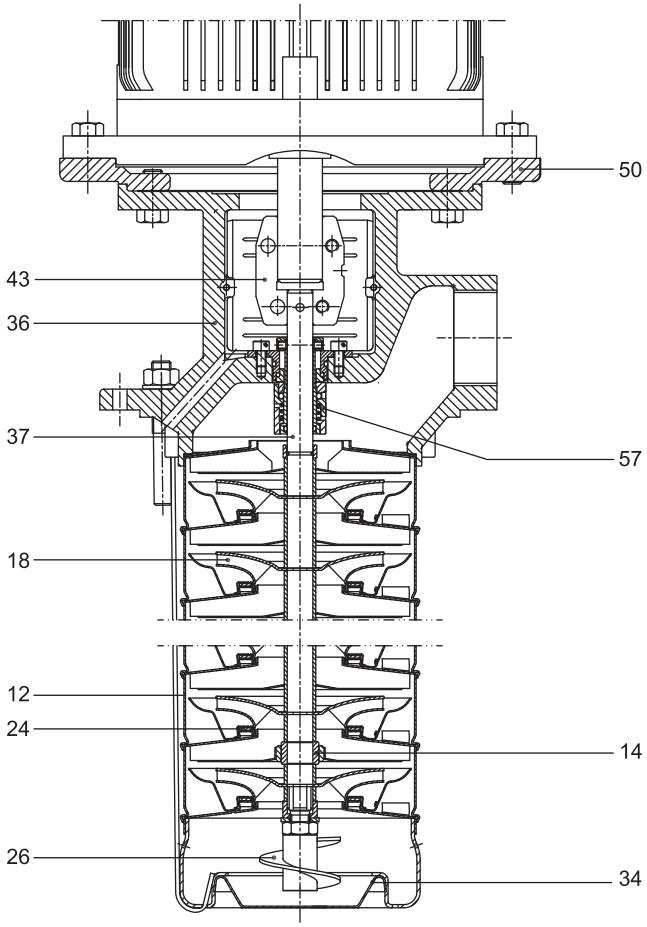


SBK 5



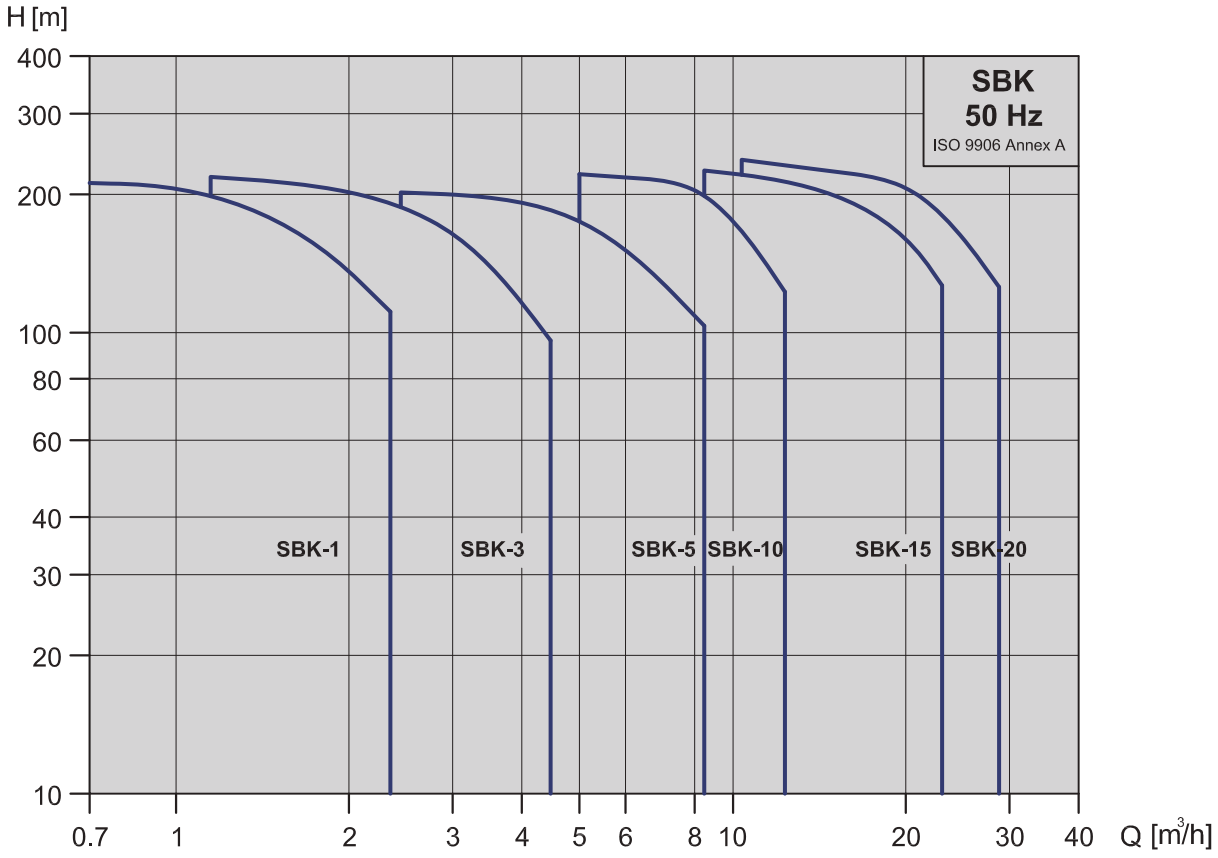
Pos.	Name	Material	Europe	AISI/ASTM
12	Chamber complete	Stainless steel	1.4301	AISI 304
18	Impeller	Stainless steel	1.4301	AISI 304
24	Neck ring	PTFE		
26	Priming screw	Stainless steel	1.4301	AISI 304
34	Strainer	Stainless steel	1.4301	AISI 304
36	Pump head	Cast Iron EN-GJL-220	0.6020	ASTM 25B
37	Pump shaft	Stainless steel	1.4057	AISI 431
43	Coupling			
57	Shaft seal	SUUV		

SBK 10,15,20

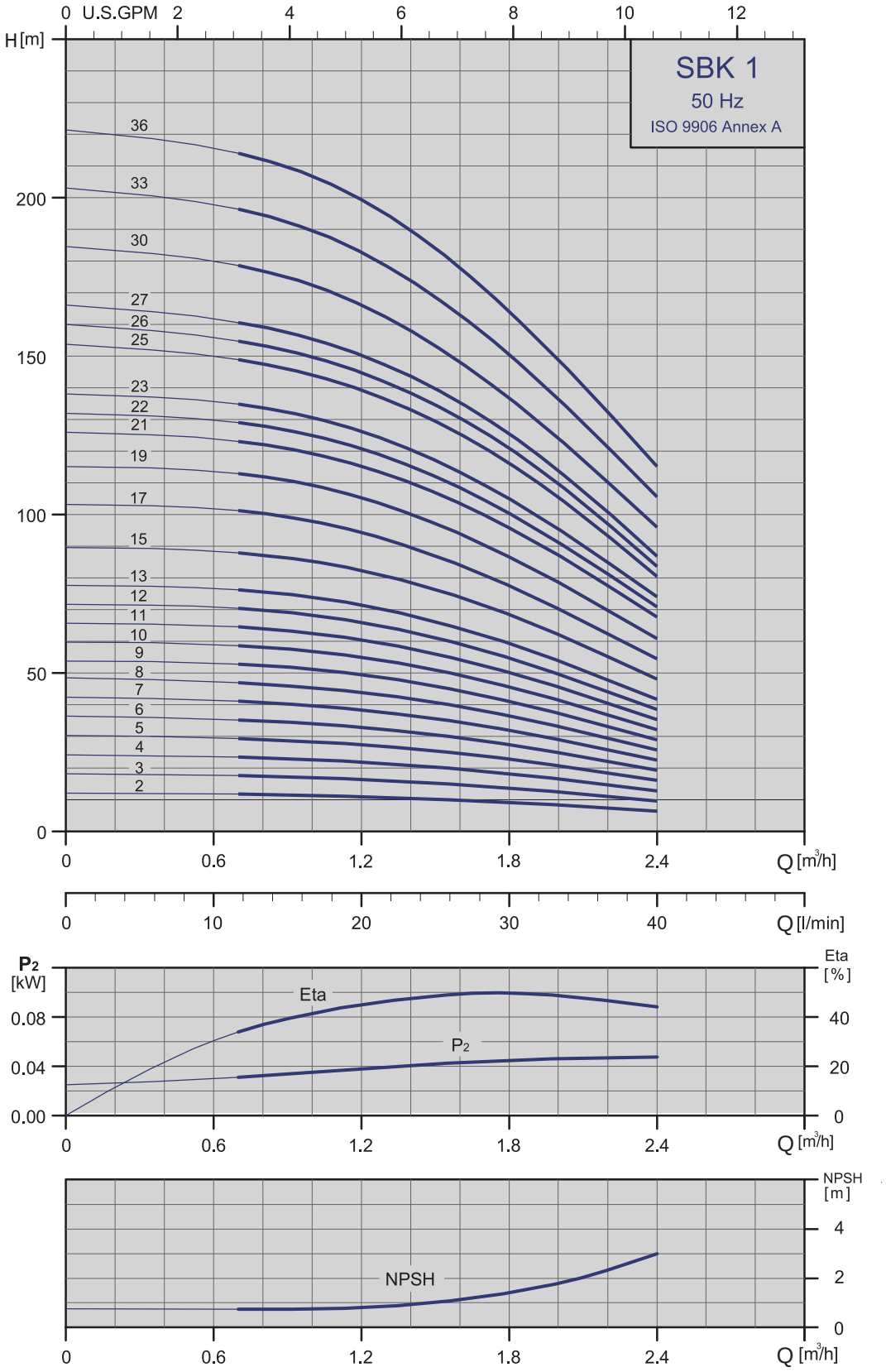


Pos.	Name	Material	Europe	AISI/ASTM
12	Chamber complete	Stainless steel	1.4301	AISI 304
14	Bearing ring	Sic		
18	Impeller	Stainless steel	1.4301	AISI 304
24	Neck ring	PTFE		
26	Priming screw	Stainless steel	1.4301	AISI 304
34	Strainer	Stainless steel	1.4301	AISI 304
36	Pump head	EN-GJL-200	0.6020	ASTM 25B
37	Pump shaft	Stainless steel	1.4057	AISI 431
43	Coupling			
50	Motor stool	EN-GJL-200	0.6020	ASTM 25B
57	Shaft seal	SUUV		

Performance Range SBK 1,3,5,10,15,20

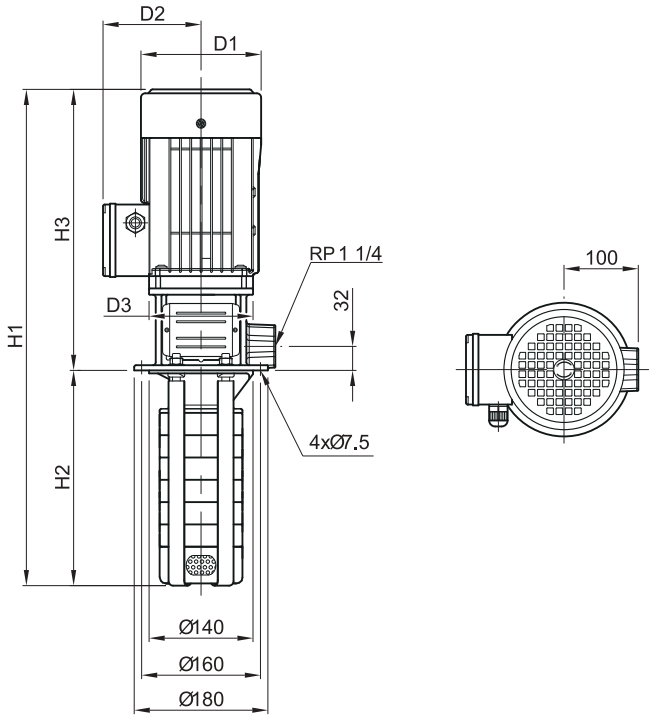


Performance curves SBK 1 — 50Hz



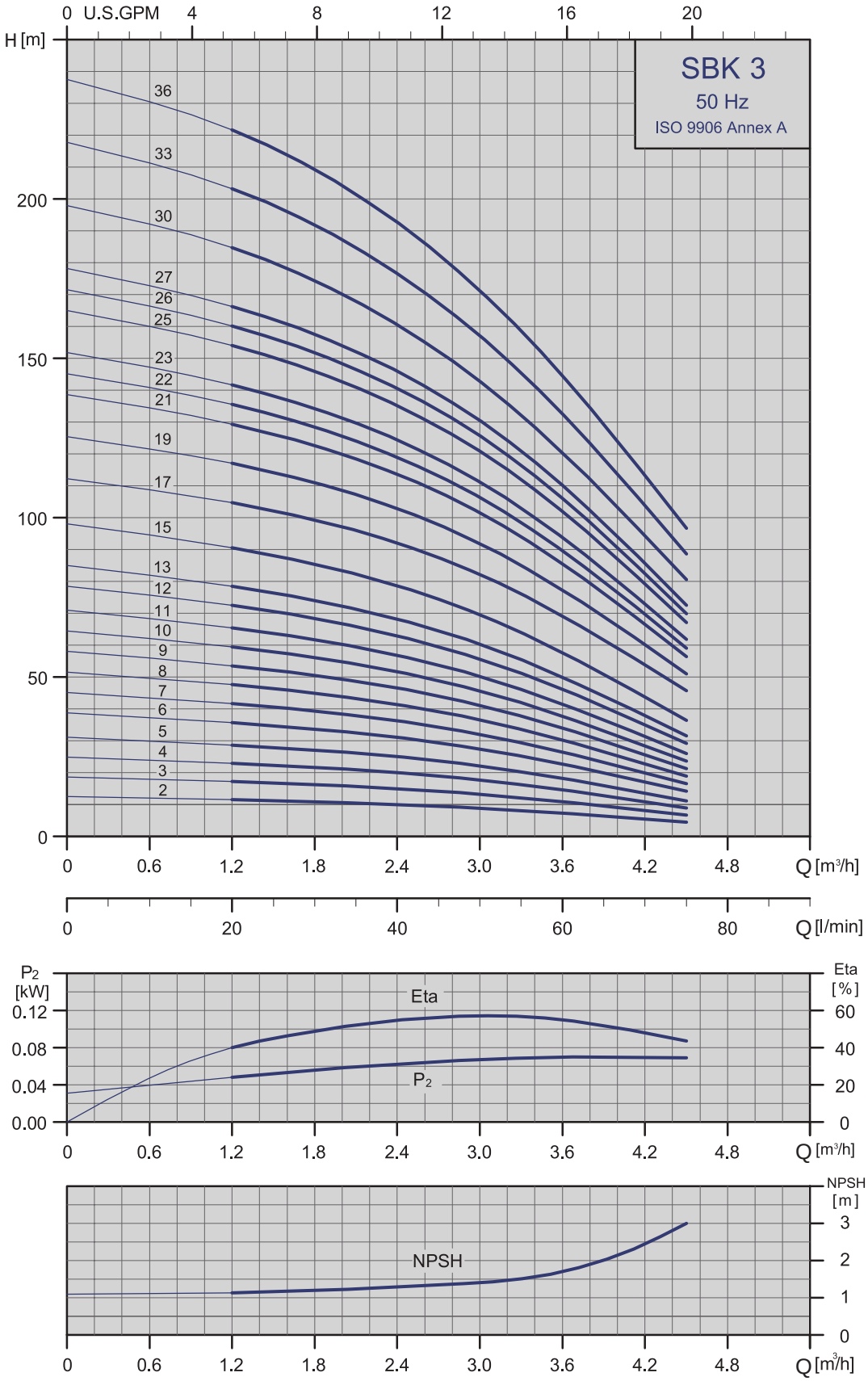
Dimensions and weights SBK 1

50Hz

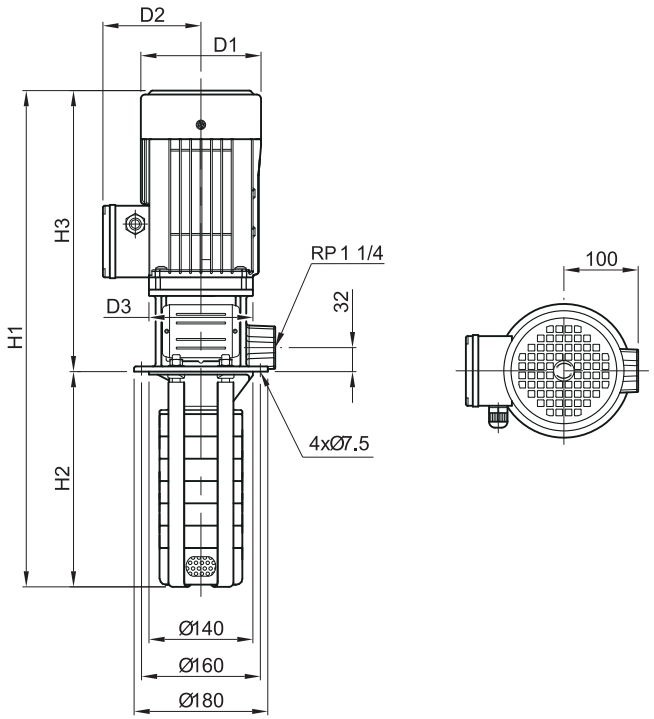


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	D3	(kg)
SBK 1-2/2	0.37	0.5	465.4	160	305.4	141	115	140	12.1
SBK 1-3/3	0.37	0.5	483.4	178	305.4	141	115	140	12.3
SBK 1-4/4	0.37	0.5	501.4	196	305.4	141	115	140	12.5
SBK 1-5/5	0.37	0.5	519.4	214	305.4	141	115	140	12.7
SBK 1-6/6	0.37	0.5	537.4	232	305.4	141	115	140	13.0
SBK 1-7/7	0.37	0.5	555.4	250	305.4	141	115	140	13.2
SBK 1-8/8	0.55	0.75	573.4	268	305.4	141	115	140	13.9
SBK 1-9/9	0.55	0.75	591.4	286	305.4	141	115	140	14.2
SBK 1-10/10	0.55	0.75	609.4	304	305.4	141	115	140	14.4
SBK 1-11/11	0.55	0.75	627.4	322	305.4	141	115	140	14.6
SBK 1-12/12	0.75	1	685.4	340	345.4	141	115	140	16.5
SBK 1-13/13	0.75	1	703.4	358	345.4	141	115	140	16.7
SBK 1-15/15	0.75	1	739.4	394	345.4	141	115	140	17.1
SBK 1-17/17	1.1	1.5	775.4	430	345.4	141	115	140	18.7
SBK 1-19/19	1.1	1.5	811.4	466	345.4	141	115	140	19.2
SBK 1-21/21	1.1	1.5	847.4	502	345.4	141	115	140	19.6
SBK 1-22/22	1.1	1.5	865.4	520	345.4	141	115	140	19.9
SBK 1-23/23	1.1	1.5	883.4	538	345.4	141	115	140	20.1
SBK 1-25/25	1.5	2	975.4	574	401.4	177	141	140	27.8
SBK 1-26/26	1.5	2	993.4	592	401.4	177	141	140	28.0
SBK 1-27/27	1.5	2	1011.4	610	401.4	177	141	140	28.2
SBK 1-30/30	1.5	2	1065.4	664	401.4	177	141	140	28.9
SBK 1-33/33	2.2	3	1119.4	718	401.4	177	141	140	32.0
SBK 1-36/36	2.2	3	1173.4	772	401.4	177	141	140	32.7

Performance curves SBK 3 — 50Hz

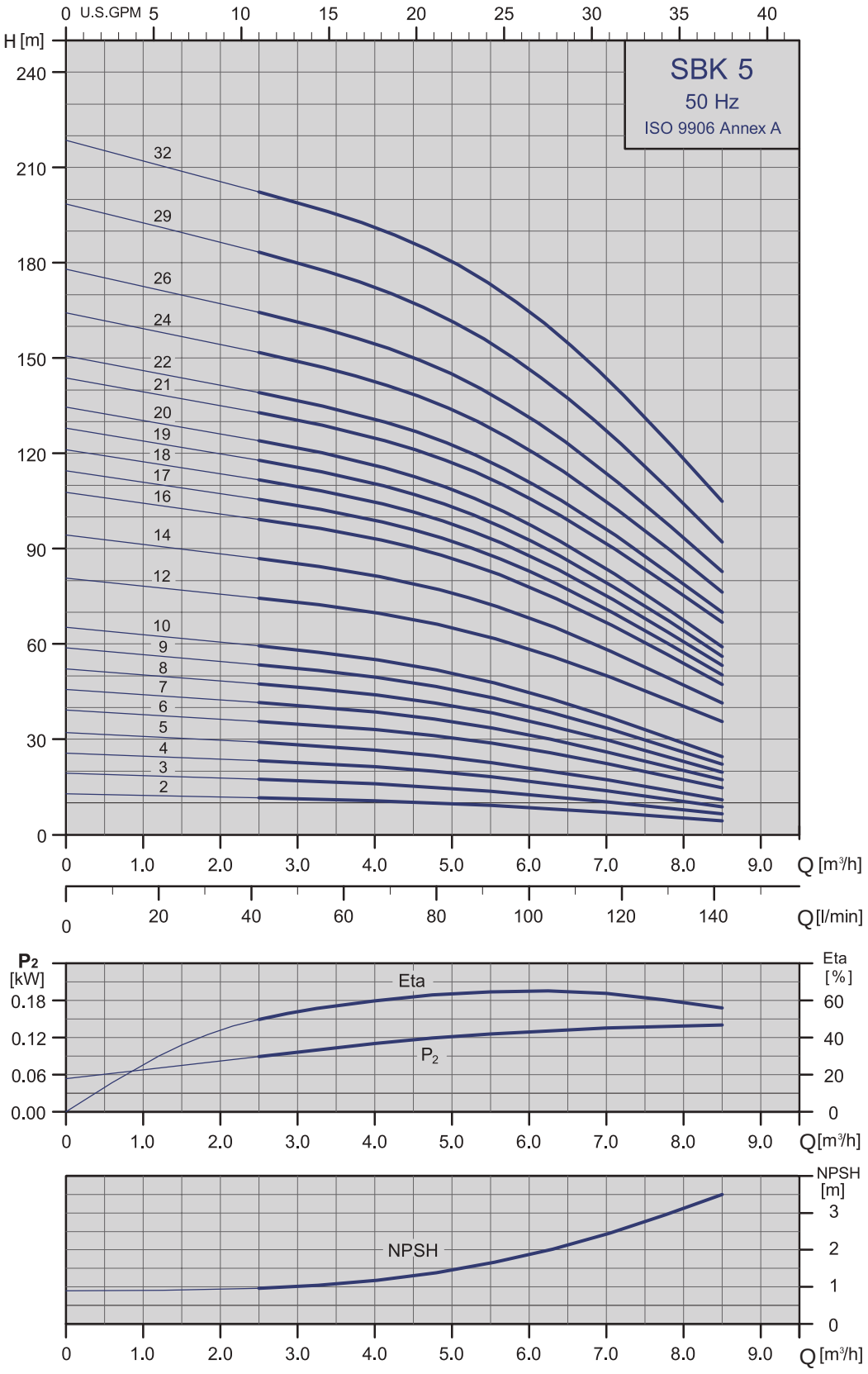


Dimensions and weights SBK 3 — 50Hz

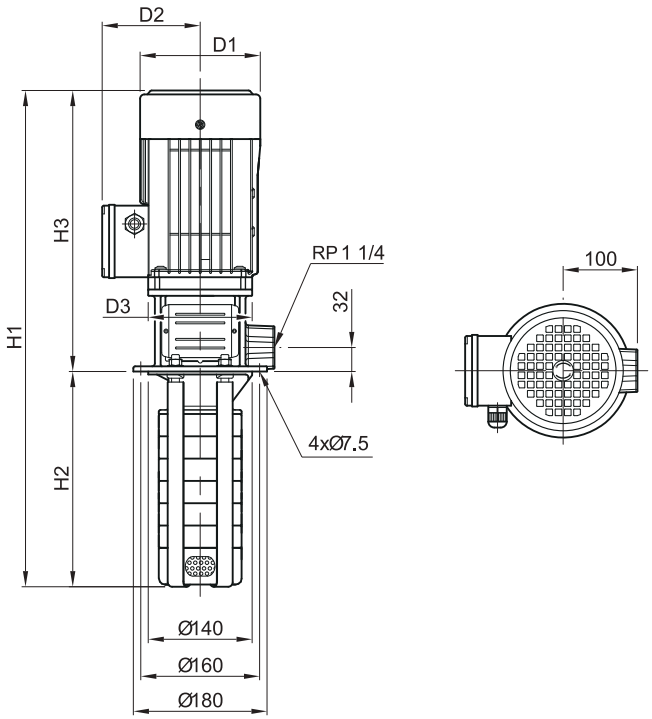


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	D3	(kg)
SBK 3-2/2	0.37	0.5	465.4	160	305.4	141	115	140	12.1
SBK 3-3/3	0.37	0.5	483.4	178	305.4	141	115	140	12.3
SBK 3-4/4	0.37	0.5	501.4	196	305.4	141	115	140	12.5
SBK 3-5/5	0.37	0.5	519.4	214	305.4	141	115	140	12.7
SBK 3-6/6	0.55	0.75	537.4	232	305.4	141	115	140	13.5
SBK 3-7/7	0.55	0.75	555.4	250	305.4	141	115	140	13.7
SBK 3-8/8	0.75	1	613.4	268	345.4	141	115	140	15.5
SBK 3-9/9	0.75	1	631.4	286	345.4	141	115	140	15.8
SBK 3-10/10	0.75	1	649.4	304	345.4	141	115	140	16.0
SBK 3-11/11	0.75	1	667.4	322	345.4	141	115	140	16.2
SBK 3-12/12	1.1	1.5	685.4	340	345.4	141	115	140	17.6
SBK 3-13/13	1.1	1.5	703.4	358	345.4	141	115	140	17.8
SBK 3-15/15	1.1	1.5	739.4	394	345.4	141	115	140	18.3
SBK 3-17/17	1.5	2	831.4	430	401.4	177	141	140	25.9
SBK 3-19/19	1.5	2	867.4	466	401.4	177	141	140	26.4
SBK 3-21/21	2.2	3	903.4	502	401.4	177	141	140	29.3
SBK 3-22/22	2.2	3	921.4	520	401.4	177	141	140	29.5
SBK 3-23/23	2.2	3	939.4	538	401.4	177	141	140	29.7
SBK 3-25/25	2.2	3	975.4	574	401.4	177	141	140	30.2
SBK 3-26/26	2.2	3	993.4	592	401.4	177	141	140	30.4
SBK 3-27/27	2.2	3	1011.4	610	401.4	177	141	140	30.6
SBK 3-30/30	3	4	1095.9	664	431.9	197	147	160	36.5
SBK 3-33/33	3	4	1149.9	718	431.9	197	147	160	38.1
SBK 3-36/36	3	4	1203.9	772	431.9	197	147	160	38.8

Performance curves SBK 5 — 50Hz

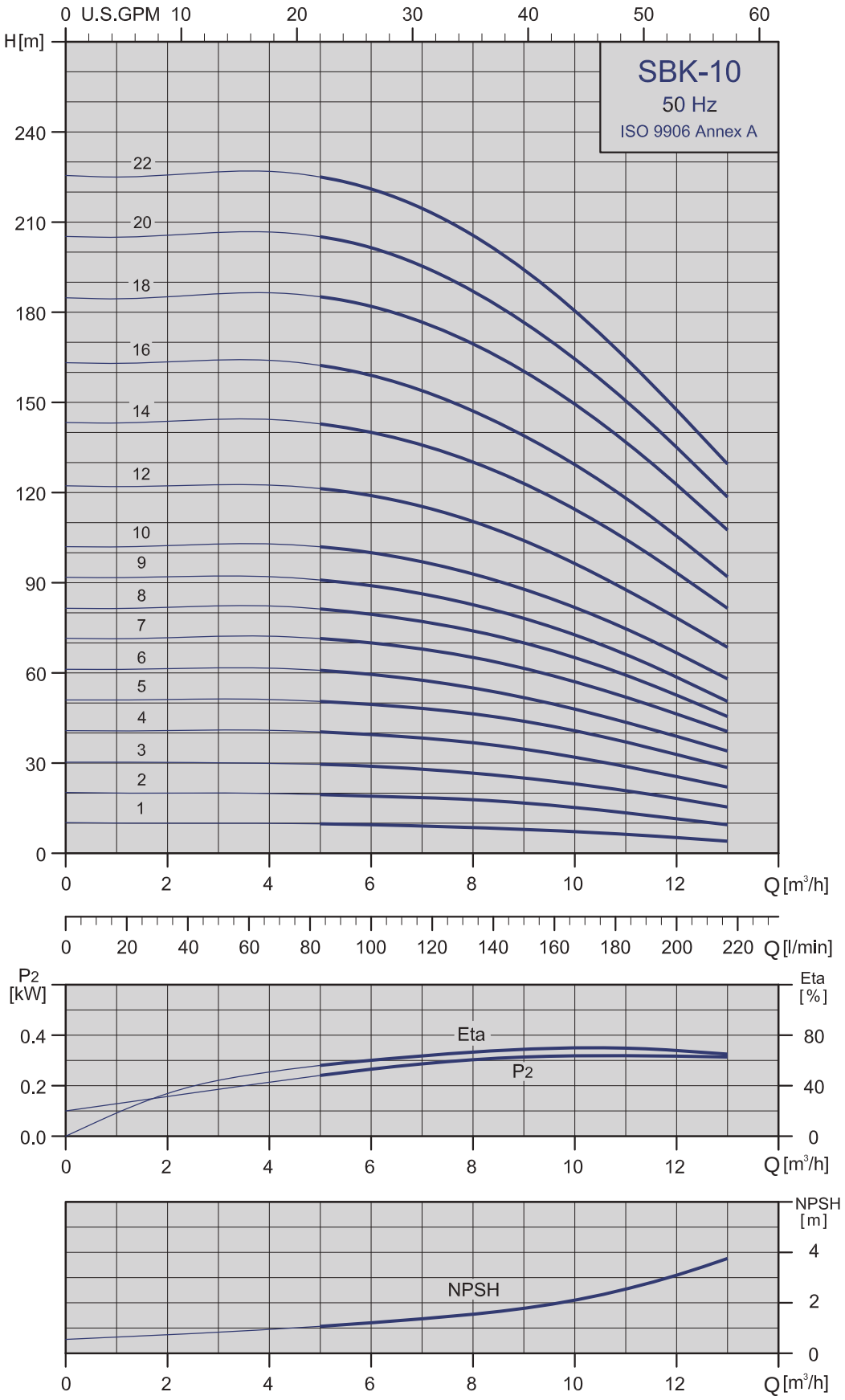


Dimensions and weights SBK 5 — 50Hz

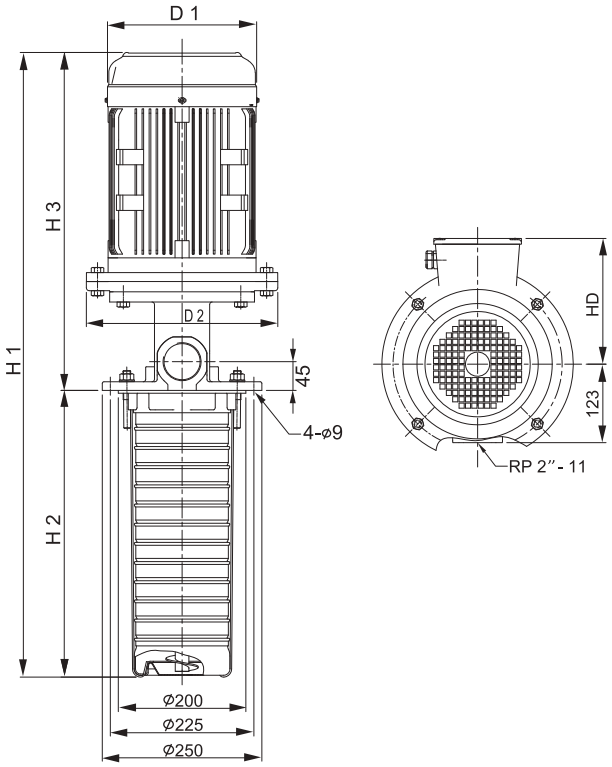


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	D3	(kg)
SBK 5-2/2	0.37	0.5	474.4	169	305.4	141	115	140	12.2
SBK 5-3/3	0.55	0.75	501.4	196	305.4	141	115	140	13.1
SBK 5-4/4	0.55	0.75	528.4	223	305.4	141	115	140	13.4
SBK 5-5/5	0.75	1	595.4	250	345.4	141	115	140	15.4
SBK 5-6/6	1.1	1.5	622.4	277	345.4	141	115	140	16.9
SBK 5-7/7	1.1	1.5	649.4	304	345.4	141	115	140	17.3
SBK 5-8/8	1.1	1.5	676.4	331	345.4	141	115	140	17.6
SBK 5-9/9	1.5	2	759.4	358	401.4	177	141	140	25.8
SBK 5-10/10	1.5	2	786.4	385	401.4	177	141	140	26.1
SBK 5-12/12	2.2	3	840.4	439	401.4	177	141	140	28.9
SBK 5-14/14	2.2	3	894.4	493	401.4	177	141	140	29.3
SBK 5-16/16	2.2	3	948.4	547	401.4	177	141	140	29.6
SBK 5-17/17	3	4	1005.9	574	431.9	197	147	160	37.0
SBK 5-18/18	3	4	1032.9	601	431.9	197	147	160	37.4
SBK 5-19/19	3	4	1059.9	628	431.9	197	147	160	37.7
SBK 5-20/20	3	4	1086.9	655	431.9	197	147	160	38.1
SBK 5-21/21	3	4	1113.9	682	431.9	197	147	160	38.5
SBK 5-22/22	4	5.5	1150.9	709	441.9	220	161	160	45.3
SBK 5-24/24	4	5.5	1204.9	763	441.9	220	161	160	46.1
SBK 5-26/26	4	5.5	1258.9	817	441.9	220	161	160	46.8
SBK 5-29/29	4	5.5	1339.9	898	441.9	220	161	160	47.9
SBK 5-32/32	5.5	7.5	1485.9	979	506.9	235	197	300	70.3

Performance curves SBK 10 50Hz

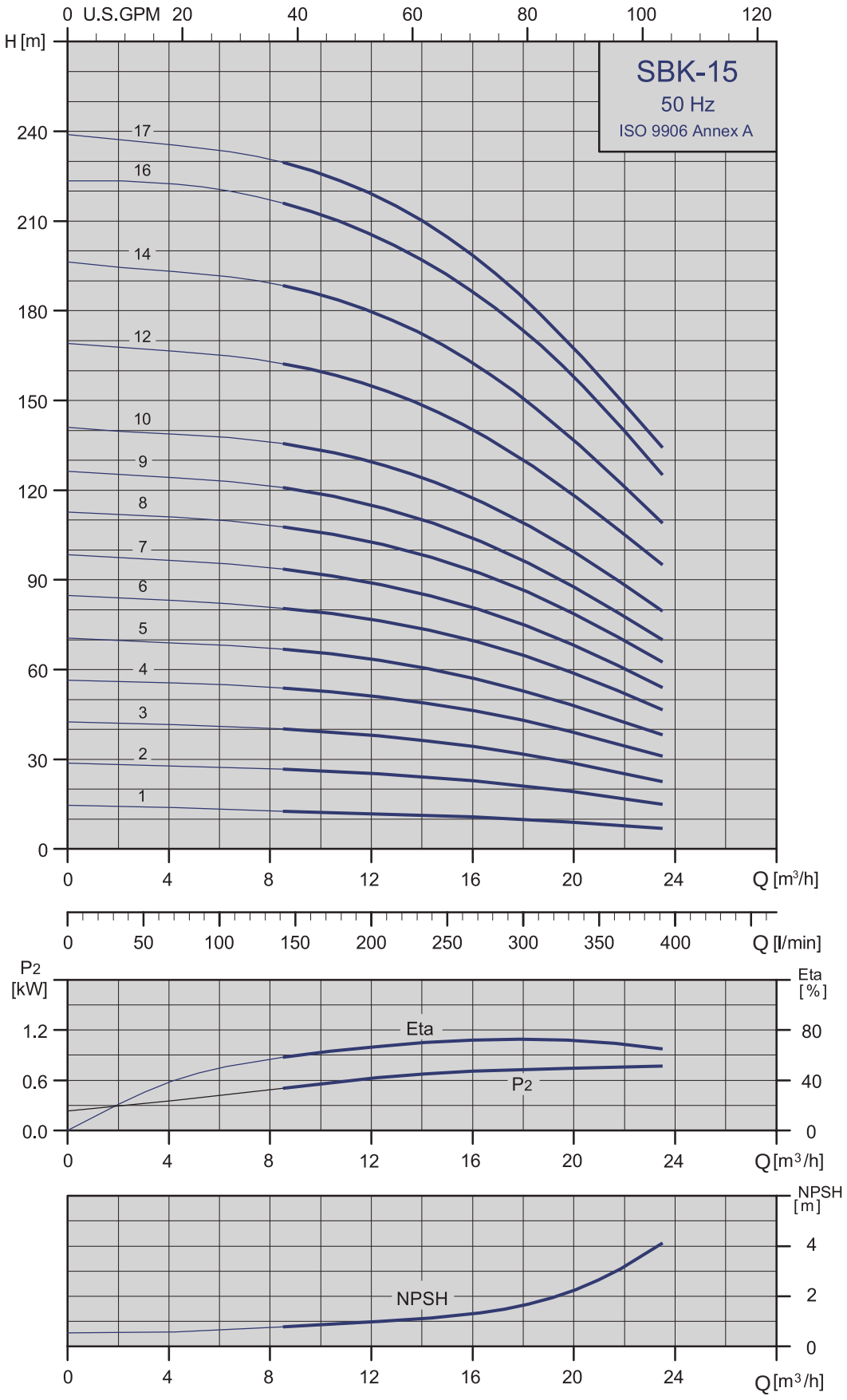


Dimensions and weights SBK 10 50Hz

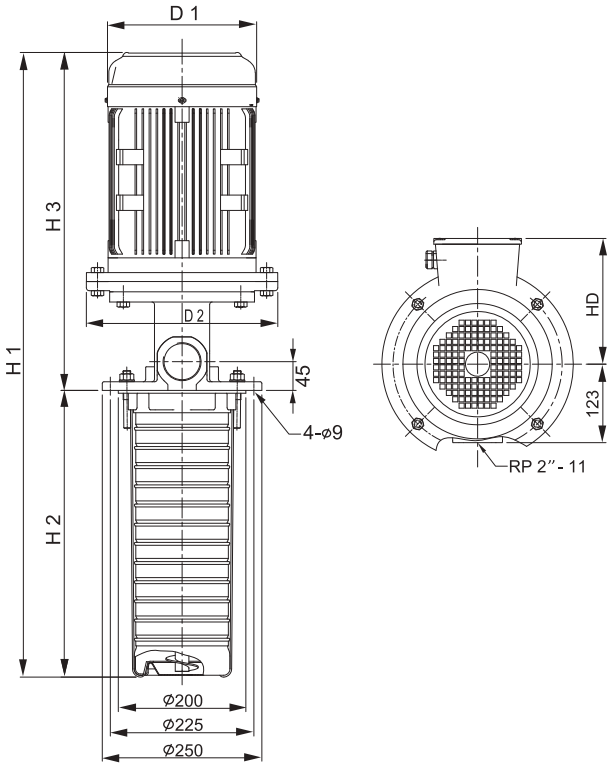


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	HD	(kg)
SBK-10-2/1	0.75	1	523	148	375	141	140	115	21.7
SBK-10-2/2	0.75	1	523	148	375	141	140	115	21.8
SBK-10-3/3	1.1	1.5	553	178	375	141	140	115	23.7
SBK-10-4/4	1.5	2	639	208	431	177	140	141	32.2
SBK-10-5/5	2.2	3	669	238	431	177	140	141	35.4
SBK-10-6/6	2.2	3	699	268	431	177	140	141	36.1
SBK-10-7/7	3	4	755	298	457	197	160	147	42.6
SBK-10-8/8	3	4	785	328	457	197	160	147	43.3
SBK-10-9/9	3	4	815	358	457	197	160	147	44.2
SBK-10-10/10	4	5.5	855	388	467	220	160	161	51.4
SBK-10-12/12	4	5.5	915	448	467	220	160	161	52.9
SBK-10-14/14	5.5	7.5	1041	508	533	235	300	197	79.0
SBK-10-16/16	5.5	7.5	1101	568	533	235	300	197	80.5
SBK-10-18/18	7.5	10	1197	628	569	235	300	197	90.4
SBK-10-20/20	7.5	10	1257	688	569	235	300	197	91.9
SBK-10-22/22	7.5	10	1317	748	569	235	300	197	93.4

Performance curves SBK 15 — 50Hz

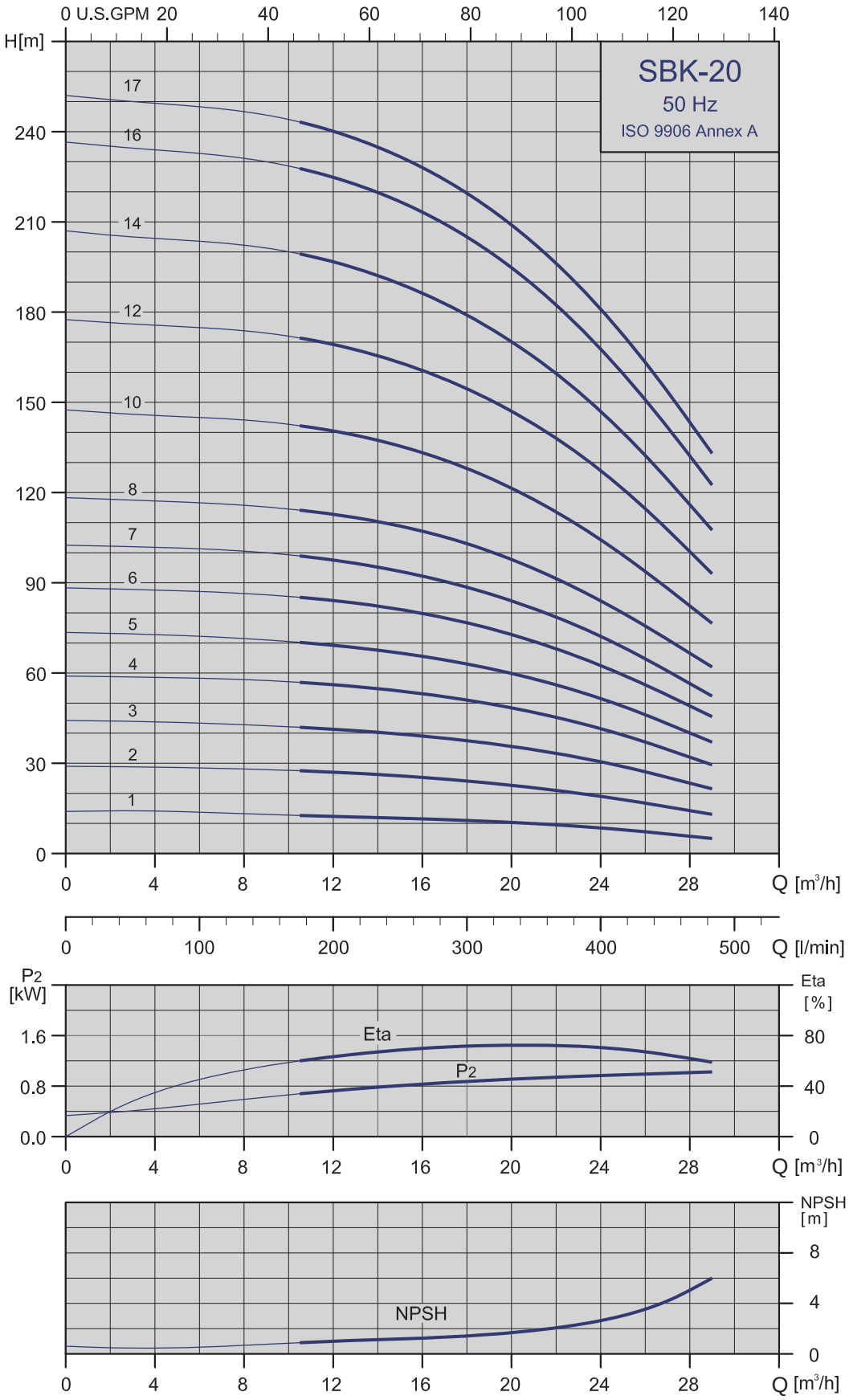


Dimensions and weights SBK 15 50Hz

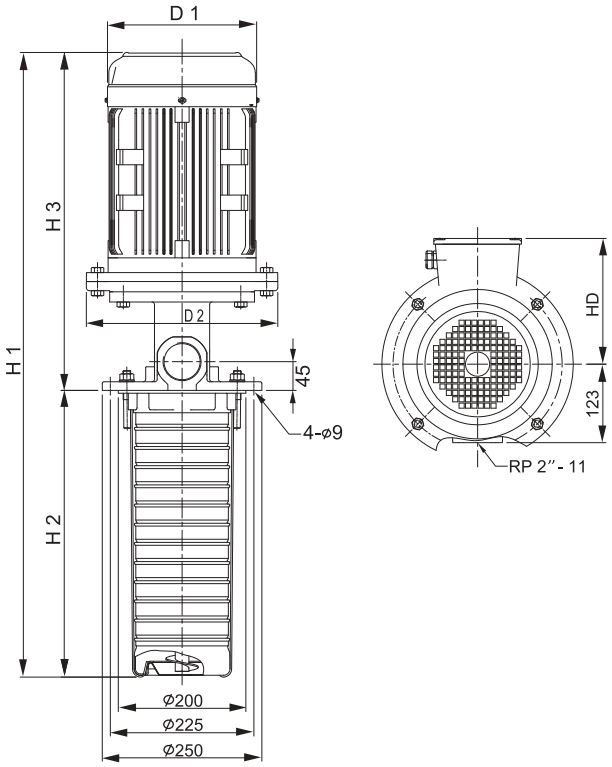


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	HD	(kg)
SBK-15-2/1	1.1	1.5	553	178	375	141	140	115	23.6
SBK-15-2/2	2.2	3	609	178	431	177	140	141	34.1
SBK-15-3/3	3	4	680	223	457	197	160	147	37.2
SBK-15-4/4	4	5.5	735	268	467	220	160	161	45.3
SBK-15-5/5	4	5.5	780	313	467	220	160	161	49.2
SBK-15-6/6	5.5	7.5	891	358	533	235	300	197	74.8
SBK-15-7/7	5.5	7.5	936	403	533	235	300	197	75.8
SBK-15-8/8	7.5	10	1017	448	569	235	300	197	85.2
SBK-15-9/9	7.5	10	1062	493	569	235	300	197	86.2
SBK-15-10/10	11	15	1243	538	705	318	352	245	117.2
SBK-15-12/12	11	15	1333	628	705	318	352	245	119.2
SBK-15-14/14	11	15	1423	718	705	318	352	245	121.3
SBK-15-16/16	15	20	1518	808	710	318	352	245	133.8
SBK-15-17/17	15	20	1563	853	710	318	352	245	134.9

Performance curves SBK 20 — 50Hz

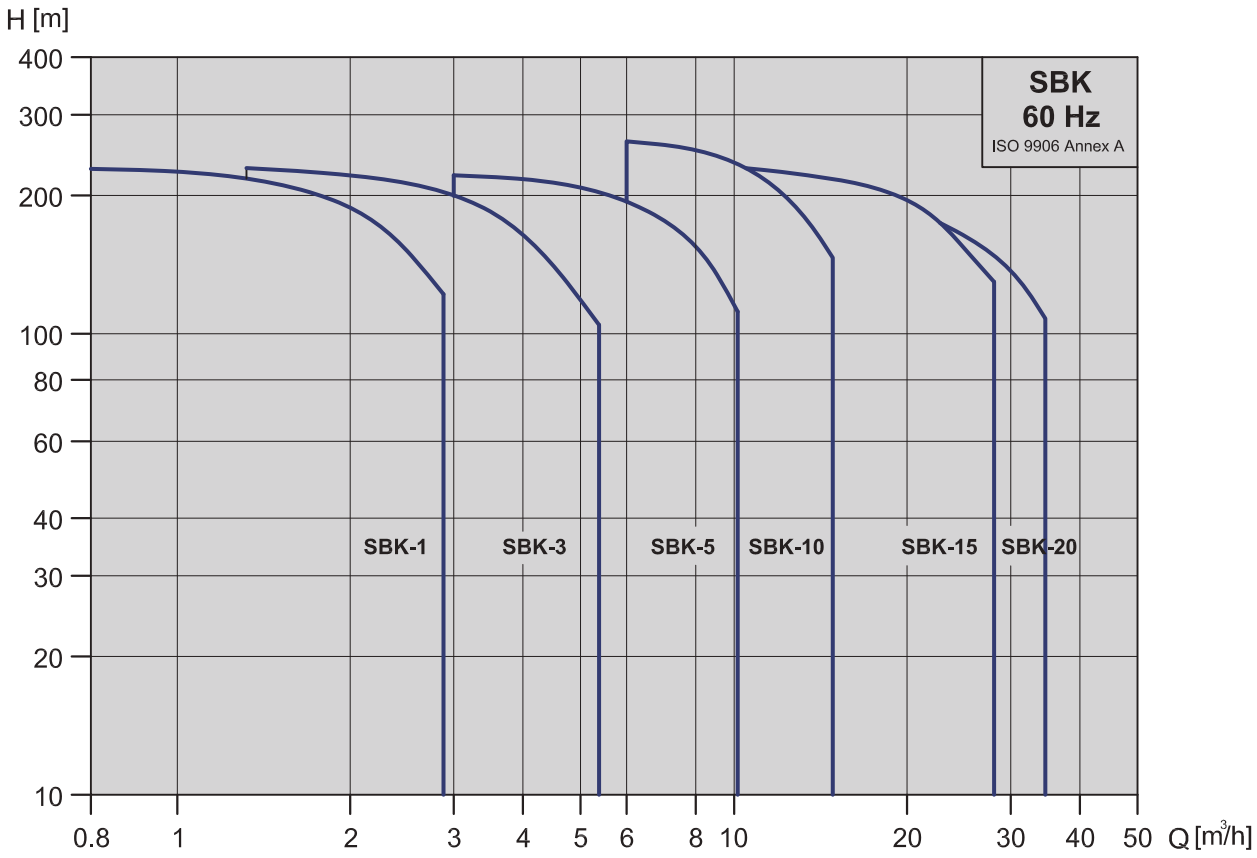


Dimensions and weights SBK 20 50Hz

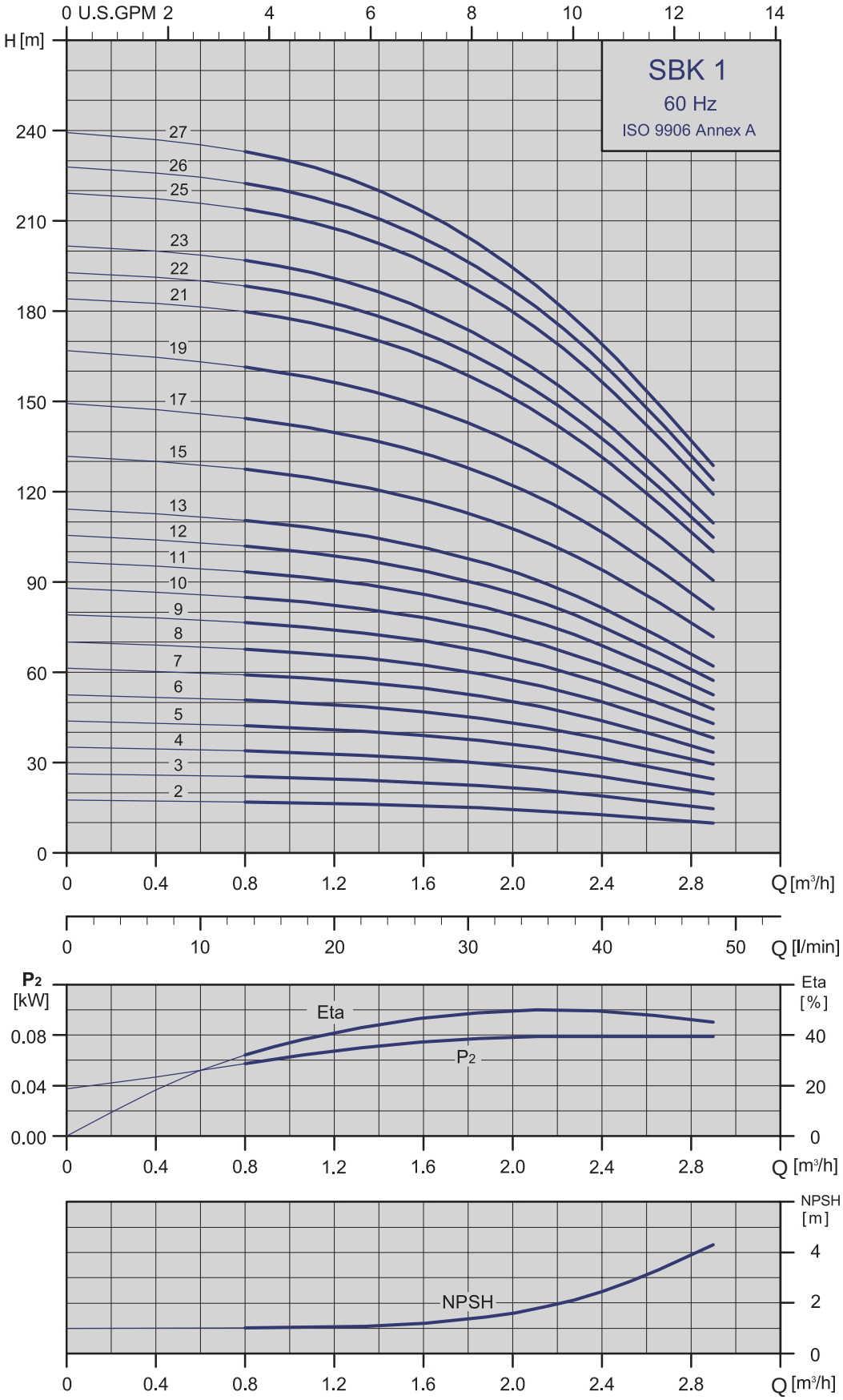


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	HD	(kg)
SBK-20-2/1	1.1	1.5	553	178	375	141	140	115	23.6
SBK-20-2/2	2.2	3	609	178	431	177	140	141	34.1
SBK-20-3/3	4	5	690	223	467	220	160	161	47.3
SBK-20-4/4	5.5	7.5	801	268	533	235	300	197	72.8
SBK-20-5/5	5.5	7.5	846	313	533	235	300	197	73.8
SBK-20-6/6	7.5	10	927	358	569	235	300	197	83.2
SBK-20-7/7	7.5	10	972	403	569	235	300	197	84.2
SBK-20-8/8	11	15	1153	448	705	318	352	245	115.3
SBK-20-10/10	11	15	1243	538	705	318	352	245	117.2
SBK-20-12/12	15	20	1338	628	710	318	352	245	129.8
SBK-20-14/14	15	20	1428	718	710	318	352	245	131.8
SBK-20-16/16	18.5	25	1558	808	750	318	352	245	162.7
SBK-20-17/17	18.5	25	1603	853	750	318	352	245	163.7

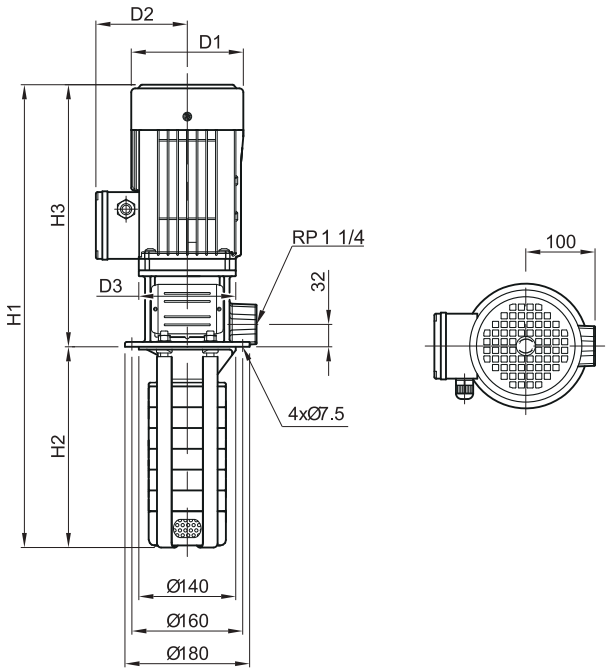
Performance Range SBK 1,3,5,10,15,20



Performance curves SBK 1 — 60Hz

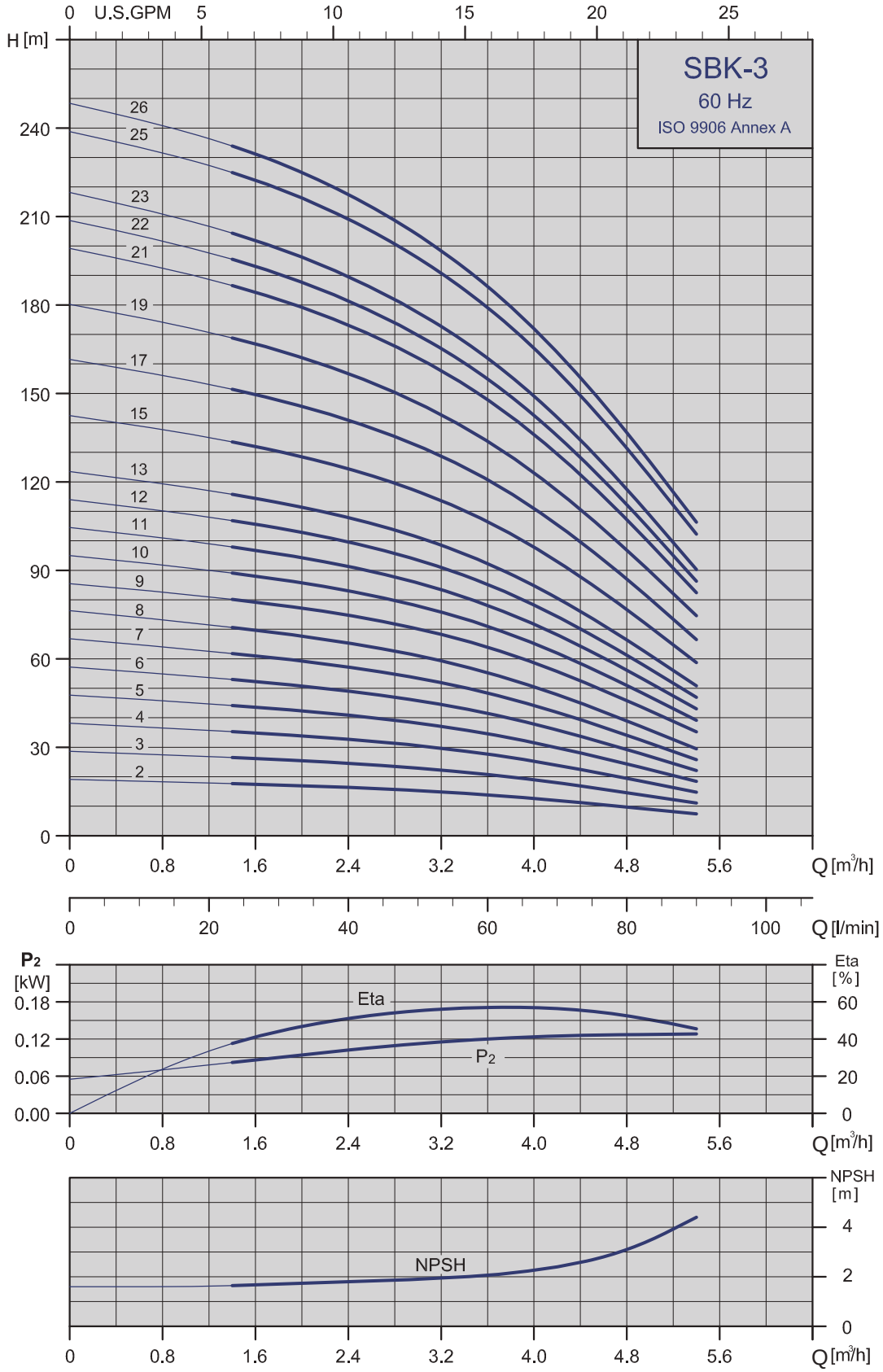


Dimensions and weights SBK 1 60Hz

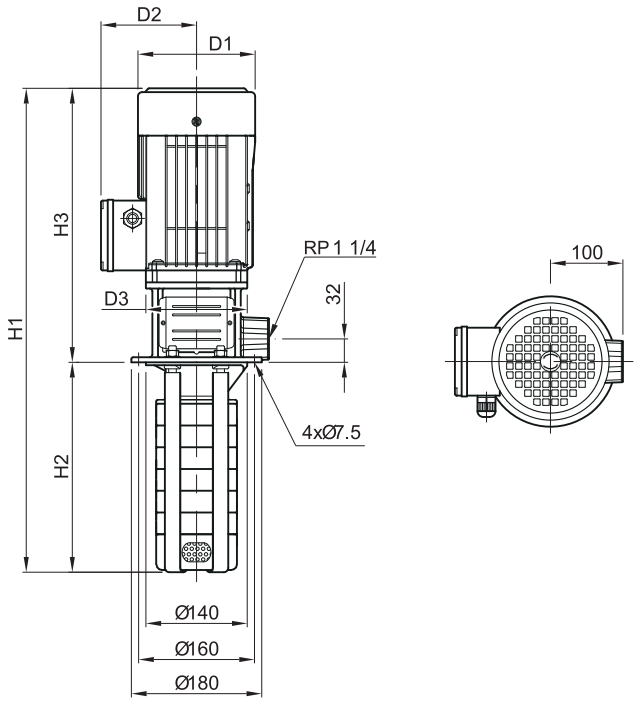


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	D3	(kg)
SBK 1-2/2	0.37	0.5	465.4	160	305.4	141	115	140	12.1
SBK 1-3/3	0.37	0.5	483.4	178	305.4	141	115	140	12.3
SBK 1-4/4	0.37	0.5	501.4	196	305.4	141	115	140	12.5
SBK 1-5/5	0.55	0.75	519.4	214	305.4	141	115	140	13.2
SBK 1-6/6	0.55	0.75	537.4	232	305.4	141	115	140	13.5
SBK 1-7/7	0.75	1	595.4	250	345.4	141	115	140	15.3
SBK 1-8/8	0.75	1	613.4	268	345.4	141	115	140	15.5
SBK 1-9/9	0.75	1	631.4	286	345.4	141	115	140	15.7
SBK 1-10/10	1.1	1.5	649.4	304	345.4	141	115	140	17.1
SBK 1-11/11	1.1	1.5	667.4	322	345.4	141	115	140	17.3
SBK 1-12/12	1.1	1.5	685.4	340	345.4	141	115	140	17.6
SBK 1-13/13	1.1	1.5	703.4	358	345.4	141	115	140	17.8
SBK 1-15/15	1.5	2	795.4	394	401.4	177	141	140	25.8
SBK 1-17/17	1.5	2	831.4	430	401.4	177	141	140	26.2
SBK 1-19/19	2.2	3	867.4	466	401.4	177	141	140	29.1
SBK 1-21/21	2.2	3	903.4	502	401.4	177	141	140	29.5
SBK 1-22/22	2.2	3	921.4	520	401.4	177	141	140	29.8
SBK 1-23/23	2.2	3	939.4	538	401.4	177	141	140	30.0
SBK 1-25/25	2.2	3	975.4	574	401.4	177	141	140	30.2
SBK 1-26/26	3	4	1023.9	592	431.9	197	147	160	35.6
SBK 1-27/27	3	4	1041.9	610	431.9	197	147	160	35.8

Performance curves SBK 3 — 60Hz

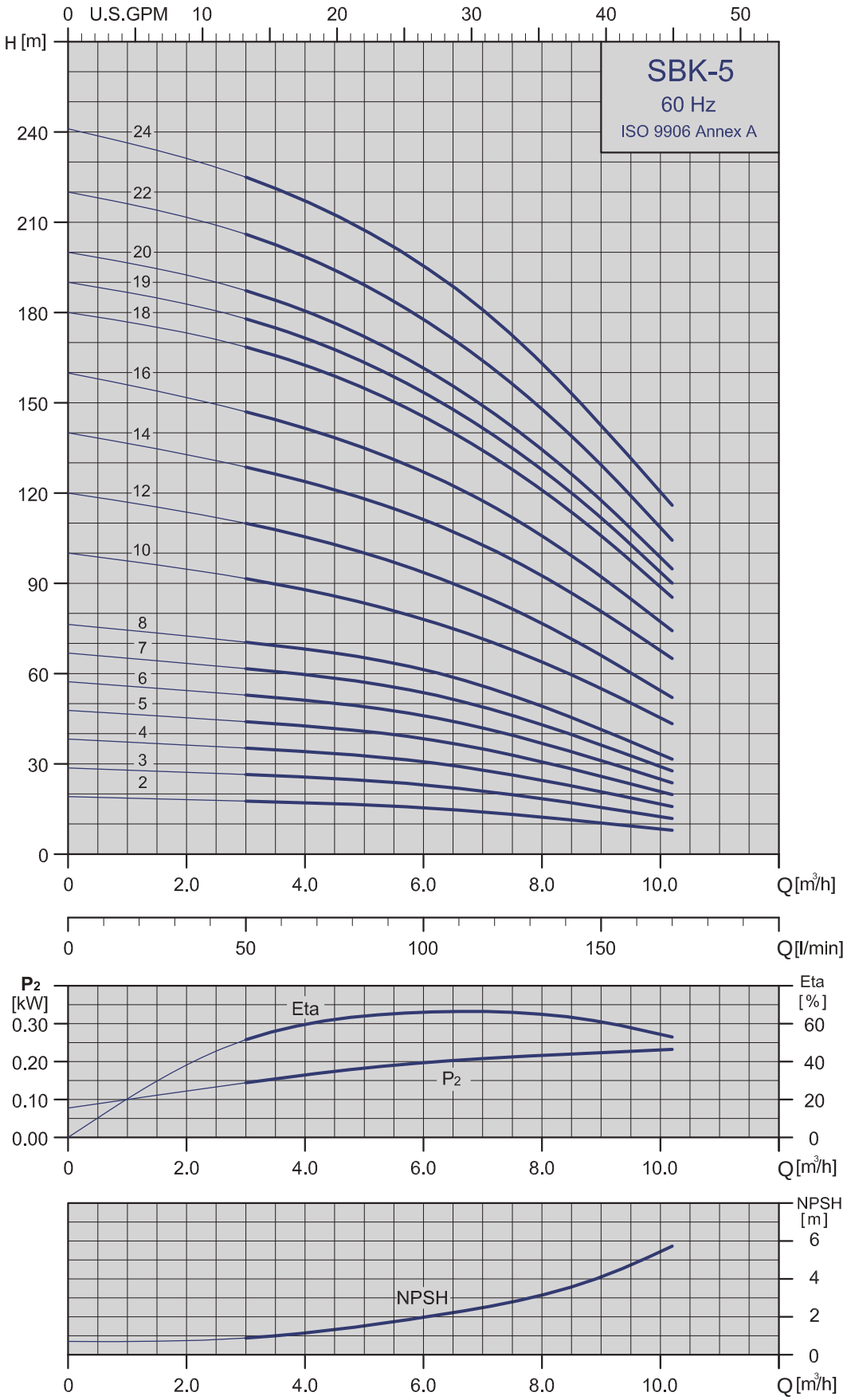


Dimensions and weights SBK 3 60Hz

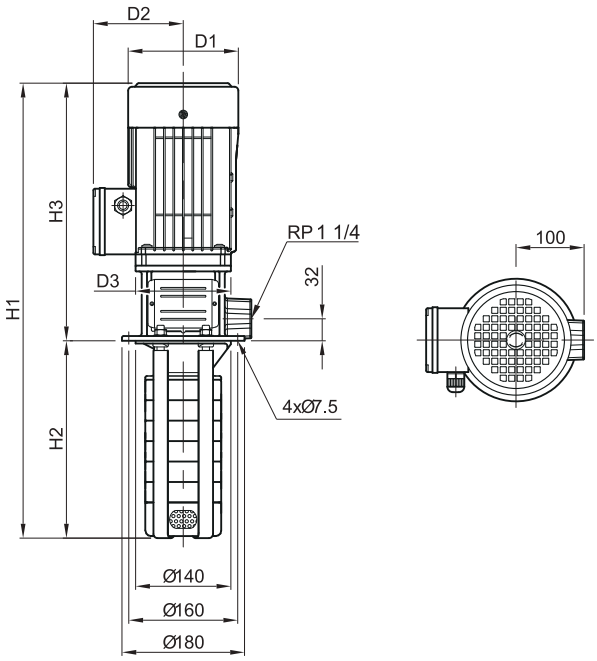


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	D3	(kg)
SBK 3-2/2	0.37	0.5	465.4	160	305.4	141	115	140	12.1
SBK 3-3/3	0.55	0.75	483.4	178	305.4	141	115	140	12.8
SBK 3-4/4	0.55	0.75	501.4	196	305.4	141	115	140	13.0
SBK 3-5/5	0.75	1	559.4	214	345.4	141	115	140	14.8
SBK 3-6/6	1.1	1.5	577.4	232	345.4	141	115	140	16.1
SBK 3-7/7	1.1	1.5	595.4	250	345.4	141	115	140	16.4
SBK 3-8/8	1.1	1.5	613.4	268	345.4	141	115	140	16.6
SBK 3-9/9	1.5	2	687.4	286	401.4	177	141	140	24.4
SBK 3-10/10	1.5	2	705.4	304	401.4	177	141	140	24.7
SBK 3-11/11	1.5	2	723.4	322	401.4	177	141	140	24.9
SBK 3-12/12	2.2	3	741.4	340	401.4	177	141	140	27.5
SBK 3-13/13	2.2	3	759.4	358	401.4	177	141	140	27.8
SBK 3-15/15	2.2	3	795.4	394	401.4	177	141	140	28.2
SBK-3-17/17	2.2	3	831.4	430	401.4	177	141	140	28.3
SBK 3-19/19	3	4	897.9	466	431.9	197	147	160	34.6
SBK 3-21/21	3	4	933.9	502	431.9	197	147	160	35.0
SBK 3-22/22	3	4	951.9	520	431.9	197	147	160	35.3
SBK 3-23/23	3	4	969.9	538	431.9	197	147	160	35.5
SBK 3-25/25	4	5.5	1015.9	574	441.9	220	161	160	42.4
SBK 3-26/26	4	5.5	1033.9	592	441.9	220	161	160	42.7

Performance curves SBK 5 60Hz

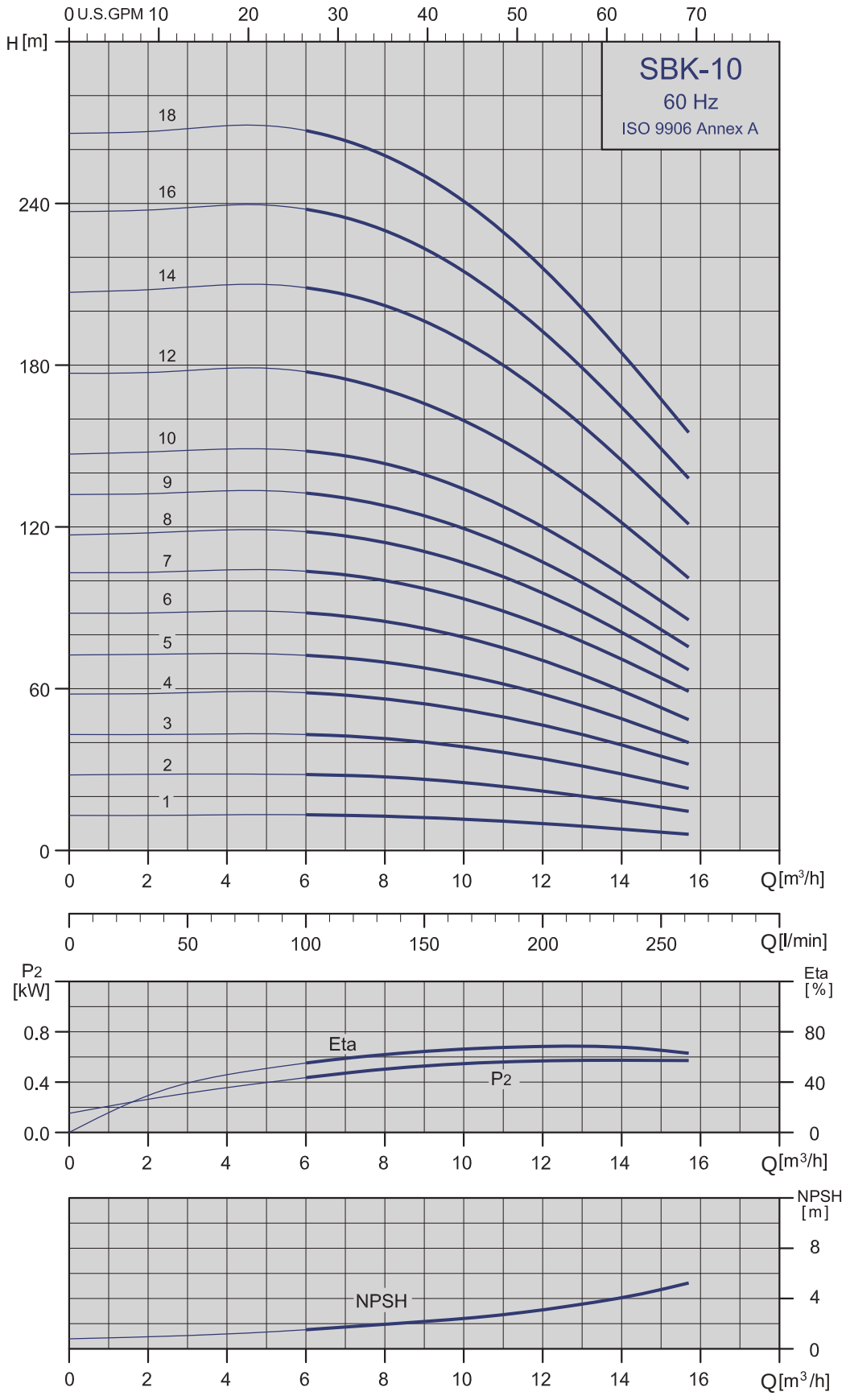


Dimensions and weights SBK 5 60Hz

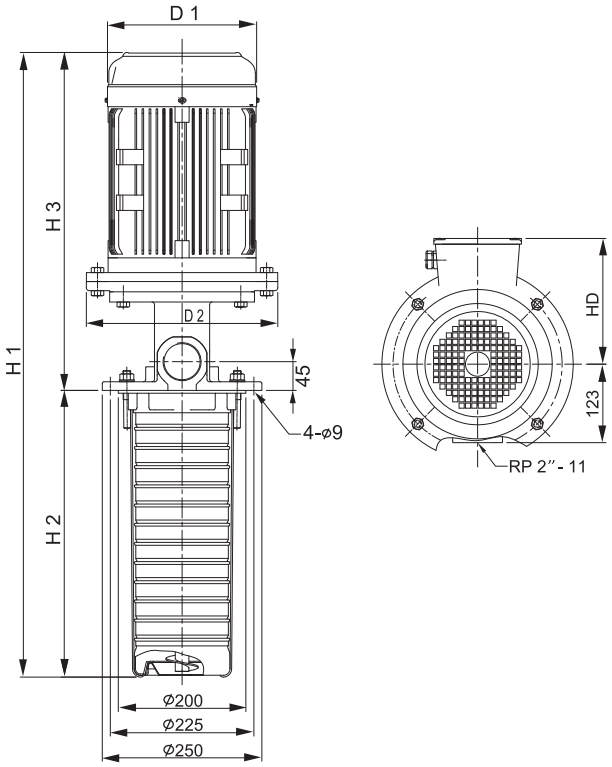


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	D3	(kg)
SBK 5-2/2	0.55	0.75	474.4	169	305.4	141	115	140	12.7
SBK 5-3/3	1.1	1.5	541.4	196	345.4	141	115	140	15.7
SBK 5-4/4	1.1	1.5	568.4	223	345.4	141	115	140	16.1
SBK 5-5/5	1.5	2	651.4	250	401.4	177	141	140	24.1
SBK 5-6/6	2.2	3	678.4	277	401.4	171	141	140	26.8
SBK 5-7/7	2.2	3	705.4	304	401.4	171	141	140	27.2
SBK 5-8/8	2.2	3	732.4	331	401.4	171	141	140	27.6
SBK 5-10/10	3	4	816.9	385	431.9	197	147	160	34.3
SBK 5-12/12	3	4	870.9	439	431.9	197	147	160	34.7
SBK 5-14/14	4	5.5	934.9	493	441.9	220	161	160	41.5
SBK 5-16/16	4	5.5	988.9	547	441.9	220	161	160	41.9
SBK 5-18/18	5.5	7.5	1107.9	601	506.9	235	197	300	65.1
SBK 5-19/19	5.5	7.5	1134.9	628	506.9	235	197	300	65.5
SBK 5-20/20	5.5	7.5	1161.9	655	506.9	235	197	300	65.9
SBK 5-22/22	5.5	7.5	1215.9	709	506.9	235	197	300	66.6
SBK 5-24/24	7.5	10	1305.9	763	542.9	235	197	300	75.7

Performance curves SBK 10 60Hz

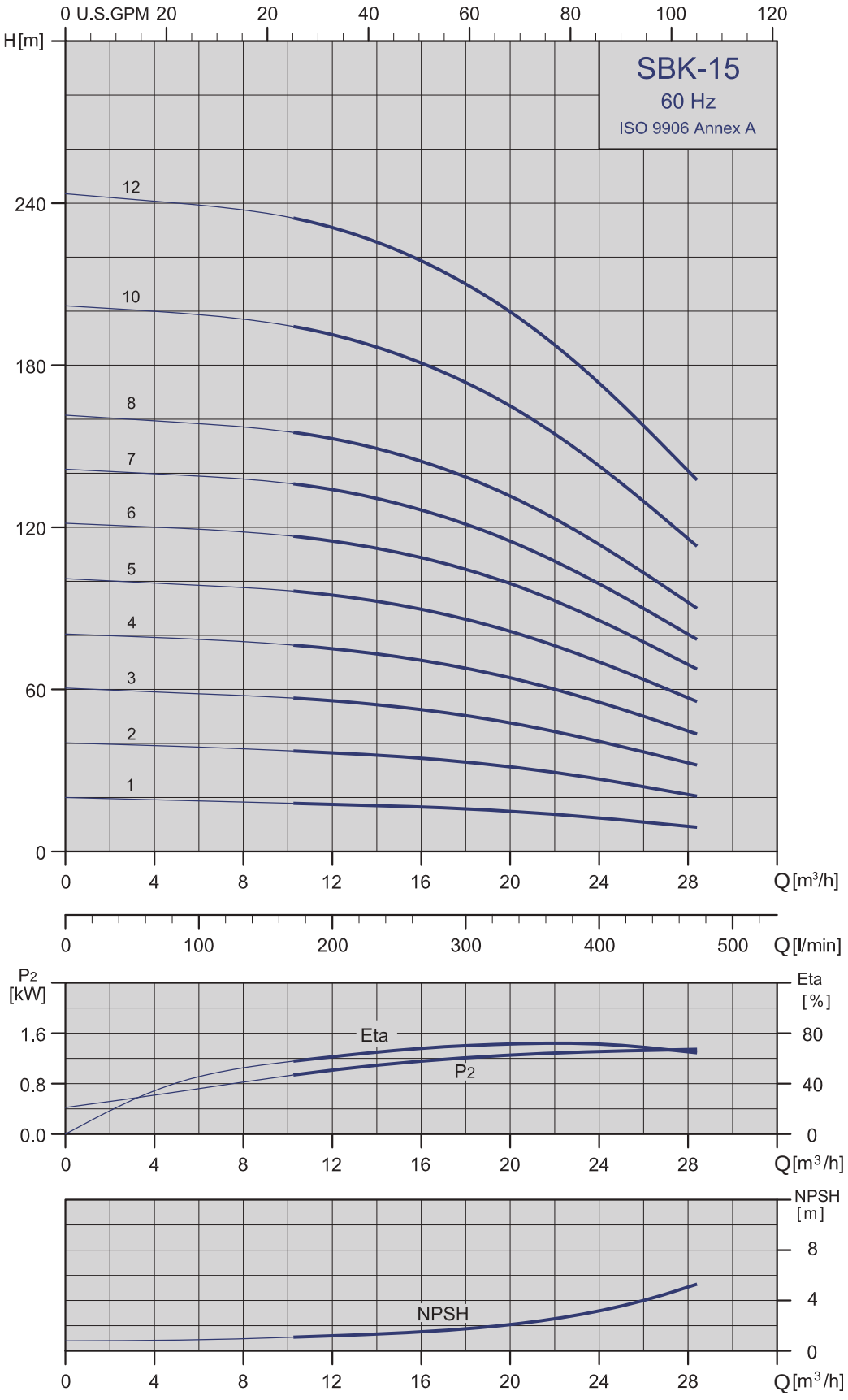


Dimensions and weights SBK 10 60Hz

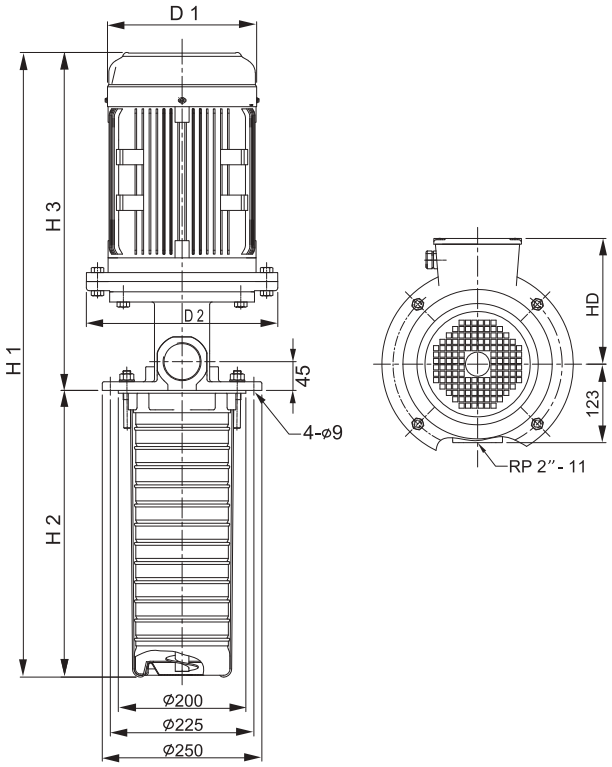


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	HD	(kg)
SBK-10-2/1	0.75	1	523	148	375	141	140	115	21.7
SBK-10-2/2	1.5	2	579	148	431	177	140	141	30.7
SBK-10-3/3	2.2	3	609	178	431	177	140	141	33.6
SBK-10-4/4	3	4	665	208	457	197	160	147	40.3
SBK-10-5/5	3	4	695	238	457	197	160	147	41.1
SBK-10-6/6	4	5.5	735	268	467	220	160	161	48.3
SBK-10-7/7	5.5	7.5	831	298	533	235	300	197	65.5
SBK-10-8/8	5.5	7.5	861	328	533	235	300	197	74.4
SBK-10-9/9	5.5	7.5	891	358	533	235	300	197	75.2
SBK-10-10/10	7.5	10	957	388	569	235	300	197	84.4
SBK-10-12/12	7.5	10	1017	448	569	235	300	197	85.8
SBK-10-14/14	11	15	1213	508	705	318	352	245	117.4
SBK-10-16/16	11	15	1273	568	705	318	352	245	118.9
SBK-10-18/18	11	15	1333	628	705	318	352	245	120.4
SBK-10-20/18	11	15	1393	688	705	318	352	245	121.2
SBK-10-22/18	11	15	1453	748	705	318	352	245	122.0

Performance curves SBK 15 60Hz

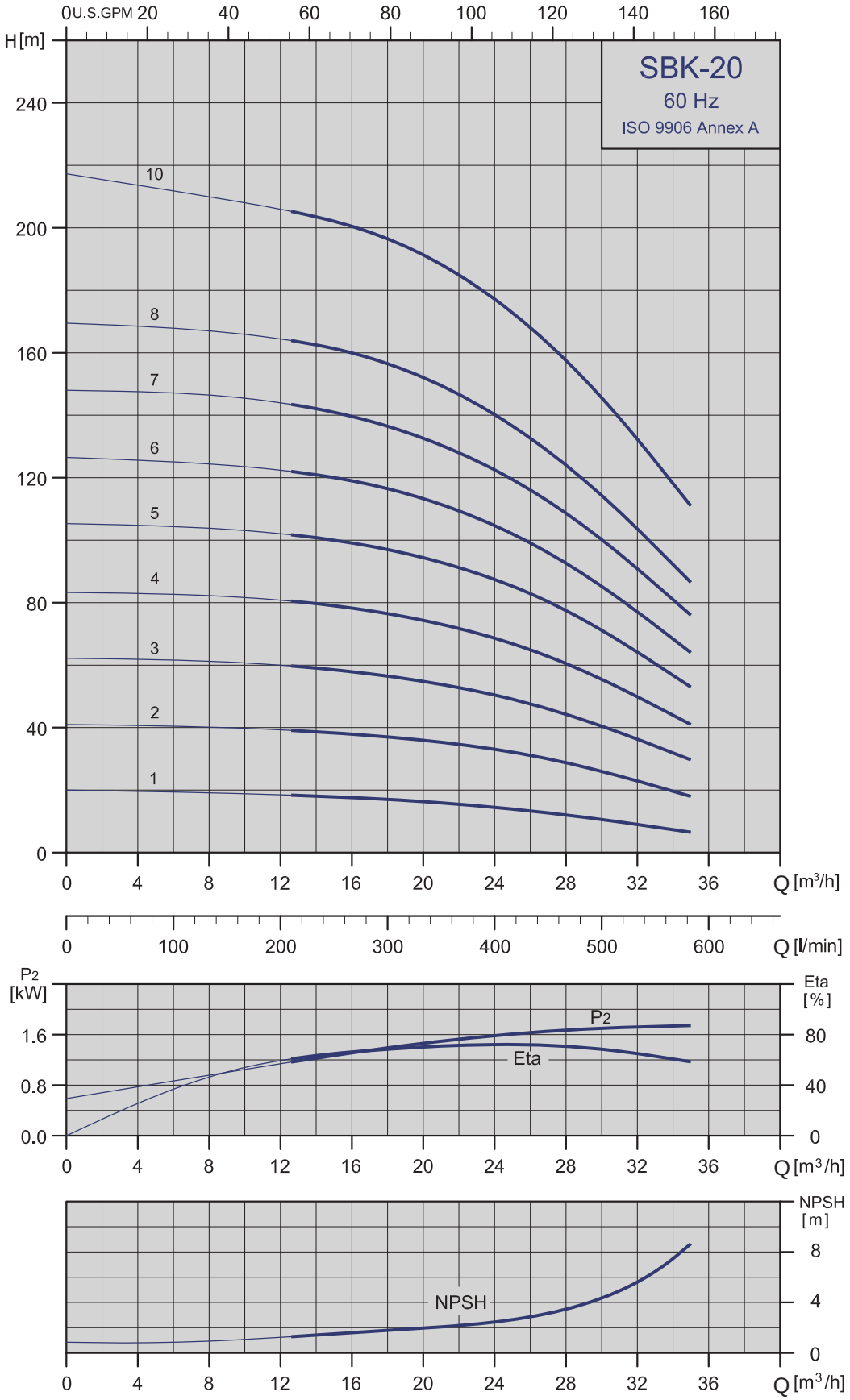


Dimensions and weights SBK 15 60Hz

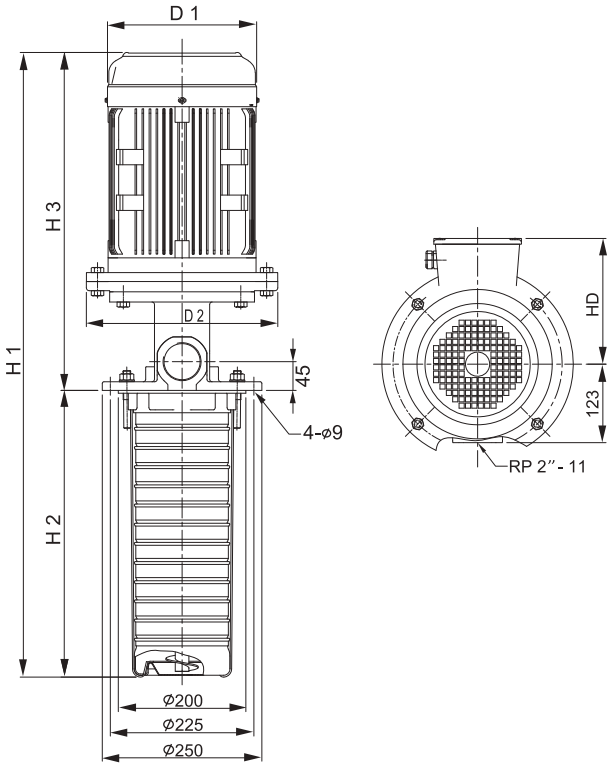


Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	HD	(kg)
SBK-15-2/1	1.5	2	609	178	431	177	140	141	31.5
SBK-15-2/2	3	4	635	178	457	197	160	147	36.2
SBK-15-3/3	4	5.5	690	223	467	220	160	161	47.2
SBK-15-4/4	5.5	7.5	801	268	533	235	300	197	72.8
SBK-15-5/5	7.5	10	882	313	569	235	300	197	82.2
SBK-15-6/6	11	15	1063	358	705	318	352	245	113.3
SBK-15-7/7	11	15	1108	403	705	318	352	245	114.3
SBK-15-8/8	11	15	1153	448	705	318	352	245	115.3
SBK-15-10/10	15	20	1248	538	710	318	352	245	127.8
SBK-15-12/12	18.5	25	1378	628	750	318	352	245	158.7
SBK-15-14/12	18.5	25	1468	718	750	318	352	245	159.8
SBK-15-16/12	18.5	25	1558	808	750	318	352	245	161.0
SBK-15-17/12	18.5	25	1603	853	750	318	352	245	161.6

Performance curves SBK 20 60Hz



Dimensions and weights SBK 20 60Hz



Pump Type	Motor P_2		Dimension (mm)						Net Weight
	kW	HP	H1	H2	H3	D1	D2	HD	(kg)
SBK-20-2/1	2.2	3	609	178	431	177	140	141	33.9
SBK-20-2/2	4	5.5	645	178	467	220	160	161	46.3
SBK-20-3/3	5.5	7.5	756	223	533	235	300	197	71.8
SBK-20-4/4	7.5	10	837	268	569	235	300	197	81.2
SBK-20-5/5	11	15	1018	313	705	318	352	245	112.3
SBK-20-6/6	11	15	1063	358	705	318	352	245	113.3
SBK-20-7/7	15	20	1113	403	710	318	352	245	124.9
SBK-20-8/8	15	20	1158	448	710	318	352	245	125.9
SBK-20-10/10	18.5	25	1288	538	750	318	352	245	156.7
SBK-20-12/10	18.5	25	1378	628	750	318	352	245	157.8
SBK-20-14/10	18.5	25	1468	718	750	318	352	245	159.0
SBK-20-16/10	18.5	25	1558	808	750	318	352	245	160.1
SBK-20-17/10	18.5	25	1603	853	750	318	352	245	160.7

CBK

Feature
Compact design / High Efficiency
Reliability / Easy installation /
Wide Range

Application
Machine centers / Grinding machines /
Lathes / Swarf conveyors /
Filtering systems / Cooling units /
Industrial washing machines

CBK pumps are vertical multistage centrifugal pumps especially designed for pumping of cooling lubricants for machine tools , and to be mounted on top of tanks with the pump stack immerged in the pumped liquid. STAIRS CBK pumps are available with various pump sizes and various numbers of stages to provide the flow, the pressure and the length required.

CBK 50 Hz Product Data

Range	2	4	8	12
Frequency	50Hz	50Hz	50Hz	50Hz
Rated fiow rate (m³/h)	2.5	4	8	12.5
Flow range (m³/h)	1~3.5	1~8	4.8~12	7.2~14.4
Maximum head (bar)	10	5	8.5	9.5
Motor power P1 (W)	260~1520	370~1530	1114~3429	2410~5667
Temperature range (˚C)	-10 to +90			

Pipe connection		
Union	Rp 3/4	Rp1 1/4

CBK 60 Hz Product Data

Range	2	4	8	12
Frequency	60Hz	60Hz	60Hz	60Hz
Rated fiow rate (m³/h)	3	4.8	9.5	12.5
Flow range (m³/h)	1~4	1~8	5.4~13.2	9.6~16.8
Maximum head (bar)	10	5	12	8.5
Motor power P1 (W)	340~1820	520~1950	1724~5448	3867~5619
Temperature range (˚C)	-10 to +90			

Pipe connection		
Union	Rp 3/4	Rp1 1/4

Mechanical Seals

Made of Tungsten carbide / Tungsten carbide or Viton.

List of materials

U:Tungsten carbide V:Viton

Type of Seal

HUUV	Standard

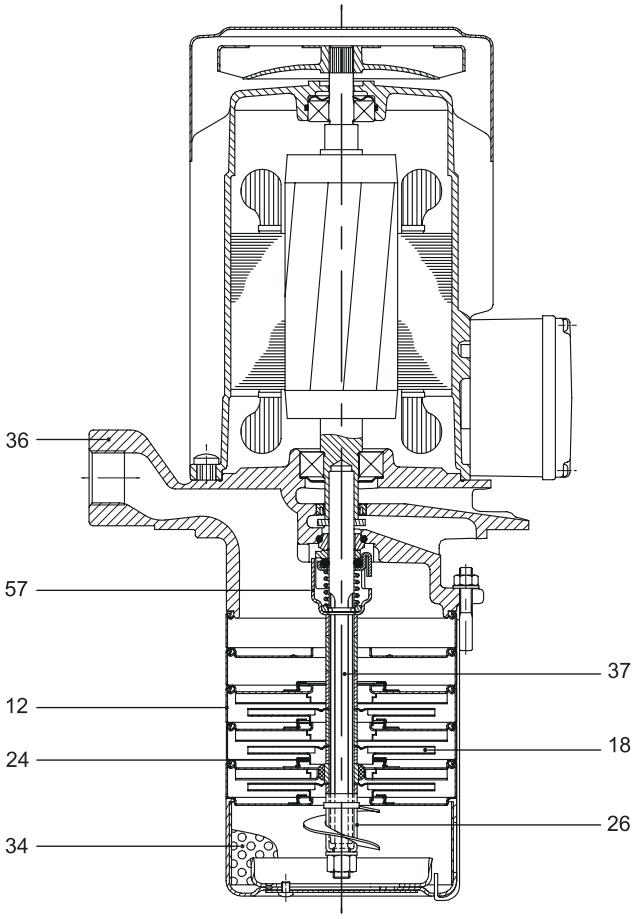
Mechnical seal is available in different material per customer's demand.

Motor Data

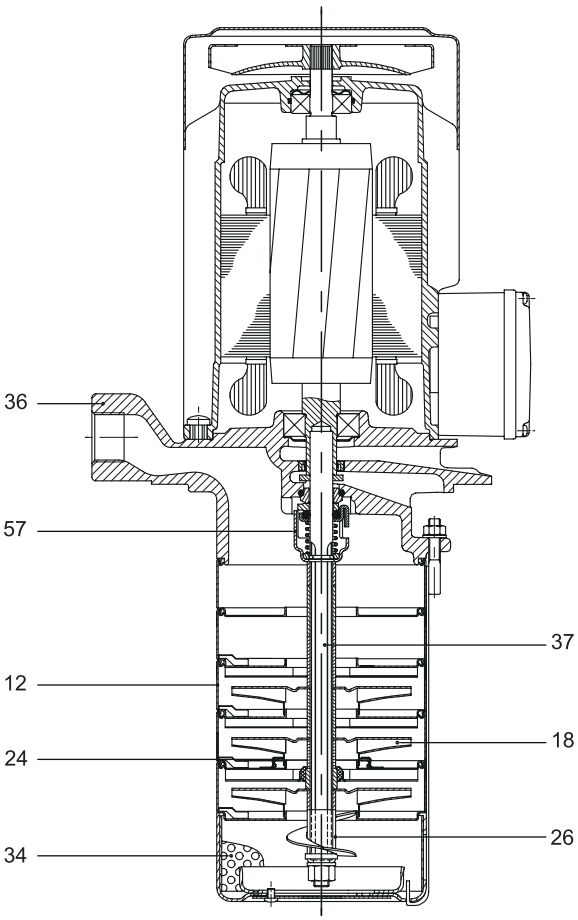
CBK is fitted with totally enclosed fan-cooled,2-pole standard motor.

Enclosure class : IP 55
Insulation class : F
Ambient temperature : Max. + 50°C
Supply voltage 50 Hz: 3X220-240/380-415V
Supply voltage 60 Hz: 3X220-255/380-440V
3X220-277/380-480V

CBK 2

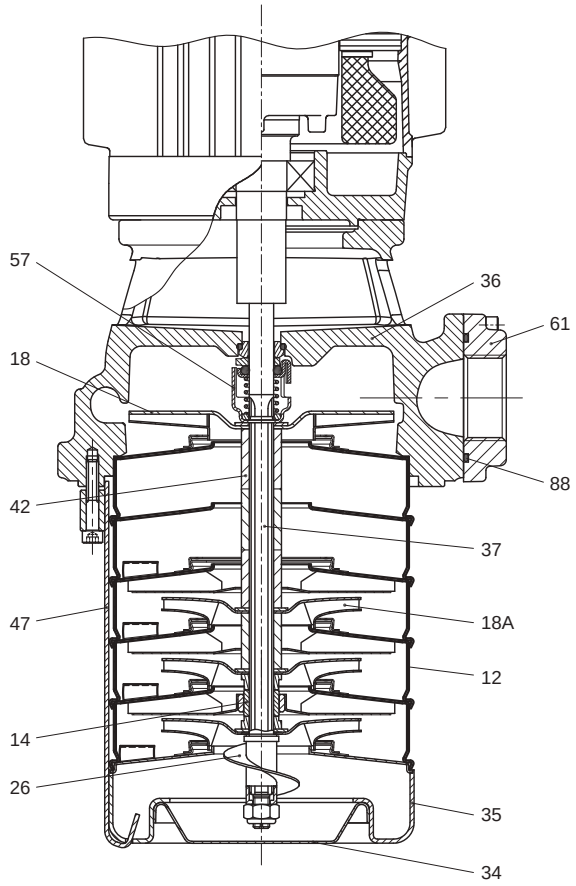


CBK 4



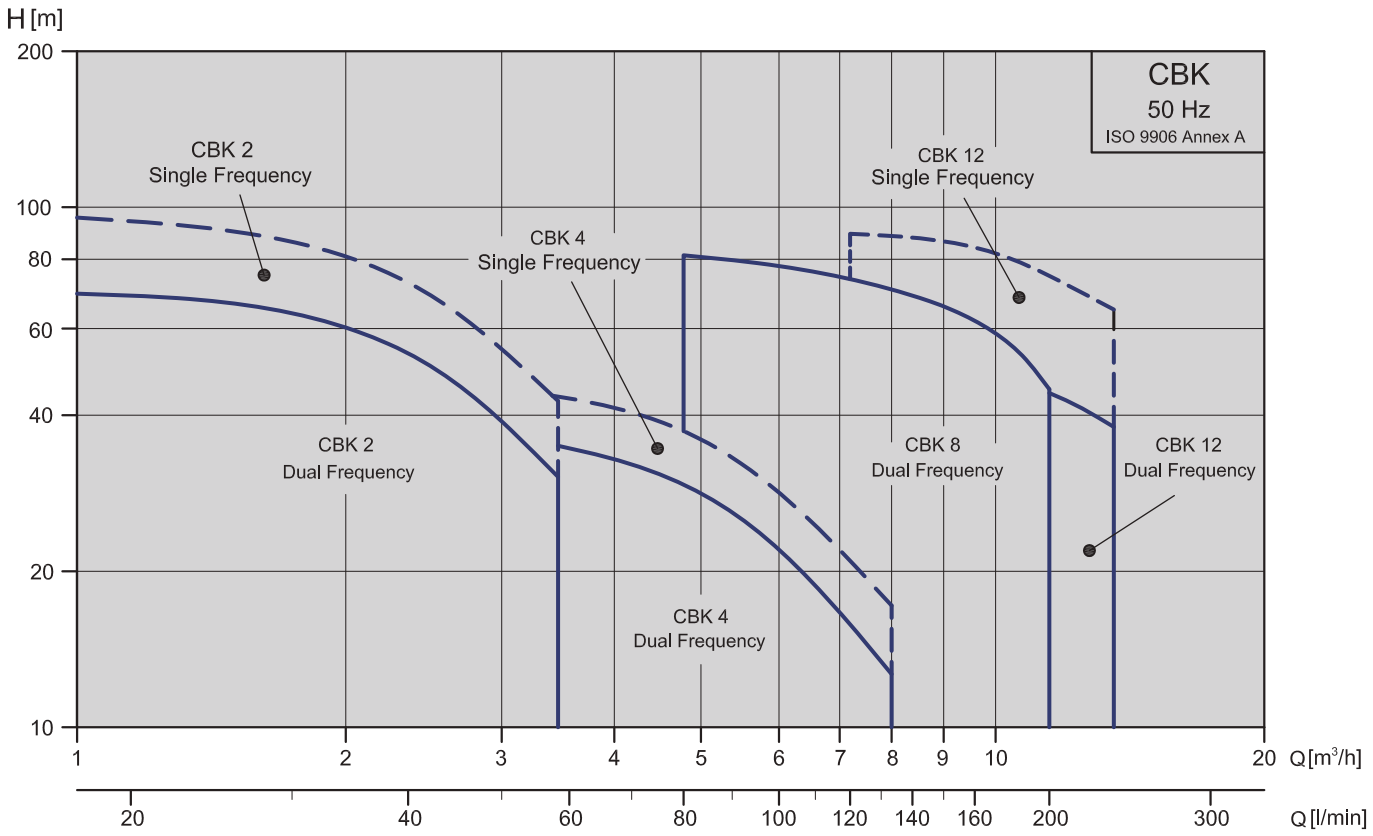
Pos.	Name	Material	Europe	AISI/ASTM
12	Chamber complete	Stainless steel	1.4301	AISI 304
18	Impeller	Stainless steel	1.4301	AISI 304
24	Neck ring	PTFE		
26	Priming screw	Stainless steel	1 4301	AISI 304
34	Strainer (internal)	Stainless steel	1.4301	AISI 304
36	Pump head	Cast Iron EN-GJL-200	0.6020	ASTM25B
37	Pump shaft	Stainless steel	1.4057	AISI 431
57	Shaft seal	HUUV		

CBK 8,12



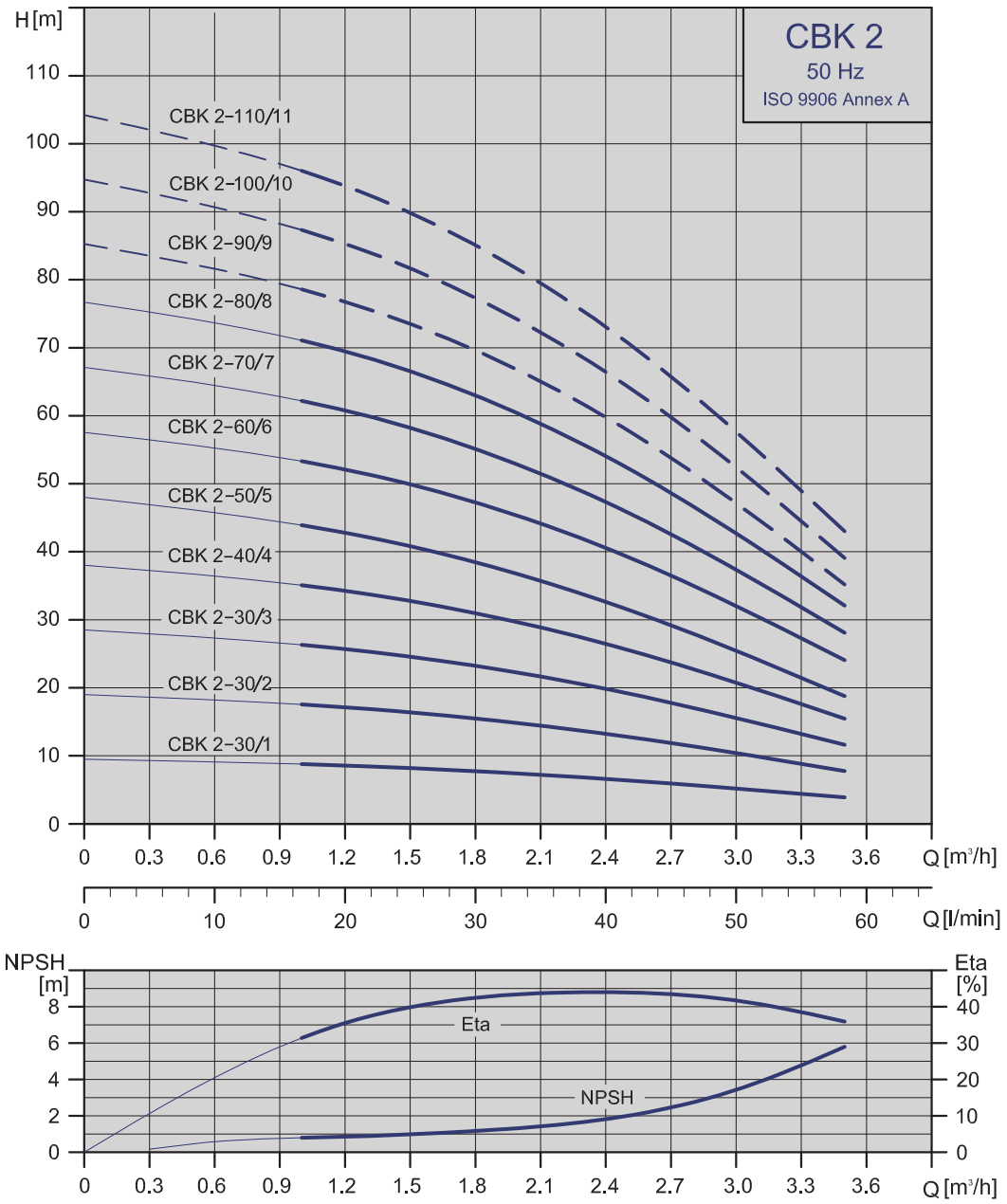
Pos.	Name	Material	Europe	AISI/ASTM
12	Chamber complete	Stainless steel	1.4301	AISI 304
14	Bearing	Silicon carbide		
18	Impeller	Stainless steel	1.4301	AISI 304
18A	Impeller	Stainless steel	1.4301	AISI 304
26	Priming screw	Stainless steel	1.4301	AISI 304
34	Strainer(internal)	Stainless steel	1 4301	AISI 304
35	Retainer for strainer	Stainless steel	1.4301	AISI 304
36	Pump head	EN-GJL-200	0.6020	ASTM 25B
37	Pump shaft	Stainless steel	1 4057	AISI 431
42	Spacing pipe	Stainless steel	1 4301	AISI 304
47	Strap	Stainless steel	1.4301	AISI 304
57	Shaft seal	HUUV		
61	Flange	EN-GJL-200	0 6020	ASTM 25B
88	O-ring	FKM		

Performance Range CBK 2,4,8,12



Performance curves CBK 2

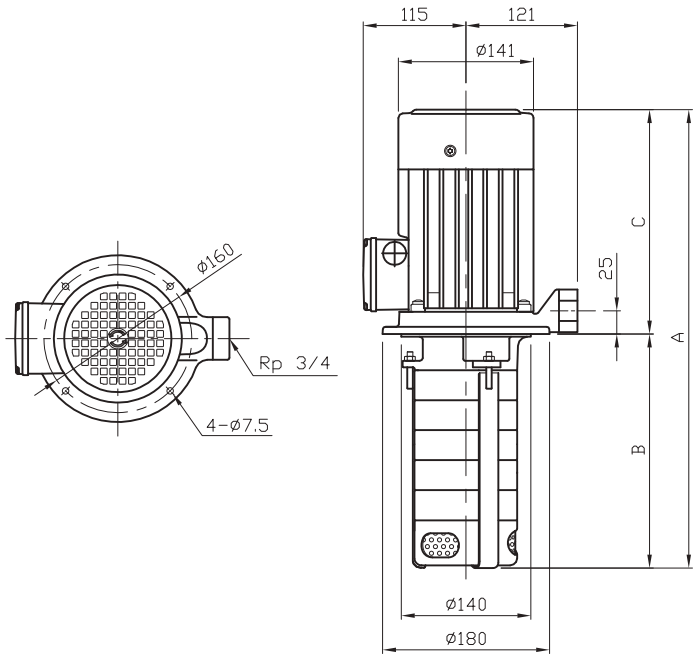
50Hz



* ———— Single Frequency

———— Dual Frequency

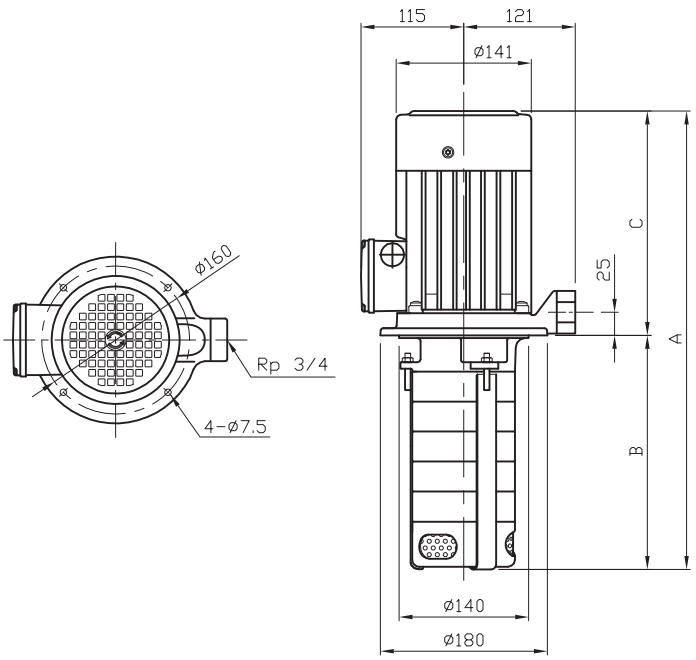
Dimensions and weights CBK 2 — 50Hz



Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight (kg)
	P_1[W]	I_N [A]	A	B	C	
CBK 2-30/1	260	1.6-1.9 / 0.9-1.1	346	142	204	11.7
CBK 2-30/2	380	1.7-2.1 / 1.0-1.2	346	142	204	11.8
CBK 2-30/3	590	2.4-3.1 / 1.4-1.8	346	142	204	11.9
CBK 2-40/1	260	1.6-1.9 / 0.9-1.1	364	160	204	11.8
CBK 2-40/2	380	1.7-2.1 / 1.0-1.2	364	160	204	11.9
CBK 2-40/3	590	2.4-3.1 / 1.4-1.8	364	160	204	12.1
CBK 2-40/4	630	2.6-3.3 / 1.5-1.9	364	160	204	12.1
CBK 2-50/1	260	1.6-1.9 / 0.9-1.1	382	178	204	12.0
CBK 2-50/2	380	1.7-2.1 / 1.0-1.2	382	178	204	12.1
CBK 2-50/3	590	2.4-3.1 / 1.4-1.8	382	178	204	12.3
CBK 2-50/4	630	2.6-3.3 / 1.5-1.9	382	178	204	12.3
CBK 2-50/5	860	3.3-3.6 / 1.9-2.1	422	178	244	13.7
CBK 2-60/1	260	1.6-1.9 / 0.9-1.1	400	196	204	12.2
CBK 2-60/2	380	1.7-2.1 / 1.0-1.2	400	196	204	12.2
CBK 2-60/3	590	2.4-3.1 / 1.4-1.8	400	196	204	12.5
CBK 2-60/4	630	2.6-3.3 / 1.5-1.9	400	196	204	12.5
CBK 2-60/5	860	3.3-3.6 / 1.9-2.1	440	196	244	14.0
CBK 2-60/6	910	3.5-3.8 / 2.0-2.2	440	196	244	14.0
CBK 2-70/1	260	1.6-1.9 / 0.9-1.1	418	214	204	12.4
CBK 2-70/2	380	1.7-2.1 / 1.0-1.2	418	214	204	12.4
CBK 2-70/3	590	2.4-3.1 / 1.4-1.8	418	214	204	12.6
CBK 2-70/4	630	2.6-3.3 / 1.5-1.9	418	214	204	12.7
CBK 2-70/5	860	3.3-3.6 / 1.9-2.1	458	214	244	14.2
CBK 2-70/6	910	3.5-3.8 / 2.0-2.2	458	214	244	14.3
CBK 2-70/7	1040	4.3-5.0 / 2.5-2.9	458	214	244	15.4

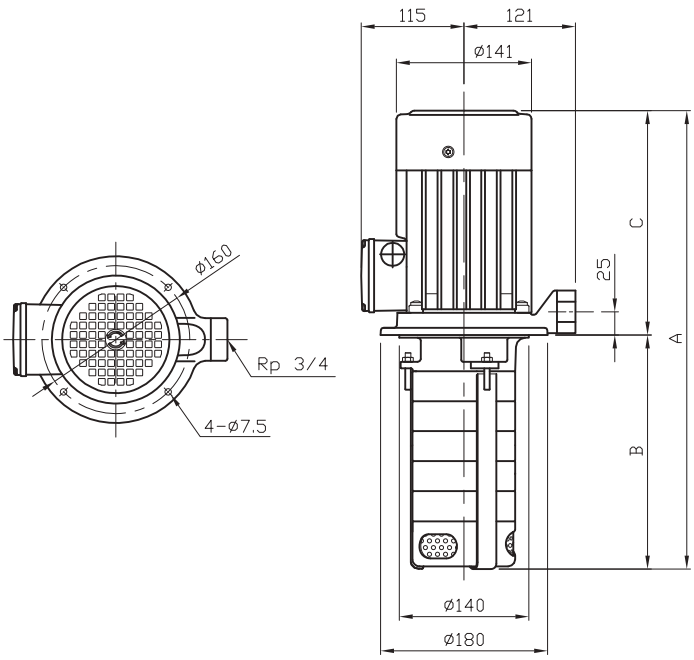
Dimensions and weights CBK 2 — 50Hz



Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 2-80/1	260	1.6-1.9 / 0.9-1.1	436	232	204	12.4
CBK 2-80/2	380	1.7-2.1 / 1.0-1.2	436	232	204	12.6
CBK 2-80/3	590	2.4-3.1 / 1.4-1.8	436	232	204	12.8
CBK 2-80/4	630	2.6-3.3 / 1.5-1.9	436	232	204	13.0
CBK 2-80/5	860	3.3-3.6 / 1.9-2.1	476	232	244	14.4
CBK 2-80/6	910	3.5-3.8 / 2.0-2.2	476	232	244	14.5
CBK 2-80/7	1040	4.3-5.0 / 2.5-2.9	476	232	244	15.7
CBK 2-80/8	1230	4.7-5.4 / 2.7-3.1	476	232	244	15.7
CBK 2-90/1	260	1.6-1.9 / 0.9-1.1	454	250	204	12.7
CBK 2-90/2	380	1.7-2.1 / 1.0-1.2	454	250	204	12.8
CBK 2-90/3	590	2.4-3.1 / 1.4-1.8	454	250	204	13.0
CBK 2-90/4	630	2.6-3.3 / 1.5-1.9	454	250	204	13.0
CBK 2-90/5	860	3.3-3.6 / 1.9-2.1	494	250	244	14.5
CBK 2-90/6	910	3.5-3.8 / 2.0-2.2	494	250	244	14.8
CBK 2-90/7	1040	4.3-5.0 / 2.5-2.9	494	250	244	15.9
CBK 2-90/8	1230	4.7-5.4 / 2.7-3.1	494	250	244	16.0
CBK 2-100/1	260	1.6-1.9 / 0.9-1.1	472	268	204	12.9
CBK 2-100/2	380	1.7-2.1 / 1.0-1.2	472	268	204	13.0
CBK 2-100/3	590	2.4-3.1 / 1.4-1.8	472	268	204	13.2
CBK 2-100/4	630	2.6-3.3 / 1.5-1.9	472	268	204	13.4
CBK 2-100/5	860	3.3-3.6 / 1.9-2.1	512	268	244	14.8
CBK 2-100/6	910	3.5-3.8 / 2.0-2.2	512	268	244	14.8
CBK 2-100/7	1040	4.3-5.0 / 2.5-2.9	512	268	244	16.1
CBK 2-100/8	1230	4.7-5.4 / 2.7-3.1	512	268	244	16.1

Dimensions and weights CBK 2 — 50Hz



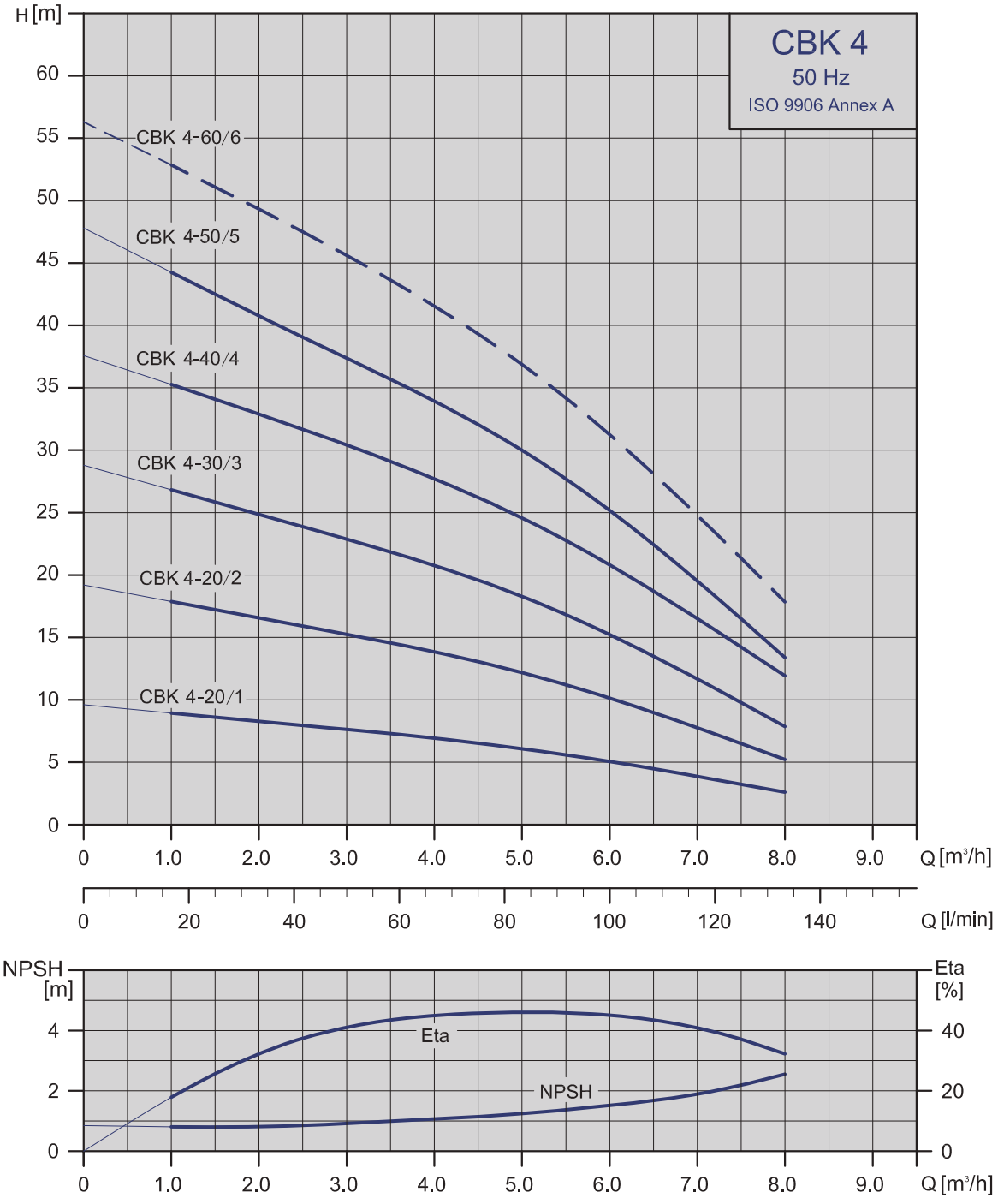
Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 2-110/1	260	1.6-1.9 / 0.9-1.1	490	286	204	13.0
CBK 2-110/2	380	1.7-2.1 / 1.0-1.2	490	286	204	13.2
CBK 2-110/3	590	2.4-3.1 / 1.4-1.8	490	286	204	13.4
CBK 2-110/4	630	2.6-3.3 / 1.5-1.9	490	286	204	13.5
CBK 2-110/5	860	3.3-3.6 / 1.9-2.1	530	286	244	14.8
CBK 2-110/6	910	3.5-3.8 / 2.0-2.2	530	286	244	15.0
CBK 2-110/7	1040	4.3-5.0 / 2.5-2.9	530	286	244	16.3
CBK 2-110/8	1230	4.7-5.4 / 2.7-3.1	530	286	244	16.3

Single Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 2-90/9	1210	4.1-4.6 / 2.4-2.7	494	250	244	14.8
CBK 2-100/9	1210	4.1-4.6 / 2.4-2.7	512	268	244	15.0
CBK 2-100/10	1390	4.9-5.7 / 2.8-3.3	512	268	244	16.3
CBK 2-110/9	1210	4.1-4.6 / 2.4-2.7	530	286	244	15.2
CBK 2-110/10	1390	4.9-5.7 / 2.8-3.3	530	286	244	16.6
CBK 2-110/11	1520	5.4-6.0 / 3.1-3.5	530	286	244	16.7

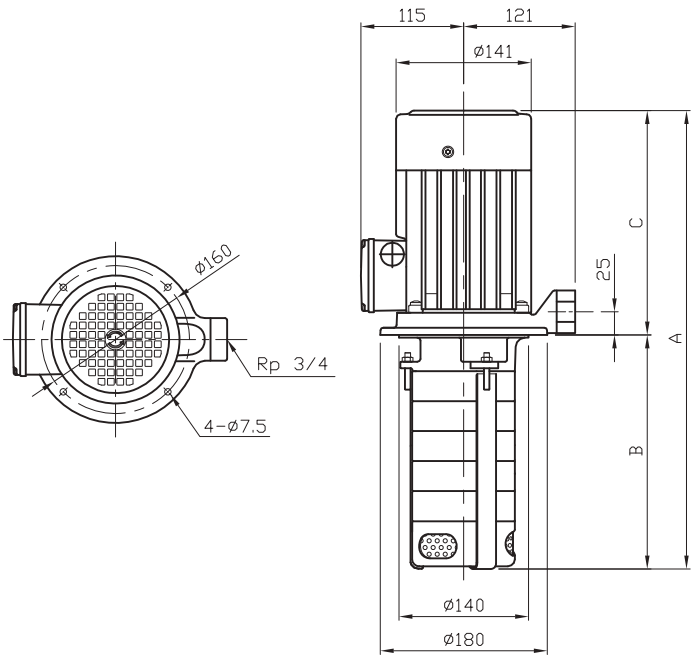
Performance curves CBK 4 — 50Hz



* ———— Single Frequency

———— Dual Frequency

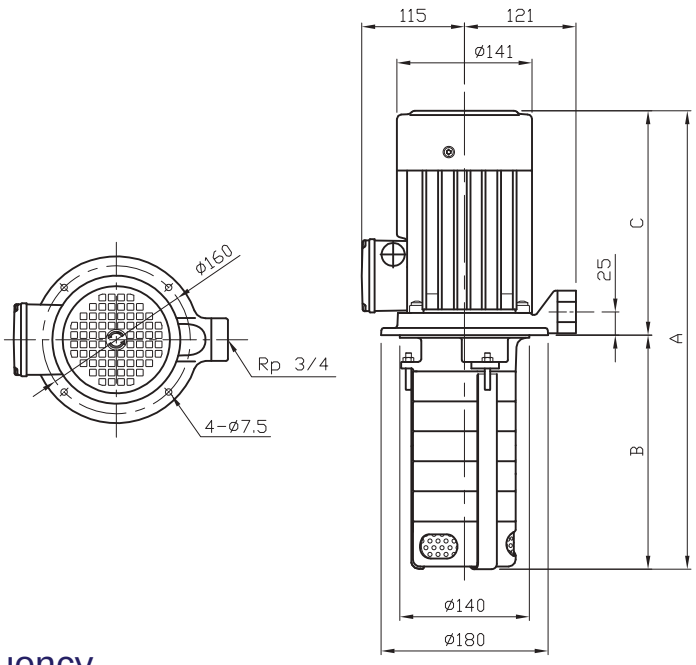
Dimensions and weights CBK 4 — 50Hz



Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 4-20/1	370	1.7-1.9 / 1.0-1.1	346	142	204	11.5
CBK 4-20/2	630	2.6-3.1 / 1.5-1.8	346	142	204	11.6
CBK 4-30/1	370	1.7-1.9 / 1.0-1.1	373	169	204	11.7
CBK 4-30/2	630	2.6-3.1 / 1.5-1.8	373	169	204	11.9
CBK 4-30/3	820	3.1-3.6 / 1.8-2.1	413	169	244	13.4
CBK 4-40/1	370	1.7-1.9 / 1.0-1.1	400	196	204	12.0
CBK 4-40/2	630	2.6-3.1 / 1.5-1.8	400	196	204	12.1
CBK 4-40/3	820	3.1-3.6 / 1.8-2.1	440	196	244	13.7
CBK 4-40/4	1090	4.3-5.0 / 2.5-2.9	440	196	244	14.9
CBK 4-50/1	370	1.7-1.9 / 1.0-1.1	427	223	204	12.1
CBK 4-50/2	630	2.6-3.1 / 1.5-1.8	427	223	204	12.3
CBK 4-50/3	820	3.1-3.6 / 1.8-2.1	467	223	244	14.0
CBK 4-50/4	1090	4.3-5.0 / 2.5-2.9	467	223	244	15.1
CBK 4-50/5	1300	4.6-5.3 / 2.7-3.1	467	223	244	15.2
CBK 4-60/1	370	1.7-1.9 / 1.0-1.1	454	250	204	12.4
CBK 4-60/2	630	2.6-3.1 / 1.5-1.8	454	250	204	12.5
CBK 4-60/3	820	3.1-3.6 / 1.8-2.1	494	250	244	14.1
CBK 4-60/4	1090	4.3-5.0 / 2.5-2.9	494	250	244	15.3
CBK 4-60/5	1300	4.6-5.3 / 2.7-3.1	494	250	244	15.5

Dimensions and weights CBK 4 50Hz



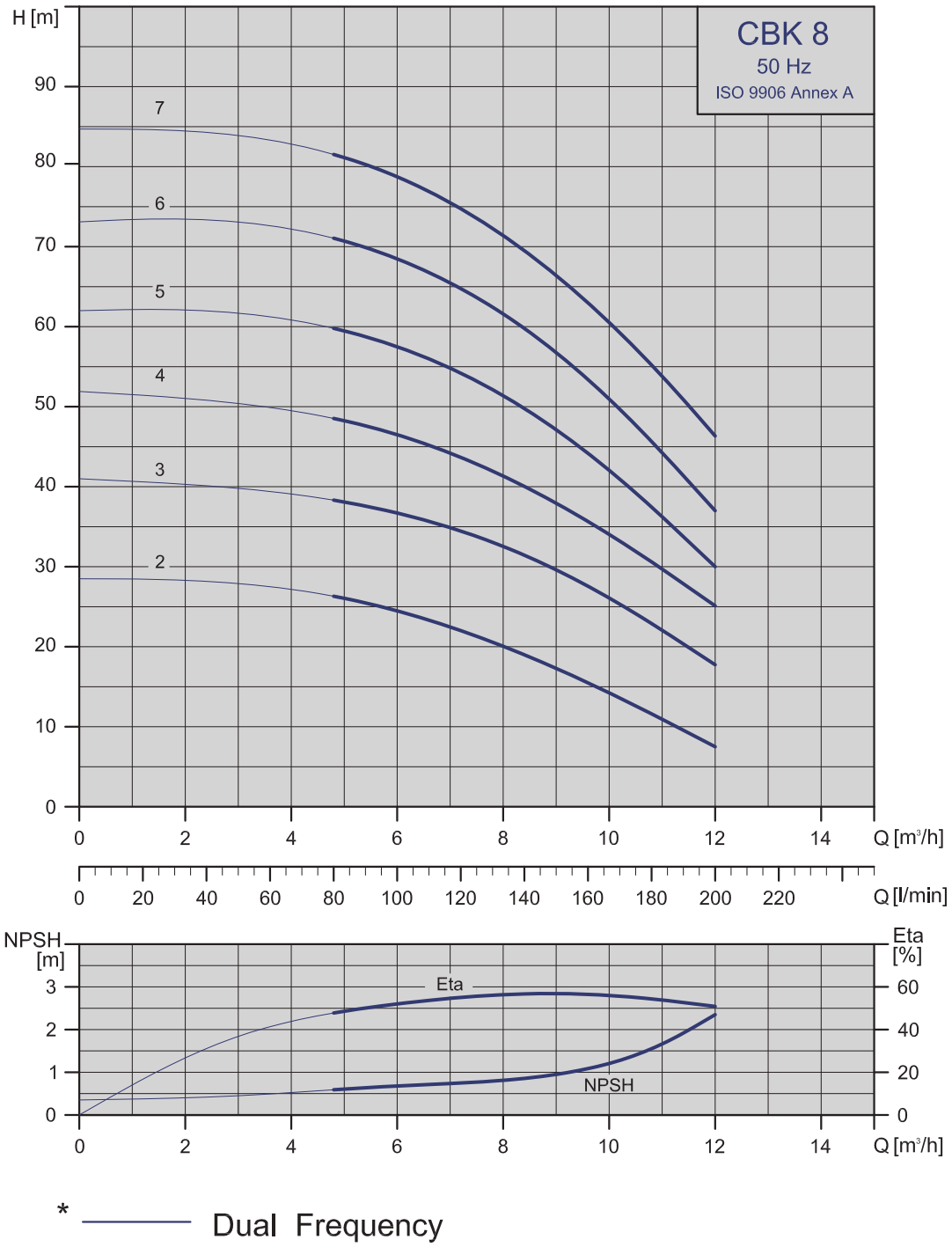
Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 4-70/1	370	1.7-1.9 / 1.0-1.1	481	277	204	12.5
CBK 4-70/2	630	2.6-3.1 / 1.5-1.8	481	277	204	12.6
CBK 4-70/3	820	3.1-3.6 / 1.8-2.1	521	277	244	14.2
CBK 4-70/4	1090	4.3-5.0 / 2.5-2.9	521	277	244	15.5
CBK 4-70/5	1300	4.6-5.3 / 2.7-3.1	521	277	244	15.6
CBK 4-80/1	370	1.7-1.9 / 1.0-1.1	508	304	204	12.7
CBK 4-80/2	630	2.6-3.1 / 1.5-1.8	508	304	204	12.9
CBK 4-80/3	820	3.1-3.6 / 1.8-2.1	548	304	244	14.5
CBK 4-80/4	1090	4.3-5.0 / 2.5-2.9	548	304	244	15.7
CBK 4-80/5	1300	4.6-5.3 / 2.7-3.1	548	304	244	15.9

Single Frequency

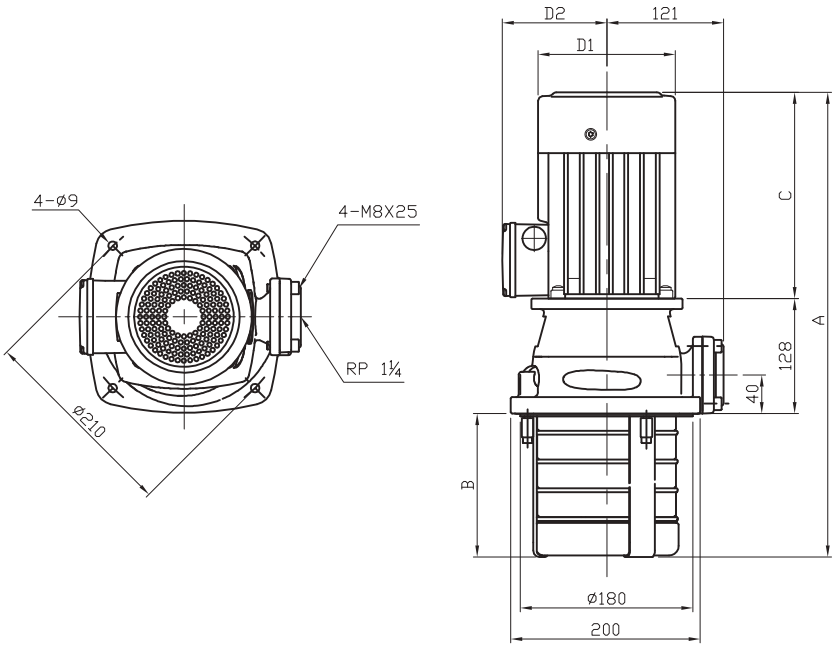
Pump Type	3X220-240/380-415V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 4-60/6	1530	5.5-5.9 / 3.2-3.4	494	250	244	15.6
CBK 4-70/6	1530	5.5-5.9 / 3.2-3.4	521	277	244	15.8
CBK 4-80/6	1530	5.5-5.9 / 3.2-3.4	548	304	244	16.1

Performance curves CBK 8 — 50Hz



* ——— Dual Frequency

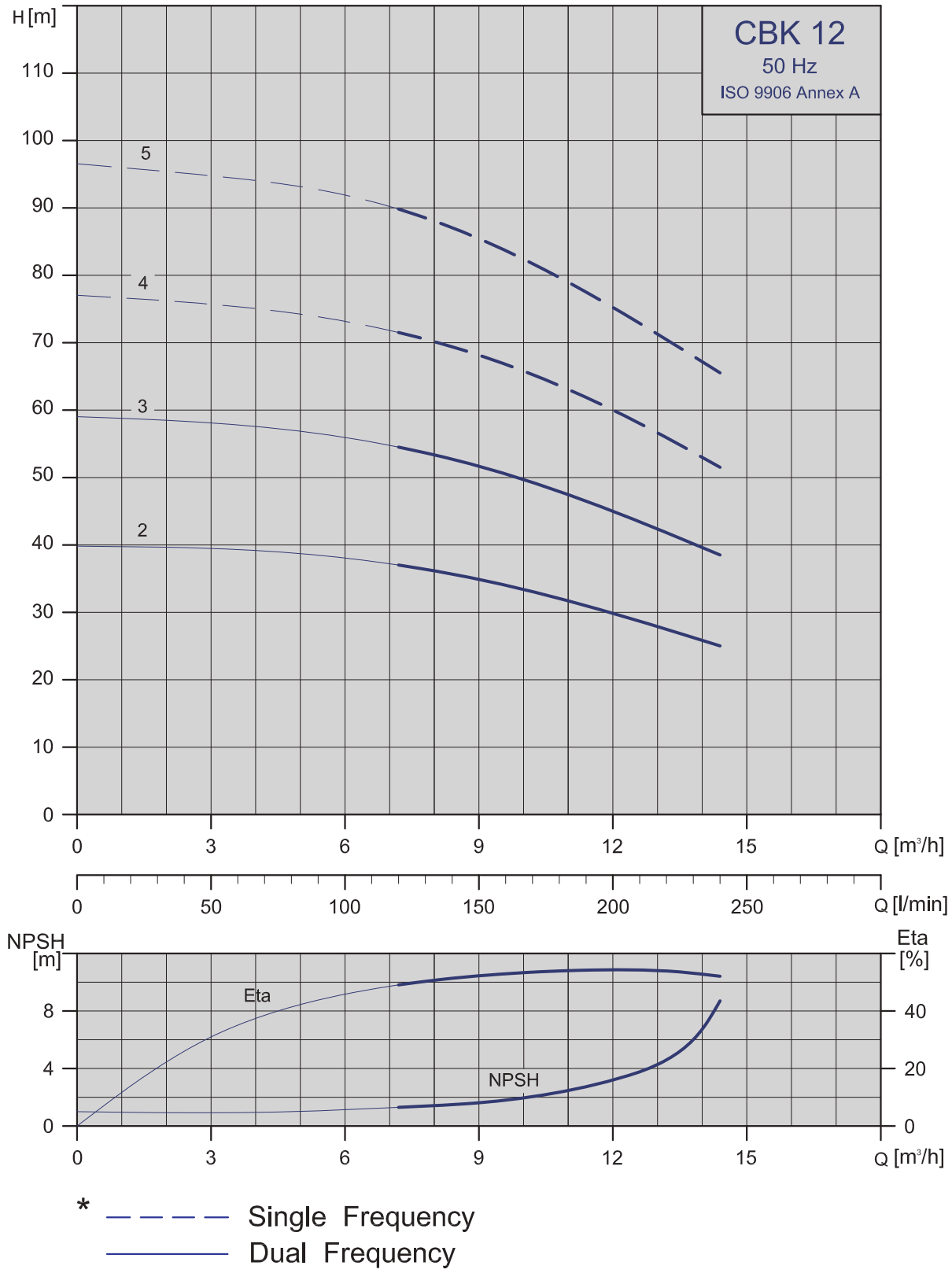
Dimensions and weights CBK 8 50Hz



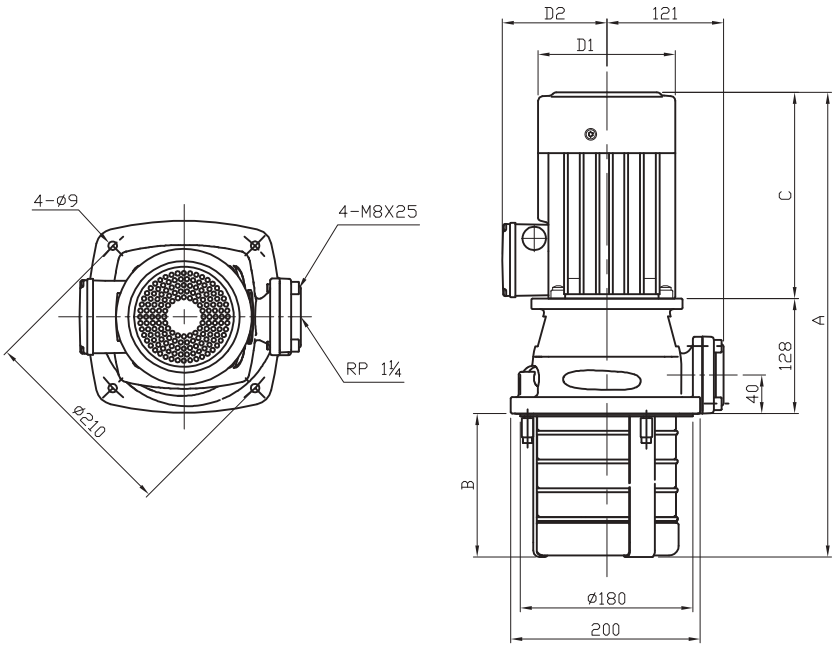
Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)					Net Weight
	P_1[W]	I_N [A]	A	B	C	D1	D2	(kg)
CBK-8-20/2	1114	4.1-4.8 / 2.4-2.8	423	60	235	141	115	19.25
CBK-8-30/2	1114	4.1-4.8 / 2.4-2.8	423	60	235	141	115	19.42
CBK-8-30/3	1648	5.4-6.2 / 3.2-3.6	509	90	291	177	141	28.53
CBK-8-40/2	1114	4.1-4.8 / 2.4-2.8	483	120	235	141	115	20.06
CBK-8-40/3	1648	5.4-6.2 / 3.2-3.6	539	120	291	177	141	28.88
CBK-8-40/4	2105	7.0-7.9 / 4.0-4.6	539	120	291	177	141	31.29
CBK-8-50/2	1114	4.1-4.8 / 2.4-2.8	513	150	235	141	115	20.45
CBK-8-50/3	1648	5.4-6.2 / 3.2-3.6	569	150	291	177	141	29.23
CBK-8-50/4	2105	7.0-7.9 / 4.0-4.6	569	150	291	177	141	31.69
CBK-8-50/5	2638	10.8-11.8 / 6.3-7.0	594	150	316	197	147	37.74
CBK-8-60/2	1114	4.1-4.8 / 2.4-2.8	543	180	235	141	115	20.79
CBK-8-60/3	1648	5.4-6.2 / 3.2-3.6	599	180	291	177	141	29.58
CBK-8-60/4	2105	7.0-7.9 / 4.0-4.6	599	180	291	177	141	32.04
CBK-8-60/5	2638	10.8-11.8 / 6.3-7.0	624	180	316	197	147	37.39
CBK-8-60/6	3095	9.2-11.1 / 5.3-6.5	634	180	326	200	161	43.93
CBK-8-70/2	1114	4.1-4.8 / 2.4-2.8	573	210	235	141	115	21.64
CBK-8-70/3	1648	5.4-6.2 / 3.2-3.6	629	210	291	177	141	29.93
CBK-8-70/4	2105	7.0-7.9 / 4.0-4.6	629	210	291	177	141	32.39
CBK-8-70/5	2638	10.8-11.8 / 6.3-7.0	654	210	316	197	147	37.74
CBK-8-70/6	3095	9.2-11.1 / 5.3-6.5	664	210	326	200	161	44.28
CBK-8-70/7	3429	10.4-11.5 / 6.0-6.7	664	210	326	200	161	44.71

Performance curves CBK 12 — 50Hz



Dimensions and weights CBK 12 50Hz



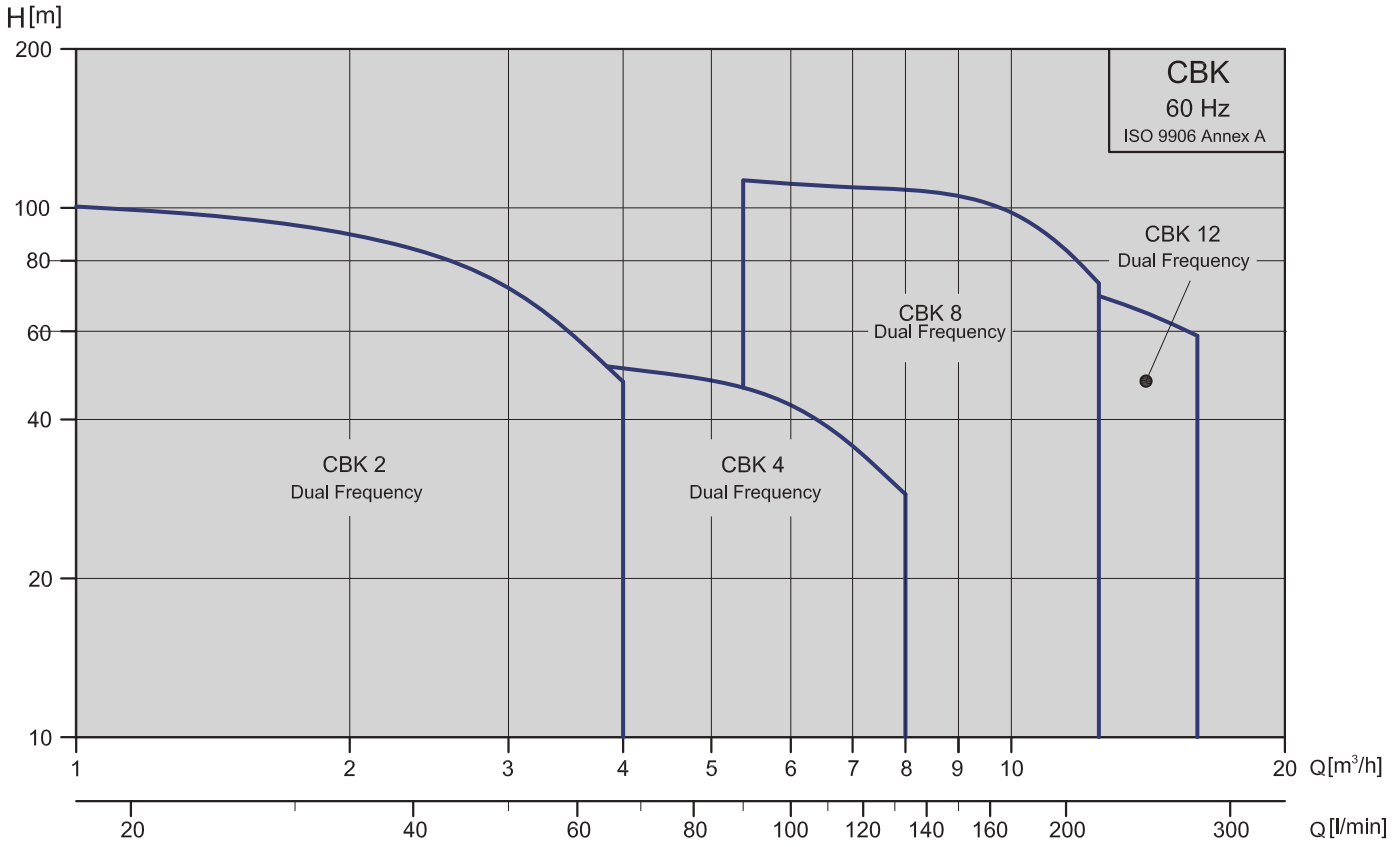
Dual Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)					Net Weight (kg)
	P_1[W]	I_N [A]	A	B	C	D1	D2	
CBK-12-20/2	2410	8.9-10.7 / 5.2-6.2	504	60	316	197	147	34.82
CBK-12-30/2	2410	8.9-10.7 / 5.2-6.2	534	90	316	197	147	35.17
CBK-12-30/3	3600	11.0-12.2 / 6.4-7.1	544	90	326	220	161	41.69
CBK-12-40/2	2410	8.9-10.7 / 5.2-6.2	564	120	316	197	147	35.52
CBK-12-40/3	3600	11.0-12.2 / 6.4-7.1	574	120	326	220	161	42.05
CBK-12-50/2	2410	8.9-10.7 / 5.2-6.2	594	150	316	197	147	35.87
CBK-12-50/3	3600	11.0-12.2 / 6.4-7.1	604	150	326	220	161	42.40
CBK-12-60/2	2410	8.9-10.7 / 5.2-6.2	624	180	316	197	147	36.22
CBK-12-60/3	3600	11.0-12.2 / 6.4-7.1	634	180	326	220	161	42.75
CBK-12-70/2	2410	8.9-10.7 / 5.2-6.2	654	210	316	197	147	36.57
CBK-12-70/3	3600	11.0-12.2 / 6.4-7.1	664	210	326	220	161	43.10

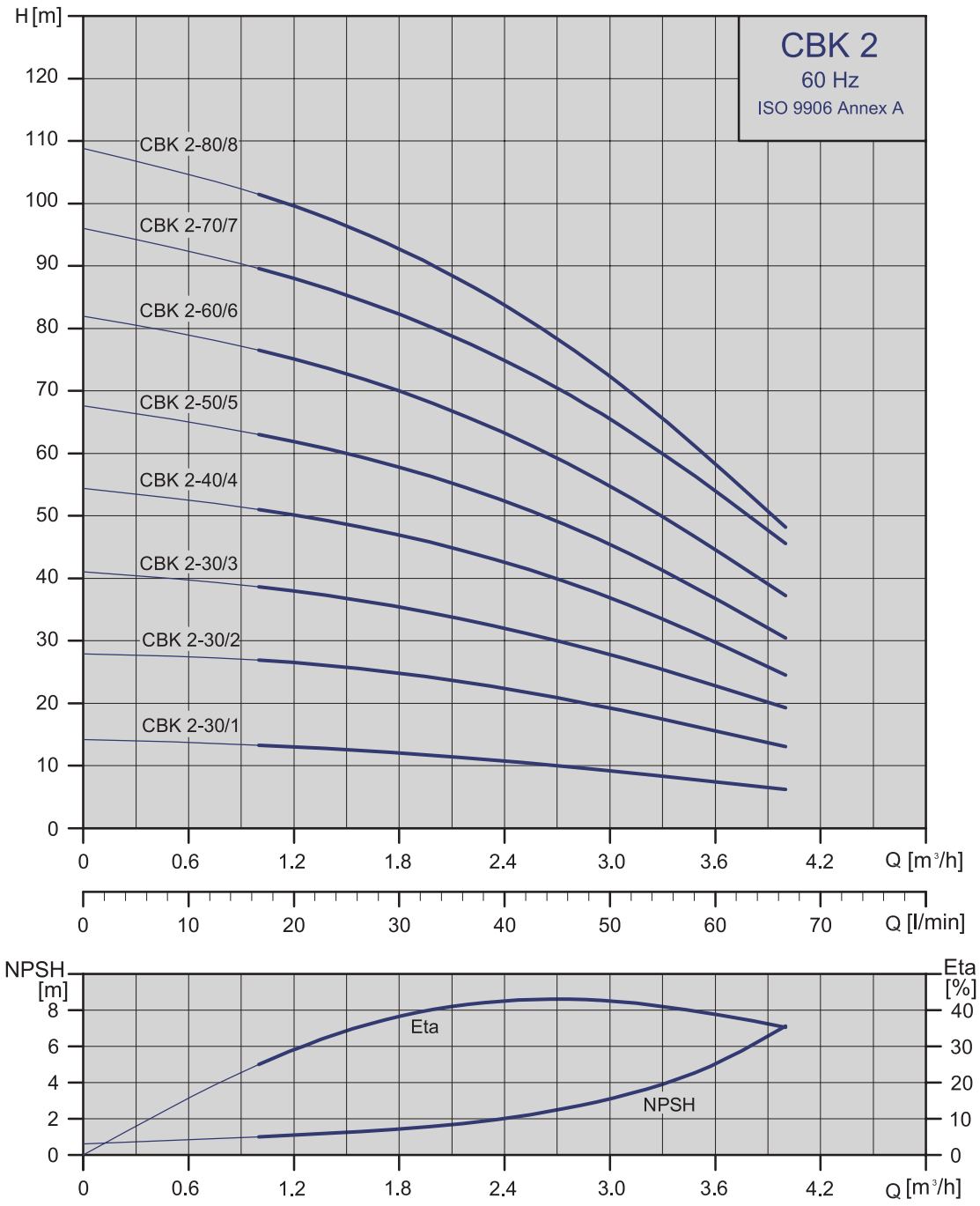
Single Frequency

Pump Type	3X220-240/380-415V		Dimension (mm)					Net Weight (kg)
	P_1[W]	I_N [A]	A	B	C	D1	D2	
CBK-12-40/4	4571	13.4-13.8 / 7.7-8.0	574	120	326	220	161	43.42
CBK-12-50/4	4571	13.4-13.8 / 7.7-8.0	604	150	326	220	161	43.92
CBK-12-50/5	5667	15.5-15.9 / 9.0-9.2	604	150	326	220	161	44.66
CBK-12-60/4	4571	13.4-13.8 / 7.7-8.0	634	180	326	220	161	44.50
CBK-12-60/5	5667	15.5-15.9 / 9.0-9.2	634	180	326	220	161	45.16
CBK-12-70/4	4571	13.4-13.8 / 7.7-8.0	664	210	326	220	161	45.00
CBK-12-70/5	5667	15.5-15.9 / 9.0-9.2	664	210	326	220	161	45.66

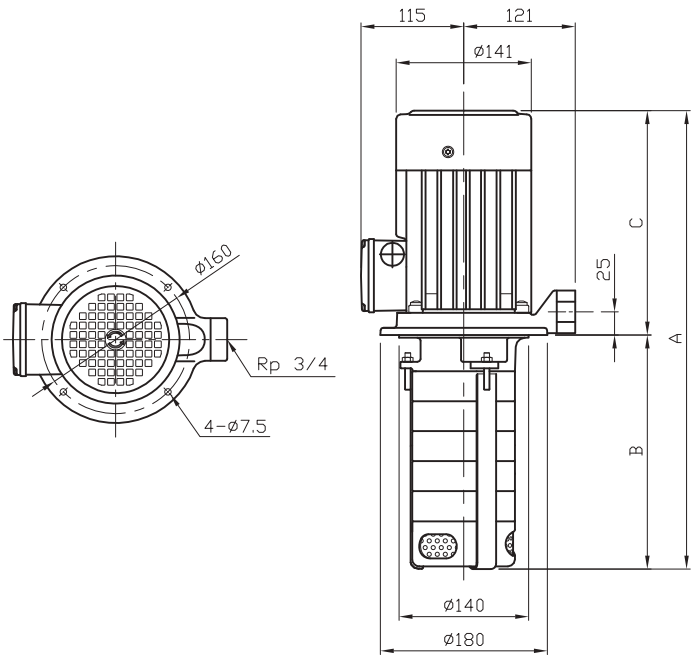
Performance Range CBK 2,4,8,12



Performance curves CBK 2 (Dual Frequency) 60Hz



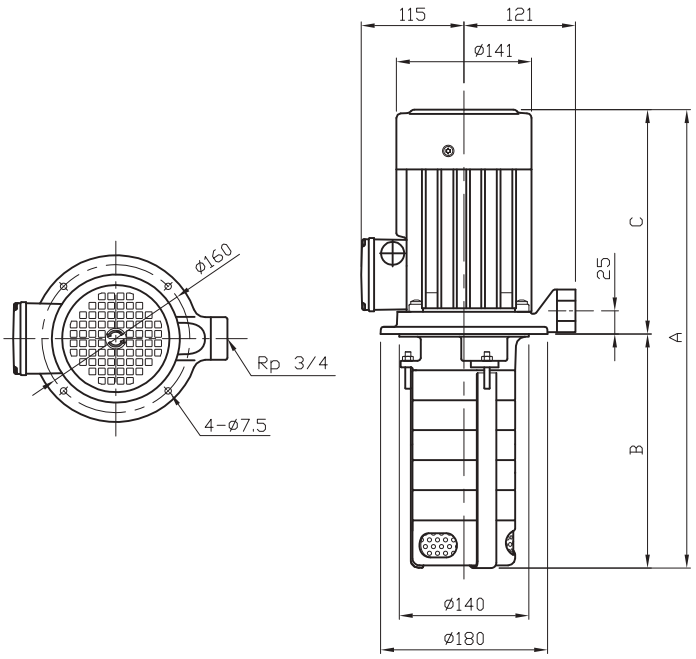
Dimensions and weights CBK 2 60Hz



Dual Frequency

Pump Type	3X220-255/380-440V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 2-30/1	340	1.4-1.6 / 0.8-0.9	346	142	204	11.7
CBK 2-30/2	530	1.9-2.1 / 1.1-1.2	346	142	204	11.8
CBK 2-30/3	750	2.4-2.6 / 1.4-1.5	346	142	204	11.9
CBK 2-40/1	340	1.4-1.6 / 0.8-0.9	364	160	204	11.8
CBK 2-40/2	530	1.9-2.1 / 1.1-1.2	364	160	204	11.9
CBK 2-40/3	750	2.4-2.6 / 1.4-1.5	364	160	204	12.1
CBK 2-40/4	950	2.9-3.1 / 1.7-1.8	364	160	204	12.1
CBK 2-50/1	340	1.4-1.6 / 0.8-0.9	382	178	204	12.0
CBK 2-50/2	530	1.9-2.1 / 1.1-1.2	382	178	204	12.1
CBK 2-50/3	750	2.4-2.6 / 1.4-1.5	382	178	204	12.3
CBK 2-50/4	950	2.9-3.1 / 1.7-1.8	382	178	204	12.3
CBK 2-50/5	1280	3.8-4.0 / 2.2-2.3	422	178	244	13.7
CBK 2-60/1	340	1.4-1.6 / 0.8-0.9	400	196	204	12.2
CBK 2-60/2	530	1.9-2.1 / 1.1-1.2	400	196	204	12.2
CBK 2-60/3	750	2.4-2.6 / 1.4-1.5	400	196	204	12.5
CBK 2-60/4	950	2.9-3.1 / 1.7-1.8	400	196	204	12.5
CBK 2-60/5	1280	3.8-4.0 / 2.2-2.3	440	196	244	14.0
CBK 2-60/6	1340	4.0-4.2 / 2.3-2.4	440	196	244	14.0
CBK 2-70/1	340	1.4-1.6 / 0.8-0.9	418	214	204	12.4
CBK 2-70/2	530	1.9-2.1 / 1.1-1.2	418	214	204	12.4
CBK 2-70/3	750	2.4-2.6 / 1.4-1.5	418	214	204	12.6
CBK 2-70/4	950	2.9-3.1 / 1.7-1.8	418	214	204	12.7
CBK 2-70/5	1280	3.8-4.0 / 2.2-2.3	458	214	244	14.2
CBK 2-70/6	1340	4.0-4.2 / 2.3-2.4	458	214	244	14.3
CBK 2-70/7	1750	5.4-5.6 / 3.1-3.2	458	214	244	15.4

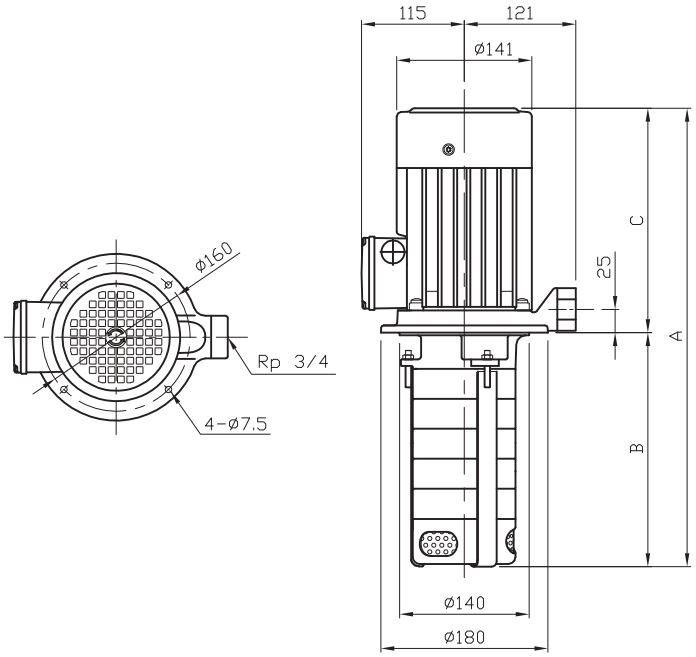
Dimensions and weights CBK 2 60Hz



Dual Frequency

Pump Type	3X220-255/380-440V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 2-80/1	340	1.4-1.6 / 0.8-0.9	436	232	204	12.4
CBK 2-80/2	530	1.9-2.1 / 1.1-1.2	436	232	204	12.6
CBK 2-80/3	750	2.4-2.6 / 1.4-1.5	436	232	204	12.8
CBK 2-80/4	950	2.9-3.1 / 1.7-1.8	436	232	204	13.0
CBK 2-80/5	1280	3.8-4.0 / 2.2-2.3	476	232	244	14.4
CBK 2-80/6	1340	4.0-4.2 / 2.3-2.4	476	232	244	14.5
CBK 2-80/7	1750	5.4-5.6 / 3.1-3.2	476	232	244	15.7
CBK 2-80/8	1820	5.6-5.7 / 3.2-3.3	476	232	244	15.7
CBK 2-90/1	340	1.4-1.6 / 0.8-0.9	454	250	204	12.7
CBK 2-90/2	530	1.9-2.1 / 1.1-1.2	454	250	204	12.8
CBK 2-90/3	750	2.4-2.6 / 1.4-1.5	454	250	204	13.0
CBK 2-90/4	950	2.9-3.1 / 1.7-1.8	454	250	204	13.0
CBK 2-90/5	1280	3.8-4.0 / 2.2-2.3	494	250	244	14.5
CBK 2-90/6	1340	4.0-4.2 / 2.3-2.4	494	250	244	14.8
CBK 2-90/7	1750	5.4-5.6 / 3.1-3.2	494	250	244	15.9
CBK 2-90/8	1820	5.6-5.7 / 3.2-3.3	494	250	244	16.0
CBK 2-100/1	340	1.4-1.6 / 0.8-0.9	472	268	204	12.9
CBK 2-100/2	530	1.9-2.1 / 1.1-1.2	472	268	204	13.0
CBK 2-100/3	750	2.4-2.6 / 1.4-1.5	472	268	204	13.2
CBK 2-100/4	950	2.9-3.1 / 1.7-1.8	472	268	204	13.4
CBK 2-100/5	1280	3.8-4.0 / 2.2-2.3	512	268	244	14.8
CBK 2-100/6	1340	4.0-4.2 / 2.3-2.4	512	268	244	14.8
CBK 2-100/7	1750	5.4-5.6 / 3.1-3.2	512	268	244	16.1
CBK 2-100/8	1820	5.6-5.7 / 3.2-3.3	512	268	244	16.1

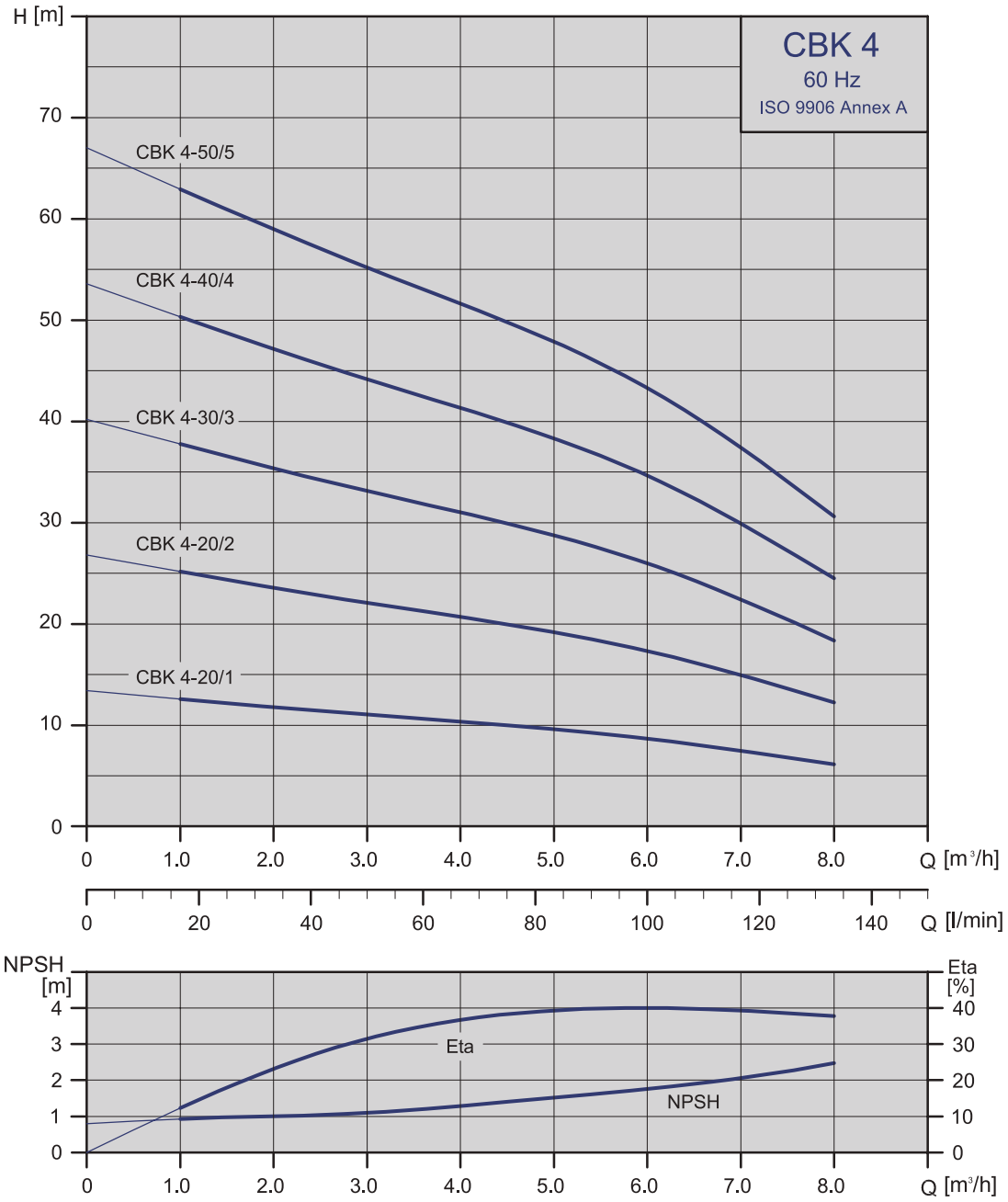
Dimensions and weights CBK 2 60Hz



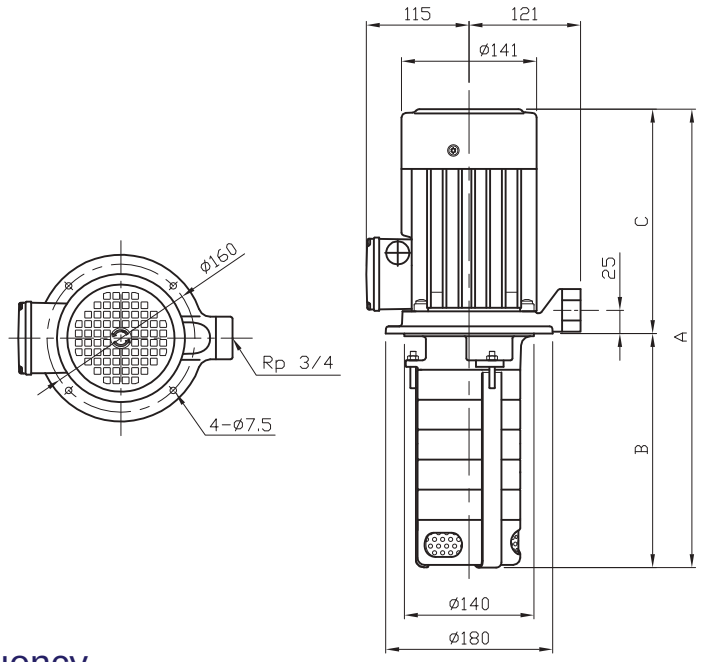
Dual Frequency

Pump Type	3X220-255/380-440V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 2-110/1	340	1.4-1.6 / 0.8-0.9	490	286	204	13.0
CBK 2-110/2	530	1.9-2.1 / 1.1-1.2	490	286	204	13.2
CBK 2-110/3	750	2.4-2.6 / 1.4-1.5	490	286	204	13.4
CBK 2-110/4	950	2.9-3.1 / 1.7-1.8	490	286	204	13.5
CBK 2-110/5	1280	3.8-4.0 / 2.2-2.3	530	286	244	14.8
CBK 2-110/6	1340	4.0-4.2 / 2.3-2.4	530	286	244	15.0
CBK 2-110/7	1750	5.4-5.6 / 3.1-3.2	530	286	244	16.3
CBK 2-110/8	1820	5.6-5.7 / 3.2-3.3	530	286	244	16.3

Performance curves CBK 4 — 60Hz



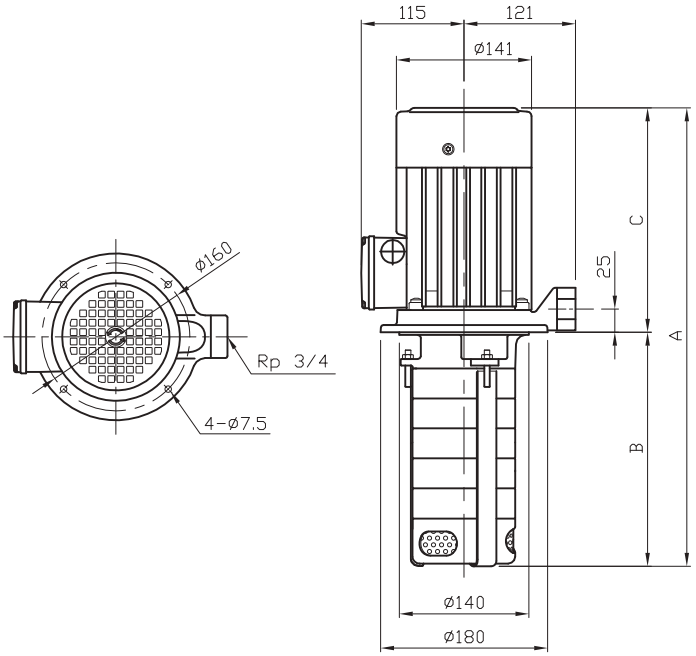
Dimensions and weights CBK 4 60Hz



Dual Frequency

Pump Type	3X220-255/380-440V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 4-20/1	520	1.7-1.9 / 1.0-1.1	346	142	204	11.5
CBK 4-20/2	905	2.9-3.1 / 1.7-1.8	346	142	204	11.6
CBK 4-30/1	520	1.7-1.9 / 1.0-1.1	373	169	204	11.7
CBK 4-30/2	905	2.9-3.1 / 1.7-1.8	373	169	204	11.9
CBK 4-30/3	1330	4.2-4.3 / 2.4-2.5	413	169	244	13.4
CBK 4-40/1	520	1.7-1.9 / 1.0-1.1	400	196	204	12.0
CBK 4-40/2	905	2.9-3.1 / 1.7-1.8	400	196	204	12.1
CBK 4-40/3	1330	4.2-4.3 / 2.4-2.5	440	196	244	13.7
CBK 4-40/4	1650	5.0-5.2 / 2.9-3.0	440	196	244	14.9
CBK 4-50/1	520	1.7-1.9 / 1.0-1.1	427	223	204	12.1
CBK 4-50/2	905	2.9-3.1 / 1.7-1.8	427	223	204	12.3
CBK 4-50/3	1330	4.2-4.3 / 2.4-2.5	467	223	244	14.0
CBK 4-50/4	1650	5.0-5.2 / 2.9-3.0	467	223	244	15.1
CBK 4-50/5	1950	5.9-6.0 / 3.4-3.5	467	223	244	15.2
CBK 4-60/1	520	1.7-1.9 / 1.0-1.1	454	250	204	12.4
CBK 4-60/2	905	2.9-3.1 / 1.7-1.8	454	250	204	12.5
CBK 4-60/3	1330	4.2-4.3 / 2.4-2.5	494	250	244	14.1
CBK 4-60/4	1650	5.0-5.2 / 2.9-3.0	494	250	244	15.3
CBK 4-60/5	1950	5.9-6.0 / 3.4-3.5	494	250	244	15.5

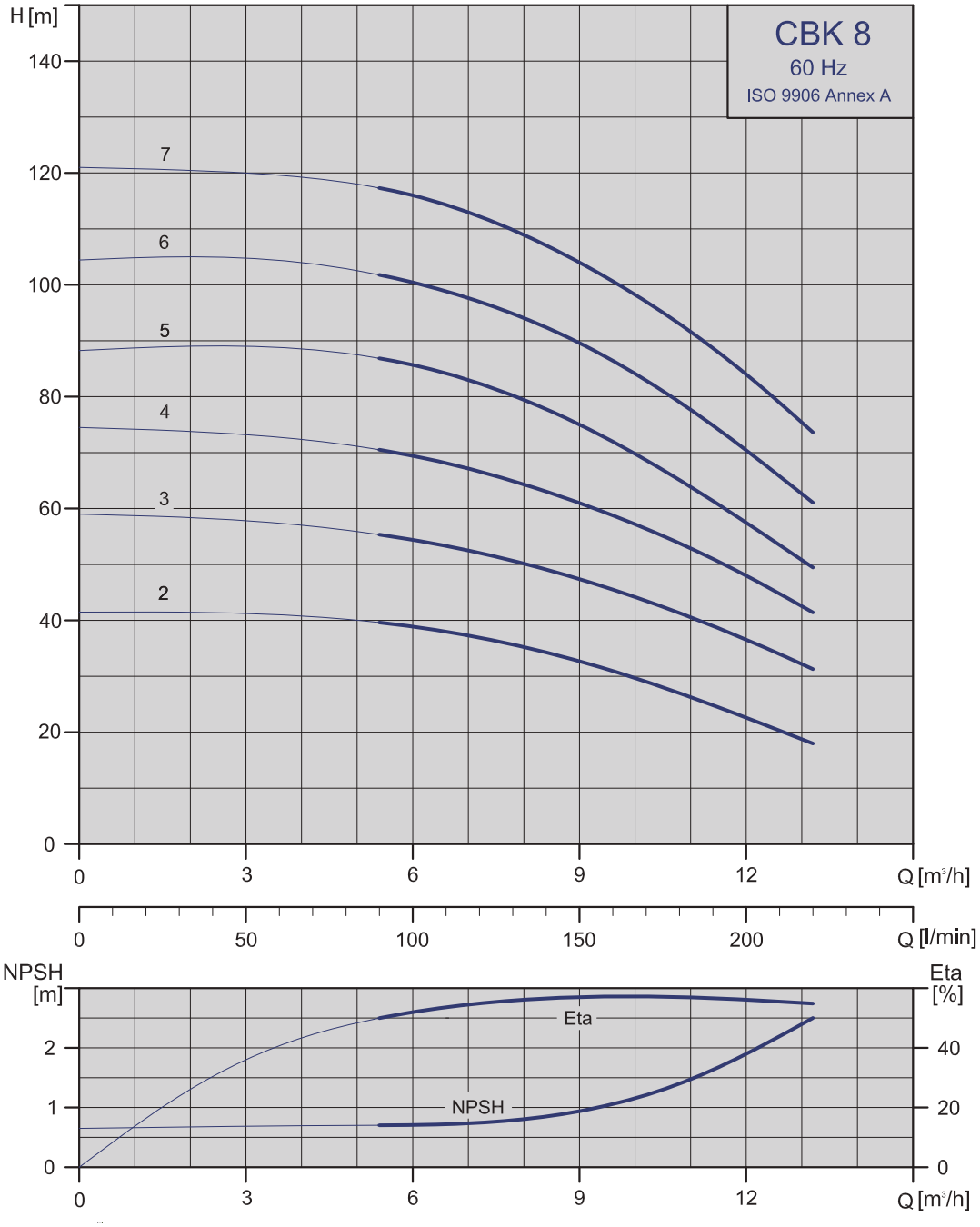
Dimensions and weights CBK 4 60Hz



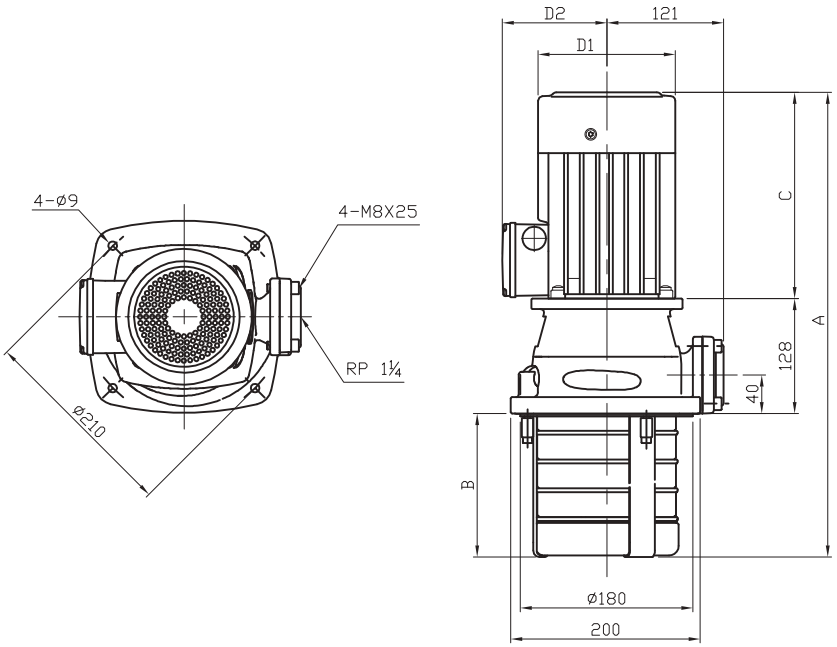
Dual Frequency

Pump Type	3X220-255/380-440V		Dimension (mm)			Net Weight
	P_1[W]	I_N [A]	A	B	C	(kg)
CBK 4-70/1	520	1.7-1.9 / 1.0-1.1	481	277	204	12.5
CBK 4-70/2	905	2.9-3.1 / 1.7-1.8	481	277	204	12.6
CBK 4-70/3	1330	4.2-4.3 / 2.4-2.5	521	277	244	14.2
CBK 4-70/4	1650	5.0-5.2 / 2.9-3.0	521	277	244	15.5
CBK 4-70/5	1950	5.9-6.0 / 3.4-3.5	521	277	244	15.6
CBK 4-80/1	520	1.7-1.9 / 1.0-1.1	508	304	204	12.7
CBK 4-80/2	905	2.9-3.1 / 1.7-1.8	508	304	204	12.9
CBK 4-80/3	1330	4.2-4.3 / 2.4-2.5	548	304	244	14.5
CBK 4-80/4	1650	5.0-5.2 / 2.9-3.0	548	304	244	15.7
CBK 4-80/5	1950	5.9-6.0 / 3.4-3.5	548	304	244	15.9

Performance curves CBK 8 (Dual Frequency) 60Hz



Dimensions and weights CBK 8 60Hz

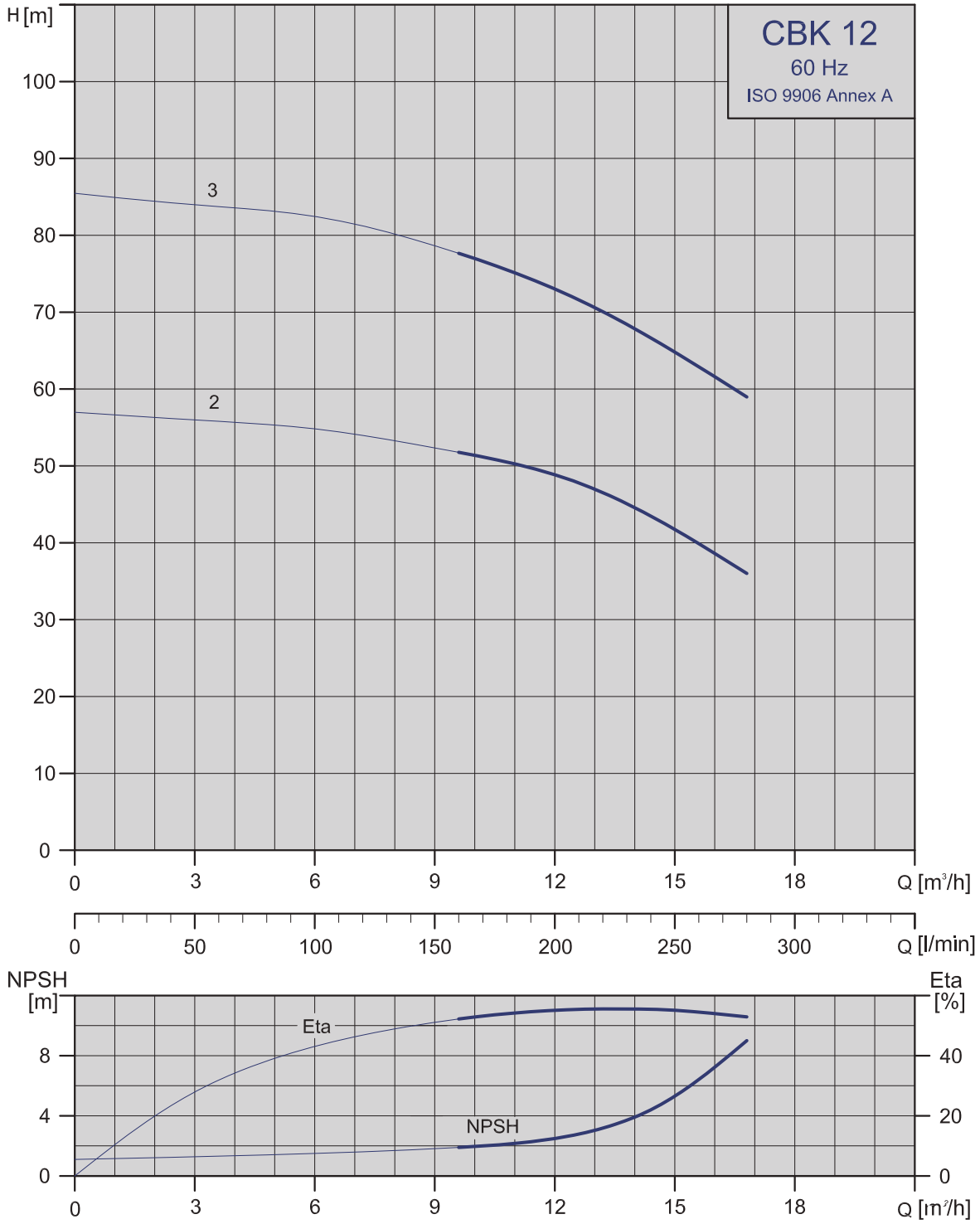


Dual Frequency

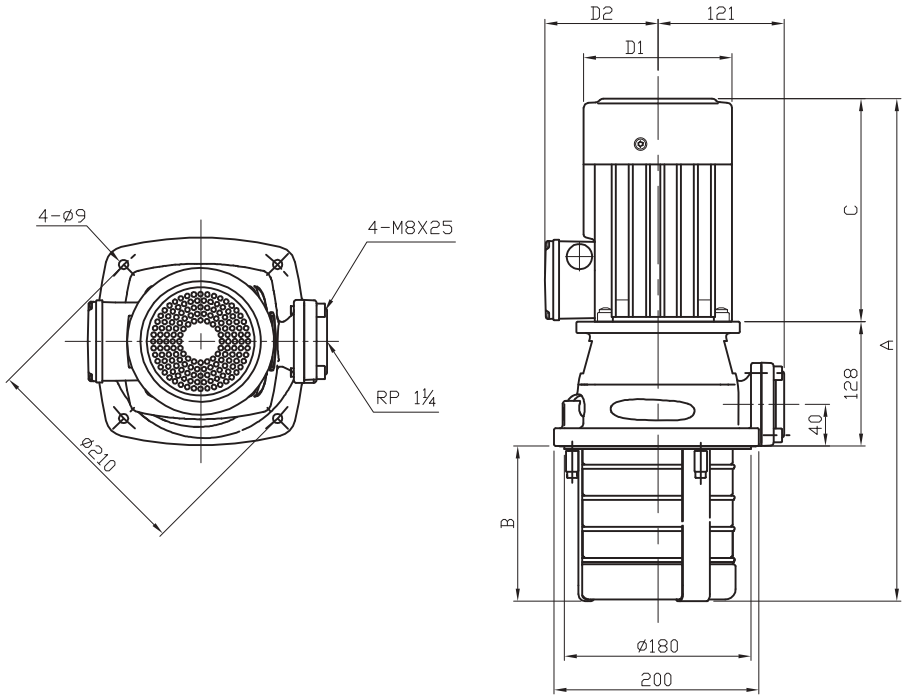
Pump Type	3X220-255/380-440V		Dimension (mm)					Net Weight (kg)
	P_1[W]	I_N [A]	A	B	C	D1	D2	
CBK-8-20/2	1724	5.3-5.0 / 3.1-2.9	423	60	235	141	115	19.25
CBK-8-30/2	1724	5.3-5.0 / 3.1-2.9	453	90	235	141	115	19.42
CBK-8-40/2	1724	5.3-5.0 / 3.1-2.9	483	120	235	141	115	20.06
CBK-8-50/2	1724	5.3-5.0 / 3.1-2.9	513	150	235	141	115	20.45
CBK-8-60/2	1724	5.3-5.0 / 3.1-2.9	543	180	235	141	115	20.79
CBK-8-70/2	1724	5.3-5.0 / 3.1-2.9	573	210	235	141	115	21.64

Pump Type	3X220-277/380-480V		Dimension (mm)					Net Weight (kg)
	P_1[W]	I_N [A]	A	B	C	D1	D2	
CBK-8-30/3	2648	7.3-7.0 / 4.2-4.1	509	90	291	177	141	28.53
CBK-8-40/3	2648	7.3-7.0 / 4.2-4.1	539	120	291	177	141	28.88
CBK-8-40/4	3352	9.2-9.1 / 5.3-5.2	539	120	291	177	141	31.29
CBK-8-50/3	2648	7.3-7.0 / 4.2-4.1	569	150	291	177	141	29.23
CBK-8-50/4	3352	9.2-9.1 / 5.3-5.2	569	150	291	177	141	31.69
CBK-8-50/5	4114	12.0-12.4 / 7.0-7.3	594	150	316	197	147	37.74
CBK-8-60/3	2648	7.3-7.0 / 4.2-4.1	599	180	291	177	141	29.58
CBK-8-60/4	3352	9.2-9.1 / 5.3-5.2	599	180	291	177	141	32.04
CBK-8-60/5	4114	12.0-12.4 / 7.0-7.3	624	180	316	197	147	37.39
CBK-8-60/6	4800	14.0-12.9 / 8.2-7.5	634	180	326	220	161	43.93
CBK-8-70/3	2648	7.3-7.0 / 4.2-4.1	629	210	291	177	141	29.93
CBK-8-70/4	3352	9.2-9.1 / 5.3-5.2	629	210	291	177	141	32.39
CBK-8-70/5	4114	12.0-12.4 / 7.0-7.3	654	210	316	197	147	37.74
CBK-8-70/6	4800	14.0-12.9 / 8.2-7.5	664	210	326	220	161	44.28
CBK-8-70/7	5448	15.6-14.6 / 9.1-8.5	664	210	326	220	161	44.71

Performance curves CBK 12 (Dual Frequency) 60Hz

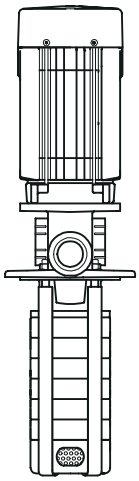


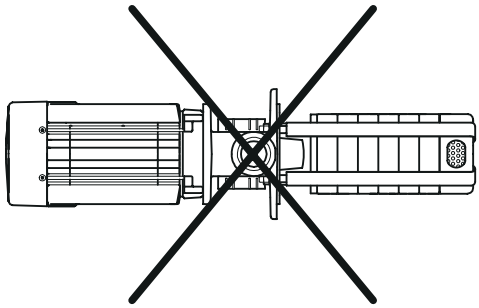
Dimensions and weights CBK 12 60Hz



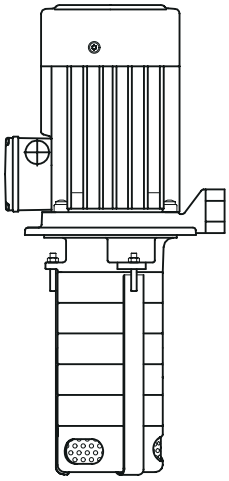
Dual Frequency

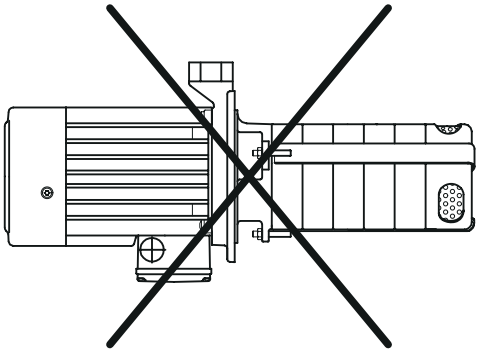
Pump Type	3X220-277/380-480V		Dimension (mm)					Net Weight
	P_1[W]	I_N [A]	A	B	C	D1	D2	(kg)
CBK-12-20/2	3867	11.3-11.6 / 6.6-6.8	504	60	316	197	147	34.82
CBK-12-30/2	3867	11.3-11.6 / 6.6-6.8	534	90	316	197	147	35.17
CBK-12-30/3	5619	15.6-14.2 / 9.0-8.3	544	90	326	220	161	41.69
CBK-12-40/2	3867	11.3-11.6 / 6.6-6.8	564	120	316	197	147	35.52
CBK-12-40/3	5619	15.6-14.2 / 9.0-8.3	574	120	326	220	161	42.05
CBK-12-50/2	3867	11.3-11.6 / 6.6-6.8	594	150	316	197	147	35.87
CBK-12-50/3	5619	15.6-14.2 / 9.0-8.3	604	150	326	220	161	42.40
CBK-12-60/2	3867	11.3-11.6 / 6.6-6.8	624	180	316	197	147	36.22
CBK-12-60/3	5619	15.6-14.2 / 9.0-8.3	634	180	326	220	161	42.75
CBK-12-70/2	3867	11.3-11.6 / 6.6-6.8	654	210	316	197	147	36.57
CBK-12-70/3	5619	15.6-14.2 / 9.0-8.3	664	210	326	220	161	43.10





SBK series





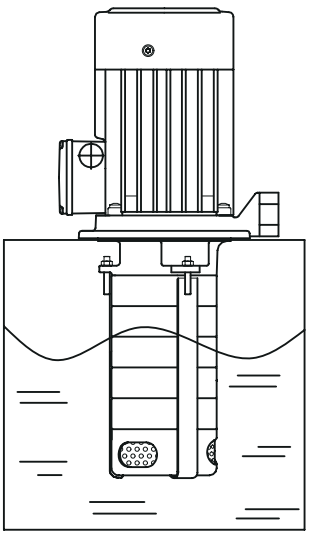
CBK series

Note

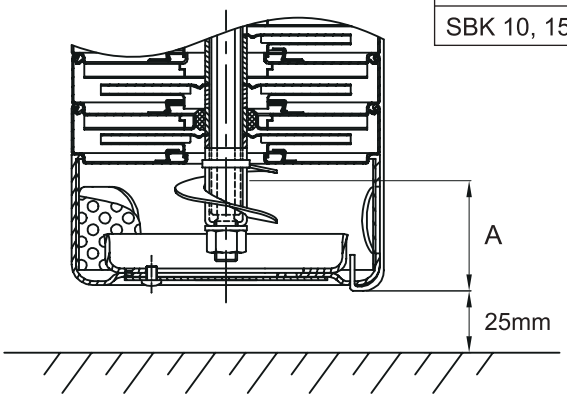
> When you install the SBK 1,3,5,10,15,20 or CBK 2,4,8,12 series pumps, you must follow the instruction as below.

> The distance between the liquid level and the pump bottom (Minimum) : A (mm)

> The distance between the pump and the tank bottom (Minimum) : 25mm



機型	A(mm)
CBK 2, 4, 8,12	40
SBK 1, 3, 5	40
SBK 10, 15, 20	50



STAIRS

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201504

STAIRS

Immersible Pumps

en	SBK,CBK	Installation and Operating Instructions
cn	SBK,CBK	使用說明書

EC DECLARATION OF CONFORMITY

according to the following EC Directives

- Machinery Directive : 2006/42/EC/ as amended by 98/37/EC
- Low Voltage Directive : 2006/95/EC
- Electromagnetic Compatibility Directive : 2004/108/EC

CE

The undersigned, R.T. Hsieh, representing STAIRS INDUSTRIAL CO., LTD. / No.27, Lane 267, Huacheng Rd., Sinjhuang City, Taipei County 242, Taiwan, R.O.C. , manufacturer, declares that the machine described hereafter:

Immersible pump

Model :

SBK,CBK series

Provided that it is used and maintained in accordance with the general accepted codes of good practice and the recommendations of the instructions manual, meet the essential safety and health requirements of the Machinery Directive, Low Voltage Directive and Electromagnetic Compatibility Directive.
For the most specific risks of this machine, safety and compliance with the essential requirements of the Directive has been based on elements of:

- EN ISO 12100-1 : 2003 / Safety of Machinery - Basic concepts, general principles for design Part 1: Basic terminology, methodology.
- EN ISO 12100-2 : 2003 / Safety of Machinery - Basic concepts, general principles for design Part 2 : Technical principles and specifications.
- EN 809:1998/AC:2001 Pumps and pump units for liquids – Common safety requirements
- EN ISO 13857 : 2008 / Safety of machinery - Safety distance to prevent danger zones being reached by the upper and lower limbs
- EN 414 : 2000 / Safety of machinery - Rules for the drafting and Presentation of safety standards
- EN 953 : 1997 / Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards
- EN ISO 14121-1:2007 / Safety of machinery - Risk assessment – Part1: Principles
- EN 60204-1 : 2006 / Safety of machinery - Electrical equipment of machines - Part 1 : General requirements. Industrial electrical device.
- EN 61000-6-2 : 2001 / Electromagnetic compatibility (EMC) Part 6-2 : Generic standards – Immunity for industrial environments
- EN 61000-6-4 : 2001 / Electromagnetic compatibility (EMC) Part 6-4 : Generic standards – Emission standard for industrial environments

Date: 02.06.2011

Signature: R. T. Hsieh

Qualification: FACTORY MANAGER

Please read this installation and operating instructions carefully before beginning installation and operation.

1. Application

1.1 The SBK,CBK Series is multi-stage centrifugal pump designed for transferring liquid used in machine tools.
1.2 The pump can not be used to transfer explosive liquids, such as gasoline,diesel oil and other similar liquids. It is only suitable for water diluted, low viscosity, uncorrosive cooling or lubricant liquids.

2. Type Keys

The pump models are coded based on the number of pump stages. Standard stages consist of both diffusers pump stages. Standard stages consist of both diffusers andimpellers, and null stages,for special installation stages,for special installation considerations, contain diffuser chamber only. The pump model is shown on the pump nameplate.

SBK 3 – 10 / 10
- SBK series
- Rated flow rate (m^3/h)
- Number of stages
- Number of Impellers

CBK 2 – 60 / 5
- CBK series
- Rated flow rate (m^3/h)
- Number of stages (60:6 stages)
- Number of Impellers

3. Technical Data

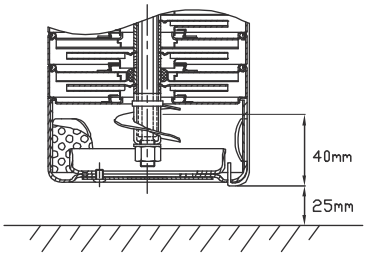
Liquid Temperature: -10°C ~ +90°C
Ambient Temperature: +50°C
Enclosure Class: IP55
Insulation class: F

4. Installation

The pump has hot surface on the motor. It must be installed so that persons cannot accidentally come into contact the hot surface.

4.1 Suction conditons
To avoid dry running and damage the pump during operation,the minimum pump submerged depth is 40mm as shown in Fig 1. In addition, the bottom of the pump strainer must be at least 25 mm above the bottom of the tank.

Fig 1



5. Electrical Connection

5.1 The electrical connection should be carried out in accordance with local regulations. Never make any connections unless the electricity supply has been switched off.

5.2 The electrical hazard warning mark is placed outside the connection box.

5.3 Electrical data (voltage and frequency) are shown on the pump nameplate.Verify if these shown on the pump nameplate. Verify if these data match your electricity supply. A circuit breaker should be installed and the grounding be properly connected for your safety.

5.4 Make electrical connection in accordance with connecting diagram located inside the connection box. The motor current must be within the rated amps range indicated on nameplate. Three phase motor requires a magnetic starter for safety.

5.5 Three phase motor must check rotating direction. The rotating direction indicated on the fan cover, is clockwise viewing from fan cover end. Interchanging any two leads with power off can reverse the pump rotation.

6. Start-up

Before starting the pump, make sure the following:
6.1 Start the pump and check the direction of rotation.
6.2 All piping joints are completely tightened. Leakage in piping may cause the pump hydraulic loss.
6.3 The pump is filled with liquid.
6.4 The suction filter is not blocked by any oreign objects.

7. Maintenance

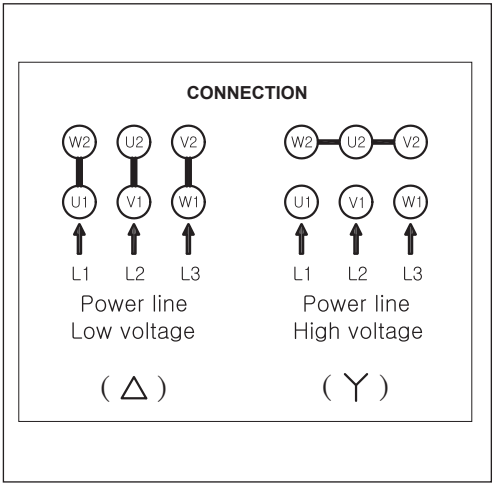
It is dangerous to operate the pump against a closed discharge outlet because it will cause extremely high liquid flow temperature and damage the pump in a few minutes.

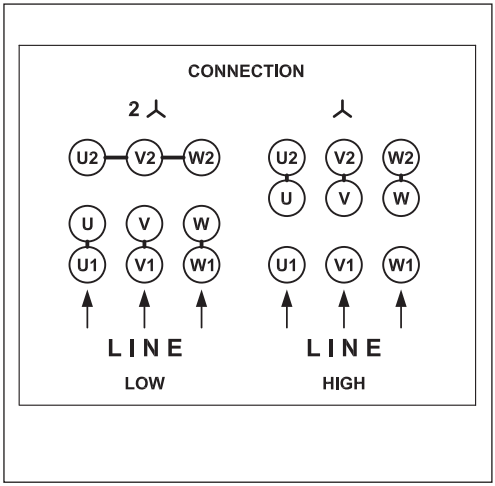
7.1 Lubrication
The mechanical seal and shaft sleeves are lubricated by the pumped liquid.
7.2 Filter
Always keep suction filter clean and make sure it is not blocked by impurities
7.3 Periodic checks.
The following checks should be carried out periodically to ensure the normal operation periodically to ensure the normal operation.
7.3.1 The liquid level and operating pressure.
7.3.2 There are no leaks on piping and joints.
7.3.3 Check the tripping of the motor starter.
7.3.4 Check that all controls are functional.
7.4 The pump must not be used to transfer explosive liquids. In systems with hot liquids (over 60 °C), extra caution should be exercised to prevent from personal injury.
7.5 The pump should not be used to transfer toxic or contaminated liquids.
Please carefully follow all instructions in the manual as STAIRS may refuse to accept the contaminated pump for servicing.

8. Trouble Shooting

Make sure electricity supply has been switched off before trouble shooting

Fault	Cause	Remedy
1. Motor does not run when started.	a. Supply failure.	Connect the electricity supply.
	b. Fuses are blown.	Replace fuses.
	c. Motor starter overload has tripped out..	Reactivate the motor protection.
	d. Thermal protection has tripped out.	Reactivate the thermal protection.
	e. Main contacts in motor starter are not making contact or the coil is faulty.	Replace contacts or magnetic coil.
	f. Control circuit is defective.	Repair the control circuit.
	g. Motor is defective.	Replace the motor.
2. Motor starter overload trips out immediately when supply is switched on.	a. One fuse/automatic circuit breaker is blown.	Cut in the fuse.
	b. Contacts in motor starter overload are faulty.	Replace motor starter contacts.
	c. Cable connection is loose or faulty.	Fasten or replace the cable connection.
	d. Motor winding is defective.	Replace the motor.
	e. Pump mechanically blocked.	Remove the mechanical blocking of the pump.
	f. Overload setting is too low.	Set the motor starter correctly.
3. Motor starter overload trips out occasionally.	a. Overload setting is too low.	Set the motor starter correctly.
	b. Low voltage at peak times.	Check the electricity supply.
4. Motor starter has not tripped out but the pump does not run.	a. Supply failure.	Connect the electricity supply.
	b. Fuses are blown.	Replace fuses.
	c. Thermal protection has tripped out.	Reactivate the thermal protection.
	d. Main contacts in motor starter are not making contact or the coil is faulty.	Replace contacts or magnetic coil.
5. Pump runs but gives no liquid or pump capacity is not constant.	a. Pump strainer partly blocked by impurities.	Clean the strainer.
	b. Liquid level in tank too low.	Increase the liquid level.
	c. Pump draws in air.	Check the suction conditions.
6. Leakage in shaft seal.	a. Shaft seal is defective.	Replace the shaft seal.
7. Noise.	a. Cavitation occurs in the pump.	Check the suction conditions.
	b. Pump does not rotate freely (frictional resistance) because of incorrect pump shaft position.	Adjust the pump shaft.





Not applicable from 25HP (Including) motors and above.

⚠ 在開始安裝與操作之前，請仔細研讀本說明書裡各項的安裝與操作說明。

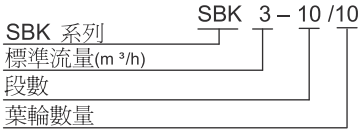
1.應用

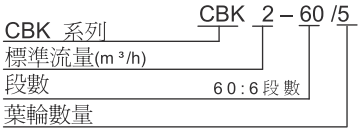
1.1 本機型SBK,CBK產品是採用多段離心式設計之泵浦。可用來傳送工具機上之液體。

1.2 本泵浦不可以被使用於易燃的液體輸送，諸如柴油、石油、汽油或類似的液體。適用液體包括水溶性、低黏稠度、中性之冷却／潤滑液。

2. 型號說明

泵浦型別主要依加壓導室而來，有葉輪之加壓導室爲標準加壓導室，配合無葉輪的空加壓導室組合，可應用於另外的尺寸場合，泵浦的型別編號由泵浦銘板上可查得。





3. 使用條件

液體溫度： -10˚C ~ +90˚C
使用環境溫度：+50˚C
防護等級： IP55
絕緣等級： F

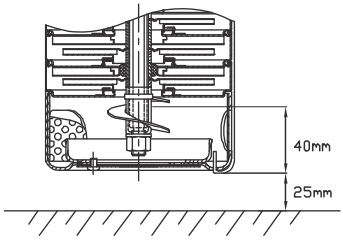
4. 裝置

⚠ 馬達表面有高熱，所以安裝位置儘量避免人容易意外碰觸到的位置。

4.1 吸入狀況

爲防止泵浦於低水位時乾轉受損，其操作最低水位極限爲 40mm（圖 1）

圖.1



5. 電路安裝

⚠ 5.1 電路必須依照各地規定的標準來安裝，於安裝泵浦電路時，必須將電源關閉。
⚠ 5.2 會產生電的危險警告標示，於接線盒外明確標示，敬請小心。
5.3 泵浦使用的電壓，頻率標示於銘板上。同時請確認馬達標示的電壓、頻率與使用的電源規格相同，泵浦必須外接一個 ON/OFF開關。
5.4 三相馬達必須接到啓動裝置，並檢視指示電流是否與銘板標示相符，且馬達電路連接須與接線盒蓋標示一致。
5.5 三相電源泵浦，必須檢查轉向，由風罩端看爲順時鐘方向且於馬達風罩上有箭頭標示正確轉向，若從風罩端看爲逆時鐘方向，則必須更改轉向，於更改轉向前必須先切斷電源，再將其電源線其中 2 條對調。

6. 啓動

於開始啓動泵浦前，須確認之操作的事項：
6.1 馬達轉向是否正確，從風罩端看，應爲順時鐘方向。
6.2 全部的管路是否密閉，管路洩漏會造成泵浦壓力損失。
6.3 泵浦體需有液體存在。
6.4 濾網沒有被雜物堵塞。
6.5 初次啓動或久未使用，請先以螺絲起子在馬達軸心末端依旋轉標籤方向指示順時針方向或逆時針方向試轉，確定泵浦可自由旋轉後方可啓動馬達。

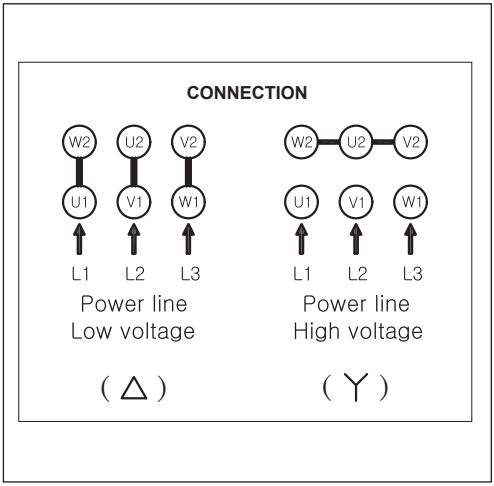
7. 操作維護

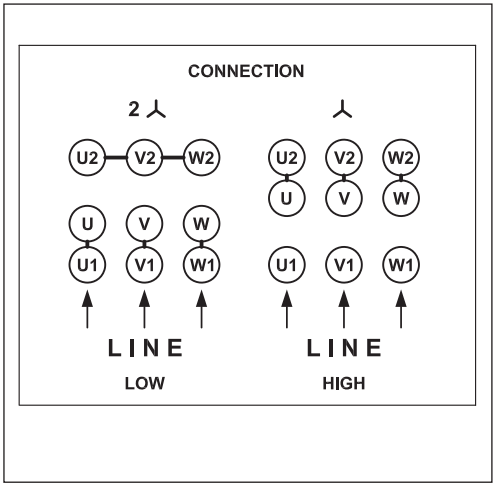
於泵浦運轉時，不被允許將管路開關關閉，若是接近 5 分鐘，泵浦將受到損害。
7.1 潤滑維護
泵浦內機械軸封與軸套皆爲自潤式，由傳動液體來潤滑。
7.2 濾網
須應常保持清潔，確定無雜物堵塞，如此才能維持一個最佳的液體流量。
7.3 定期檢查
在一定的操作時間，請必須作以下的檢查：
7.3.1 檢查液體的流量和操作壓力。
7.3.2 檢查管路系統是否洩漏。
7.3.3 檢查馬達的起動是否正常。
7.3.4 檢查全部的操縱器，是否都達正常的狀況。
7.4 本泵浦禁止使用於具有爆炸危險之環境，且使用液體溫度超過 60°C時需加裝防護裝置，以避免燙傷。
7.5 假如泵浦被用來操作有害人類健康的有毒液體或污染源的話，在非一般使用情形下故障，本公司將拒絕各項的維修服務，顧客個人造成的損害，須自行負擔。

8. 故障可能原因分析

在檢查泵浦各項故障原因前，必須確定已將電源關閉才可進行。

狀況	可能原因	排除方法
1. 當啓動時，馬達不運轉	a. 電源供應失敗	重新連結電源
	b. 保險絲被熔斷	替換保險絲
	c. 馬達啓動器超載跳脫	使馬達保護恢復正常
	d. 熱保護已經跳脫	使熱保護恢復正常
	e. 馬達啓動器接觸不良或線圈失能	更換啓動器或線圈
	f. 控制電路損壞	修理這條控制電路
	g. 馬達損壞	替換馬達
2. 啓動時馬達啓動器超載立即跳脫	a. 保險絲熔斷／無熔絲開關跳脫	替換保險絲／重新啓動無熔絲開關
	b. 馬達啓動器接觸不良	替換馬達啓動器接觸
	c. 電纜連接鬆脫或不良	替換或固定電纜連接
	d. 馬達損壞	替換馬達
	e. 泵浦堵塞	去除堵塞
	f. 過載保護裝置設定過低	正確設定啓動器過載保護電流值
3. 馬達啓動器超載偶爾跳脫	a. 過載保護裝置設定過低	正確設定啓動器過載保護電流值
	b. 尖峰用電時電壓過低	改善供電品質
4. 馬達啓動器沒跳脫而泵浦無運轉	a. 電源供應失敗	重新連結電源
	b. 保險絲被熔斷	替換保險絲
	c. 熱保護已經跳脫	使熱保護恢復正常
	d. 馬達啓動器接觸不良或線圈失能	更換啓動器或線圈
5. 泵浦正常運轉但出水量不正常	a. 泵浦濾網阻塞	清洗濾器
	b. 水箱液位過低	增加液體容量
	c. 吸入空氣	檢查抽吸條件
6. 軸封滲漏	a. 軸封損壞	替換軸封
7. 噪音	a. 抽入空氣	檢查抽吸條件
	b. 軸心位置錯誤(摩擦阻力)造成泵浦無法自由旋轉	調整泵浦軸心位置





*備註:25HP(含)以上馬達不適用。

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