Looking ahead,
going beyond expectations

Ahead Beyond

EBARA

SWX

Data Book 50/60Hz



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DEFINITION AND USE

EBARA SWX is a horizontal self-priming centrifugal swimming pool pump with built-in prefilter, for water circulation. SWX pumps are perfect solution for recirculation of cleanwater or slightly dirty water, water containing chlorine or additives in filtration system for small and medium sized swimming pools.

TYPICAL APPLICATIONS

DOMESTIC

OPERATING CONDITIONS

EBARA SWX can be used, in their standard versions, for domestical applications, as follows:

- Domestic pressurisation of pools
- Emptying of tanks and swimming pools
- Garden irrigation systems
- Handling of clean water

This pump is designed to handle a neutral liquid without suspended solids with a temperature below 40 ° in continuous service. The units must be installed under cover, protected from the weather and freezing.

- Conveyed water temperature 5÷45°C
- Ambient operating temperature 5÷40°C, no higher than 1000 m above sea level.
- Max relative humidity 90% at 40°C.

MECHANICAL AND HYDRAULIC TESTS

- Pump direction of rotation
- Mechanical testing of moving parts and running noise

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PRODUCT SPECIFICATIONS

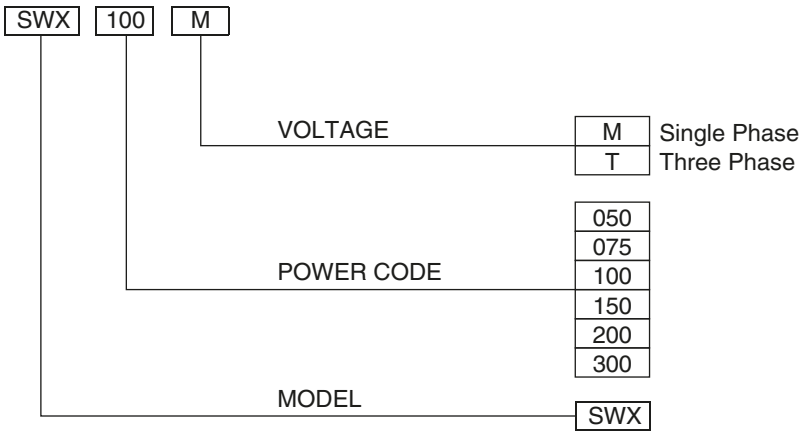
SWX		
Liquid Handled	Type of liquid	Clean water / Salt water up to 0,4% - 4 gr/l
	Temperature [C°]	min +5°C max +40°C
Maximum working pressure [Mpa]		3
Maximum suction depth [m]		4/2 without non-return valve
Construction	Impeller	Closed centrifugal type
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction [inch]	ø50mm / ø63mm with adapter noozle
	Discharge [inch]	ø50mm / ø63mm with adapter noozle
Material	Casing	PPGF30
	Impeller	PPGF20
	Casing cover	PPGF30
	Shaft seal	Ceramic/Carbon Graphite/NBR
	Shaft	AISI 316
	Stages	-
	Ejector	PPE+PS glass fibre reinforced
	Bracket	Aluminium
	Diffuser	EPDM/NBR
Applicable standard of test		ISO 9902:2012 - Grade 2B

MOTOR			
Type		Electric - TEFC	
		Single Phase	Three Phase
Efficency evel(Reg.1781/2019)		IE2	IE3
No. of Poles		2	
Rotation speed [min-1]		≈ 2800	
Insulation Class		F	
Protection degree (CEI EN 60034-5)		IP X5	
Power rating	**[kW]**	0.75 ÷ 3.00	
	[HP]	1.00 ÷ 4.00	
Power rating	**[Hz]**	50/60	
Voltage	**[V]**	230 ±10%	230/400 ±10%
Capacitor		Built in	-
Over load protection		Built in	Provided by the user
Casing material		Aluminium L-2521	
Motor support		Aluminium L-2521	
Dimensions of cable entry		PG 11	

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TYPE KEY

Example for **standard version**:
SWX 100 M



CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.
Tolerances according to ISO 9902:2012 – Grade 2B.
Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of v = 1 mm2/s (1 cSt).
The NPSH curve is an average curve obtained in the same conditions of performance curves.
During the pump selection, consider to get a safety margin of at least 0.5 m.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

Q = volume flow rate
H = total head
P2 = pump power input (shaft power)
η = pump efficiency
NPSH = net positive suction head required by the pump

Pressure drops of the unit's fittings are not considered

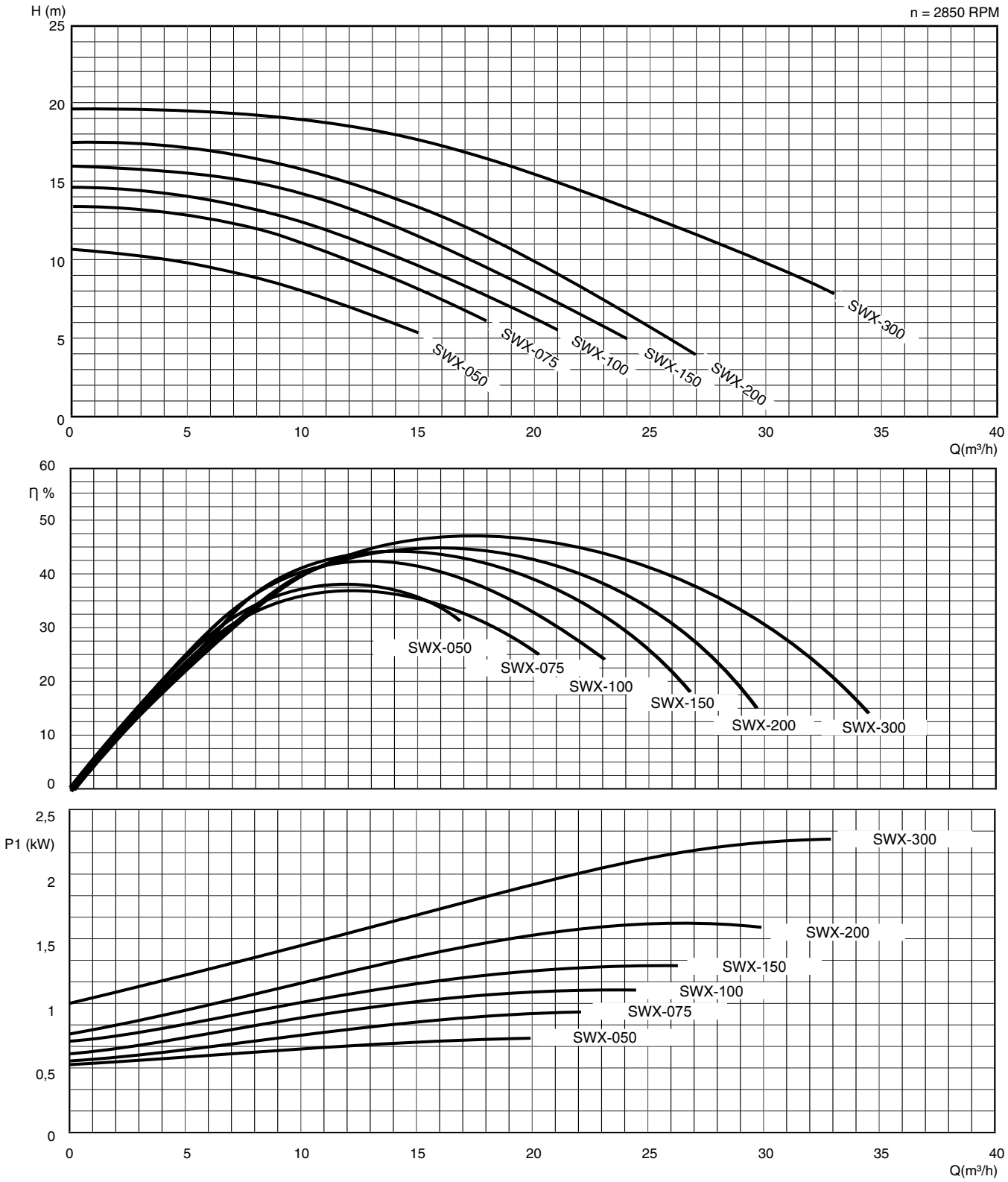
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SWX

PERFORMANCE CURVE

Rev. A

PERFORMANCE RANGE



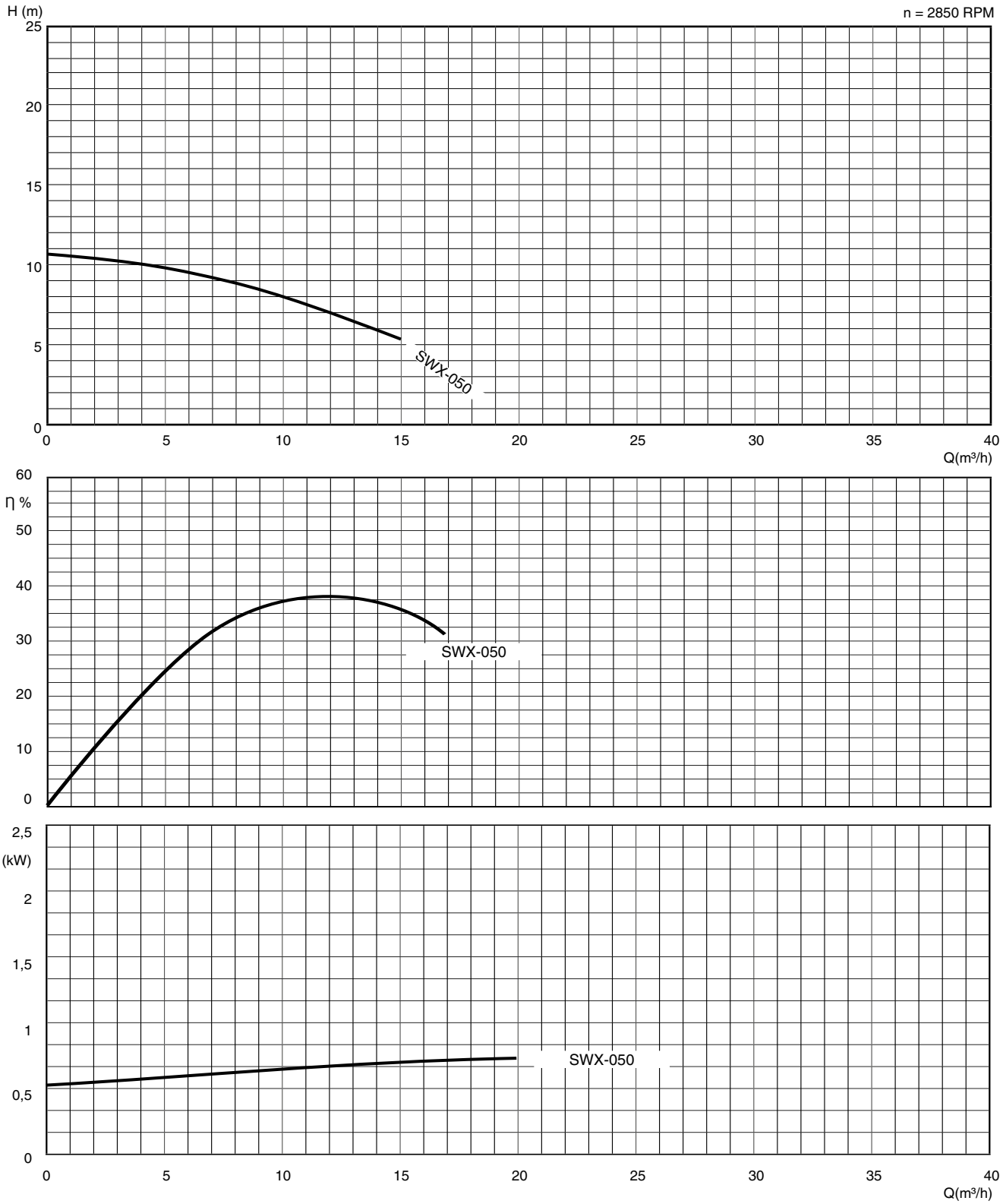
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SWX

PERFORMANCE CURVE

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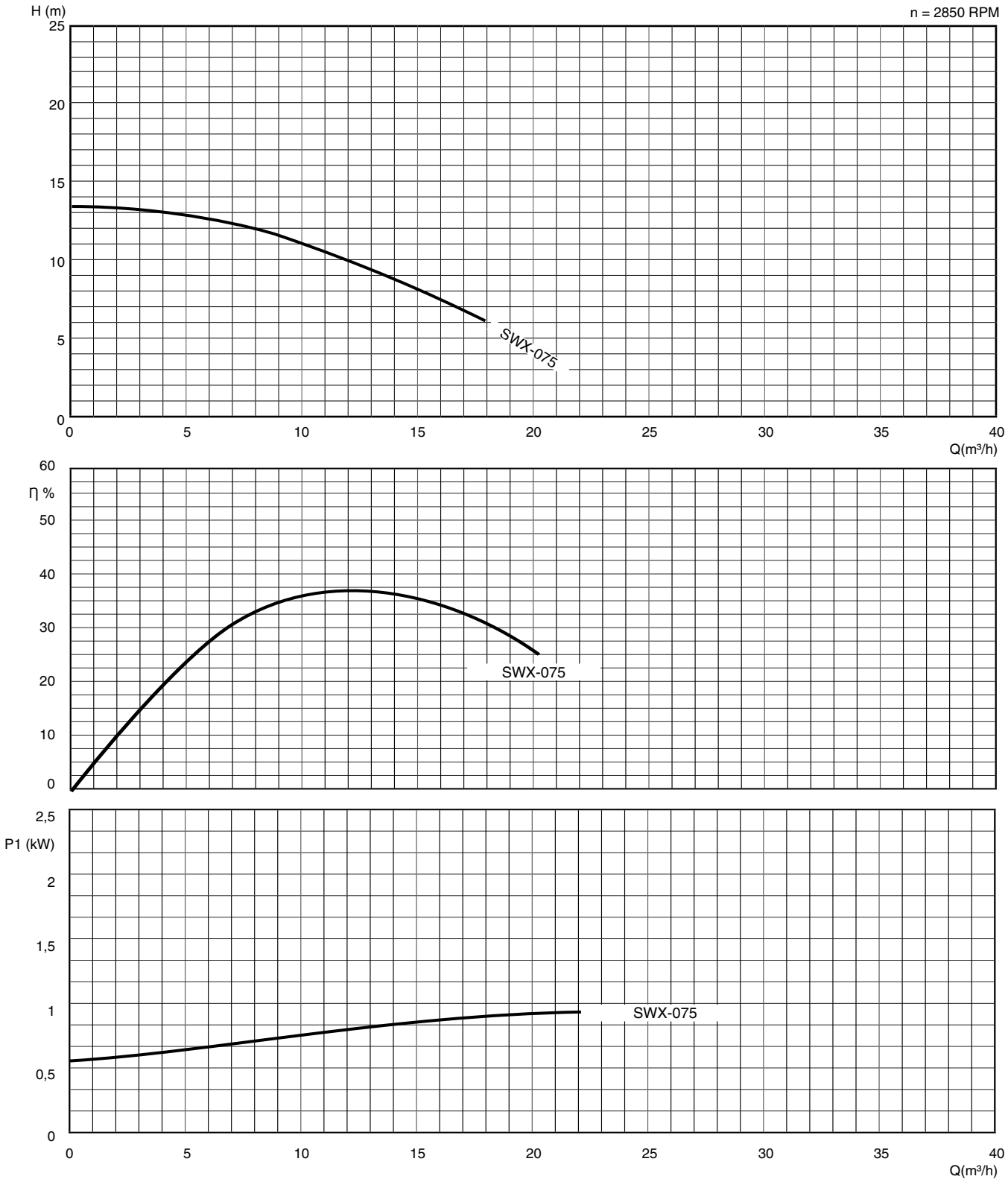
SWX-050



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SWX-075



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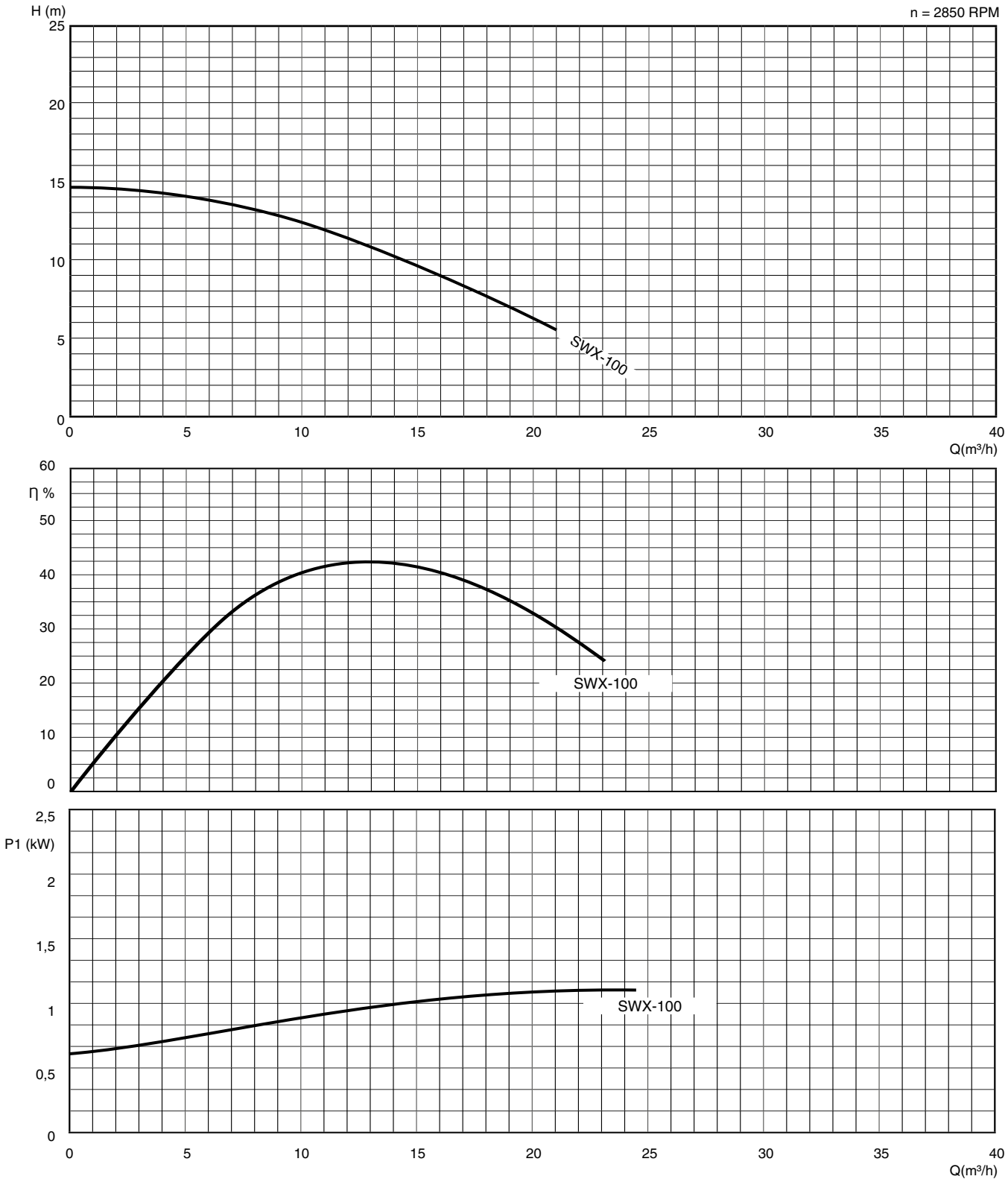
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SWX

PERFORMANCE CURVE

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SWX-100



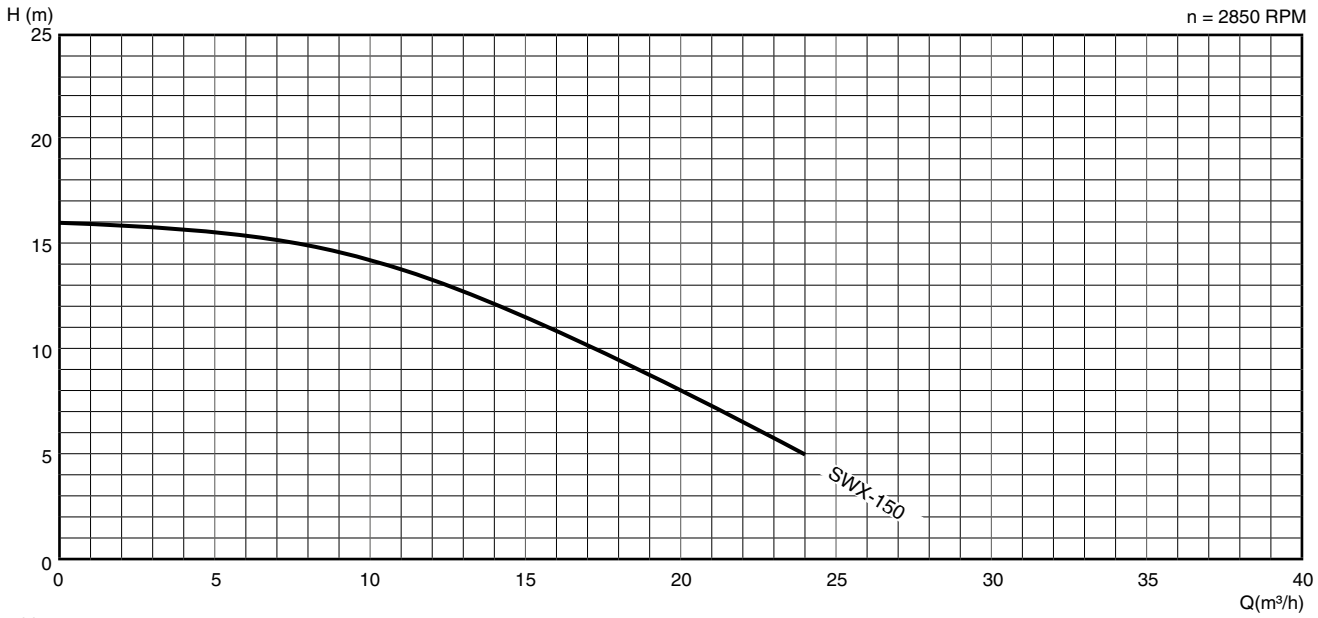
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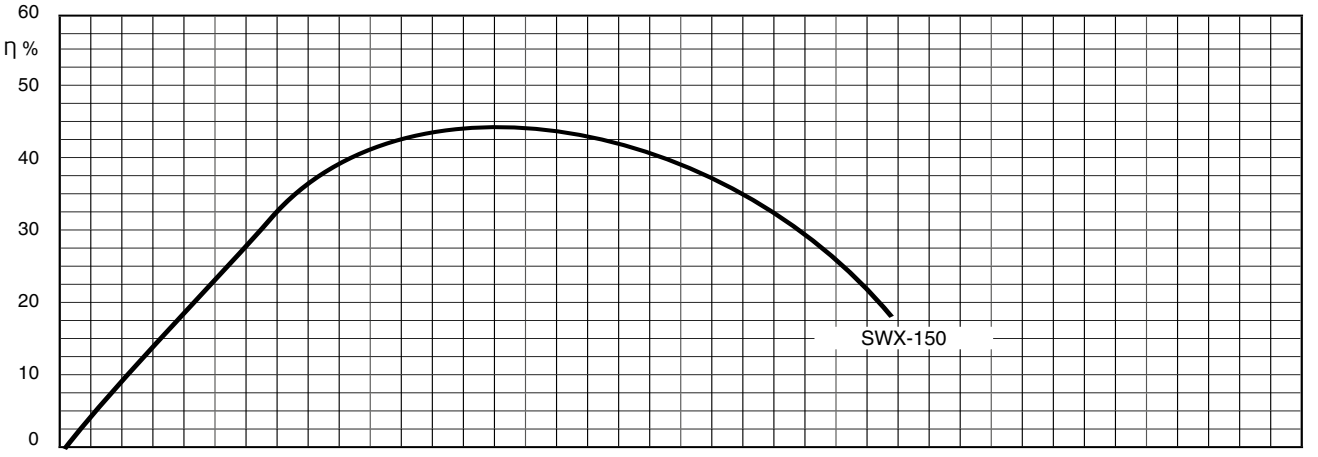
SWX

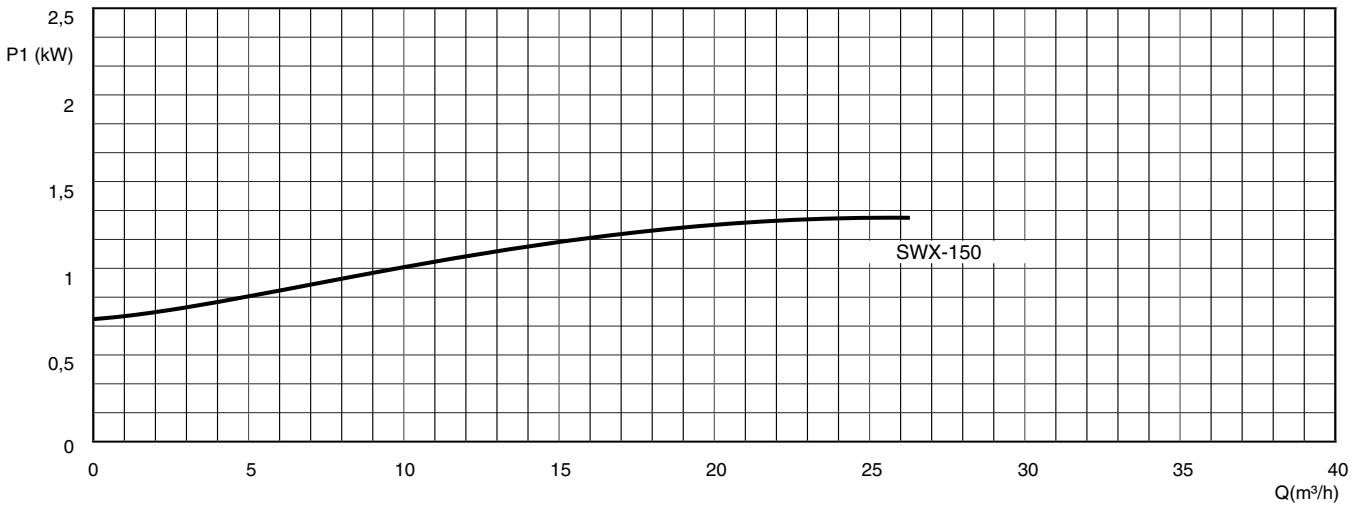
PERFORMANCE CURVE

Rev. A

SWX-150





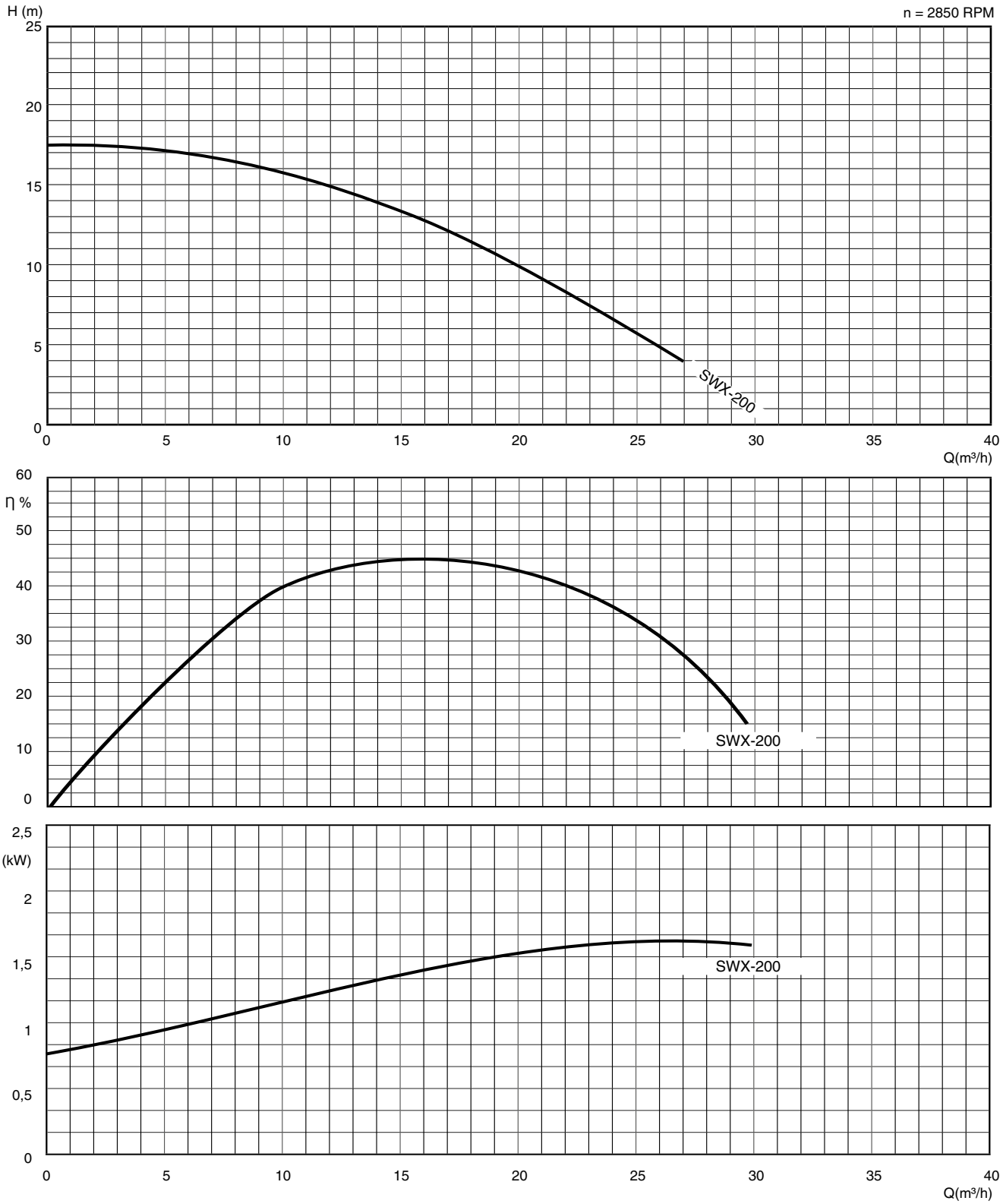


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PERFORMANCE CURVE

SWX-200



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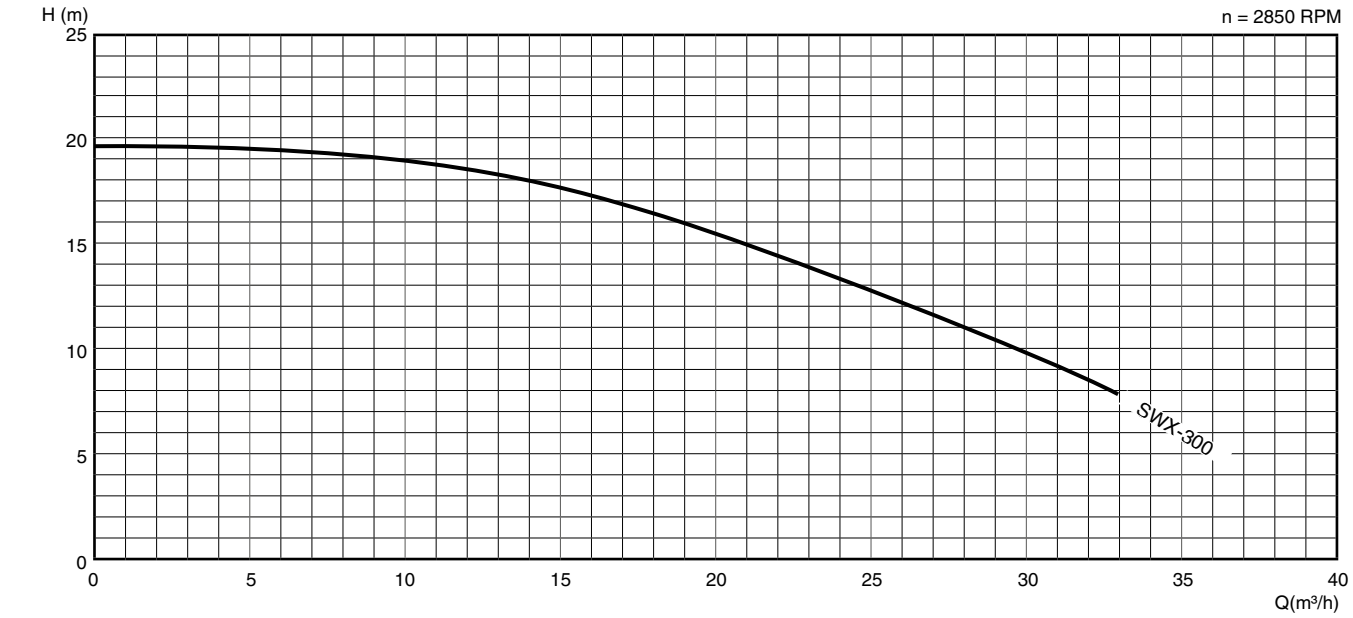
EBARA

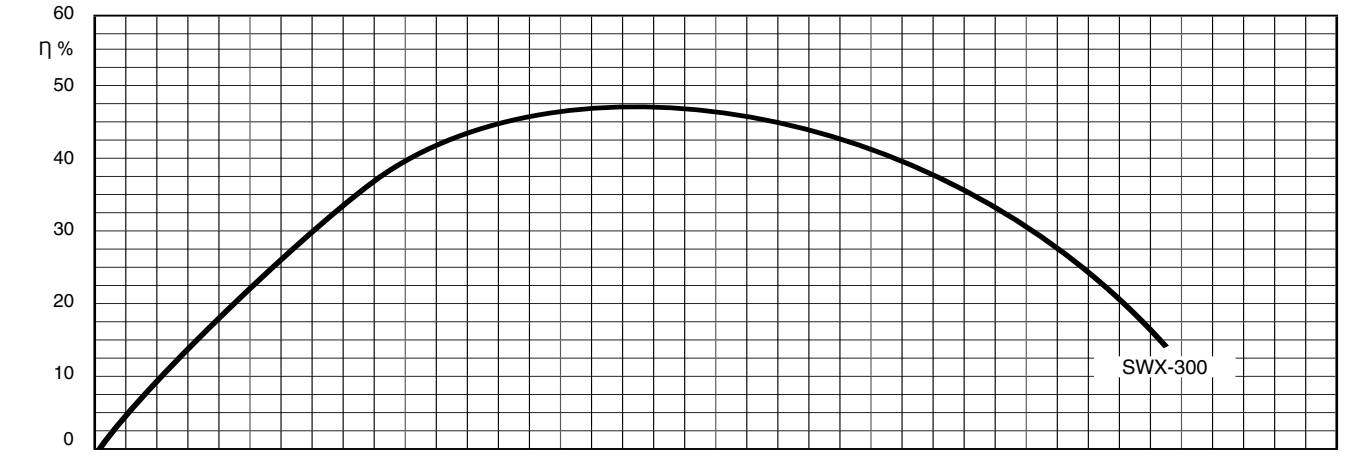
SWX

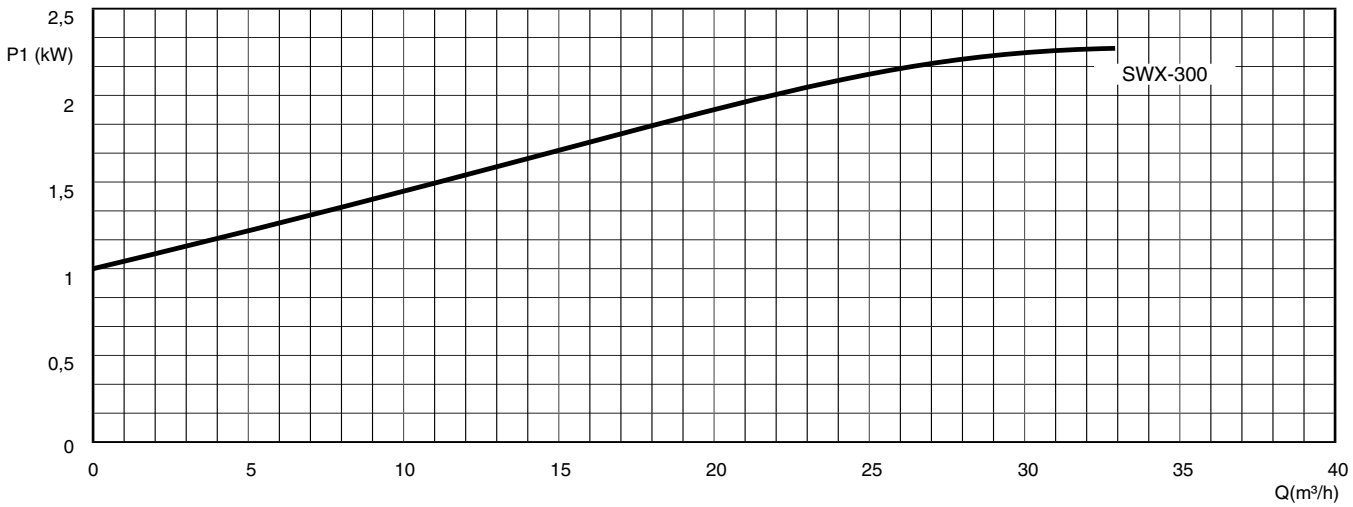
PERFORMANCE CURVE

Rev. A

SWX-300







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SELECTION CHART

Model	Motor		Q= Capacity											
			l/min	0	50	100	150	200	250	300	350	400	450	500	550
	kW	HP	m^3/h	0	3	6	9	12	15	18	21	24	27	30	33
			H= Total manometric head in meters												
SWX-050 M/T	0,37	0,5		10.8	10.3	9.7	8.5	7.2	5.3						
SWX-075 M/T	0,55	0,75		13.5	13	12.4	11.7	10.5	8.3	6.2					
SWX-100 M/T	0,75	1		14.8	14.2	13.6	12.6	11.5	9.5	7.5	5.5				
SWX-150 M/T	1.0	1,33		16.2	15.8	15.3	14.5	13.5	12	10	8	5			
SWX-200 M/T	1.1	1.5		17.5	17	16.5	15.8	15.2	13.7	11.9	10	7	4		
SWX-300 M/T	1.5	2.0		19.6	19.5	18.9	19.2	18.4	17.6	16.5	15.5	14	12.5	10.4	8.2

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SECTIONAL VIEW

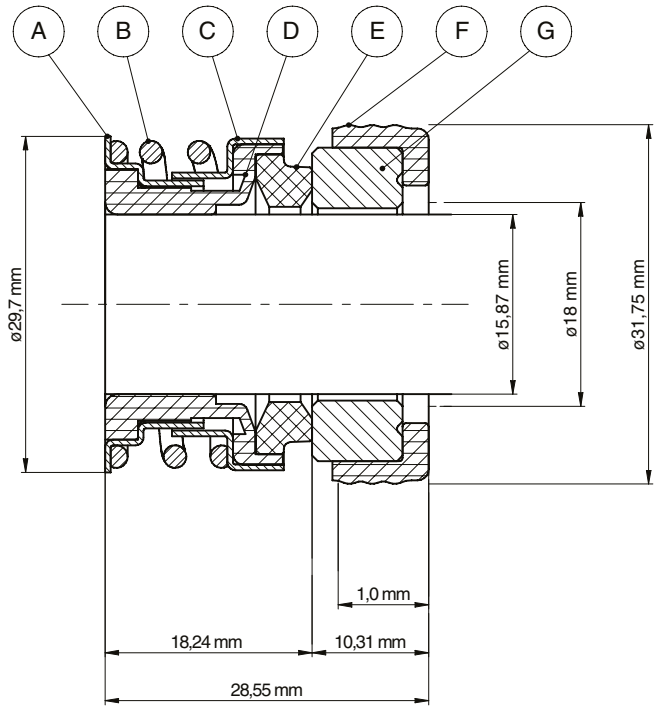


N°	PART NAME	MATERIAL	Q.TY
A	Strainer cover nut	ABS	1
B	Strainer cover	PC	1
C	Strainer cover O-Ring	NBR Ø 160x7.5	1
D	Strainer Basket	PPOGF20	1
E	In/Outlet nut	ABS	2
F	In/Outlet pipe	PVC	2
G	In/Outlet O-Ring	NBR Ø 64.5x4.55	2
H	Drain plug	PPOGF30	2
I	Drain plug O-Ring	NBR Ø 11.5x2.5	2
J	Pump body	PPOGF30	1
K	Diffuser O-Ring (SWX 50-200) Diffuser O-Ring (SWX 300)	NBR Ø 68x5.5 NBR Ø 72x3.6	1
L	Pump support	PPOGF30	1
M	Diffuser	PPOGF20	1
N	Impeller	PPOGF20	1
O	Mechanical Seal	Ceramic & Graphite BT-Burgmann AISI316	1
P	Pump cover O-Ring	NBR Ø 195x5.5	1
Q	Pump cover	PPOGF20	1
R	Drop Guard	NBR	1
S	Motor housing	Alluminum L-2521	1

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MECHANICAL SEAL



REF	PART NAME	MATERIAL
A	Driver	CrNiMo Steel AISI 316
B	Spring	CrNiMo Steel AISI 316
C	Drive collar	CrNiMo Steel AISI 316
D	Bellows	NBR
E	Seal Face	Carbon graphite & resin
F	Gasket	NBR
G	Stationary seal ring	Aluminium Oxide

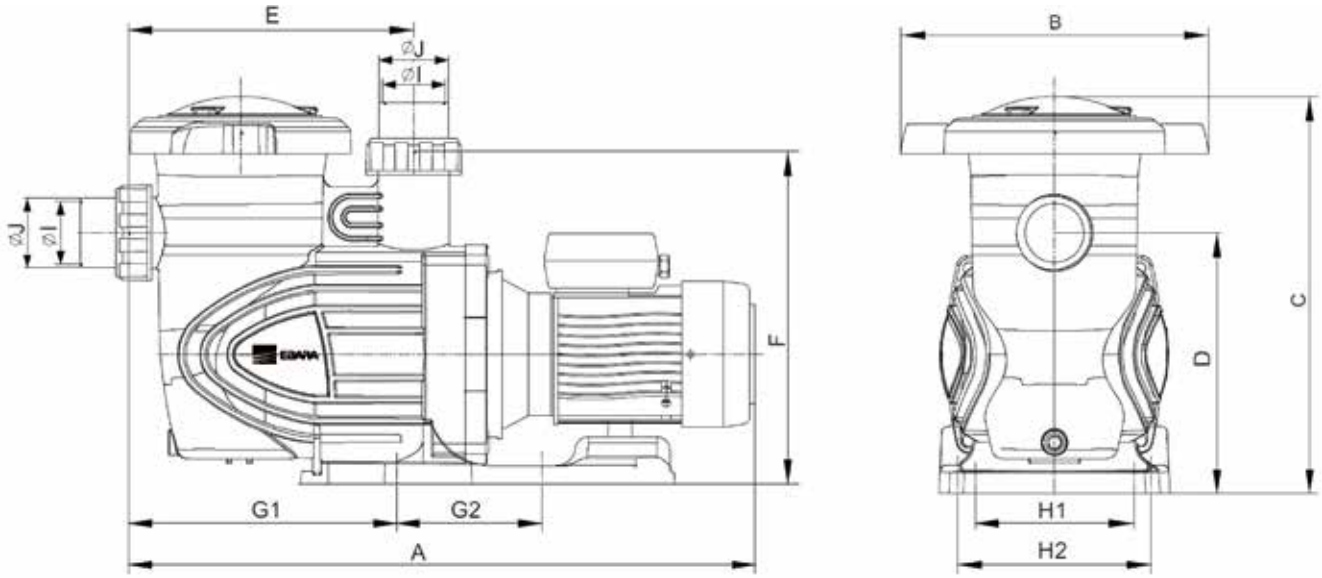
BEARINGS

PUMP TYPE		BALL BEARING	
Single phase	Three phase	Pump side	Fan side
SWX-050 M	SWX-050 T	6203-2RS	6202-2RS
SWX-075 M	SWX-075 T	6203-2RS	6202-2RS
SWX-100 M	SWX-100 T	6203-2RS	6202-2RS
SWX-150 M	SWX-150 T	6204-2RS	6202-2RS
SWX-200 M	SWX-200 T	6204-2RS	6202-2RS
SWX-300 M	SWX-300 T	6204-2RS	6202-2RS

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SWX
PRODUCT DIMENSIONS



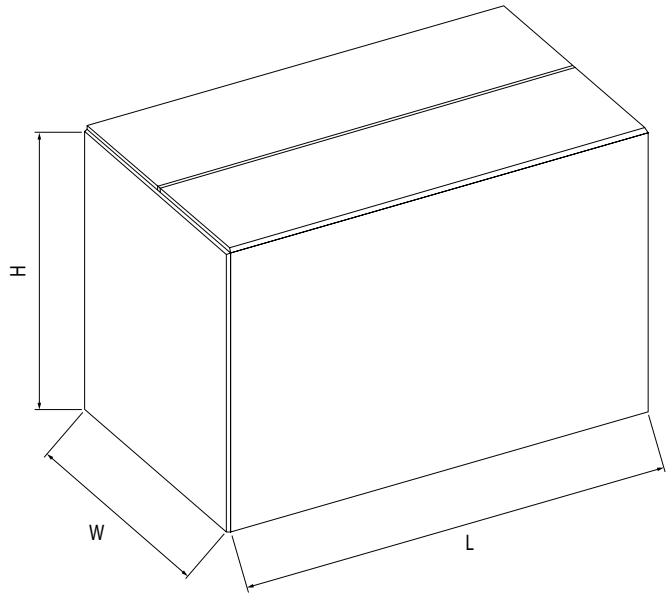
Model	Packing dimensions [mm]											Weight [kg]
	A	B	C	D	E	F	G1	G2	H1	H2	I	
SWX-050 M/T	640	298	380	243	281	323	275	134	190	154	Ø50/Ø63	12,8
SWX-075 M/T	640	298	380	243	281	323	275	134	190	154	Ø50/Ø63	14
SWX-100 M/T	640	298	380	243	281	323	275	134	190	154	Ø50/Ø63	14,3
SWX-150 M/T	640	298	380	243	281	323	275	134	190	154	Ø50/Ø63	16,7
SWX-200 M/T	685	298	380	243	281	323	275	134	190	154	Ø50/Ø63	17,7
SWX-300 M/T	685	298	380	243	281	323	275	134	190	154	Ø50/Ø63	20,4

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PACKAGING DIMENSIONS



The dimensions may change without notice.

Model	Packing dimensions [mm]			Weight
	W	L	H	kg
SWX-050 M/T	270	655	410	16,5
SWX-075 M/T	270	655	410	17,5
SWX-100 M/T	270	655	410	18,5
SWX-150 M/T	270	655	410	19,5
SWX-200 M/T	270	705	410	22
SWX-300 M/T	270	705	410	24

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MOTOR DATA

Model (Single Phase) 1~	Power		Efficiency	Capacitor		Efficiency (% load) and power factor				Input [kW]		Full load current [A]	Locked rotor current [A]
	[kW]	[HP]	[%]	[uF]	[V]	η% 50%	η% 75%	η% 100%	cos-φ	[kW]	[HP]	Single phase 230 V	230 V
SWX-050 M	0,37	0,5	73,5	16	450	61,5	70	73,5	0,98	0,68	0,91	2,5	9,5
SWX-075 M	0,55	0,75	74,3	16	450	66,5	72,7	74,3	0,98	0,95	1,27	3,5	13,9
SWX-100 M	0,75	1,0	77,6	20	450	68,5	74,2	77,6	0,96	1,0	1,33	4,6	21,9
SWX-150 M	1,0	1,33	79,7	35	450	66,5	75,9	79,7	0,99	1,2	1,6	5,7	25,2
SWX-200 M	1,1	1,5	79,7	35	450	72,3	78,5	79,7	0,93	1,5	2,0	6,3	31,4
SWX-300 M	1,5	2,0	82,7	35	450	73,6	80,4	82,7	0,99	2,1	2,8	8,4	43,3

Model (Three Phase) 3~	Power		Efficiency	Capacitor		Efficiency (% load) and power factor				Input [kW]		Full load current [A]		Locked rotor current [A]
	[kW]	[HP]	[%]	[uF]	[V]	η% 50%	η% 75%	η% 100%	cos-φ	[kW]	[HP]	Three phase 400 V	Three phase 230 V	230 V
SWX-050 T	0,37	0,5	74,6	-	-	69,3	72,3	74,6	0,78	0,65	0,87	0,98	1,72	5,2
SWX-075 T	0,55	0,75	77,9	-	-	74,2	77	77,9	0,82	0,91	1,22	1,36	2,38	7,2
SWX-100 T	0,75	1,0	82,6	-	-	79,5	82,3	82,6	0,86	1,0	1,33	1,72	3,01	13,6
SWX-150 T	1,0	1,33	82,7	-	-	77,6	80,1	82,7	0,76	1,15	1,54	2,2	3,85	18,6
SWX-200 T	1,1	1,5	82,7	-	-	79,4	82,3	82,7	0,88	1,4	1,88	2,43	4,25	18,7
SWX-300 T	1,5	2,0	84,6	-	-	84,2	85,3	84,6	0,89	2,0	2,68	3,22	5,64	25,4

NOISE DATA

Model		LpA - dB(A) *	
Single Phase	Three Phase		
SWX-050 M	SWX-050 T	60	60
SWX-075 M	SWX-075 T	62	62
SWX-100 M	SWX-100 T	62	62
SWX-150 M	SWX-150 T	62	62
SWX-200 M	SWX-200 T	64	64
SWX-300 M	SWX-300 T	68	68

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REV.A 09/25

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