ErichHahn

EQUIPMENT
for pumping viscous liquids

TECHNICAL DESCRIPTION

Since 2014, ErichHahn has been designing and supplying equipment for the production, storage, and transportation of viscous and solidifying fluids. Our cumulative knowledge and experience allow us to be a provider of advanced industrial solutions on both regional and global levels. We deliver pumping equipment to the suppliers of bitumen for road construction, including terminals for storage and transportation of viscous and solidifying fluids, mobile and stationary modular plants, and units designed in accordance with individual customer requirements.

ErichHahn pumping equipment represents integrated solutions for pumping and distributing viscous petroleum products and thermal oils. The equipment ensures stable supply and precise control of fluid parameters within process systems. Integration of automation, heating, and monitoring systems guarantees reliable and efficient operation at oil and gas, petrochemical, and other industrial facilities, including sites with increased safety and reliability requirements.

ErichHahn's mission is to apply our technology and engineering expertise to improve our customers' production processes.

We strive to be a driving force behind our customers' process improvements, business development and production culture, following the principles of innovation, customer focus, reliability, safety and competence.

Bitumen pumping unit ErichHahn HPS

Bitumen pumping and distribution unit ErichHahn HPDU

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TECHNICAL DESCRIPTION

Erichhahn HPS

High viscous fluid pumping station

Purpose and Configuration of the Station

The HPS pumping station is designed for pumping viscous and solidifying petroleum products with a density of up to 1300 kg/m³ and a temperature of up to 200°C. All equipment is compactly mounted on a support frame.

Specifications

- Performance range: 30-200 m³/h
- Working pressure: 0.6 MPa
- Motor output: 11-55 kW
- Viscosity range: 20-1000 cSt

Scope of Delivery

- Gear pump
- Filter for viscous fluids
- Oil heating and insulation system
- Control cabinet

Why choose ErichHahn HPS

- Wide performance range for various industrial applications
- Petroleum product filtration reduces wear of equipment and pipeline systems
- Heating prevents thickening of viscous petroleum products during pumping
- Thermal insulation minimizes heat loss and maintains stable product temperature
- Parameter monitoring improves safety and stability of the process operation
- Automated control simplifies operation and maintenance of the pumping station

Unit Specification

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Main Technical Characteristics

Model	HPS-30	HPS-55	HPS-90	HPS-120	HPS-200
Working medium	Viscous and solidifying petroleum product				
Climatic conditions	Temperate climate				
Ambient temperature, °C	from -40 to +40				
Product operating temperature, max., °C	200				
Operating pressure, MPa	0,6				
Motor–gear unit					
Motor power, kW	11	18,5	30		55
Current frequency, Hz	50				
Electrical voltage, V	380				
Coupling	Elastic compensating coupling with spider				
ATEX categories for EX version	2 Ex IIA T4				
Pump					
Type	Gear pump				
Nominal diameter of inlet nozzle DN, mm	80	100	150	150	200
Nominal capacity, m³/h	30	55	90	120	200
Safety valve	Provided				
Filter					
Type	Mesh				
Nominal diameter of inlet nozzle DN, mm	80	100	150	150	200
Filter mesh size, mm	8				
Pressure drop across clean filter at maximum capacity and petroleum product viscosity of 300 cSt, max., MPa	0,01				
Allowable pressure drop across contaminated filter, MPa	0,1				
Thermal oil heating system					
Heat transfer medium	Thermal oil				
Nominal diameter of thermal oil pipelines, DN, mm	DN 25	DN 25	DN 40	DN 40	DN 40
Maximum oil temperature at a pressureof 6 kgf/cm², °C	200				
Overall dimensions					
Length L, mm	1600	2200	2500	2700	3000
Width W, mm	1150	1350	1550	1600	1850
Height H, mm	930	2000	2000	2000	2000
Unit weight, max., kg	550	900	1200	1350	1500
Service life, min., years	20				
Country of manufacture	Turkey				

Note: *Specifications are subject to change without notice..

TECHNICAL DESCRIPTION

ErichHahn HPDU

High viscous fluid Pumping and Distribution Unit

Purpose and Configuration of the Station

The ErichHahn HPDU unit is intended for continuous pumping and flow control of viscous petroleum products (up to 1000 cSt) at operating temperatures up to 200 °C. All equipment is compactly mounted on a support frame, ensuring efficient use of space.

Specifications

- Performance range: 90-200 m³/h
- Working pressure: 0.6 MPa
- Motor output: 30-55 kW
- Viscosity range: 20-1000 cSt
- Number of ways: 3 or 4-way distributor

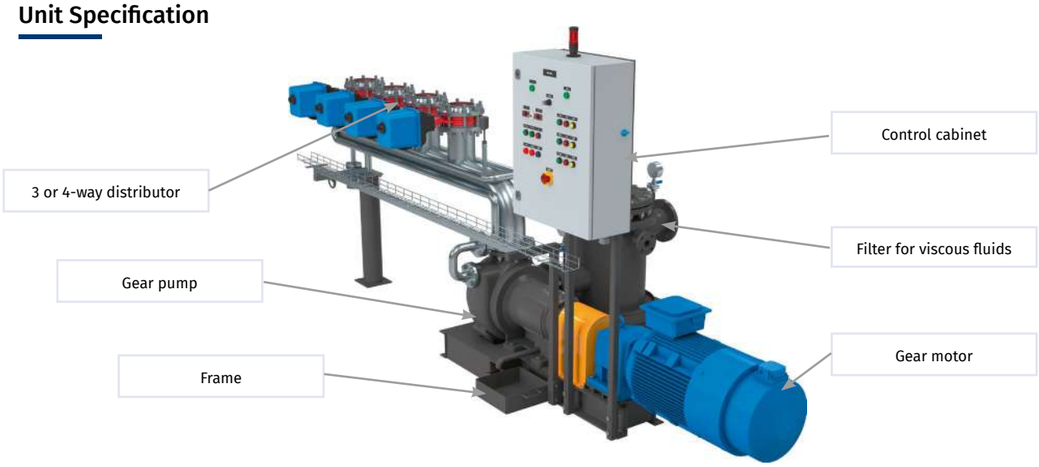
Why choose ErichHahn HPDU

- Ensures stable pumping of viscous petroleum products without pulsation even under high loads
- Modular design simplifies integration and adaptation to plant requirements
- Automatic flow distribution improves process control accuracy
- Efficient filtration extends equipment service life
- Heating and thermal insulation systems maintain stable medium parameters
- Compact design reduces installation space requirements

Scope of Delivery

- 3 or 4-way distributor
- Gear pump
- Gear motor
- Filter for viscous fluids
- Oil heating and insulation system
- Control cabinet

Unit Specification



Main Technical Specifications

Model	HPDU-90-3	HPDU-90-4	HPDU-120-3	HPDU-120-4	HPDU-200-3	HPDU-200-4
Working medium	Viscous and solidifying petroleum product					
Climatic conditions	Temperate climate					
Ambient temperature, °C	from −40 to +40					
Maximum operating product temperature, °C	200					
Operating pressure, MPa	0,6					
Number of distributor outlets	3	4	3	4	3	4
Motor–Gear Unit						
Motor power, kW	30				55	
Output speed, rpm	405				239	
Current frequency, Hz	50					
Electrical voltage, V	380					
Motor–gear unit protection rating	IP55					
ATEX categories for EX version	2 Ex IIA T4					
Coupling	Flexible jaw coupling with elastomer spider					
Pump						
Type	Gear type					
Nominal diameter of the filter inlet nozzle, DN, mm	DN 150				DN 200	
Nominal capacity, m³/h	90		120		200	
Relief valve	Provided					
Filter						
Type	Mesh type					
Nominal diameter of the inlet nozzle, DN, mm	150				200	
Filter element mesh size, mm	8					
Pressure drop across a clean filter at maximum capacity and petroleum product viscosity of 300 cSt, max., MPa	Not more than 0.01					
Allowable pressure drop across a contaminated filter, MPa	0,3					
Automation system	Remote I/O station					
Overall dimensions						
Length, L, mm	3500	4100	3900	4300	4900	4900
Width, W, mm	1800	1800	1800	1800	1800	1800
Height, H, mm	2000	2000	2000	2000	2000	2000
Unit weight, max., kg	1500	1600	1650	1750	2600	2600
Service life, min., years	10					
Country of manufacture	Turkey					

Note: *Specifications are subject to change without notice.

TECHNICAL DESCRIPTION

ErichHahn OPS

Oil pump station

Purpose and Configuration of the Station

The OPS thermal oil pumping station is designed for pumping and increasing the pressure of heat-transfer media (high-temperature oils) in thermal oil pipeline heating systems.
The OPS (A) oil station is equipped with a control three-way valve for optimal regulation of oil flow in the system. This valve allows automatic adjustment of the direction and volume of oil depending on equipment requirements, ensuring stable operation and efficient resource utilization.

Specifications

- Performance range: 65-200 m³/h
- Working pressure: 0.6 MPa
- Motor output: 15-37,5 kW
- Viscosity of the pumped fluid: not more than 10 cSt

Scope of Delivery

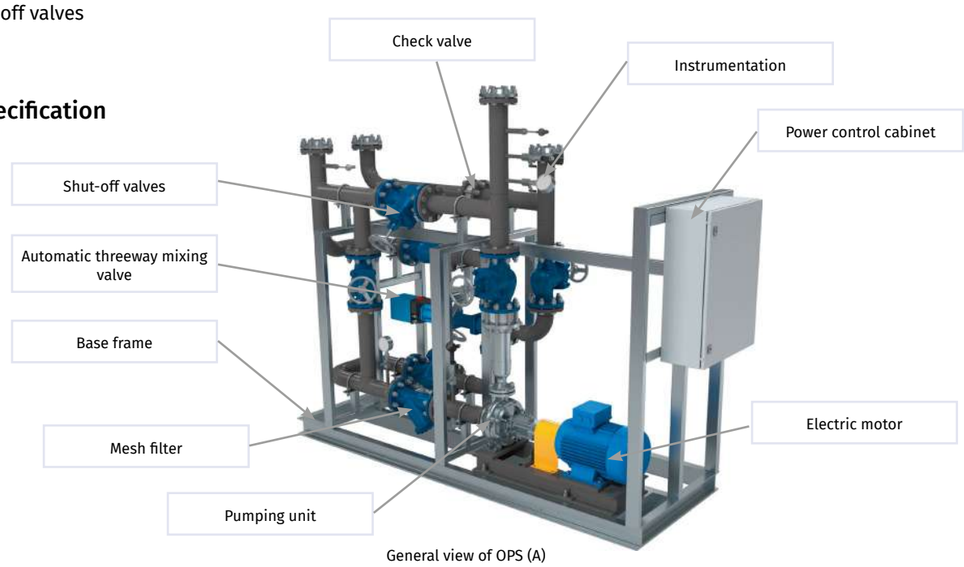
- Centrifugal pump
- Electric motor
- Mesh filter
- Control valve
- Check valve
- Shut-off valves
- Instrumentation devices
- Control panel
- Thermal insulation
- Support frame

Why choose ErichHahn OPS

- Ensures stable pumping and pressure maintenance of thermal oil in process systems
- Precise flow control improves process efficiency
- Automation and monitoring systems ensure reliable and safe operation
- Compact skid-mounted design simplifies installation
- Flexible product range allows adaptation to various production requirements

The pumping station has been designed in accordance with the European standard EN 809 + A1:2009 + AC:2010 “Pumps and pump units for liquids — General safety requirements.”

Unit Specification



General view of OPS (A)

Main Technical Specifications

Model	OPS-65	OPS-120	OPS-150	OPS-200
Working medium	High-temperature oils			
Climatic conditions	Temperate climate			
Ambient temperature, °C	from -25 to +40			
Maximum viscosity of the pumped product, cSt	10			
Maximum operating temperature of the product, °C	200			
Operating pressure, MPa	0,6			
Pump unit				
Capacity, m³/h	65	120	150	200
Electric motor power, kW	15	22	30	37.5
Pump type	Centrifugal pump			
Power supply frequency, Hz	50			
Voltage, V	380			
Degree of enclosure protection against environmental impact				
Automation protection rating, not lower than	IP44			
Control panel protection rating, not lower than	IP65			
Filter	Mesh filter			
Nominal diameter of the filter inlet nozzle, DN, mm	100	150	150	200
Mesh size, mm	3			
Thermal insulation				
Insulation thickness, mm	100			
Casing sheet thickness, mm	0,5			
Overall dimensions				
Length, L, mm	3000	3000	3000	4000
Width, W, mm	1100	1000	1000	1200
Height, H, mm	2300	2500	2500	2700
Unit weight, not more than, kg	1100	1150	1200	2000
Service life, not less than, years	10			
Country of manufacture	Turkey			

Note: *Specifications are subject to change without notice

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TECHNICAL DESCRIPTION

ErichHahn OSM-PS

Oil Pumping and Distribution Station

Purpose and Configuration of the Station

The ErichHahn OSM-PS(A) oil pumping and distribution unit is designed for supplying and evenly distributing the heat transfer medium flow to consumers. All equipment is compactly mounted on a support frame with protective guards. The equipment and pipelines are covered with a layer of thermal insulation with a protective cladding.The unit provides the possibility to stop heating of individual consumer lines in both manual and automatic operating modes.

Specifications

- Performance range: 50-150 m^3/h
- Nominal process pressure: 0.6 MPa
- Motor output: 12-22 kW
- Viscosity of the pumped fluid: not more than 10 cSt
- Number of ways: 6 or 12

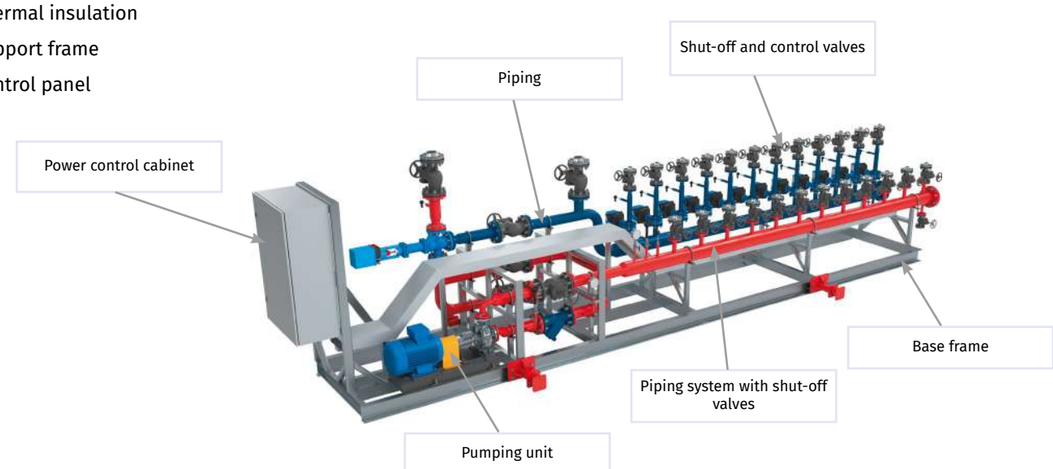
Why choose ErichHahn OSM-PS

- Ensures uniform distribution of heat transfer medium flows between consumers, improving process stability
- Modular factory-ready design simplifies installation and commissioning
- Integration of heating systems maintains the required temperature conditions
- Automation and parameter monitoring increase operational reliability
- Flexible configuration allows adaptation of the system to plant requirements

Scope of Delivery

- Pumping station
- Distribution manifolds
- Piping system
- Shut-off and control valves
- Instrumentation and measuring devices
- Thermal insulation
- Support frame
- Control panel

Unit Specification



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Main Technical Specifications

Model	OSM-PS-6 OSM-PSA-6**	OSM-PS-12* OSM-PSA-12**
Climatic condition	Temperate climate	
Ambient temperature [°C]	-40 to +40	
Application	High-temperature oil, petroleum products, and other chemically neutral fluids	
Max. pumped product viscosity [cSt]	10	
Max. process temperature [°C]	210	
Weight [kg]	2600	2650
Pumping station		
Motor output [kW]	up to 22	
Nominal capacity [m^3]	up to 150	
Frequency [Hz]	50	
Electrical voltage [V]	380	
Consumer Lines	Upon request	
Insulation		
Insulation material	Mineral wool mats	
Material of coating layer	Polymer-coated galvanized steel	
Overall dimensions		
Length [mm]	6485 (6 distribution lines)	8360 (12 distribution lines))
Width [mm]	1560 (without slings)	1900 (with slings)
Height [mm]	2075	
Components		
Temperature transducer	Provided	
Control valve	Provided	
Gate valves with electrical actuators	Provided	
Power control cabinet	Provided	

Note: *Specifications are subject to change without notice.
**(A) is a model equipped with an automatic three-way mixing valve.

Application of ErichHahn solutions

Industry	Process	Fluid
Oil refining	**Pumping, storage and transportation of high-viscous fluids**	Bitumen
		Vacuum distillate
		Tar
		Half-tar
Building and road construction	**Production of construction materials, pumping, and storage of raw materials**	Asphalt concrete and bitumen-mineral mixtures
		Silicate adhesive (liquid glass)
		Plastisol
		Liquid pitch
		Pyrolysis fuel
Energy	**Heating. Circulation of heat transfer fluid**	Thermal oil
Pulp and paper	**Pumping and storage of raw materials**	Starch glue
		Phenol-formaldehyde resin
		Sodium sulfide solution
Chemistry	**Production of paints and varnishes, plastics, adhesives, synthetic dyes, synthetic rubber, detergents, and cosmetics. Pumping and storage**	Phenol-formaldehyde resin
		Acrylic dispersion
		Furan acid
		PVA glue
		Sodium lauryl ether sulfate
		Paints and varnishes
		Polyol
		Silicone
		Soap stock
		Oleum
		Petrolatum
		Pyrolysis fuel
Petrochemicals	**Manufacturing of products and raw materials. Pumping and storage**	Thermal oil
		Oxyethylidene diphosphonic acid OEDPA
		Paraffin
		Dielectric oil
		Petroleum softener PN-6
		Cylinder oil 38
		Match wax
		Engine oil
		Aviation oil
Pharmaceuticals	**Manufacturing of products. Pumping and storage of raw materials**	Fish oil
		Glycerin
		Plastisol
		Carbolic acid
		Furan acid
Food production	**Manufacturing of products. Pumping and storage of raw materials**	Animal and vegetable fat
		Olive oil
		Coconut oil
		Fish oil
		Glycerin
		Hydro processed oil sludge
		Caramel
		Molasses
		Vegetable and fruit puree
		Suspensions and syrups of various viscosities
		Chocolate mass
		Syrup

Note: For information on each solution, please contact ErichHahn.

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ErichHahn Project References

Bitumen pumping and distribution unit ErichHahn HPDU

Bitumen pumping and distribution unit ErichHahn OSM-PS
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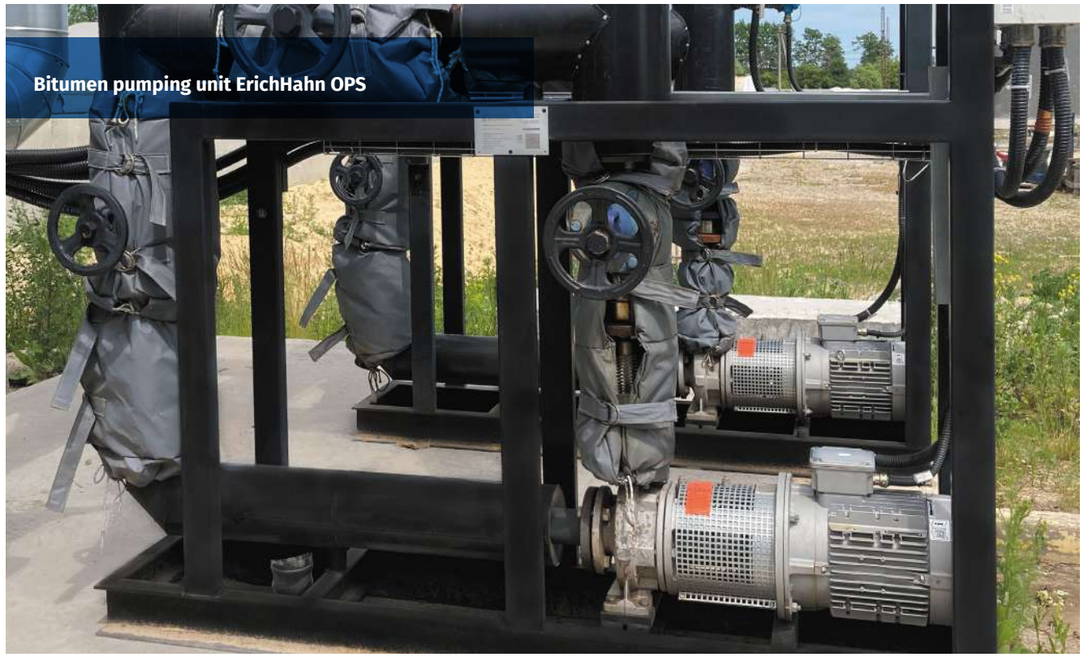
Oil Pumping & Distribution Station unit ErichHahn OSM-PS



Bitumen pumping unit ErichHahn OPS

Oil Pumping & Distribution Station unit ErichHahn OSM-PS

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