

		Product description IR80-2000		Revision no 	Page: 1
Company name Respons. Department Person in charge Phone number Fax no E-mail address		Receiver	From		
Pos.no	Qty.	Description			
1		0,7			
1.1	1	Centrifugal pump: IR80-2000 CLOSE-COUPLED END-SUCTION ELECTRIC PUMPS 3000 1/min IR80-2000 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 Suitable for recirculation, heating and heat recovery system, water supply facilities, pressurisation groups MEI index according to EU Regulation 547/2012 MEI > 0,7 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 balancing holes for balancing the axial thrust. All stainless steel shaft IMPELLER Impeller material: Cast iron EN-GJL-250 Impeller diameter: 215.5 mm FLANGES TYPE: UNI EN 1092-1/2 - Outlet: DN 80 - Suction: DN 100 Flanges PN: up to DN 150: PN16, from DN 200: PN10. MOTOR Type: SAER MT2 - IE3 - 225-2P-60 Nominal power: 45 kW Voltage / Frequency / N. phases: 400 V / 50 Hz / 3~ Poles: 2 Motor efficiency: 94.2 % 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=200 m³/h H=57 m CHARACTERISTIC DATA AT 3000 1/min Q=199.1 m³/h - Qmax=279.7 m³/h H=56.47 m Power requested at the duty point P2=37.7 kW Max power requested along the curve P2max=44.82 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		Revision no		Page: 2	
	IR80-200O					
Receiver		From				
Company name						
Respons. Department						
Person in charge						
Phone number						
Fax no						
E-mail address						
H / m Head 60 56.47 50 45 40 35 30 25 0 40 80 120 160 199.1 240 Q / m³/h P₂ / kW Shaft power P2 30 37.75 20 0 40 80 120 160 199.1 240 Q / m³/h NPSH / m NPSH-values 4 5.92 0 40 80 120 160 199.1 240 Q / m³/h Eff. 80.8% A1 O O O Operating data specification Nominal flow m³/h 200 Nominal head m 57 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 IR80-200O Size 100/80/200 MEI (Reg. 547/2002 EU) > 0,7 Speed 1/min 3000 No of stages 1 Impeller type Flow Nominal m³/h 199 Max- m³/h 280 Min- m³/h 80 Head Nominal m 56.5 Max- m 64.1 Min- m 40.5 Head H(Q=0) m 62.2 NPSH 3% m 5.92 Max working pressure kPa 609 Shaft power kW 37.7 Efficiency % 80.7 Max absorbed power kW 45.021						

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

Aramid 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

225-2P-60

Efficiency

IEC 60034-30

IE3

Rated power

kW

45

SF

1

Efficiency 4/4

94.2 %

Number of poles

2

Frame size

225

Electric current

A

78.7

Speed

1/min

2976

Electric voltage

V

400

3~

Hz

50

Starting mode

Unknown

Degree of protection

IP 55

Insulation class

F

Remarks:

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Dimensions in mm

a

125

DNM

DNA

b

65

C

138

C

158

h2

250

D

200

D

220

m1

125

DN

80

DN

100

m2

95

K

160

K

180

n1

345

n°

8 x 18mm

n°

8 x 18mm

n2

280

s

14

3/8" G

OR DEBAND

h1

h2

3/8" G

3/8" G

DNM

DNA

a

b

f

m1

x1

n1

n2

d

m2

x2

z2

z1

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.

Receiver

From

Company name

Respons. Department

Person in charge

Phone number

Fax no

E-mail address

Operating area

Flow

Head

Impeller type

Operating data specification

200

m³/h

57

m

Impeller construction

Closed

Sense of rotation

Clockwise from the drive end

Pump data

199

m³/h

56.5

m

Outlet width

DN80

Speed

1/min

3000

Frequency

Hz

50 Hz

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

80

280

204

62.2

55.8

23.6

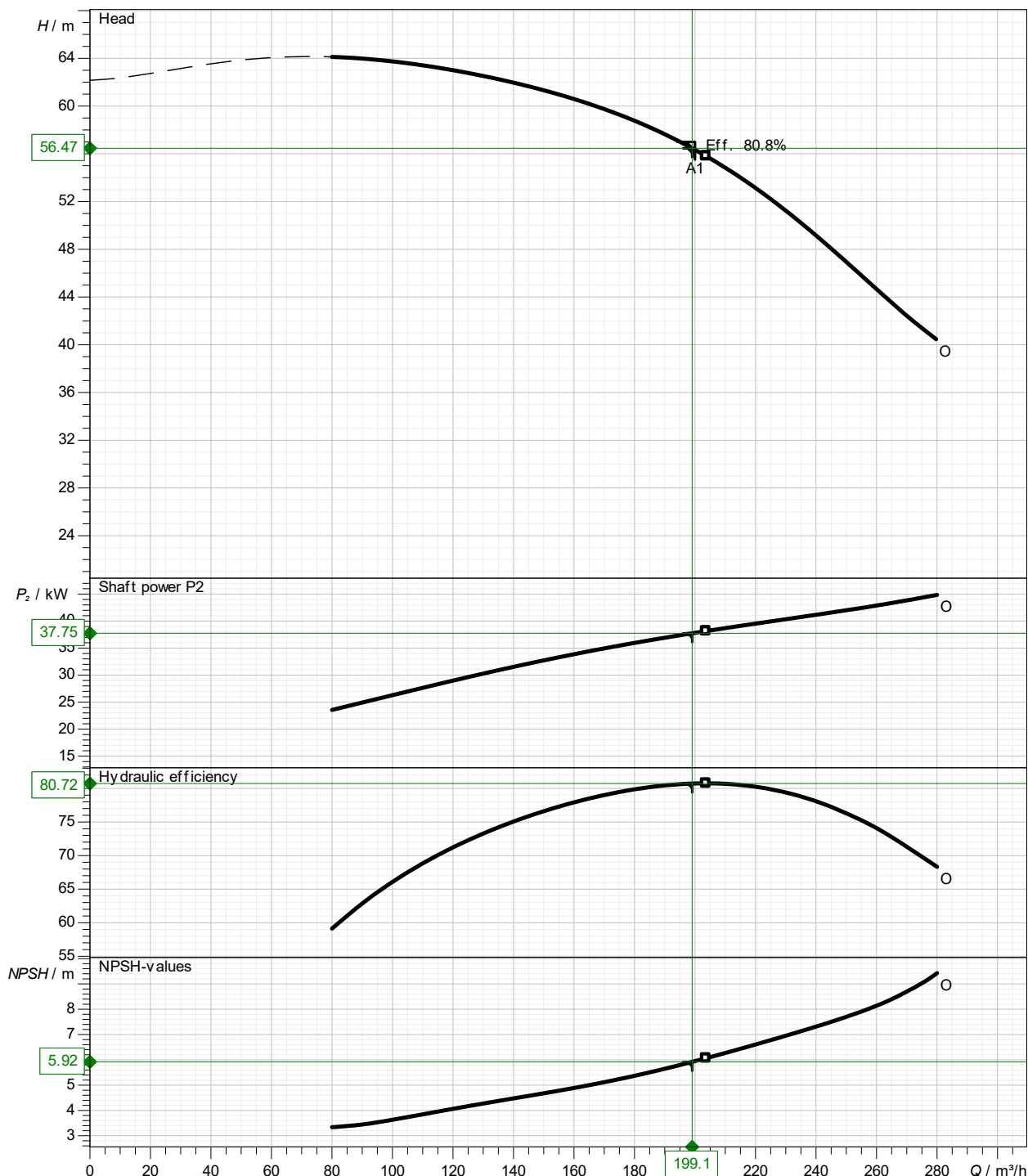
45

38.1

Performance data based to:

Water; 20°C; 998.3kg/m³; 1.005mm²/s

UNI EN ISO 9906:2012 - Grade 3B



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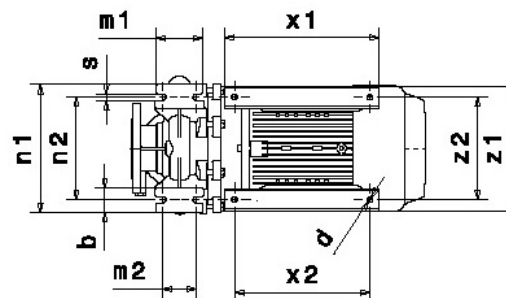
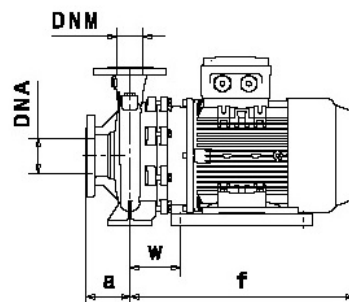
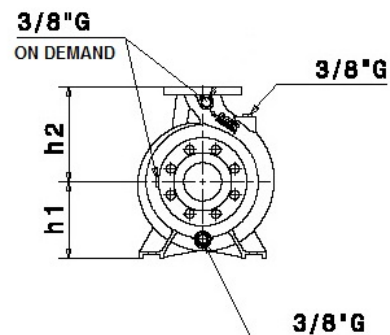
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Pump dimensions



Disegni dimensionali e immagini non vincolanti. Saer si riserva il diritto di effettuare cambiamenti senza alcun preavviso.

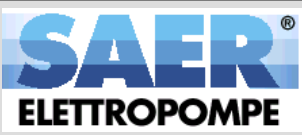
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Connections

Suction side	Discharge port
DN100	DN80
PN10/16	PN10/16

Dimensions in mm

a	125		
b	65		
h2	250		
m1	125		
m2	95		
n1	345		
n2	280		
s	14		

	Technical data IR80-200O				Revision no 		Page: 5		
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Company name Respons. Department Person in charge Phone number Fax no E-mail address									
Operating data specification		Data					Unit		
Type		SAER MT2 - IE3							
Frame		225SM							
Mounting		Pump dimensions							
Rated power P _n		45					kW		
Rated voltage		400					V		
Rated frequency		50					Hz		
Rated speed n		2976							
Service factor		1							
Rated current I _n		78.7					A		
Service factor current I _{sf}		-					A		
Nominal motor torque T _n		144.39					Nm		
Thermal class / Temperature rise		F / B							
Starting current I _s /I _n		9							
Locked rotor torque T _l /T _n		1.8							
Max. torque T _m /T _n		3.9							
Efficiency Class IEC 60034-30		IE3 = Premium Efficiency							
Efficiency η		50% 75% 100% 93.6 94.3 94.2					%		
Power factor cos φ		0.88							
Sound pressure level L _{pA} - 1 m		79					dBA		
Type of duty		S1							
Cooling		IC411							
Degree of protection		IP 55							
Ambient temperature		40					°C		
Max. installation site elevation		1000							
Moment of inertia J		0.29724					kg m ²		
Bearing design		Radial ball bearing with greaser							
Bearing type		DE: 6314-Z / NDE: 6314-2Z							
Sense of rotation		CW / CCW							
Terminal box position		At top							
Cable entry (Number x hole type)		2+1 x n°2 PG42 + n°1 PG9							
Weight		300							
Power loss/Rated power at different speed-torque operating points									
25%-25%	25%-100%	50%-25%	50%-50%	50%-100%	90%-50%	90%-100%			
0.9	5	1.5	2.6	6	4.3	8.4	%		
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