



**Oil -Gas**

**OH2**

**Chemical process pump**

**Model**

**FS-ZE40-2200**

**((4-P45 A/B))**

**SR. NO FS-ZE 19811011**

EBARA pumps Europe S.P.A  
SEDE LEGALE  
38023 CLES (TN)- italy -via Campo Sportivo ,30 Telefono +39 0463 660411  
PART. IVA IT 01234660221  
R.E.A.N. 124581 TRENTO

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SEDE OPERATIVA E COMMERCIAIE  
36053 CABELLARA(VI)- Italy -Via Torri di Confine 2/1int. c Telefono  
:+390444706811  
E-mail: ebarapums.epe@ebaracom  
PEC: amministrazione@pec.ebaraeurope.com

Contact to  
Galiano Palatella  
Export Sales Manger  
+393356423310



## Oil -Gas

<b>4-P45 A/B</b>	
Requested flow rate	28.43 m <sup>3</sup> /h
Requested developed head	41.72 m
Pumped medium	RO salinated water
Temperature	138.5 °C
Fluid density	914.8 kg/m <sup>3</sup>
Fluid viscosity (cP)	0.2
Vapour pressure	3.91 kg/cm <sup>2</sup> a
Suction pressure max.	11.07 kg/cm <sup>2</sup> g
Efficiency	55.00%
Power Absorbed	30
Pump speed of rotation	2900rpm
NPSH required	3m
Discharge press.	13.82 kg/cm <sup>2</sup> .g
Stuffing box press.	VTA
Shutoff head	48m
Shutoff pressure	15kg/cm <sup>2</sup>
Differential pressure	2.75 kg/cm <sup>2</sup>
NPSH available	94.08 m
Ratio Q/Q <sub>bep</sub>	91.00%
Max. power on curve	23KW
low for continuous stab	VTA
Suction Flange Size & Rating	DN80 5MPa
Discharge Flange Size & Rating	DN40 5MPa
Shaft seal	As Per API 682
Shaft seal manufacture	EBARA
Sealing plan	API plan 23+61 (VTC)
Bearing bracket size	No. 2bearing box
Coupling Manufacturer	EBARA
Coupling type	Diaphragm coupling
Spacer length	140mm
Driver type	Electric Motor
Drive standard mech.	3-phase Electric Motor
Motor const. type	IBM-200L1-2-30
Motor speed	2985
Frequency	50 Hz
Rated voltage	380V
Rated power P2	30KW
Type of protection	EEx de IIB T4
Motor enclosure	IP55
Volute casing (102)	Cast Steel
Casing cover (161)	Cast Steel
Shaft (210)	2Cr13
Impeller (230)	Cast Steel

**EBARA pumps Europe S.P.A**



User Name :	
Device Name :	
4-P45 A/B	Quantity : 1
Equipment Name: Chemical Process Pumps	Pump Manufacturer : Ebara oil-Gas
Pump Model:FS-ZE40-2200	

Working Conditions		Material(s)	
Flow rate: 28.43	m3/h	Pump body: Cast steel	Impeller: Cast steel
Inlet gauge pressure: (rated/maximum)	MPa. G	Shaft: 2Cr13	
Outlet gauge pressure:	MPa. G	Mechanical seal flushing plan: PLAN21+61	
Lift (H, m) 41.72 m	(NPSH) a : 94.08 m	Bearing: SKF	Brand: SKF
Usage : <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> intermittent (Number of starts/per day)		Coupling: 140	

Medium

Name: RO salinated water water
Working temperature: 138.5°C
Medium density: 914.8 kg/m3
Viscosity (CP): 0.2

H2S (Hydrogen Sulfide) Concentration (PPM)	Medium Characteristics: <input type="checkbox"/> Corrosive <input type="checkbox"/> Abrasive <input type="checkbox"/> Toxic
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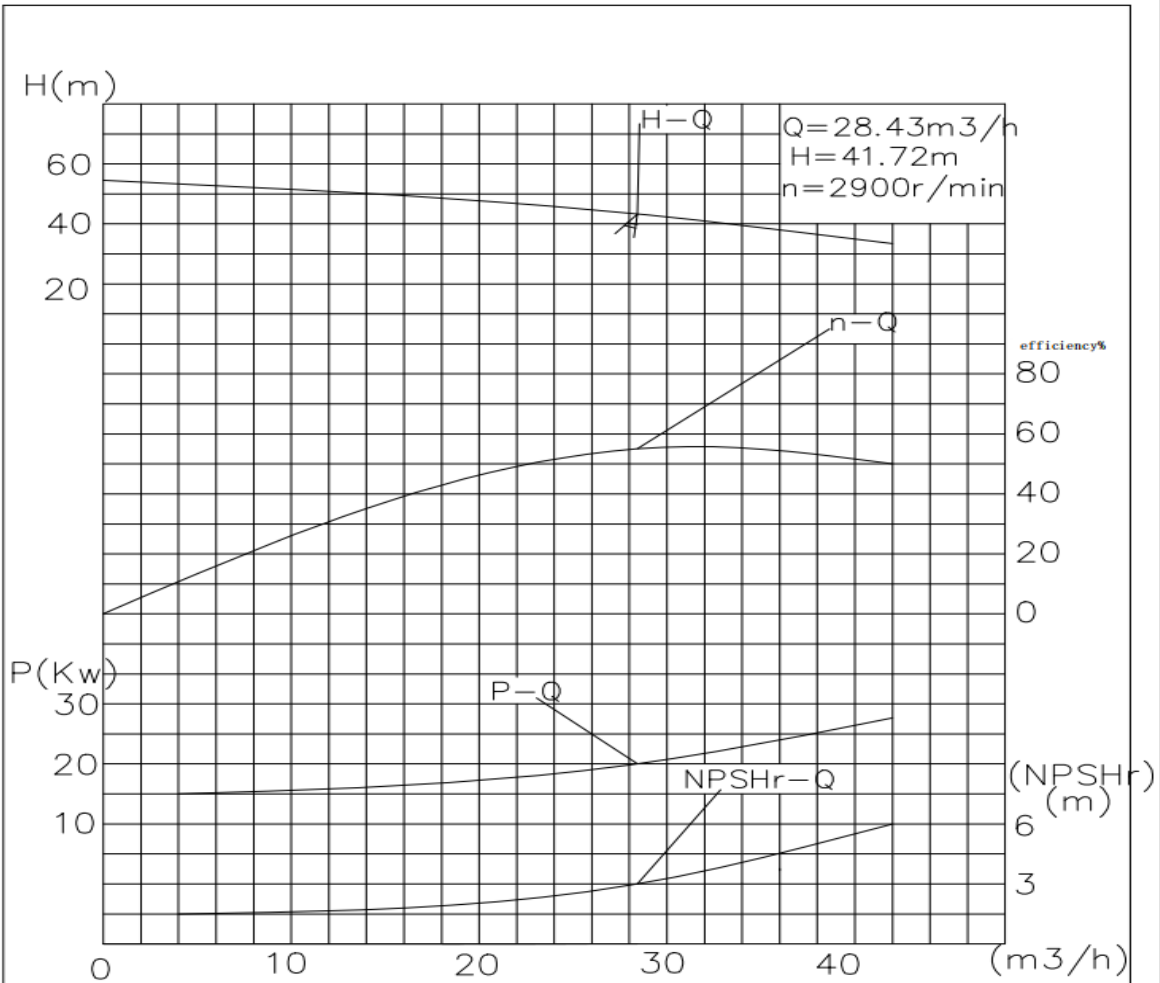
Pump performance and structure

Pump speed of rotation:2985rpm	Efficiency: 55%	Shaft power: 20kW
Impeller diameter (rated): 180mm	Impeller diameter (maximum): 200 mm	
Impeller diameter (minimum): 150 mm		
MCSF: 14 m3/h	NPSHr: 3 m	
Maximum head at rated diameter: 50m		
From rated head to shutoff head: 94%	Head ratio (rated/maximum): 96%	
Flow rate (Best Efficiency Point, BEP): 32 m3/h	Flow ratio (rated/BEP): 95 %	

Installation form: <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Horizontal							
Impeller form: <input checked="" type="checkbox"/> Closed <input type="checkbox"/> Open <input checked="" type="checkbox"/> Semi-open							
Pump Casing Split: Axial <input checked="" type="checkbox"/> Radial							
Pump casing type: <input checked="" type="checkbox"/> Single volute <input type="checkbox"/> Double volute <input type="checkbox"/> Guide casing (guide vane)							
Flange standard: GB9111.1-2000	cali ber mm	Flange pressure rating	Sealing Face Type	Orientat ion position	Electric Motor		
					Model: <input checked="" type="checkbox"/>	IBM-200L1-2-30	
Suction port	80	5MPa	RF	Horizont al	Explosion-Proof High-Voltage Motor		
Discharge port	40	5MPa	RF	Vertical	Rated power: 30kW	Maximum power:	
Drain port	/	/	/	/	Number of Poles: 2	Speed2985 rpm	Frequency: 50 Hz
Pump casing design pressure: 5 MPa		Pump Casing Hydrostatic Test: 7.5 MPa			Voltage: 380 V	Number of phases : 3 PH	Frequency: 50 Hz
Maximum working pressure: 0.7MP		Maximum permissible suction pressure:4.3MPa Maximum permissible working pressure: 5MPa			Protection Rating: IP55	Explosion proof grade: BT4	Insulation grade: F
Bearing type: <input type="checkbox"/> Sliding bearing <input checked="" type="checkbox"/> Radial rolling					Incoming line of junction box:	Method:	Number:
Bearing Lubrication: <input checked="" type="checkbox"/> Oil Bath/Grease <input checked="" type="checkbox"/> Oil Slinger							



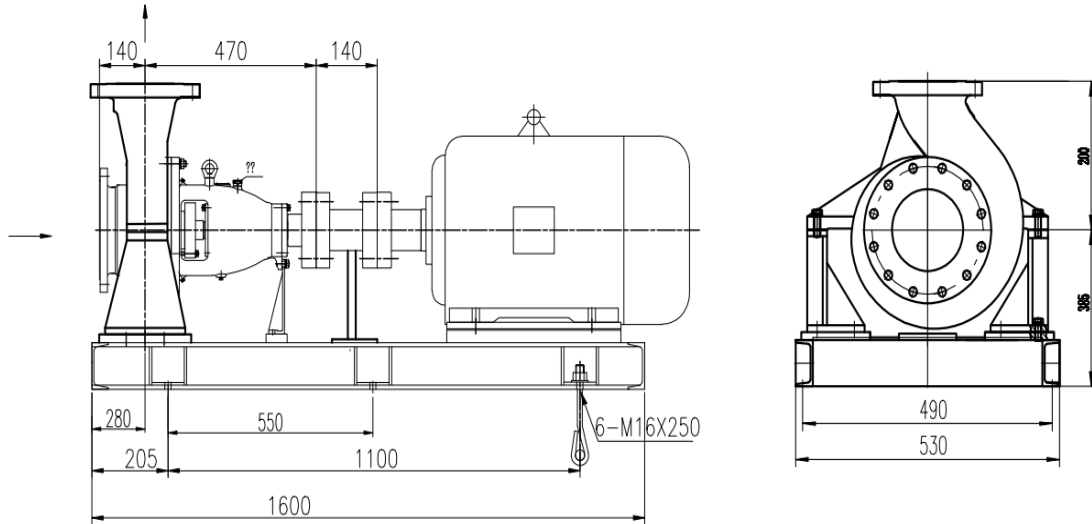
# Oil - Gas



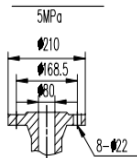
4-P45 A/B	(OH2) Chemical Process Pump	ZE40-2200-00	28.43	41.72	2	API610 standard production, mechanical seal meets API682 standard, material: cast steel, cartridge mechanical seal, mechanical seal flushing plan PLAN 21+61() SKF bearings, supply scope pump head + base + diaphragm coupling.
	Explosion -proof motor	IBM-200L1-2-30	30KW	2985r/min	2	*Drive standard machine: three-phase motor Motor model: IBM-200L1-2-30 Motor speed: 2950 Frequency: 50 Hz Rated voltage: 380V Rated power: 30KW Protection level: Ex de IIB T3 Motor protection level: IP55



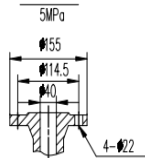
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Imported flange



Outlet flange



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	Explosion -proof motor	IBM-200L1-2-30	30KW	2985r/min	2	"Drive standard machine: three-phase motor Motor model: IBM-200L1-2-30 Motor speed: 2950 Frequency: 50 Hz Rated voltage: 380V Rated power: 30KW Protection level: Ex de IIB T3 Motor protection level: IP55