JOVAL
Tel: +351 253 490 740 | Email: joval@joval.pt

TECHNICAL DATASHEET

BS4 Submersible Pumps

High-performance BS4 pumps for clean water.

BS4 submersible pumps deliver high performance in clean water pumping, with flow rates up to 25 m³/h and head up to 521 m. Suitable for domestic applications, agricultural irrigation and hydropneumatic systems, with stainless steel construction and Noryl or polycarbonate impellers. They can be installed vertically or horizontally and comply with ISO 9906. Their modular construction allows simplified maintenance and high resistance to sand wear.

APPLICATIONS

- Domestic water supply.
- Agricultural irrigation.
- Hydropneumatic systems.
- Clean water pumping.

TECHNICAL DATA

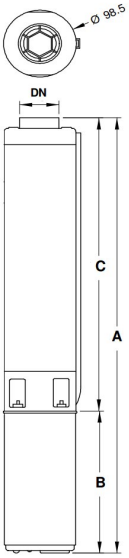
TECHNICAL SPECIFICATIONS

Type	Submersible for Clean Water
Material	Radial turbines and diffusers in Noryl reinforced with fiberglass
Motor Details	Hermetically sealed electric motor impregnated with protective resin
Protection	IP 68
Insulation	Class F
Max Temperature	35° C
Max. sand content	50 g/m³
Discharge	1 1/4" - 2"

MOTOR CHARACTERISTICS

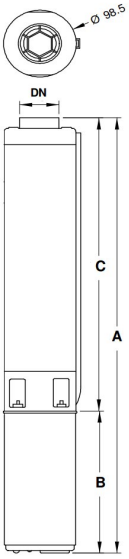
Voltage	230 V (1~) / 400 V (3~)
Frequency	50 Hz
Starts/Hour	20
Diameter	4" (98.5 mm)

DIMENSÕES



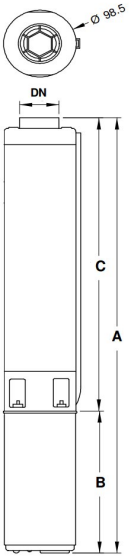
Model	A (mm)	Weight (kg)	DN
BS 1 08	327,0	3,0	1" 1/4
BS 1 13	419,0	4,0	1" 1/4
BS 1 18	553,0	5,1	1" 1/4
BS 1 23	645,0	6,0	1" 1/4
BS 1 35	908,0	8,5	1" 1/4
BS 1 45	1.134,0	11,5	1" 1/4
BS 1 65	1.586,0	15,5	1" 1/4

DIMENSÕES



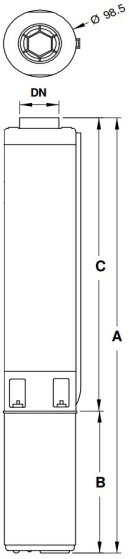
Model	A (mm)	Weight (kg)	DN
BS 1.5 07	308,0	2,9	1" 1/4
BS 1.5 09	345,0	3,1	1" 1/4
BS 1.5 15	456,0	4,1	1" 1/4
BS 1.5 19	571,0	5,4	1" 1/4
BS 1.5 29	756,0	7,3	1" 1/4
BS 1.5 38	964,0	9,3	1" 1/4
BS 1.5 58	1.375,0	13,4	1" 1/4
BS 1.5 74	1.753,0	16,5	1" 1/4

DIMENSÕES



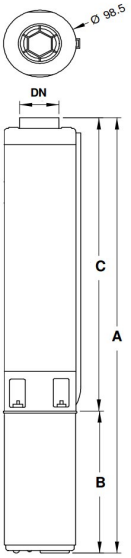
Model	A (mm)	Weight (kg)	DN
BS 2 07	308,0	3,0	1" 1/4
BS 2 11	382,0	3,7	1" 1/4
BS 2 14	438,0	4,1	1" 1/4
BS 2 21	608,0	5,8	1" 1/4
BS 2 27	719,0	6,8	1" 1/4
BS 2 39	982,0	9,5	1" 1/4
BS 2 50	1.227,0	12,0	1" 1/4
BS 2 64	1.568,0	15,5	1" 1/4
BS 2 70	1.679,0	17,0	1" 1/4

DIMENSÕES



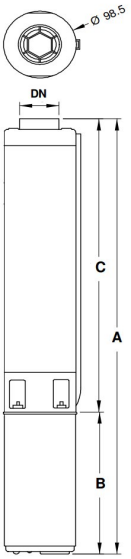
Model	A (mm)	Weight (kg)	DN
BS 3 06	311,0	3,0	1" 1/4
BS 3 09	377,0	3,5	1" 1/4
BS 3 12	443,0	4,2	1" 1/4
BS 3 18	616,0	5,6	1" 1/4
BS 3 24	748,0	6,9	1" 1/4
BS 3 35	1.031,0	9,0	1" 1/4
BS 3 47	1.336,0	12,0	1" 1/4
BS 3 55	1.531,0	14,5	1" 1/4

DIMENSÕES



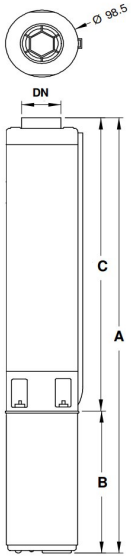
Model	A (mm)	B (mm)	C (mm)	DN
FM 44 05	517,0	228,0	289,0	1" 1/4
FT BS 4 05	503,0	214,0	289,0	1" 1/4
FM BS 4 07	586,0	253,0	333,0	1" 1/4
FT BS 4 07	561,0	228,0	333,0	1" 1/4
FM BS 4 09	659,0	283,0	377,0	1" 1/4
FT BS 4 09	625,0	248,0	377,0	1" 1/4
FM BS 4 14	793,0	307,0	487,0	1" 1/4
FT BS 4 14	769,0	283,0	487,0	1" 1/4
FM BS 4 18	954,0	339,0	616,0	1" 1/4
FT BS 4 18	922,0	307,0	616,0	1" 1/4
FM BS 4 26	1.228,0	437,0	792,0	1" 1/4
FT BS 4 26	1.130,0	339,0	792,0	1" 1/4
FT BS 4 35	1.508,0	477,0	1.031,0	1" 1/4
FT BS 4 47	1.879,0	543,0	1.336,0	1" 1/4
FT BS 4 60	2.315,0	653,0	1.663,0	1" 1/4
FT BS 4 78	2.830,0	731,0	2.100,0	1" 1/4

DIMENSÕES



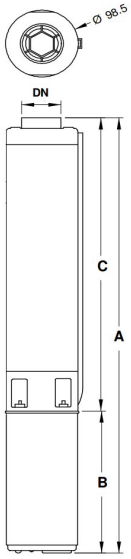
Model	A (mm)	DN
BS 6 04	299,0	2"
BS 6 06	359,0	2"
BS 6 09	449,0	2"
BS 6 12	580,0	2"
BS 6 17	730,0	2"
BS 6 23	951,0	2"
BS 6 28	1.142,0	2"
BS 6 31	1.232,0	2"
BS 6 42	1.603,0	2"
BS 6 59	2.154,0	2"

DIMENSÕES



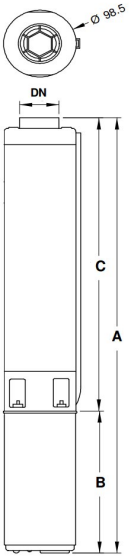
Model	A (mm)	DN
BS 8 04	299,0	2"
BS 8 07	389,0	2"
BS 8 09	449,0	2"
BS 8 13	610,0	2"
BS 8 17	730,0	2"
BS 8 21	891,0	2"
BS 8 23	951,0	2"
BS 8 31	1.232,0	2"
BS 8 42	1.603,0	2"

DIMENSÕES



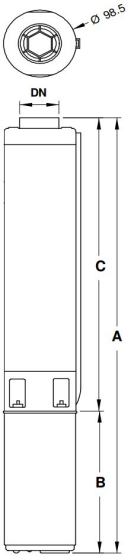
Model	A (mm)	DN
BS 10 05	439,0	2"
BS 10 07	543,0	2"
BS 10 10	740,0	2"
BS 10 15	1.041,0	2"
BS 10 18	1.238,0	2"
BS 10 20	1.342,0	2"
BS 10 26	1.695,0	2"
BS 10 35	2.204,0	2"

DIMENSÕES



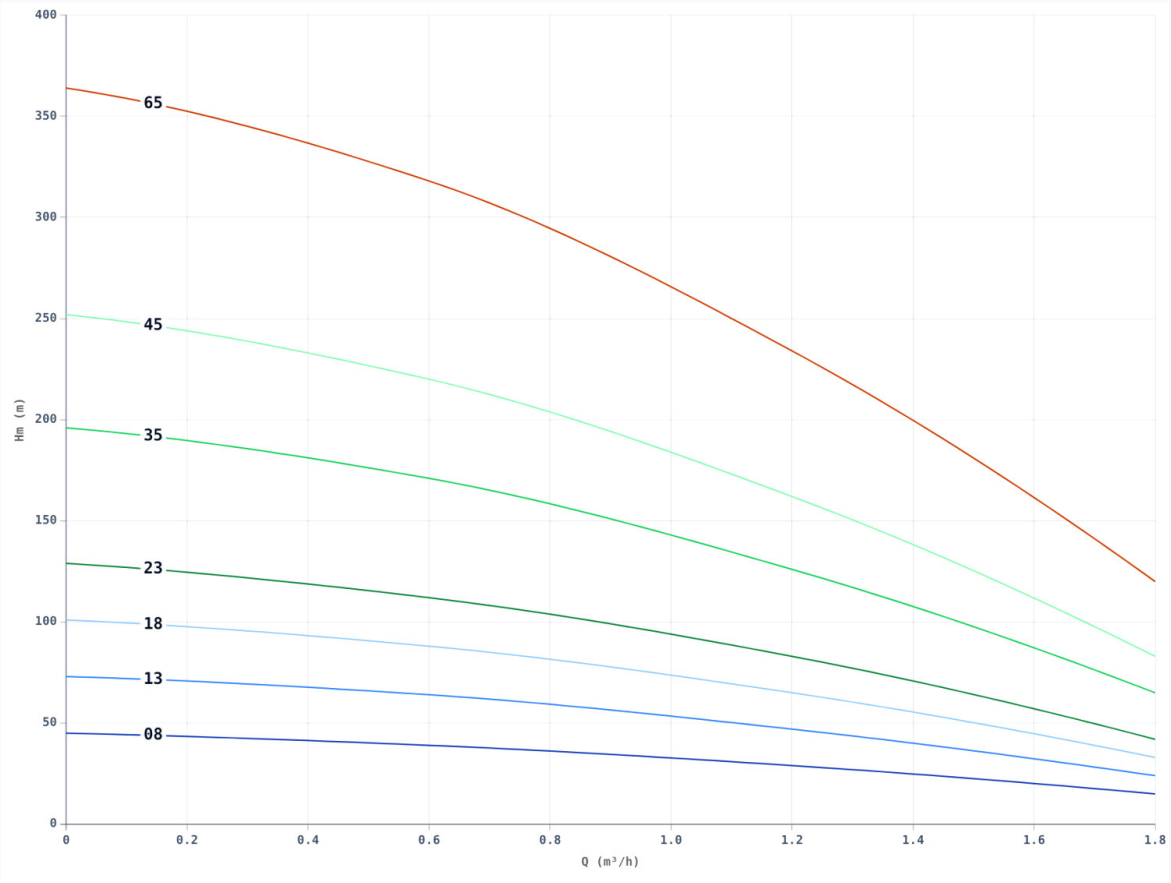
Model	A (mm)	B (mm)	C (mm)	DN
FM BS 12 04	693,0	307,0	387,0	2"
FT BS 12 04	669,0	283,0	387,0	2"
FM BS 12 06	829,0	339,0	491,0	2"
FT BS 12 06	797,0	307,0	491,0	2"
FM BS 12 09	1.124,0	437,0	688,0	2"
FT BS 12 09	1.026,0	339,0	688,0	2"
FT BS 12 12	1.278,0	394,0	885,0	2"
FT BS 12 14	-	-	-	2"
FT BS 12 16	1.677,0	543,0	1.134,0	2"
FT BS 12 22	2.139,0	653,0	1.487,0	2"
FT BS 12 29	2.622,0	731,0	1.892,0	2"

DIMENSÕES



Model	A (mm)	B (mm)	C (mm)	DN
FM BS 15 05	777,0	339,0	439,0	2"
FT BS 15 05	745,0	307,0	439,0	2"
FM BS 15 08	1.031,0	437,0	595,0	2"
FT BS 15 08	933,0	339,0	595,0	2"
FT BS 15 10	1.133,0	394,0	740,0	2"
FT BS 15 12	-	-	-	2"
FT BS 15 14	1.532,0	543,0	989,0	2"
FT BS 15 18	1.890,0	653,0	1.238,0	2"
FT BS 15 25	2.373,0	731,0	1.643,0	2"

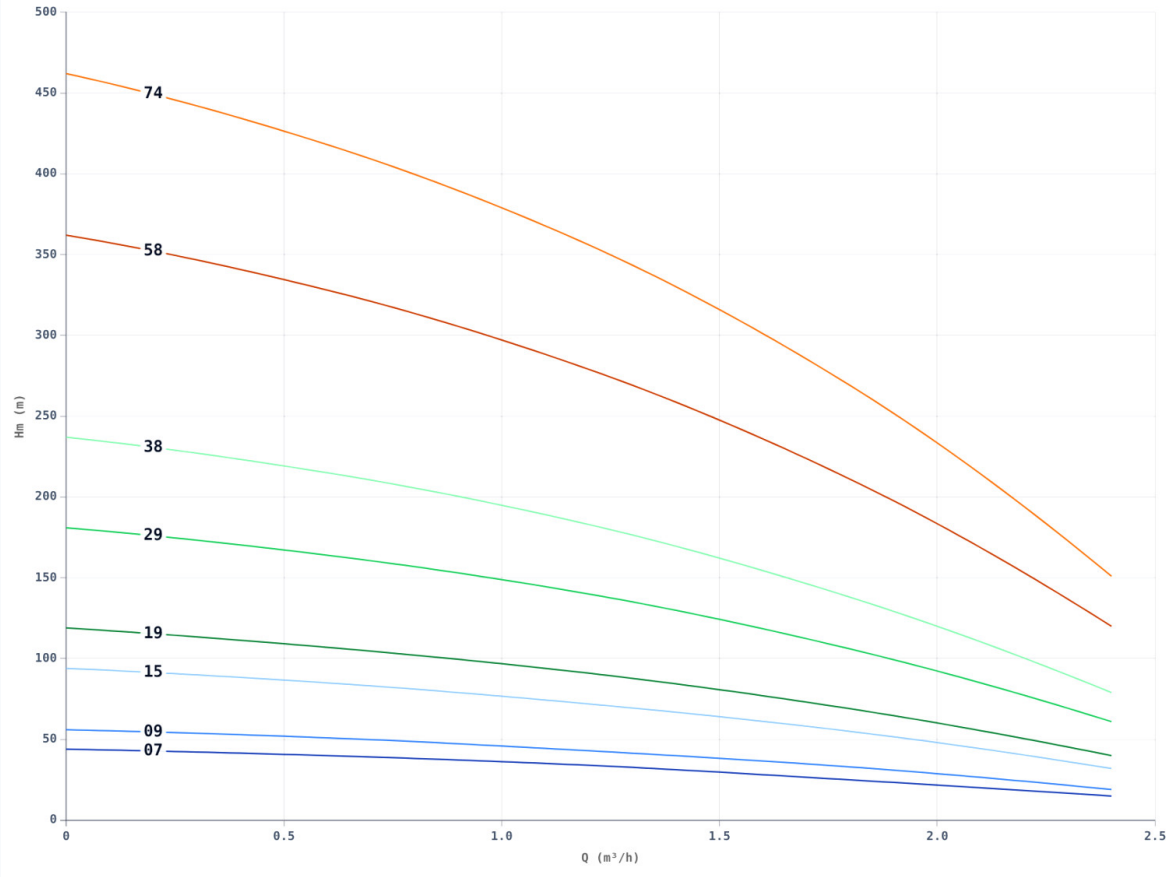
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	0.6	1.2	1.8	2.4	3	3.6	4.2	4.8
					Hm (m)									
BS 1 08	0,25	0,33	2.4 / -	12,00		45,0	39,0	29,0	15,0					
BS 1 13	0,37	0,50	3.3 / 1.1	16,00		73,0	64,0	47,0	24,0					
BS 1 18	0,55	0,75	4.3 / 1.5	20,00		101,0	88,0	65,0	33,0					
BS 1 23	0,75	1,00	5.7 / 2.0	35,00		129,0	112,0	83,0	42,0					
BS 1 35	1,10	1,50	8.4 / 2.8	40,00		196,0	171,0	126,0	65,0					
BS 1 45	1,50	2,00	10.7 / 3.9	50,00		252,0	220,0	162,0	83,0					
BS 1 65	2,20	3,00	14.7 / 5.5	70,00		364,0	318,0	234,0	120,0					

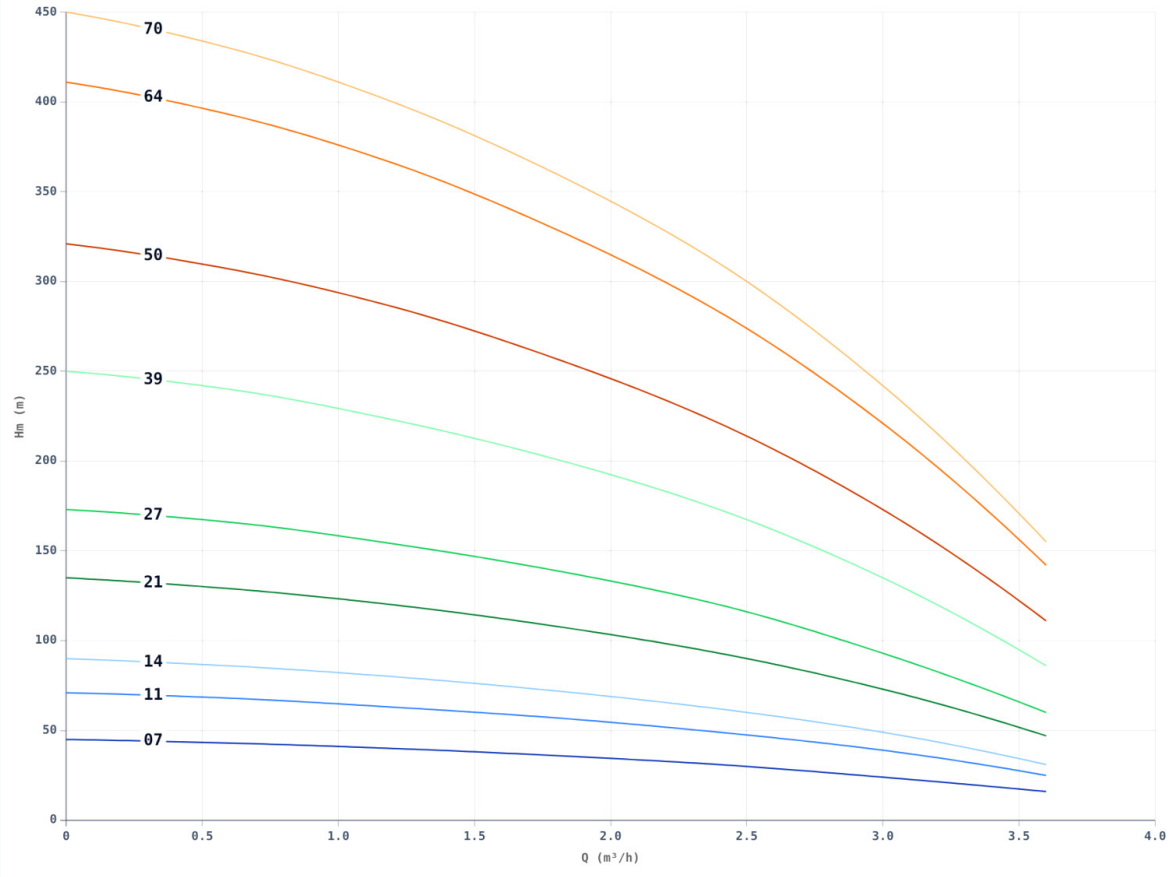
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	0.6	1.2	1.8	2.4
					Hm (m)					
BS 1.5 07	0,25	0,33	2.4 / -	12,00		44,0	40,0	34,0	25,0	15,0
BS 1.5 09	0,37	0,50	3.3 / 1.1	16,00		56,0	51,0	43,0	33,0	19,0
BS 1.5 15	0,55	0,75	4.3 / 1.5	20,00		94,0	85,0	72,0	55,0	32,0
BS 1.5 19	0,75	1,00	5.7 / 2.0	35,00		119,0	107,0	91,0	69,0	40,0
BS 1.5 29	1,10	1,50	8.4 / 2.8	40,00		181,0	164,0	140,0	106,0	61,0
BS 1.5 38	1,50	2,00	10.7 / 3.9	50,00		237,0	215,0	183,0	138,0	79,0
BS 1.5 58	2,20	3,00	14.7 / 5.5	70,00		362,0	328,0	279,0	211,0	120,0
BS 1.5 74	3,00	4,00	- / 7.5	-		462,0	418,0	356,0	269,0	151,0

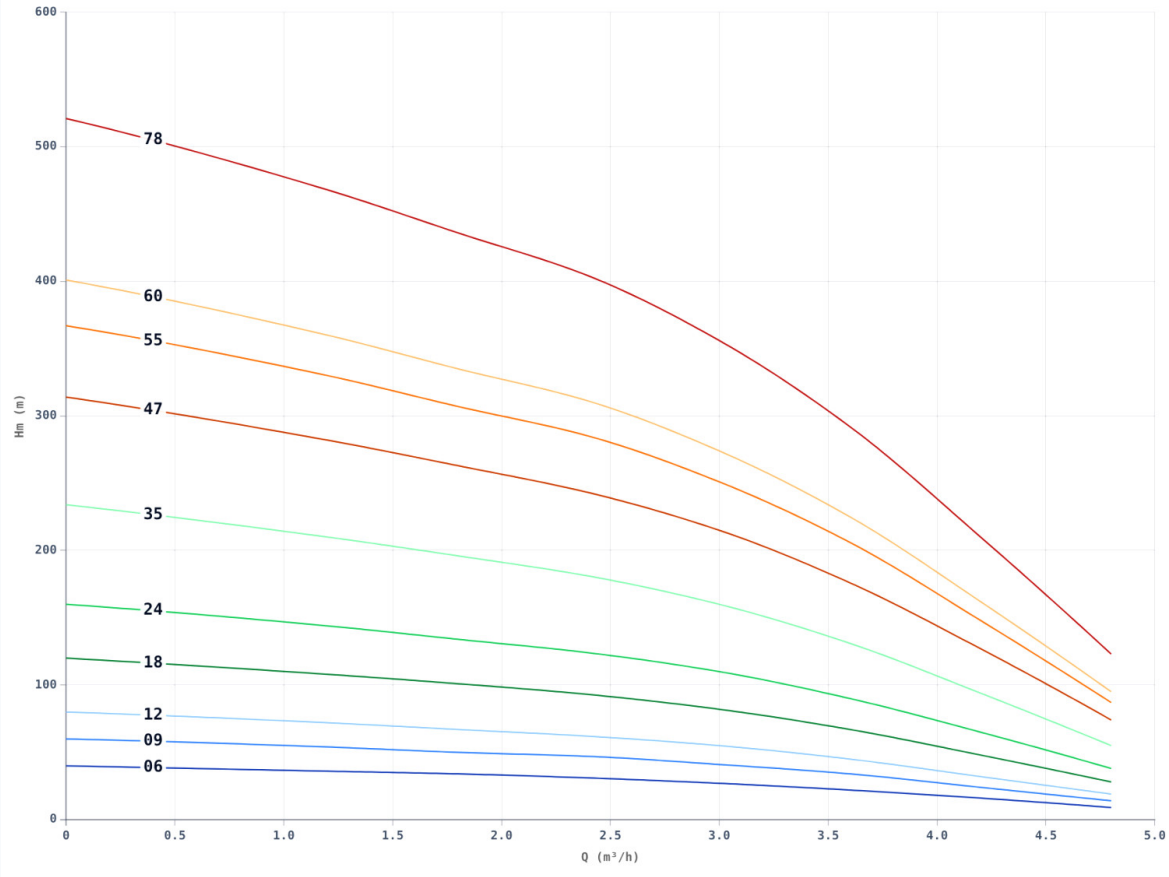
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	0.6	1.2	1.8	2.4	3	3.6
					Hm (m)							
BS 2 07	0,37	0,50	3.3 / 1.1	16,00		45,0	43,0	40,0	36,0	31,0	24,0	16,0
BS 2 11	0,55	0,75	4.3 / 1.5	20,00		71,0	68,0	63,0	57,0	49,0	39,0	25,0
BS 2 14	0,75	1,00	5.7 / 2.0	35,00		90,0	86,0	80,0	72,0	62,0	49,0	31,0
BS 2 21	1,10	1,50	8.4 / 2.8	40,00		135,0	129,0	120,0	108,0	93,0	73,0	47,0
BS 2 27	1,50	2,00	10.7 / 3.9	50,00		173,0	166,0	154,0	139,0	120,0	93,0	60,0
BS 2 39	2,20	3,00	14.7 / 5.5	70,00		250,0	240,0	223,0	201,0	173,0	135,0	86,0
BS 2 50	3,00	4,00	- / 7.5	-		321,0	307,0	286,0	257,0	221,0	173,0	111,0
BS 2 64	3,70	5,00	- / 9.0	-		411,0	393,0	366,0	329,0	283,0	221,0	142,0
BS 2 70	4,00	5,50	- / 9.9	-		450,0	430,0	400,0	360,0	310,0	242,0	155,0

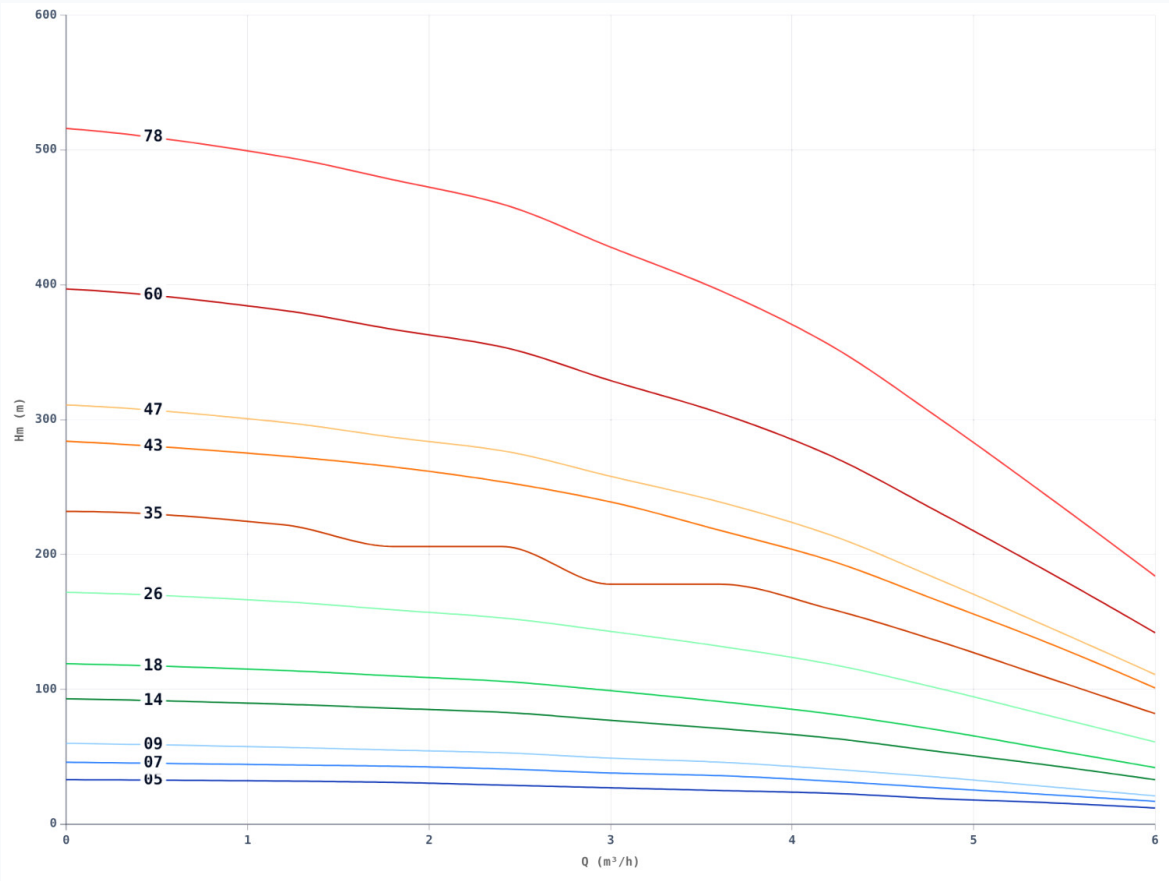
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	1.2	1.8	2.4	3	3.6	4.2	4.8
					Hm (m)								
BS 3 06	0,37	0,50	3.3 / 1.1	16,00		40,0	36,0	34,0	31,0	27,0	22,0	16,0	9,0
BS 3 09	0,55	0,75	4.3 / 1.5	20,00		60,0	54,0	50,0	47,0	41,0	34,0	24,0	14,0
BS 3 12	0,75	1,00	5.7 / 2.0	35,00		80,0	72,0	67,0	62,0	55,0	45,0	32,0	19,0
BS 3 18	1,10	1,50	8.4 / 2.8	40,00		120,0	108,0	101,0	93,0	82,0	67,0	48,0	28,0
BS 3 24	1,50	2,00	10.7 / 3.9	50,00		160,0	144,0	134,0	124,0	110,0	90,0	65,0	38,0
BS 3 35	2,20	3,00	14.7 / 5.5	70,00		234,0	210,0	196,0	181,0	160,0	131,0	94,0	55,0
BS 3 47	3,00	4,00	- / 7.5	-		314,0	282,0	263,0	243,0	215,0	176,0	127,0	74,0
BS 3 55	3,70	5,00	- / 9.0	-		367,0	330,0	307,0	285,0	251,0	206,0	148,0	87,0
BS 3 60	4,00	5,50	- / 9.9	-		401,0	360,0	335,0	311,0	274,0	225,0	162,0	95,0
BS 3 78	5,50	7,50	- / 12.6	-		521,0	468,0	436,0	404,0	356,0	292,0	210,0	123,0

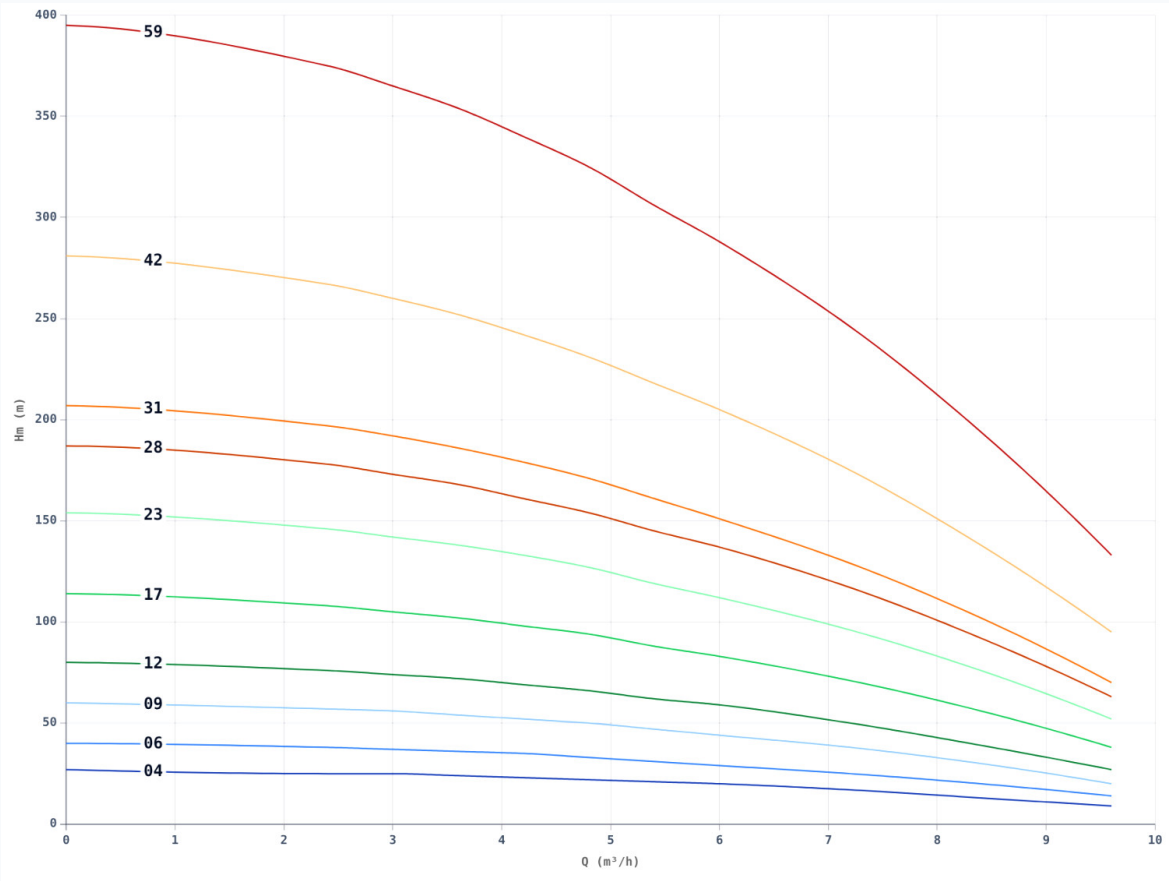
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	1.2	1.8	2.4	3	3.6	4.2	4.8	5.4	6
					Hm (m)										
BS 4 05	0,37	0,50	3.3 / 1.1	16,00		33,0	32,0	31,0	29,0	27,0	25,0	23,0	19,0	16,0	12,0
BS 4 07	0,55	0,75	4.3 / 1.5	20,00		46,0	44,0	43,0	41,0	38,0	36,0	32,0	27,0	22,0	17,0
BS 4 09	0,75	1,00	5.7 / 2.0	35,00		60,0	57,0	55,0	53,0	49,0	46,0	41,0	35,0	28,0	21,0
BS 4 14	1,10	1,50	8.4 / 2.8	40,00		93,0	89,0	86,0	83,0	77,0	71,0	64,0	54,0	44,0	33,0
BS 4 18	1,50	2,00	10.7 / 3.9	50,00		119,0	114,0	110,0	106,0	99,0	91,0	82,0	70,0	56,0	42,0
BS 4 26	2,20	3,00	14.7 / 5.5	70,00		172,0	165,0	159,0	153,0	143,0	132,0	119,0	101,0	81,0	61,0
BS 4 35	3,00	4,00	- / 7.5	-		232,0	222,0	206,0	206,0	178,0	178,0	160,0	136,0	109,0	82,0
BS 4 43	3,70	5,00	- / 9.0	-		284,0	273,0	265,0	254,0	239,0	218,0	196,0	166,0	135,0	101,0
BS 4 47	4,00	5,50	- / 9.9	-		311,0	298,0	287,0	277,0	258,0	239,0	215,0	182,0	147,0	111,0
BS 4 60	5,50	7,50	- / 12.6	-		397,0	381,0	367,0	354,0	329,0	305,0	274,0	232,0	188,0	142,0
BS 4 78	7,50	10,00	- / 17.1	-		516,0	495,0	478,0	460,0	428,0	396,0	356,0	302,0	244,0	184,0

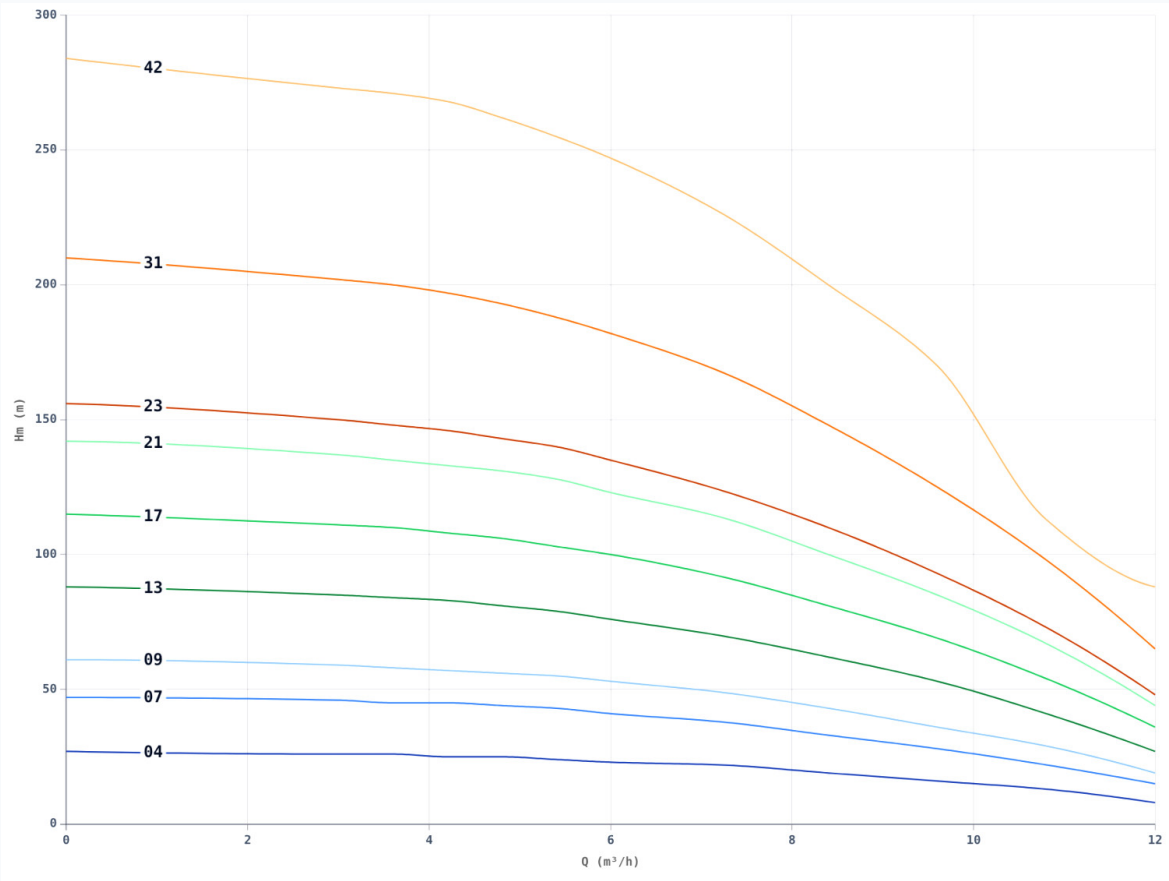
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	2.4	3	3.6	4.2	4.8	5.4	6	7.2	8.4	9.6
					Hm (m)											
BS 6 04	0,55	0,75	4.3 / 1.5	20,00		27,0	25,0	25,0	24,0	23,0	22,0	21,0	20,0	17,0	13,0	9,0
BS 6 06	0,75	1,00	5.7 / 2.0	40,00		40,0	38,0	37,0	36,0	35,0	33,0	31,0	29,0	25,0	20,0	14,0
BS 6 09	1,10	1,50	8.4 / 2.8	60,00		60,0	57,0	56,0	54,0	52,0	50,0	47,0	44,0	38,0	30,0	20,0
BS 6 12	1,50	2,00	10.7 / 3.9	80,00		80,0	76,0	74,0	72,0	69,0	66,0	62,0	59,0	50,0	39,0	27,0
BS 6 17	2,20	3,00	14.7 / 5.5	114,00		114,0	108,0	105,0	102,0	98,0	94,0	88,0	83,0	71,0	56,0	38,0
BS 6 23	3,00	4,00	- / 7.5	-		154,0	146,0	142,0	138,0	133,0	127,0	119,0	112,0	96,0	76,0	52,0
BS 6 28	3,70	5,00	- / 9.0	-		187,0	178,0	173,0	168,0	161,0	154,0	145,0	137,0	117,0	92,0	63,0
BS 6 31	4,00	5,50	- / 9.9	-		207,0	197,0	192,0	186,0	179,0	171,0	161,0	151,0	129,0	102,0	70,0
BS 6 42	5,50	7,50	- / 12.6	-		281,0	267,0	260,0	252,0	242,0	231,0	218,0	205,0	175,0	138,0	95,0
BS 6 59	7,50	10,00	- / 17.1	-		395,0	375,0	365,0	354,0	340,0	325,0	306,0	288,0	246,0	194,0	133,0

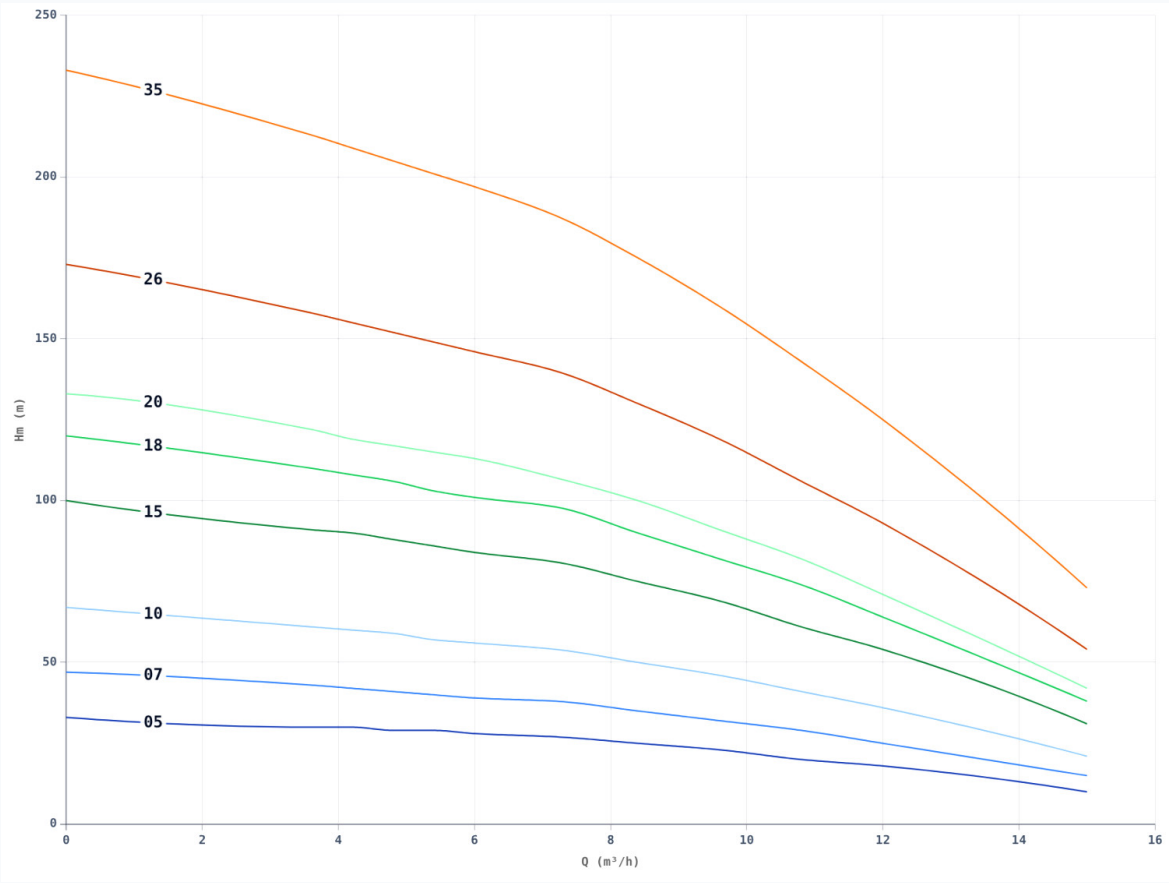
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	3	3.6	4.2	4.8	5.4	6	7.2	8.4	9.6	10.8	12
					Hm (m)												
BS 8 04	0,55	0,75	4.3 / 1.5	20,00		27,0	26,0	26,0	25,0	25,0	24,0	23,0	22,0	19,0	16,0	13,0	8,0
BS 8 07	1,10	1,50	8.4 / 2.8	40,00		47,0	46,0	45,0	45,0	44,0	43,0	41,0	38,0	33,0	28,0	22,0	15,0
BS 8 09	1,50	2,00	10.7 / 3.9	50,00		61,0	59,0	58,0	57,0	56,0	55,0	53,0	49,0	43,0	36,0	29,0	19,0
BS 8 13	2,20	3,00	14.7 / 5.5	70,00		88,0	85,0	84,0	83,0	81,0	79,0	76,0	70,0	62,0	53,0	41,0	27,0
BS 8 17	3,00	4,00	- / 7.5	-		115,0	111,0	110,0	108,0	106,0	103,0	100,0	92,0	81,0	69,0	54,0	36,0
BS 8 21	3,70	5,00	- / 9.0	-		142,0	137,0	135,0	133,0	131,0	128,0	123,0	114,0	100,0	85,0	67,0	44,0
BS 8 23	4,00	5,50	- / 9.9	-		156,0	150,0	148,0	146,0	143,0	140,0	135,0	124,0	110,0	93,0	73,0	48,0
BS 8 31	5,50	7,50	- / 12.6	-		210,0	202,0	200,0	197,0	193,0	188,0	182,0	168,0	148,0	125,0	98,0	65,0
BS 8 42	7,50	10,00	- / 17.1	-		284,0	273,0	271,0	268,0	262,0	255,0	247,0	227,0	200,0	170,0	113,0	88,0

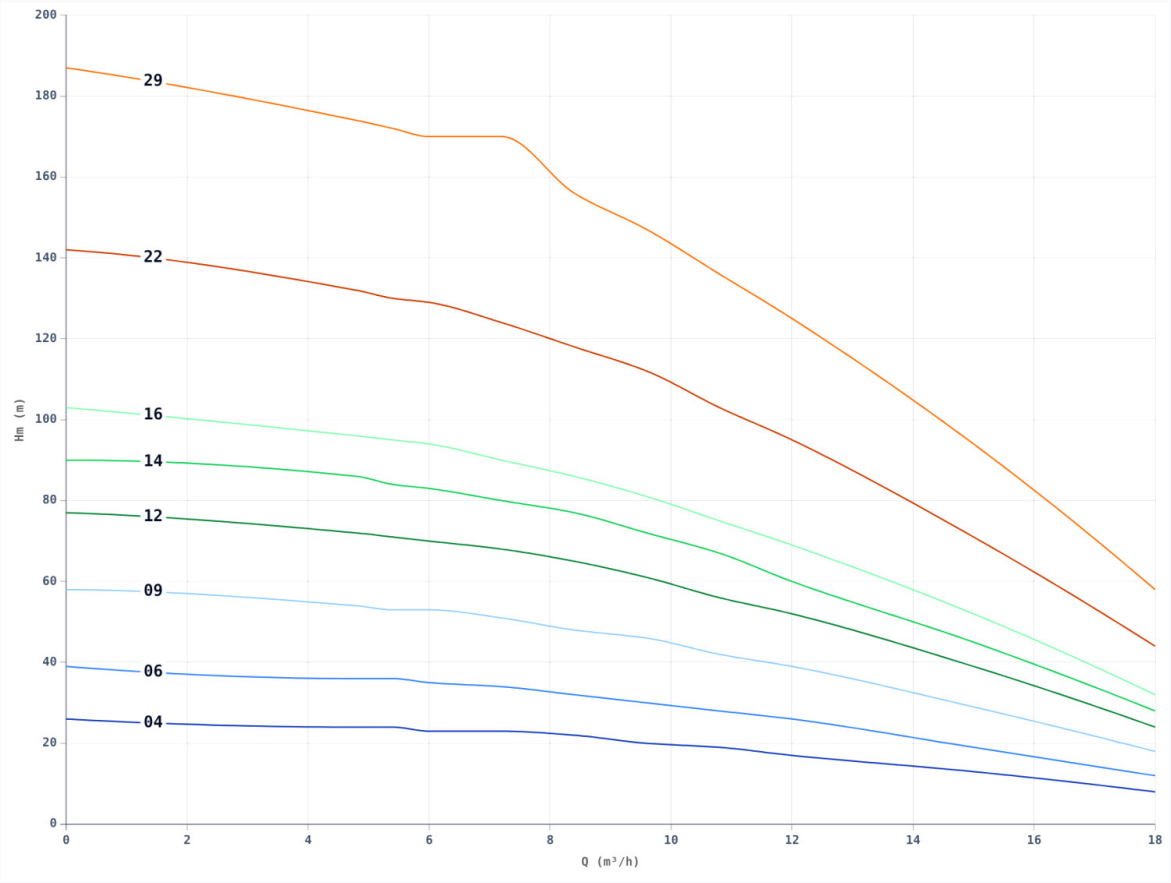
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	3.6	4.2	4.8	5.4	6	7.2	8.4	9.6	10.8	12	15
					Hm (m)												
BS 10 05	1,10	1,50	8.4 / 2.8	40,00		33,0	30,0	30,0	29,0	29,0	28,0	27,0	25,0	23,0	20,0	18,0	10,0
BS 10 07	1,50	2,00	10.7 / 3.9	50,00		47,0	43,0	42,0	41,0	40,0	39,0	38,0	35,0	32,0	29,0	25,0	15,0
BS 10 10	2,20	3,00	14.7 / 5.5	70,00		67,0	61,0	60,0	59,0	57,0	56,0	54,0	50,0	46,0	41,0	36,0	21,0
BS 10 15	3,00	4,00	- / 7.5	-		100,0	91,0	90,0	88,0	86,0	84,0	81,0	75,0	69,0	61,0	54,0	31,0
BS 10 18	3,70	5,00	- / 9.0	-		120,0	110,0	108,0	106,0	103,0	101,0	98,0	90,0	82,0	74,0	64,0	38,0
BS 10 20	4,00	5,50	- / 9.9	-		133,0	122,0	119,0	117,0	115,0	113,0	107,0	100,0	91,0	82,0	71,0	42,0
BS 10 26	5,50	7,50	- / 12.6	-		173,0	158,0	155,0	152,0	149,0	146,0	140,0	130,0	119,0	106,0	93,0	54,0
BS 10 35	7,50	10,00	- / 17.1	-		233,0	213,0	209,0	205,0	201,0	197,0	188,0	175,0	160,0	143,0	125,0	73,0

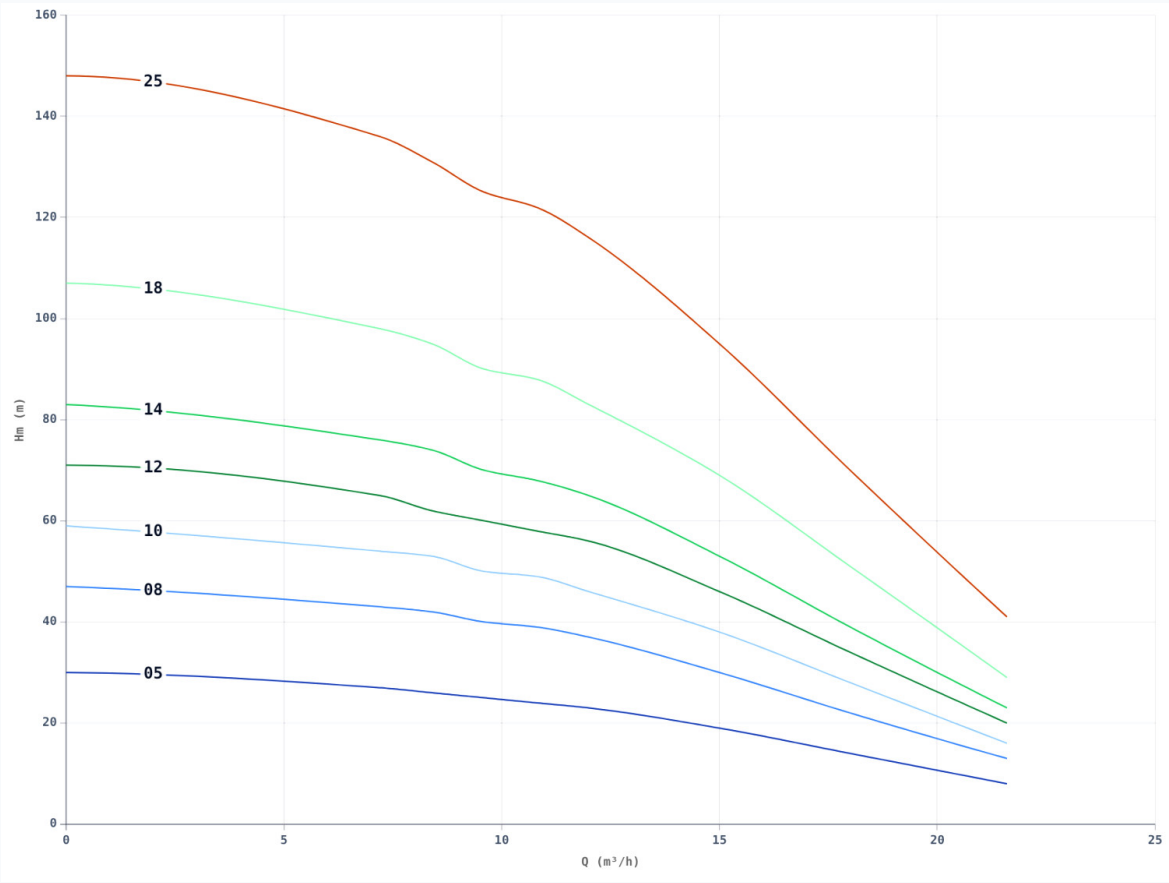
CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	4.8	5.4	6	7.2	8.4	9.6	10.8	12	15	18
					Hm (m)											
BS 12 04	1,10	1,50	8.4 / 2.8	40,00		26,0	24,0	24,0	23,0	23,0	22,0	20,0	19,0	17,0	13,0	8,0
BS 12 06	1,50	2,00	10.7 / 3.9	50,00		39,0	36,0	36,0	35,0	34,0	32,0	30,0	28,0	26,0	19,0	12,0
BS 12 09	2,20	3,00	14.7 / 5.5	70,00		58,0	54,0	53,0	53,0	51,0	48,0	46,0	42,0	39,0	29,0	18,0
BS 12 12	3,00	4,00	- / 7.5	-		77,0	72,0	71,0	70,0	68,0	65,0	61,0	56,0	52,0	39,0	24,0
BS 12 14	3,70	5,00	- / 9.0	-		90,0	86,0	84,0	83,0	80,0	77,0	72,0	67,0	60,0	45,0	28,0
BS 12 16	4,00	5,50	- / 9.9	-		103,0	96,0	95,0	94,0	90,0	86,0	81,0	75,0	69,0	52,0	32,0
BS 12 22	5,50	7,50	- / 12.6	-		142,0	132,0	130,0	129,0	124,0	118,0	112,0	103,0	95,0	71,0	44,0
BS 12 29	7,50	10,00	- / 17.1	-		187,0	174,0	172,0	170,0	170,0	156,0	147,0	136,0	125,0	94,0	58,0

CURVA DE PERFORMANCE (Q - HM)



Curvas de caudal (Q) vs. altura manométrica (Hm)

Model	kW	HP	Amperage	Capacitor	m³/h	0	7.2	8.4	9.6	10.8	12	15	18	21.6
					Hm (m)									
BS 15 05	1,50	2,00	10.7 / 3.9	50,00		30,0	27,0	26,0	25,0	24,0	23,0	19,0	14,0	8,0
BS 15 08	2,20	3,00	14.7 / 5.5	70,00		47,0	43,0	42,0	40,0	39,0	37,0	30,0	22,0	13,0
BS 15 10	3,00	4,00	- / 7.5	-		59,0	54,0	53,0	50,0	49,0	46,0	38,0	28,0	16,0
BS 15 12	3,70	5,00	- / 9.0	-		71,0	65,0	62,0	60,0	58,0	56,0	46,0	34,0	20,0
BS 15 14	4,00	5,50	- / 9.9	-		83,0	76,0	74,0	70,0	68,0	65,0	53,0	39,0	23,0
BS 15 18	5,50	7,50	- / 12.6	-		107,0	98,0	95,0	90,0	88,0	83,0	69,0	51,0	29,0
BS 15 25	7,50	10,00	- / 17.1	-		148,0	136,0	131,0	125,0	122,0	116,0	95,0	70,0	41,0

LIST OF MATERIALS

Pos.	Description	Material (Standard)
1	Screw A2 DIN 7985 M4 x 8	Stainless Steel
2	Stainless Steel Hook	Stainless Steel
3	Cable Guard	Stainless Steel
4	Jacket with Valve	Stainless Steel
5	Stainless Steel Circlip 8 mm	Stainless Steel
6	Washer A2 DIN 433 M10	Stainless Steel
7	Upper Guide G2D85	Noryl / Stainless Steel
8	Upper Guide Bushing	Rubber / Stainless Steel
9	Stainless Washer 0.5 x 35	Stainless Steel
10	Impeller	Noryl / Polycarbonate
11	Stainless Diffuser Cover	Stainless Steel
12	Diffuser	Noryl / Polycarbonate
13	Stainless Bushing 304 41x17.3	Stainless Steel 304
14	Central Guide Bushing	Rubber / Stainless Steel
15	Central Guide G1D85	Noryl / Stainless Steel
16	Easy-to-clean aspiration filter	Stainless Steel
17	Suction Chamber	Stainless Steel
18	Pump Shaft	Stainless Steel
19	Coupling 41.5 X 22	Stainless Steel
20	Screw A2 DIN 965 M6 x 16	Stainless Steel