Product description
IR50-200SB

Revision no

Page: 1

Receiver	From
Company name	
Respons. Department	
Person in charge	
Phone number	
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Pos.no	Qty.	Description
1		**0,6**
1.1	1	Centrifugal pump: IR50-200SB CLOSE-COUPLED END-SUCTION ELECTRIC PUMPS 3000 1/min IR50-200SB DESCRIPTION Close-coupled electric pump with axial suction and pump body with normalized dimensions according to EN733 Pumps and motors according to Directive 2009/125/CE (ErP). USES Suitables for recirculation, heating and heat recovery system, water supply facilities, pressurisation groups MEI index according to EU Regulation 547/2012 MEI > 0,6 CONSTRUCTIVE CHARACTERISTICS Back pull out design: the motor group and the rotating part of the pump, can be removed without having to remove the pump body from the piping of the plant Hydraulics: pump body with dimensions and performances according to EN733 standard (for the sizes covered), dynamically balanced closed impeller and balacing holes for balacing the axial thrust. All stainless steel shaft IMPELLER Impeller material: Cast iron EN-GJL-250 Impeller diameter: 208 mm FLANGES TYPE: UNI EN 1092-2/UNI EN 1092-1/2 - Outlet: DN 50 - Suction: DN 65 Flanges PN: up to DN 150: PN16, from DN 200: PN10. MOTOR Type: SAER MT2 - IE3 - 132-2P-17 Nominal power: 12.5 kW Voltage / Frequency / N. phases: 400 V / 50 Hz / 3~ Poles: 2 Motor efficiency: 91.5 % Efficiency class according to IEC 60034-30: IE3 Insulation class: F Protection: IP 55 Motor origin: SAER Made in Italy COATING Two-component epoxy coating suitable for contact with drinking water. Resistance to the corrosion corresponding to the cycle C3 durability medium according to EN12944-6 (on request cycle C5 durability medium) REQUESTED DATA Q=50 m³/h H=50 m CHARACTERISTIC DATA AT 3000 1/min Q=51.42 m³/h - Qmax=75 m³/h H=52.88 m Power requested at the duty point P2=11.2 kW Max power requested along the curve P2max=12.7 kW Temperature of the pumped liquid: from -15°C up to +120°C Maximum working pressure (maximum pressure allowable considering the sum of the maximum pressure in suction and of the head at shut off): PN 16 Max environment temperature: 40°C (for higher temperature, please, verify). INSTALLATION AND OPERATION CHARACTERISTICS The pumps series IR and IR4P can be positioned with horizontal axis, inclined or vertical as well but always with motor upward (vertical installation with motor upward allowed up to frame size 160 included. Contact SAER technical assistance for further information). The working features of this technical data sheet, the catalog and the plate are intended for continuous service and clean water (specific weight = 1000 kg/m3, kinematic viscosity = 1 mm2/s, temperature = 20°C) ACCESSORIES ON REQUEST Kit counterflanges PERFORMANCE TOLERANCES Pumps: UNI EN ISO 9906: 2012- Grade 3B, other levels on request. Motors: IEC 60034-1

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SAER ELETTROPOMPE	Technical data IR50-200SB	Revision no	Page: 2

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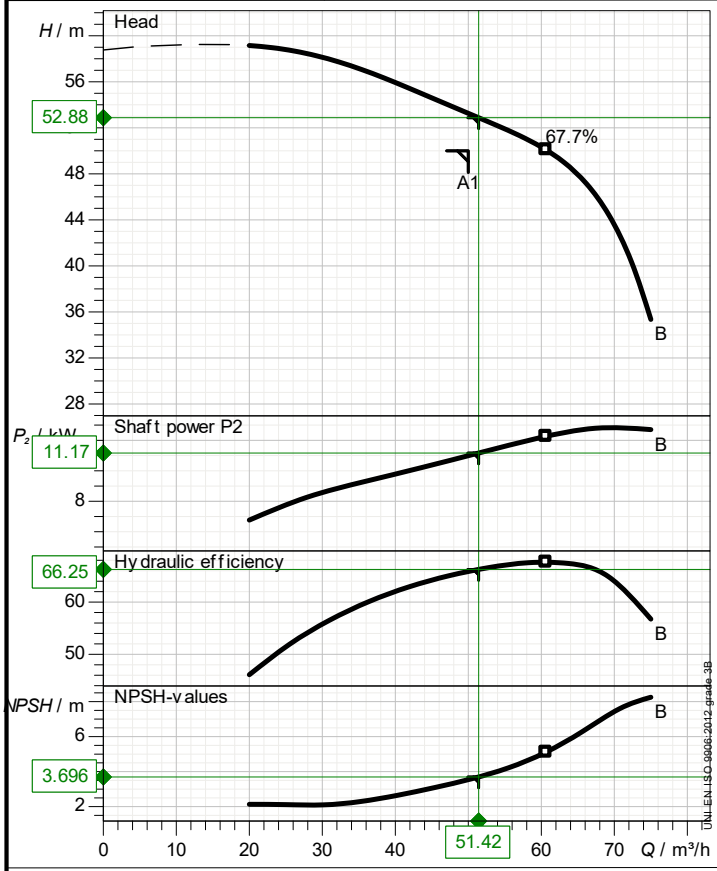


Operating data specification

Nominal flow	m³/h	50
Nominal head	m	50
Static head	m	0
NPSH - value of plant	m	
Inlet pressure	kPa	0
Fluid		Water
Operating temperature t A	°C	20
Density at t A	kg/m³	998.3
Kin. viscosity at t A	mm²/s	1.005

Pump

Pump name		IR50-200SB		
Size		65/50/200		
MEI (Reg. 547/2002 EU) >		0,6		
Speed	1/min	3000	No of stages	1
Impeller type				
Flow	Nominal	m³/h	51.4	
	Max-	m³/h	75	
	Min-	m³/h	20	
Head	Nominal	m	52.9	
	Max-	m	59.2	
	Min-	m	35.3	
Head H(Q=0)		m	58.8	
NPSH 3%		m	3.7	
Max. working pressure		kPa	576	
Shaft power		kW	11.2	
Efficiency		%	66.3	
Max absorbed power		kW	12.871	

Materials Pump

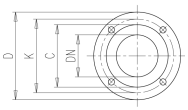
Shaft	Stainless steel AISI 431 (1.4057)
Impeller	Cast iron EN-GJL-250
Pump body	Ductile Cast iron EN-GJS-500
Seal disc	Ductile Cast iron EN-GJS-500
Gasket	Aramidic fiber
Mech. seal EN 12756 (**AQ1EGG**)	
Seal face	Carbon impregnated with antimony
Seat	Silicon carbide
Rubber elements	Rubber EPDM
Spring and metal bellows	Stainless steel AISI 316 (1.4401)

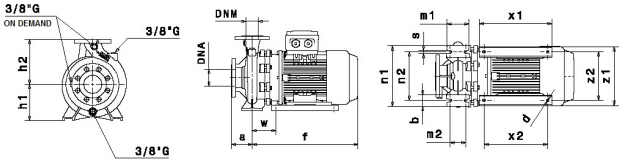
Motor	Manufacturer / Type		SAER	132-2P-17	
Efficiency	IEC 60034-30		IE3		
Rated power	kW	12.5 SF 1	Efficiency 4/4		91.5 %
Number of poles		2	Frame size		132
Electric current	A	22.7	Speed	1/min	2949
Electric voltage	V	400	3~	Hz	50
Starting mode		Unknown			
Degree of protection		IP 55	Insulation class		F

Dimensions in mm

"f	564"	z2	212
a	100		
b	50		
d	12		
h1	160		
h2	200		
m1	100		
m2	70		
n1	265		
n2	212		
s	14		
w	113		
x1	100		
x2	70		
z1	265		

DNM		DNA	
C	102	C	122
D	165	D	185
DN	50	DN	65
K	125	K	145
n°	4 x 18mm	n°	4 x 18mm





Remarks:

MAIN_PROJECT_TITLE	BUSINESS_PROCESS_ID	OWNER_	ISSUE_DATE	LAST_MODI_DATE
			2025-03-10	**2025-03-10**

Performance curves
IR50-200SB

Revision no

Page: 3

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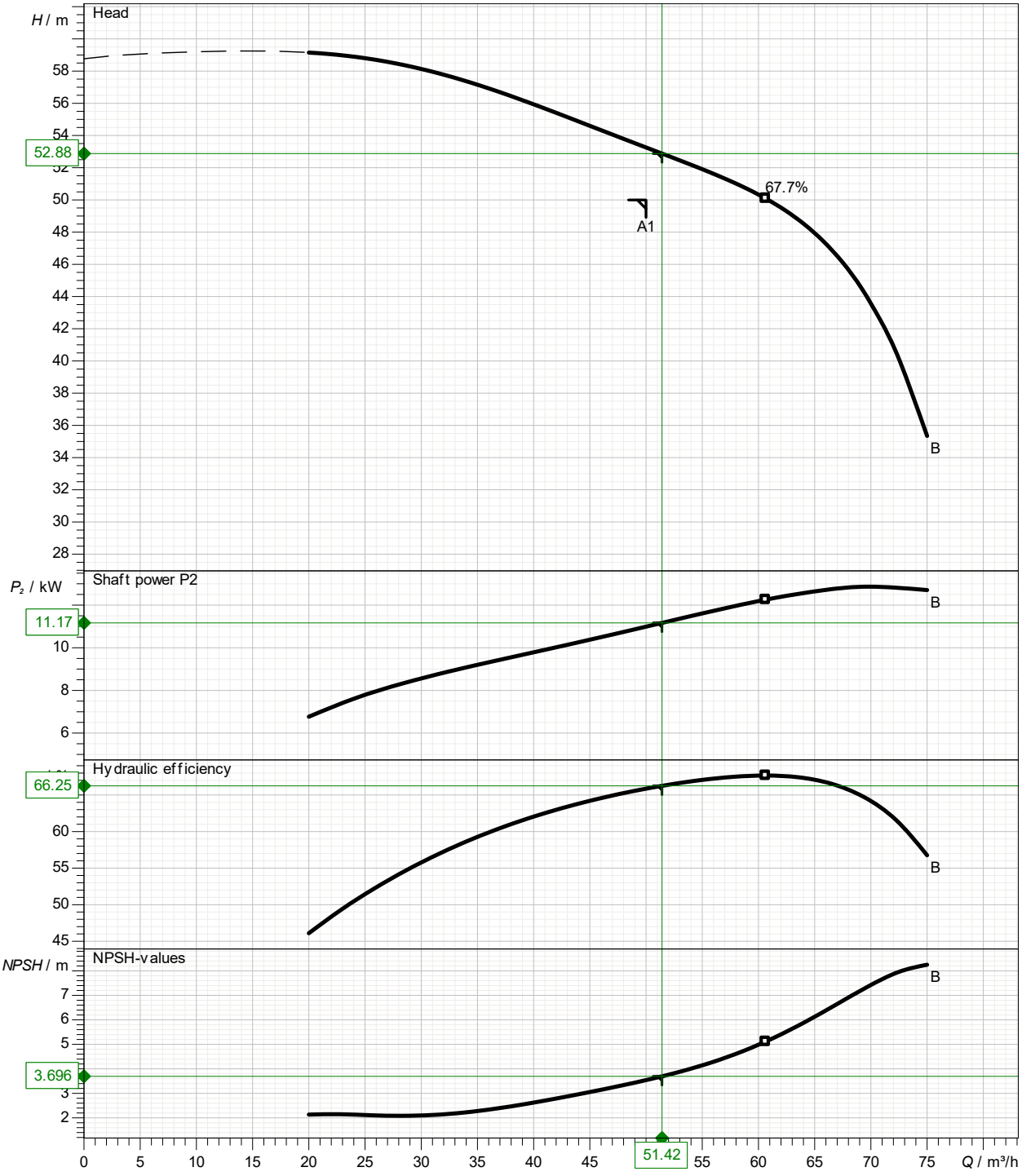
Operating area	Flow		Head	
Operating data specification	50	m³/h	50	m
Pump data	51.4	m³/h	52.9	m

	Flow			Head		Shaft power P2		
	Min.	Max.	η Max.	H(Q=0)	η Max.	P2(Q=0)	Max.	η Max.
	m³/h	m³/h	m³/h	m	m	kW	kW	kW
	20	75	60.6	58.8	50.1	6.77	12.9	12.3

Impeller type		
Impeller construction	Closed	
Sense of rotation	Clockwise from the drive end	
Outlet width	DN50	
Speed	1/min	3000
Frequency	Hz	50 Hz

Performance data based to: Water; 20°C; 998.3kg/m³; 1.005mm²/s

UNI EN ISO 9906:2012 - Grade 3B



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SAER ELETTROPOMPE

Revision no

Motor

IR50-200SB

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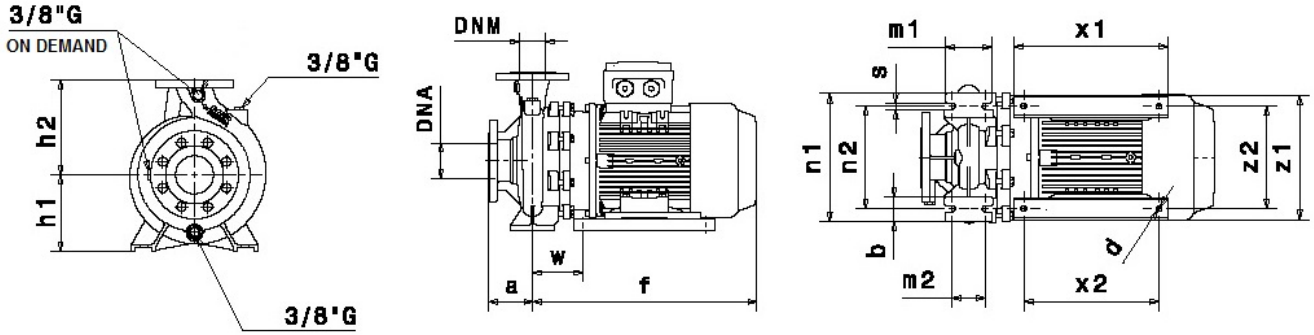
Pump dimensions



Disegni dimensionali e immagini non vincolanti.Saer si riserva il diritto di effettuare cambiamenti senza alcun preavviso.
Dimensional drawing and picture are not binding.Saer reserves the right to make changes without prior notice.

Connections

Suction side	Discharge port
DN65	DN50
PN10/16	PN10/16

Dimensions in mm

"f	564"		
a	100		
b	50		
d	12		
h1	160		
h2	200		
m1	100		
m2	70		
n1	265		
n2	212		
s	14		
w	113		
x1	100		
x2	70		
z1	265		
z2	212		

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SAER ELETTROPOMPE	Technical data IR50-200SB	Revision no	Page: 5

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Operating data specification		Data	Unit
Type		SAER MT2 - IE3	
Frame			
Mounting		Pump dimensions	
Rated power	Pn	12.5	kW
Rated voltage		400	V
Rated frequency		50	Hz
Rated speed	n	2949	
Service factor		1	
Rated current	In	22.7	A
Service factor current	Isf	-	A
Nominal motor torque	Tn	40.477	Nm
Thermal class / Temperature rise		F / B	
Starting current	Is/In	9.1	
Locked rotor torque	Ti/Tn	2	
Max. torque	Tm/Tn	4.4	
Efficiency Class IEC 60034-30			
Efficiency	η	50% 75% 100% 91.5 92.2 91.5	%
Power factor	cos φ	0.87	
Sound pressure level LpA - 1 m			dBA
Type of duty		S1	
Cooling		IC441	
Degree of protection		IP 55	
Ambient temperature		40	°C
Max. installation site elevation		1000	
Moment of inertia	J		kg m²
Bearing design		Radial ball bearing with permanent grease	
Bearing type		DE: 6208-2Z / NDE: 6208-2Z	
Sense of rotation		CW / CCW	
Terminal box position		At top	
Cable entry (Number x hole type)		2 x M32x1.5	
Weight		63	

Power loss/Rated power at different speed-torque operating points

25%-25%	25%-100%	50%-25%	50%-50%	50%-100%	90%-50%	90%-100%	
1.5	8.7	2.1	3.6	8.8	5.6	11	%

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