



**Oil -Gas**

**OH2**

**Chemical process pump**

**Model**

**FS-ZE150-500**

**4-P05AB**

**SR. NO.FS-ZE19811003**

EBARA pumps Europe S.P.A  
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R.E.A.N. 124581 TRENTO

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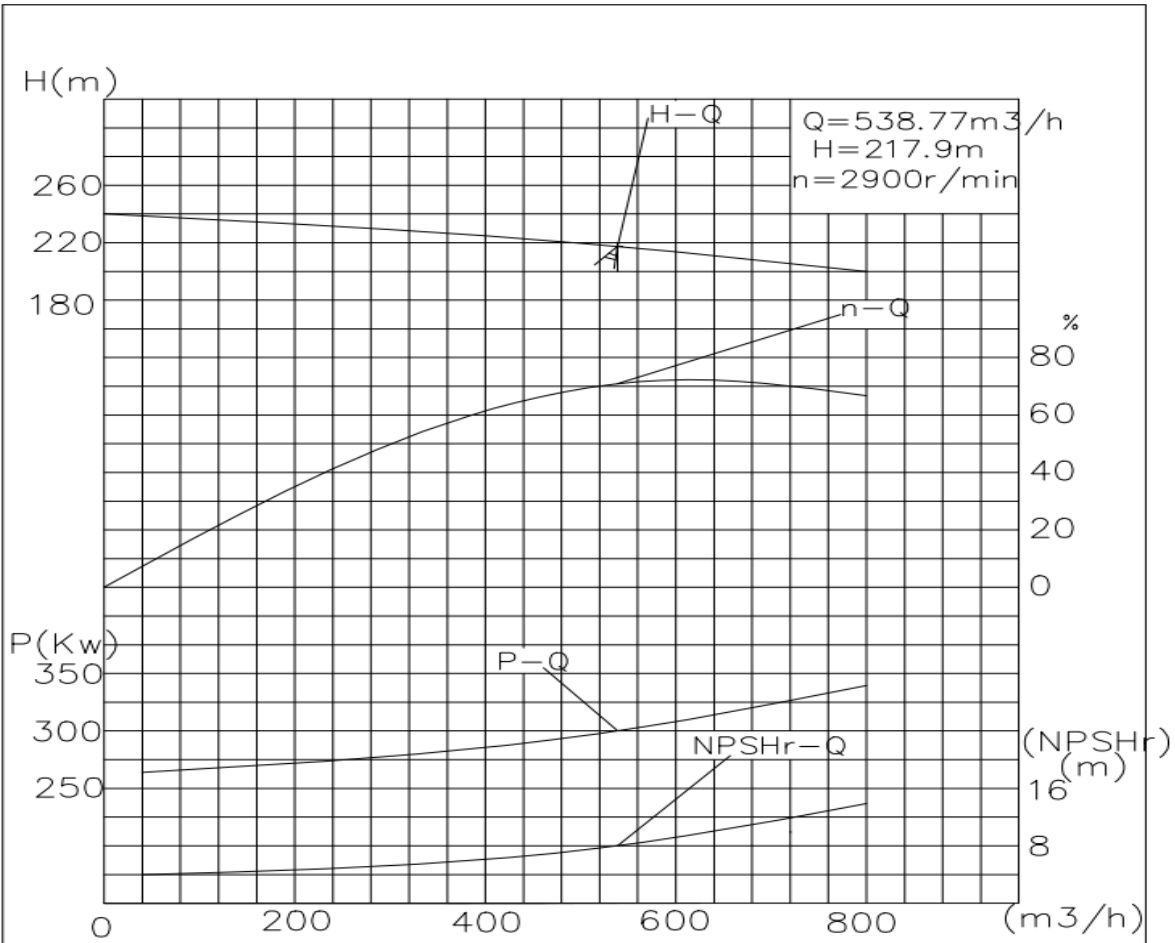
User Name :	
Device Name :	
4-P05AB	Quantity : 1
Equipment Name: Chemical Process Pumps	Pump Manufacturer : Ebara oil-Gas
Pump Model:FS-ZE150-500	

Working Conditions		Material(s)	
Flow rate: 538.77	m <sup>3</sup> /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: PLAN23+52	
Lift(H,m) 217.9 m	(NPSH)a : 22.79 m	Bearing: SKF	Brand: SKF
Usage : <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> intermittent(Number of starts/per day)		Coupling: 250	
Medium			
Name: light gas oil			
Working temperature:268.76°C			
Medium density:616.87kg/m <sup>3</sup>			
Viscosity (CP): 0.19			
H <sub>2</sub> S (Hydrogen Sulfide) Concentration (PPM)		Medium Characteristics: <input type="checkbox"/> Corrosive <input type="checkbox"/> Abrasive <input type="checkbox"/> Toxic	
Pump performance and structure			
Pump speed of rotation:2985rpm	Efficiency: 70 %	Shaft power: 300kW	
Impeller diameter (rated): 450mm		Impeller diameter (maximum): 500 mm	
Impeller diameter (minimum): 400 mm			

MCSF:270m <sup>3</sup> /h    NPSH: 8m							
Maximum head at rated diameter: 230m							
From rated head to shutoff head: 93%				Head ratio (rated/maximum): 97%			
Flow rate (Best Efficiency Point, BEP): 600m <sup>3</sup> /h				Flow ratio (rated/BEP): 88 %			
Installation form: <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Horizontal							
Impeller form: <input checked="" type="checkbox"/> Closed <input type="checkbox"/> Open <input 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	caliber mm	Flange pressure rating	Sealing Face Type	Orientation position	Electric Motor		
					Model: <input checked="" type="checkbox"/>	IBM-4001-355	
Suction port	150	5MPa	PF	Horizontal	Explosion-Proof High-Voltage Motor		
Discharge port	150	5MPa	PF	Vertical	Rated power: 355kW	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: 3300 V	Number of phases : 3 PH	Frequency: 50 Hz
Maximum working pressure: 2.4MPa		Maximum permissible suction pressure:2.6MPa 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							



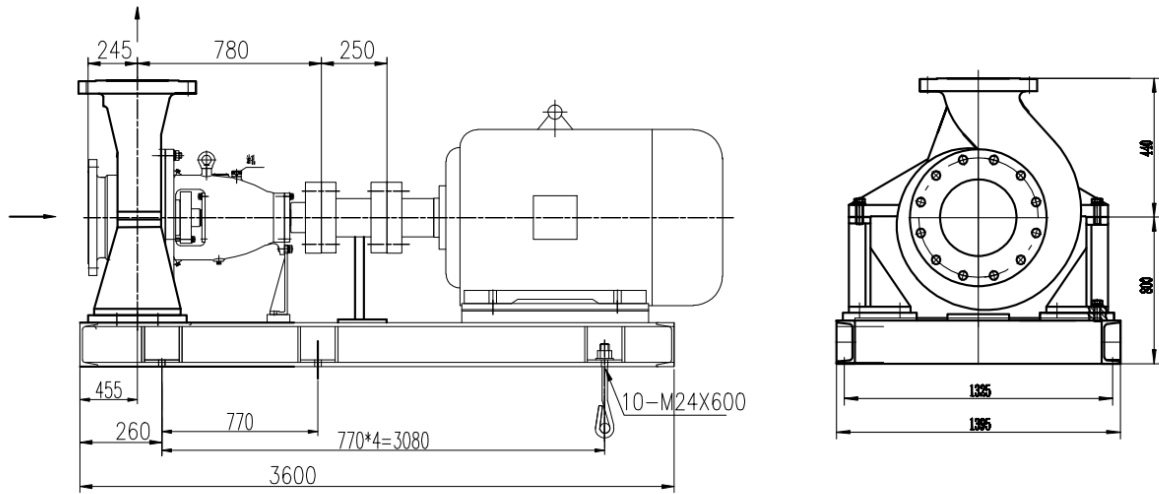
# Oil -Gas



Line Item	name	model	flow: Q (m3/h)	Lift (H, m)	Quantity	Remark
4-P05AB	(OH2) Chemical Process Pump	FS-ZE150-500	538.77	217.9	2	API610 standard production, mechanical seal meets API682 standard, material: cast steel, cartridge mechanical seal, mechanical seal flushing solution PLAN 23+52 ( ) SKF bearing, supply scope pump head + base + diaphragm coupling,
	Explosion-proof motor	IBM-4001-355	355KW	2985r/min	2	*Drive standard machine: three-phase motor Motor model: IBM-4001-355 Motor speed: 2985 Frequency: 50 Hz Rated voltage: 3300V Rated power: 355KW Protection level: Ex de IIB T4 Motor protection level: IP55

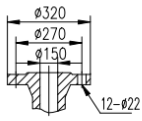


# Oil -Gas



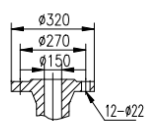
Imported flange

PN 5Mpa



Outlet flange

PN 5Mpa



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## Oil -Gas

<b>Requested flow rate</b>	538.77 m <sup>3</sup> /h
<b>Requested developed head</b>	217.9 m
<b>Pumped medium</b>	light gas oil
<b>Temperature</b>	268.76 °C
<b>Fluid density</b>	616.87 kg/m <sup>3</sup>
<b>Fluid viscosity (cP)</b>	0.19
<b>Vapors pressure</b>	2.5 kg/cm <sup>2</sup> a
<b>Suction pressure max.</b>	1.47 kg/cm <sup>2</sup> g
<b>Efficiency</b>	71.00%
<b>Power Absorbed</b>	355
<b>Pump speed of rotation</b>	2900rpm
<b>NPSH required</b>	8m
<b>Discharge press.</b>	9 kg/cm <sup>2</sup> .g
<b>Stuffing box press.</b>	VTA
<b>Shutoff head</b>	250m
<b>Shutoff pressure</b>	16kg/cm <sup>2</sup>
<b>Differential pressure</b>	6.75 kg/cm <sup>2</sup>
<b>NPSH available</b>	22.79 m
<b>Ratio Q/Qbep</b>	90.00%
<b>Max. power on curve</b>	320KW
<b>low for continuous stab</b>	VTA
<b>Suction Flange Size &amp; Rating</b>	DN150 5MPa
<b>Discharge Flange Size &amp; Rating</b>	DN150 5MPa
<b>Shaft seal</b>	As Per API 682
<b>Shaft seal manufacture</b>	EBARA
<b>Sealing plan</b>	API plan 23+52
<b>Bearing bracket size</b>	No. 5 bearing box
<b>Coupling Manufacturer</b>	EBARA
<b>Coupling type</b>	Diaphragm coupling
<b>Spacer length</b>	250mm
<b>Driver type</b>	Electric Motor
<b>Drive standard mech.</b>	3-phase Electric Motor
<b>Motor const. type</b>	IBM-4001-2-355
<b>Motor speed</b>	2985
<b>Frequency</b>	50 Hz
<b>Rated voltage</b>	3300

<b>Rated power P2</b>	<b>355KW</b>
<b>Type of protection</b>	<b>EEx de IIB T4</b>
<b>Motor enclosure</b>	<b>IP55</b>
<b>Volute casing (102)</b>	<b>Cast Steel</b>
<b>Casing cover (161)</b>	<b>Cast Steel</b>
<b>Shaft (210)</b>	<b>2Cr13</b>
<b>Impeller (230)</b>	<b>Cast Steel</b>