



Oil -Gas

OH2

Chemical process pump

Model

FS-ZE150-5500

4-POIBT

SR.NO.FS-ZE 19811009

Steam Turbine

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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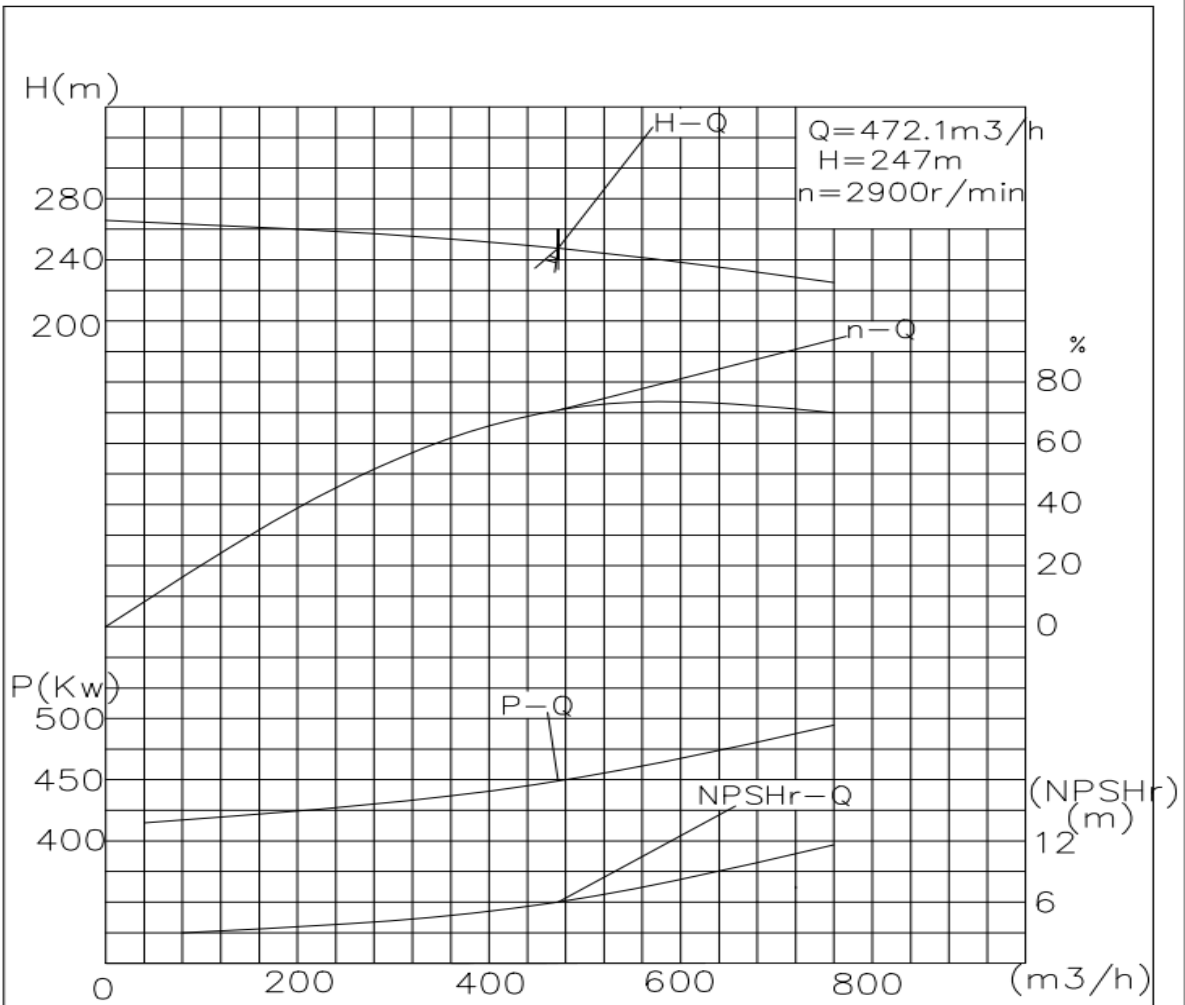
User Name :	
Device Name :	
4-P01BT	Quantity : 1
Equipment Name: Chemical Process Pumps	Pump Manufacturer : Ebara oil-Gas
Pump Model:FS-ZE150-5500	

Working Conditions		Material(s)	
Flow rate: 472.1	m ³ /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: PLAN11+61	
Lift(H,m) 247 m	(NPSH)a : 114.53 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:40°C			
Medium density:906.6kg/m ³			
Viscosity (CP): 50.15			
H ₂ 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: 75 %	Shaft power: 446kW	
Impeller diameter (rated): 450mm		Impeller diameter (maximum): 500 mm	
Impeller diameter (minimum): 400 mm			

MCSF:230m ³ /h NPSH: 6m							
Maximum head at rated diameter: 258m							
From rated head to shutoff head: 93%				Head ratio (rated/maximum): 97%			
Flow rate (Best Efficiency Point, BEP): 550m ³ /h				Flow ratio (rated/BEP): 86 %			
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	steam turbine		
					Model: <input checked="" type="checkbox"/>	N0.560-0.3	
Suction port	150	5MPa	PF	Horizontal	steam turbine		
Discharge port	150	5MPa	PF	Vertical	Rated power: 560kW	Maximum power:	
Drain port	/	/	/	/			
Pump casing design pressure: 5 MPa		Pump Casing Hydrostatic Test: 7.5 MPa					
Maximum working pressure: 2.8MP		Maximum permissible suction pressure:3.2MPa Maximum permissible working pressure: 5MPa					
Bearing type: <input type="checkbox"/> Sliding bearing <input checked="" type="checkbox"/> Radial rolling							
Bearing Lubrication: <input checked="" type="checkbox"/> Oil Bath/Grease <input checked="" type="checkbox"/> Oil Slinger							

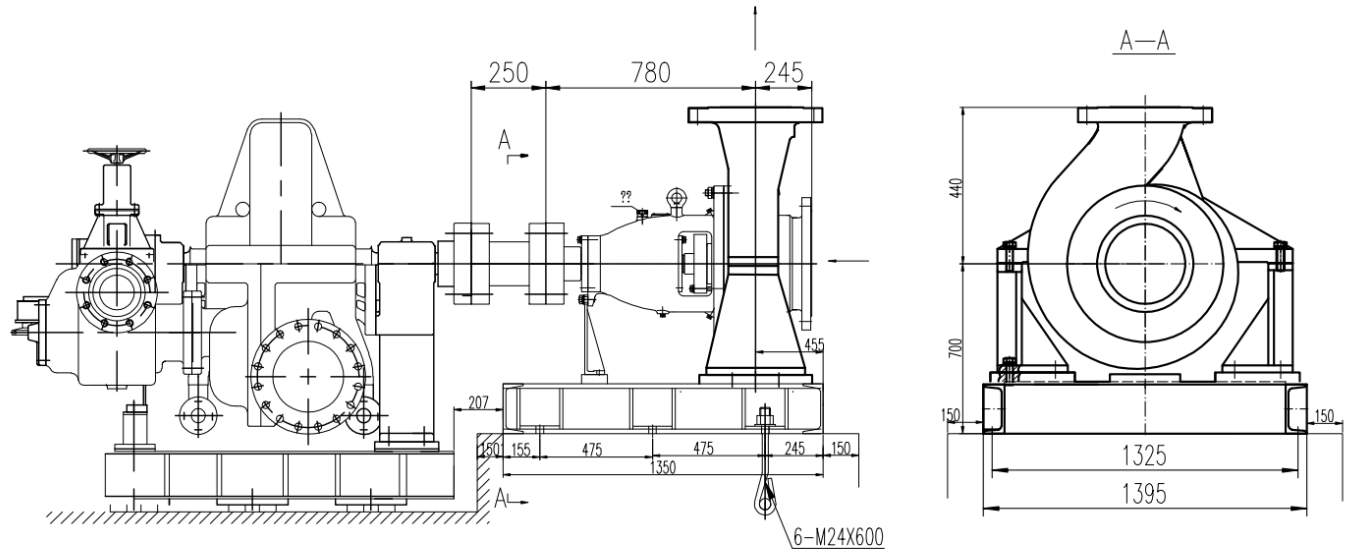


Oil - Gas



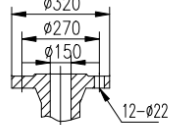
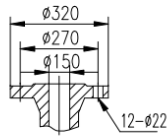
Line Item	name	model	flow: Q (m3/h)	Lift (H, m)	Quantity	Remark
4-P01 BT	(OH2) Chemical Process Pump	FS-ZE150-5500	472.1	247	1	API610 standard production, mechanical seal meets API682 standard, material: cast steel, cartridge mechanical seal, mechanical seal flushing plan PLAN 11+61 () SKF bearings, supply scope pump head + base + diaphragm coupling.
	Steam Turbine	N0.0.560-0.3	3000rpm	Inlet pressure 0.3MPa	1	Steam turbine body: N0.560-0.3 Steam turbine base, bolts, etc. are provided by the equipment factory Condenser: 140mm Control system: Siemens PLC Coupling: Shenyang Schenk

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Imported flange
PN 5Mpa

Outlet flange
PN 5Mpa



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Oil –Gas

Requested flow rate	472.1
Requested developed head	247.00
Pumped medium	crude oil
Temperature	40.0 °C
Fluid density	906.6
Fluid viscosity (cP)	50.15
Vapors pressure	0.847 kg/cm ² a
Suction pressure max.	10.0 kg/cm ² g
Efficiency	71.00%
Power Absorbed	560
Pump speed of rotation	2900rpm
NPSH required	6m
Discharge press.	23 kg/cm ² .g
Stuffing box press.	VTA
Shutoff head	284m
Shutoff pressure	35kg/cm ²
Differential pressure	13 kg/cm ²
NPSH available	114.53 m
Ratio Q/Qbep	97.00%
Max. power on curve	530KW
low for continuous stab	VTA
Suction Flange Size & Rating	DN150 5MPa
Discharge Flange Size & Rating	DN150 5MPa
Shaft seal	As Per API 682
Shaft seal manufacture	EBARA
Sealing plan	API plan 11+61
Bearing bracket size	No. 5 bearing box
Coupling Manufacturer	EBARA
Coupling type	Diaphragm coupling
Spacer length	250mm

Driver type	Steam Turbine
Drive standard mech.	VTA
Motor const. type	VTA
Motor speed	VTA
Frequency	50 Hz
Rated voltage	Note 8
Rated power P2	Note 8
Volute casing (102)	Cast Steel
Casing cover (161)	Cast Steel
Shaft (210)	2Cr13
Impeller (230)	Cast Steel