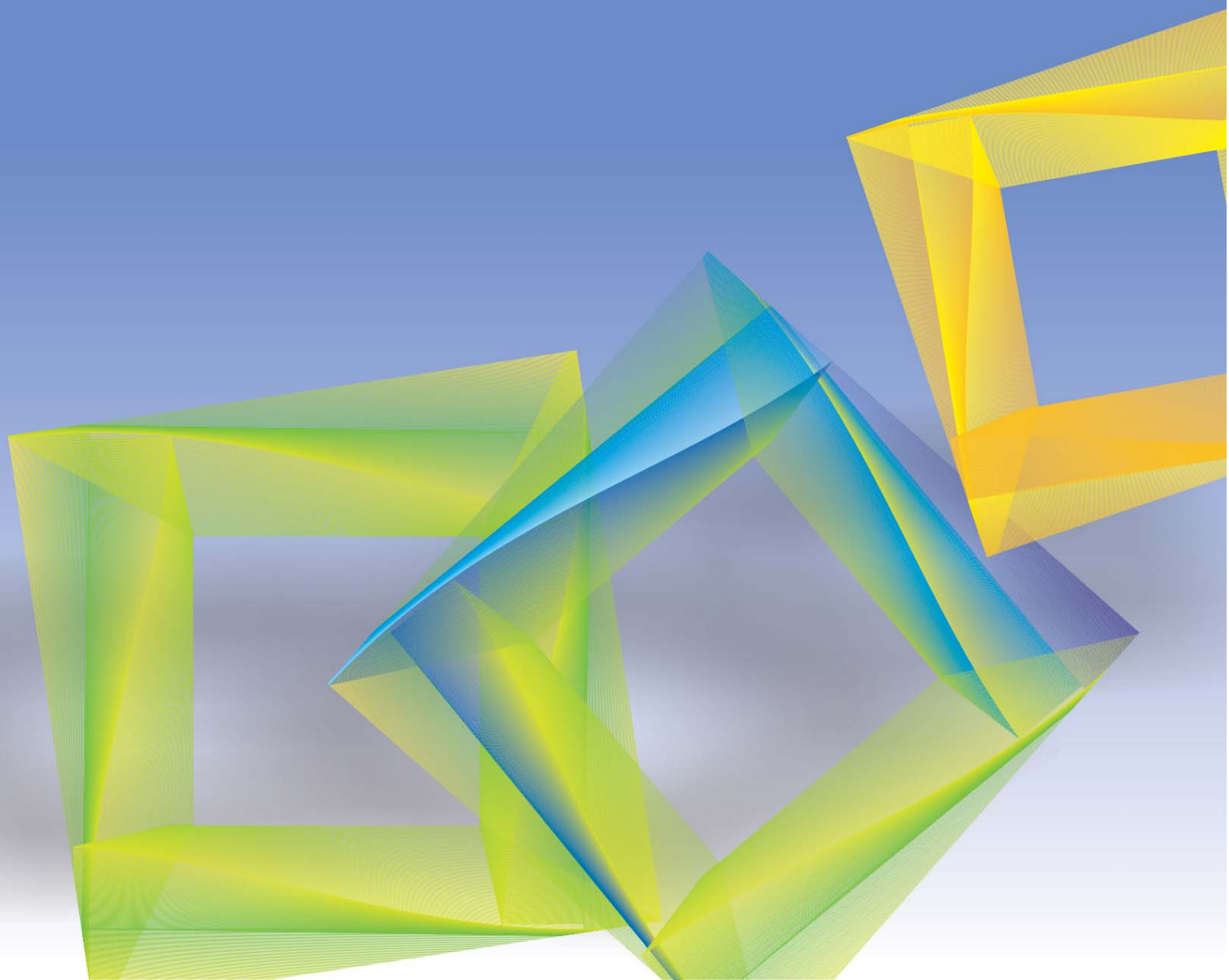


OH 1 Series

Technical Catalogue

2012





Product description

Using modern computer aided design software the pumps are specifically designed as a heavy duty, minimal wear, long life pump which has been designed in a modular way, with a number of options available, to ensure full compliance to the customer's exact requirements and specifications. A fully compliant API 610 heavy duty baseplate helps achieve low vibration and noise levels which in turn extends the pump's life and ensures maximum running time. A 'space saving' reduced footprint baseplate is also available for use where space is at a premium.

The pumps can be fitted with a variety of proprietary components (i.e. seals, motors & couplings) from all the major manufacturers to cater for customer site preferences. Double mechanical seal arrangements can be fitted with a seal support system attached. This can be supplied by Protect System, which is designed and manufactured by Burgmann, or another manufacturer's seal support system can be fitted.

To complete the package a full range of standard material options from SG iron and stainless steel, to super duplex and hastelloy are available to match your process fluid. NACE & NORSOK compliant materials are also available. Standard documentation packs including manufacturing data books, material certification, and installation & operating manuals are available to suit the application. Performance testing to ISO 9906 and various NDE (non destructive examination) & NDT (non destructive testing) options are offered to ensure full compliance to our customer's specifications. Alternative bespoke packages can be tailored to fit your exact requirements.

Fields of Application

handling aggressive, organic and inorganic fluids in chemical and petrochemical processes, in refinery off-sites, in the paper and cellulose industries, food and luxury foods industries, sugar industry, in seawater desalination plants, absorption equipment in environmental engineering systems, power stations.

They are also used in:

water supply, irrigation and spray irrigation, drainage, fire fighting, heating and air-conditioning systems, drinking water, service water and hot water systems, pumping cooling water, swimming pool water, seawater, fire fighting water, brackish water, condensate, brine, oil and cleansing agents.

Design

Horizontal, radially split volute casing pump in back pull-out design, with radial impeller, single-entry, single-stage, to EN 22 858/ISO 2858/ ISO 5199

Certification

Certified quality management ISO 9001. With scope of "Design and manufacturing of process centrifugal pumps according to API standard 610"

Key features

- OH1 single stage centerline mounted centrifugal pumps.
- 16 bar pumps to ISO 5199-2002
- -40°C to 150°C temperature applications
- Shrouded or Semi-Open Impellers
- A range of alloys available on request including NACE compliant materials
- Tested to ISO 9906/II procedures – Head, Flow, Noise & Vibration
- A range of EN 12756 Seals & systems (PED compliant)
- Grouted and Non-Grouted Baseplates to ISO 3361 dimensions

Product overview

General description	A range of OH1 single stage, foot mounted centrifugal end suction pumps with centerline or tangential discharge manufactured in a variety of alloys.
Construction	Back pullout design with metal to metal fits
Design methodology	Advanced computer techniques including 3D modeling, FEA & CFD
Design standards	EN 22 858/ISO 2858/ ISO 5199
Design pressure rating	Up to 16 bar g @ 20°C
Suction pressure rating	6 bar g (standard construction)
Temperature rating	-40°C to 120 °C (standard construction)
Design temperature	80°C (standard construction)
Performance envelope	
Flow rate	Up to 1100m³/h
Differential head	Up to 95 m
Speed	Up to 3000 rpm
Configurations	Long coupled pump Bare shaft pump Rotating assembly
Frame sizes	050x032x160 to 300X250X500
Design life	10 years (2 years uninterrupted operation)

Material Options

Materials	Casing	Impeller
I1 – Cast Iron / Cast Iron	ASTM A48 Class 25	ASTM A48 Class 25
I2 – Cast Iron / Bronze	ASTM A48 Class 25	C92200
S1 – Carbon Steel / Cast Iron	ASTM A 216 WCB	ASTM A48 Class 25
S3 – Carbon Steel / Ni-resist	ASTM A 216 WCB	ASTM A 436 Type 1,2,3
S4 – Carbon Steel / Cast Iron	ASTM A 216 WCB	ASTM A48 Class 25
S5 – Carbon Steel / Carbon Steel	ASTM A 216 WCB	ASTM A 216 WCB
S6 – Carbon Steel / 12% Cr SS	ASTM A 216 WCB	CA6NM
S8 – Carbon Steel / SS 316	ASTM A 216 WCB	ASTM A744 CF-3M
C6 – SS 304 / SS 304	304 Stainless steel	304 Stainless steel
A7 – SS 316 / SS 316	ASTM A744 CF-3M	ASTM A744 CF-3M
A8 - SS 316 / SS 316	ASTM A744 CF-3M	ASTM A744 CF-3M
D1 – Duplex SS / Duplex SS	ASTM A 890 Gr 1B CD-4MCuN	ASTM A 890 Gr 1B CD-4MCuN

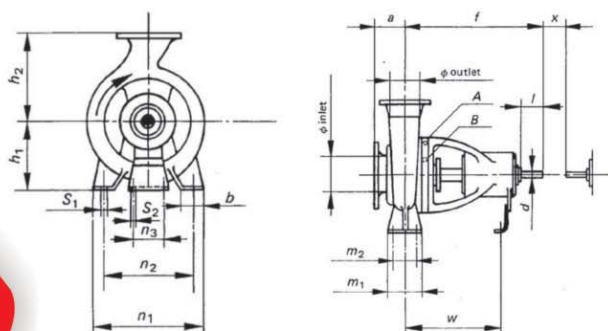
- Other alloys, including NACE compliant materials are available on request.
- We offer specific NDT and component documentation to ensure compliance to your exact requirements.

Technical table

Pump model	Bearing bracket	Bearing size		Shaft diameter at		shaft sealing size
		motor side	pump side	seal chamber	coupling	
OH1 32 – 160	B 01	6305 C3	6305 C3	25	24	33
OH1 32 – 200	B 01	6305 C3	6305 C3	25	24	33
OH1 32 – 250	B 02	6305 C3	6305 C3	25	24	33
OH1 40 – 160	B 01	6305 C3	6305 C3	25	24	33
OH1 40 – 200	B 02	6305 C3	6305 C3	25	24	33
OH1 40 – 250	B 02	6305 C3	6305 C3	25	24	33
OH1 40 – 315	B 03	6307 C3	6307 C3	35	32	43
OH1 50 – 160	B 01	6305 C3	6305 C3	25	24	33
OH1 50 – 200	B 02	6305 C3	6305 C3	25	24	33
OH1 50 – 250	B 02	6305 C3	6305 C3	25	24	33
OH1 50 – 315	B 03	6307 C3	6307 C3	35	32	43
OH1 65 – 160	B 02	6305 C3	6305 C3	25	24	33
OH1 65 – 200	B 02	6305 C3	6305 C3	25	24	33
OH1 65 – 250	B 03	6307 C3	6307 C3	35	32	43
OH1 65 – 315	B 03	6307 C3	6307 C3	35	32	43
OH1 80 – 160	B 02	6305 C3	6305 C3	25	24	33
OH1 80 – 200	B 03	6307 C3	6307 C3	35	32	43
OH1 80 – 250	B 03	6307 C3	6307 C3	35	32	43
OH1 80 – 315	B 03	6307 C3	6307 C3	35	32	43
OH1 80 – 400	B 03	6307 C3	6307 C3	35	42	43
OH1 100 – 200	B 03	6307 C3	6307 C3	35	32	43
OH1 100 – 250	B 03	6307 C3	6307 C3	35	32	43
OH1 100 – 315	B 03	6307 C3	6307 C3	35	32	43
OH1 100 – 400	B 04	6409 C3	6409 C3	45	42	53
OH1 125 – 250	B 03	6307 C3	6307 C3	35	32	43
OH1 125 – 315	B 04	6409 C3	6409 C3	45	42	53
OH1 125 – 400	B 04	6409 C3	6409 C3	45	42	53
OH1 150 – 250	B 03	6307 C3	6307 C3	35	32	43
OH1 150 – 315	B 04	6409 C3	6409 C3	45	42	53
OH1 150 – 400	B 04	6409 C3	6409 C3	45	42	53
OH1 150 – 500	B 06	6411 C3	6411 C3	55	50	60
OH1 200 - 250	B 05	6405 C3	6405 C3	45	42	53
OH1 200 - 315	B 06	6411 C3	6411 C3	55	50	60
OH1 200 - 400	B 06	6411 C3	6411 C3	55	50	60
OH1 200 - 500	B 06	6411 C3	6411 C3	55	50	60
OH1 250 - 315	B 06	6411 C3	6411 C3	55	50	60
OH1 250 – 400	B 06	6411 C3	6411 C3	55	50	60
OH1 250 – 500	B 06	6411 C3	6411 C3	55	50	60

Dimensions and General Assembly Drawing

Model	Weight kg	Ø inlet	Ø outlet	Pump				Support								Clearance holes for bolts		Shaft end		
				a	f	h ₁	h ₂	b	m ₁	m ₂	n ₁	n ₂	n ₃	w	s ₁	s ₂	d	l	x	
OH1 32 - 160	33	50	32	80	360	132	160	50	100	70	240	190	110	260	14	14	24	50	100	
OH1 32 - 200	38	50	32	80	360	160	180	50	100	70	240	190	110	260	14	14	24	50	100	
OH1 32 - 250	52	50	32	100	360	180	225	65	125	95	320	250	110	265	14	14	24	50	100	
OH1 40 - 160	34	65	40	80	360	132	160	50	100	70	240	190	110	260	14	14	24	50	100	
OH1 40 - 200	41	65	40	100	360	160	180	50	100	70	265	212	110	265	11	11	24	50	100	
OH1 40 - 250	53	65	40	100	360	180	225	65	125	95	320	250	110	265	14	14	24	50	100	
OH1 40 - 315	88	65	40	125	470	225	250	65	125	95	345	280	110	340	14	14	32	80	100	
OH1 50 - 160	37	65	50	100	360	160	180	50	100	70	265	212	110	260	14	14	24	50	100	
OH1 50 - 200	43	65	50	100	360	160	200	50	100	70	265	212	110	265	14	14	24	50	100	
OH1 50 - 250	55	65	50	100	360	180	225	65	125	95	320	250	110	265	14	14	24	50	100	
OH1 50 - 315	88	65	50	125	470	225	280	65	125	95	345	280	110	340	14	14	32	80	100	
OH1 65 - 160	44	80	65	100	360	160	200	65	125	95	280	212	110	265	14	14	24	50	100	
OH1 65 - 200	48	80	65	100	360	180	225	65	125	95	320	250	110	265	14	14	24	50	100	
OH1 65 - 250	72	80	65	100	470	200	250	80	160	120	360	280	110	340	18	14	32	80	100	
OH1 65 - 315	94	80	65	125	470	225	280	80	160	120	400	315	110	340	18	14	32	80	140	
OH1 80 - 160	49	100	80	125	360	180	225	65	125	95	320	250	110	265	14	14	24	50	100	
OH1 80 - 200	63	100	80	125	470	180	250	65	125	95	345	280	110	340	14	14	32	50	100	
OH1 80 - 250	78	100	80	125	470	200	280	80	160	120	400	315	110	340	18	14	32	80	100	
OH1 80 - 315	99	100	80	125	470	250	315	80	160	120	400	315	110	340	18	14	32	80	140	
OH1 80 - 400	148	100	80	125	530	280	355	80	160	120	435	355	110	370	18	14	32	110	140	
OH1 100 - 200	76	125	100	125	470	200	280	80	160	120	360	280	110	340	18	14	32	80	140	
OH1 100 - 250	87	125	100	140	470	225	280	80	160	120	400	315	110	340	18	14	32	80	140	
OH1 100 - 315	108	125	100	140	470	250	315	80	160	120	400	315	110	340	18	14	32	80	140	
OH1 100 - 400	159	125	100	140	530	280	355	100	200	150	500	400	110	370	23	14	42	110	140	
OH1 125 - 250	99	150	125	150	125	250	355	80	160	120	400	315	110	340	18	14	32	80	140	
OH1 125 - 315	143	150	125	140	530	280	355	100	200	150	500	400	110	370	23	14	32	110	140	
OH1 125 - 400	169	150	125	140	530	315	400	100	200	150	500	400	110	370	23	14	42	110	140	
OH1 150 - 250	148	200	150	160	470	280	400	100	200	150	500	400	110	340	23	14	32	80	140	
OH1 150 - 315	167	200	150	160	530	280	400	100	200	150	550	450	110	370	23	14	42	110	140	
OH1 150 - 400	213	200	150	160	530	315	450	150	200	150	550	450	110	370	23	14	42	110	140	
OH1 150 - 500	341	200	150	170	870	400	525	140	220	190	700	560	335	555	24	28	50	135	140	
OH1 200 - 250	193	250	200	250	635	300	300	140	250	190	580	440	140	485	24	19	42	105	140	
OH1 200 - 315	347	250	200	175	875	400	475	140	220	190	700	560	335	485	24	28	50	153	140	
OH1 200 - 400	373	250	200	180	880	400	525	140	220	190	700	660	336	490	24	28	50	153	140	
OH1 200 - 500	395	250	200	175	880	400	575	140	220	190	800	660	336	490	24	28	50	153	140	
OH1 250 - 315	405	300	250	245	853	400	525	140	220	190	700	560	335	538	24	28	50	135	140	
OH1 250 - 400	437	300	250	180	876	400	600	140	220	190	800	660	336	550	24	28	50	153	140	
OH1 250 - 500	518	300	250	210	880	450	650	140	220	190	800	660	335	550	24	28	50	153	140	



All dimensions in mm.

Performance Curves

General Notice:

The performance curves are based on acceptance test class ISO 9906 - class 2.

The NPSH values given in the performance curve sheets are measured values which correspond to a loss of discharge head of 3%.

NPSH values at part-load operation:

NPSH values for capacities below $Q = 0.3 \times Q_{\text{optimum}}$ can only be measured at considerable expense. Evidence of NPSH values in this range cannot be supplied.

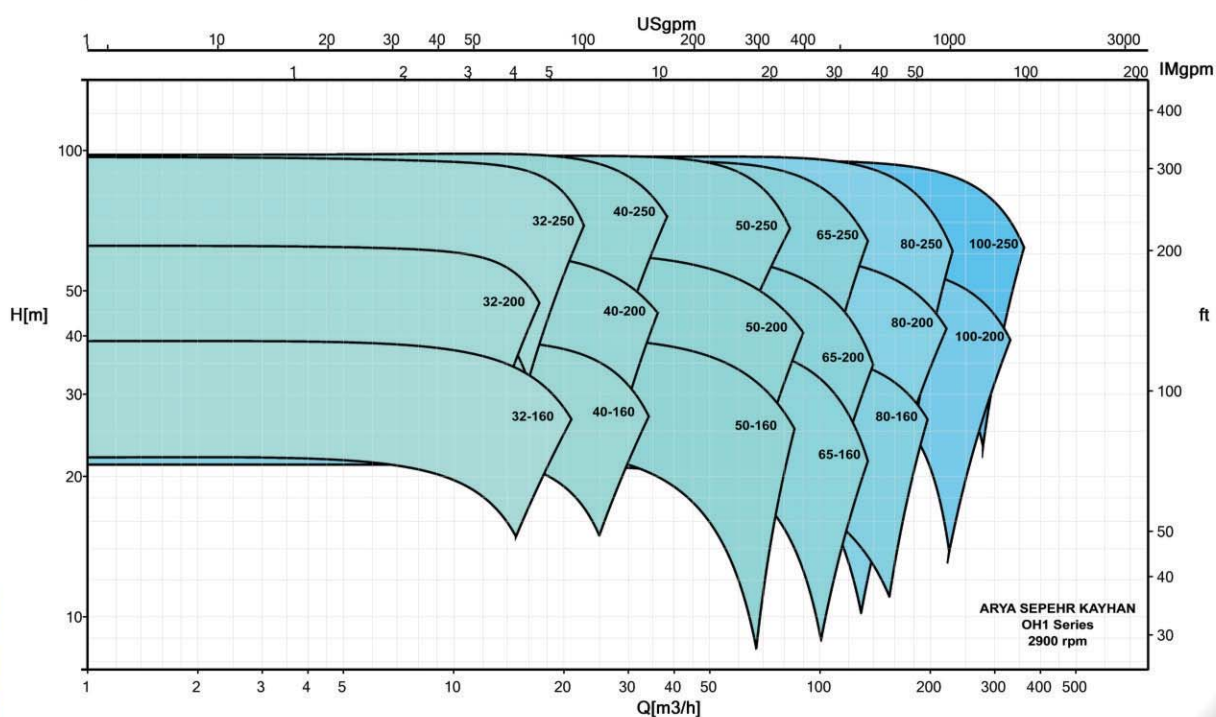
The total heads and the performance characteristics apply to media with a density $\rho = 1.0 \text{ kg/dm}^3$ and a kinematic viscosity ν up to $20 \text{ mm}^2/\text{s}$. If the density is $\neq 1.0$, the friction must be multiplied by ρ . For viscosities $> 20 \text{ mm}^2/\text{s}$, the cold water data must be calculated and effect of viscosity on pump performance must be determined.

On special pump designs (reinforced bearings, special shaft seals) losses friction must be taken into account and indicated separately in the data sheet.

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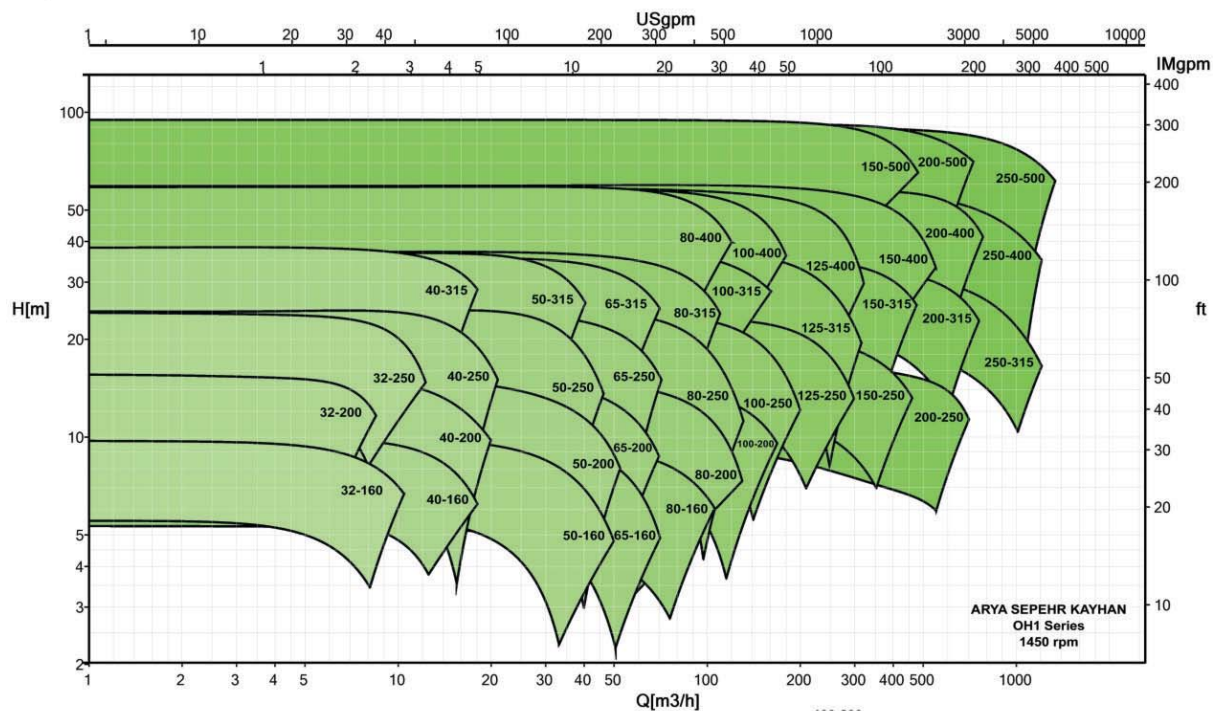
Overlapping curves

2900 rpm.

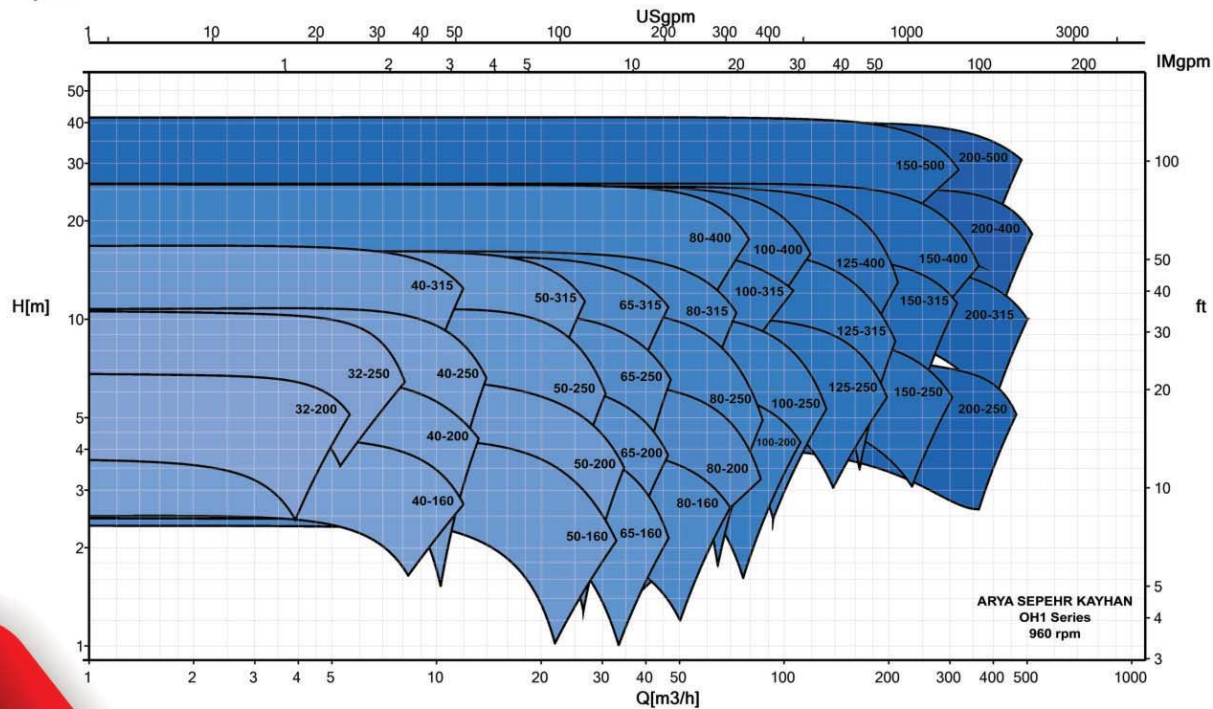


Overlapping curves

1450 rpm.

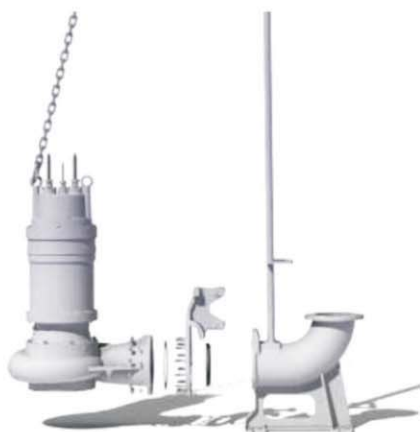


960 rpm.



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ASK Family of Pumps



Submersible Sewage Pump
SEW Series



Single Stage Vertical In-Line
Centrifugal Pump
OH3 Series



Vertically Suspended, Single Stage
Centrifugal Pump
VS4 Series



End Suction Horizontal Centrifugal Pump
Centerline Mounted
OH2 Series



Rubber Lined Horizontal
Centrifugal Pump
OH1/SL series



End Suction Horizontal
Centrifugal Pump
Foot Mounted
OH1 Series

ASK Series	Market Sector	Capacity m3/hr	TDH m	Temperature °C	Pressure barg
OH1	General Industries	1100	95	120	16
OH2	Oil	550	260	400	40
OH3	Gas	550	175	350	40
VS4	Petrochemical	1100	95	150	20
OH1/SL	Mining	800	130	85	20
SEW	Water and Waste water	1800	95	70	16

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