

SERIES 216.10

SELF-PRIMING HORIZONTAL SCREW PUMP FOR LUBRICATING LIQUIDS

PRODUCTS

LUB OILS

HYDRAULIC OILS

CLEAN FUEL OILS

LABELLING

LUB OIL PUMPS

HYDRAULIC SYSTEMS

FUEL TRANSFER PUMPS



Principle

The Houttuin double entry twin screw pumps series 216 are horizontal rotating self priming positive displacement pumps. Two intermeshing screws rotating in a pump casing insert ensure high pumping efficiency with constant axial flow and unequalled suction power.

Construction

The spindles are supported and axially held in position by ball bearings. The transmission of torque from the driven spindle to the idler spindle is effected by product lubricated timing gears located in an attached gearbox. The ball bearings and timing gears maintain a small clearance between the screws, thus preventing metal to metal contact.

Shaft sealing

In standard design the pump is fitted with single unbalanced mechanical seals, with fluid chamber if required.

Overload protection

For protection against overload a built-on spring loaded relief valve can be supplied.

Applications

For pumping lubricating oils, hydraulic oils or other lubricating fluids which do not contain abrasive substances nor chemically attack the pump materials. As lube oil pump in ship and offshore engineering, as filling pumps in tank farms and in hydraulic systems.

Products

Lubricating oils
Hydraulic oils
Clean fuel oils

Labelling

Main lub oil pumps
Auxiliary lub oil pumps
Hydraulic systems
Fuel oil transfer systems

Performance data

Capacity	Q	up to 1100 m ³ /h
Viscosity range	V	20 to 760 cSt
Temperature of pumped liquid	t	up to 80 °C
Inlet pressure	p _s	up to 6 bar
Outlet pressure	p _d	up to 16 bar
Difference pressure	Δp	up to 16 bar
Speed	n	up to 2900 rpm
Flanges		according to DIN or ANSI

A preliminary pump selection can be effected by means of the performance graphs. For the exact performance data as function of the viscosity of the liquid to be pumped and the pump speed, please refer to the individual characteristics.



AVAILABLE MATERIALS

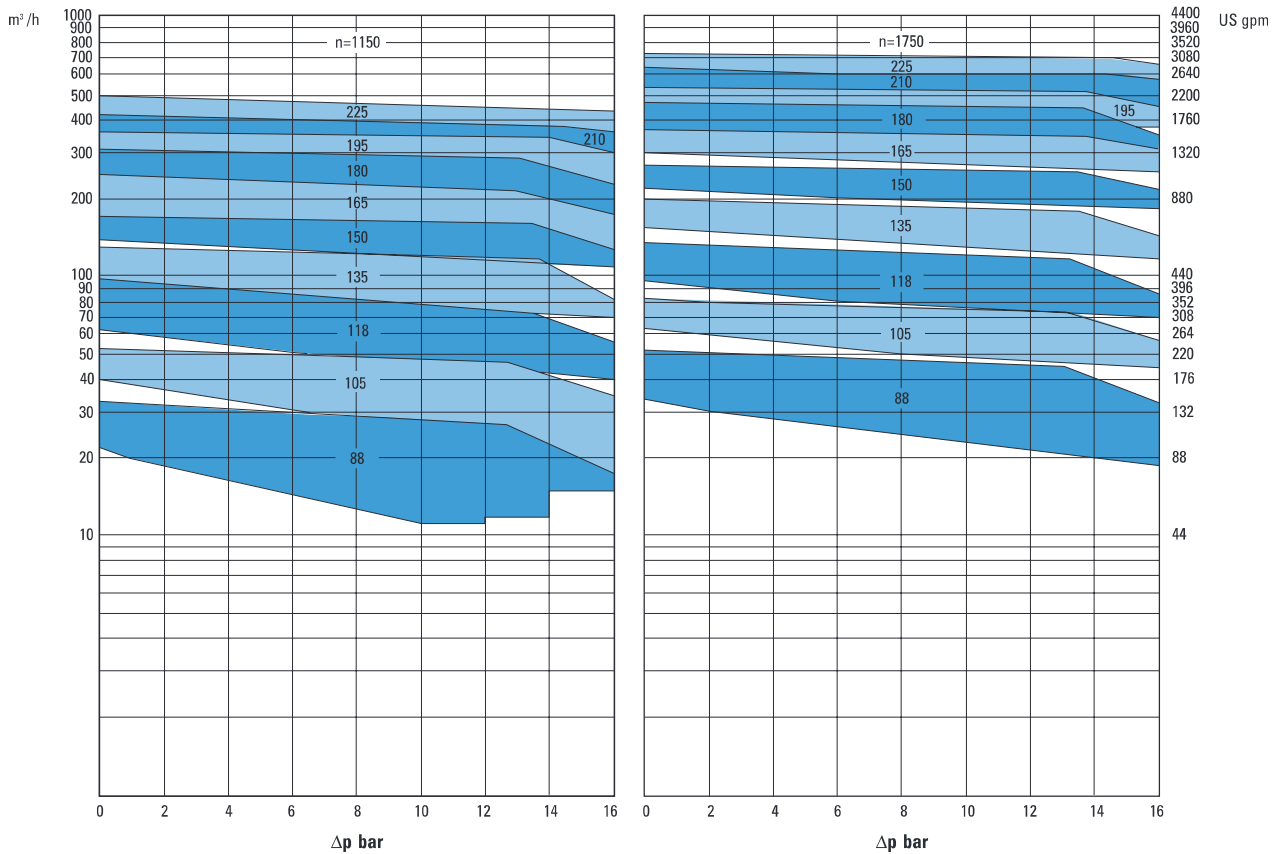
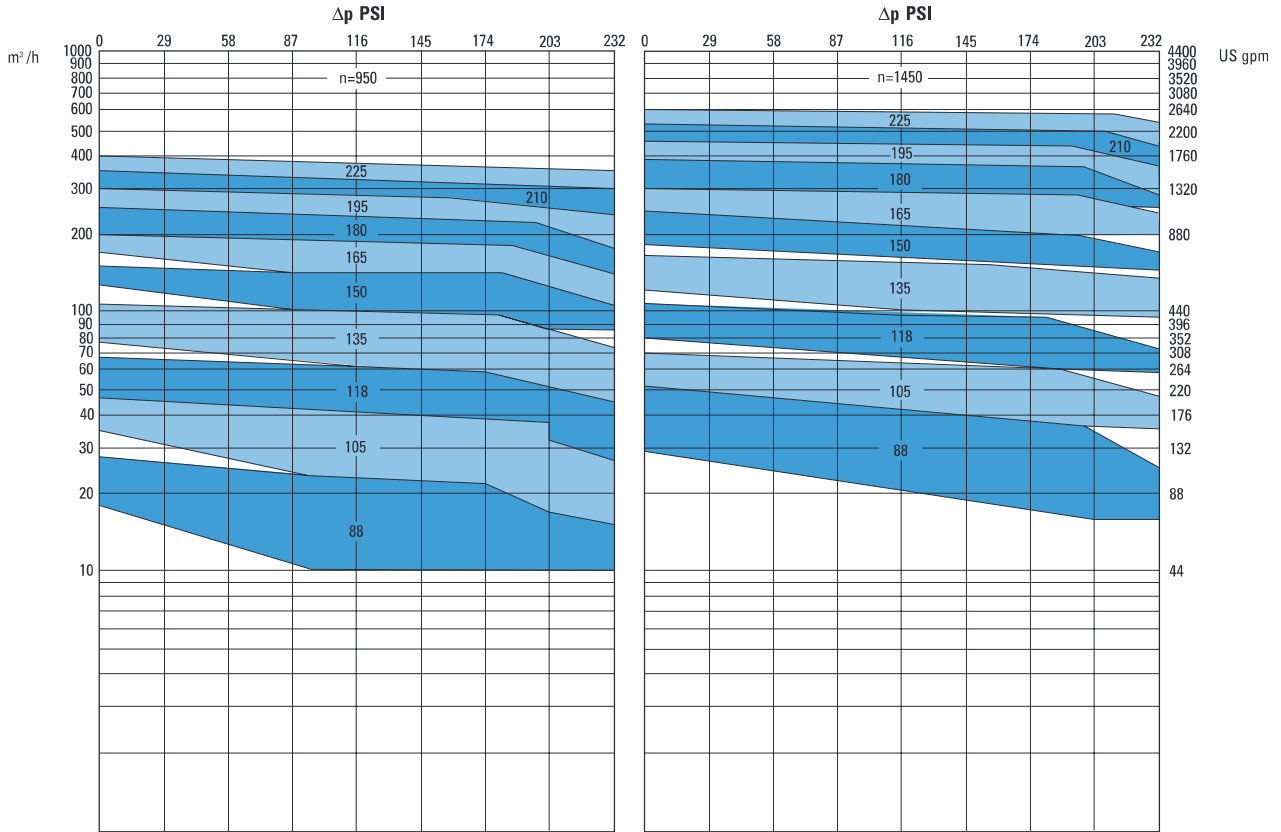
FOR PUMP AND MECHANICAL SEALS:

Pump		Mechanical seal according to DIN 24960 / API		
Screw shafts	Casing, casing insert and covers	Seal faces	Springs	'O' -rings
- Carbon Steel	- Cast Iron - Nodular cast Iron	- Chrome Steel - Carbon	- Stainless against (Type 300)	- Viton Steel

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PERFORMANCE GRAPHS

Flow rate/pressure at minimum and maximum viscosity according to pump size.
 For exact performance data dependant of viscosity and rpm please refer to the individual characteristics per pump size.

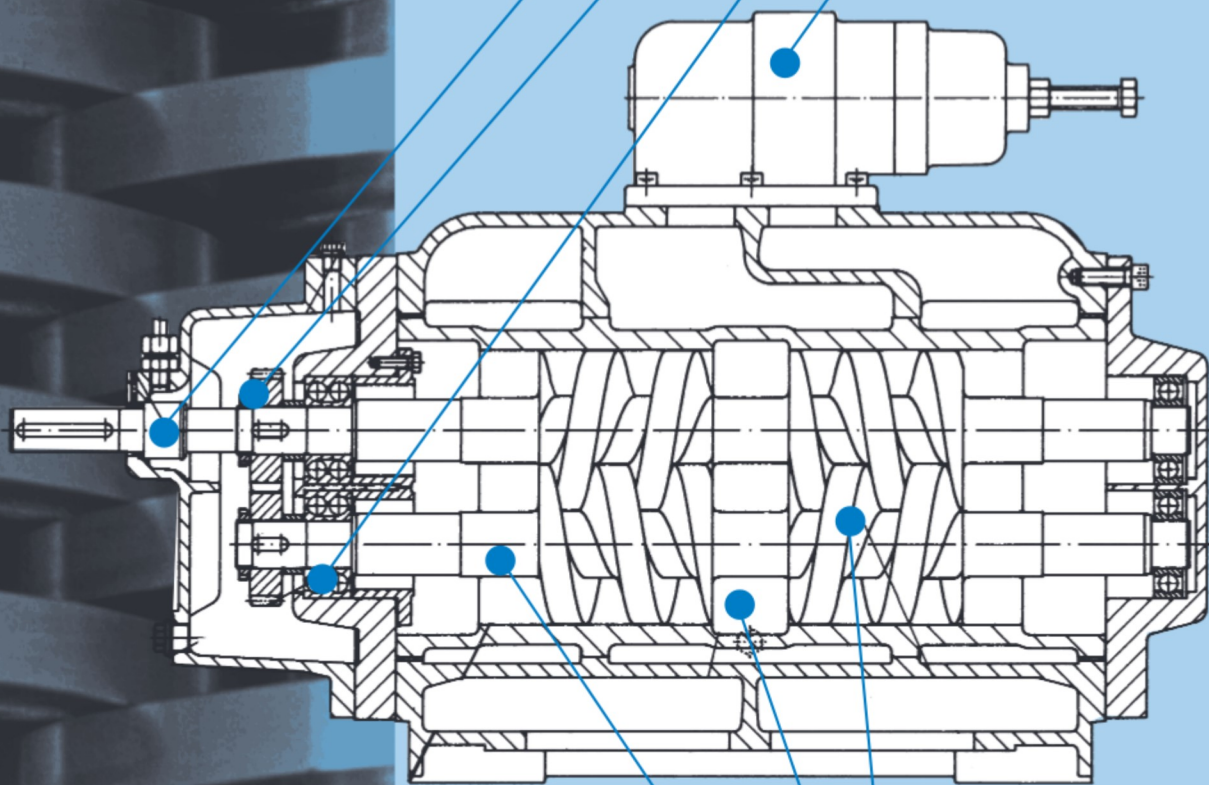


Safe shaft sealing by single unbalanced and product lubricated mechanical seals.

Safe transmission of torque through hardened and ground oil lubricated timing gears.

Amply dimensioned oil lubricated and maintenance free ball bearings, which additionally serve for the axial location of the spindles.

For **overload protection** a direct mounted pressure relief valve is optional.



The special profile of the spindle flanks results in **continuously and nearly pulsation-free pumping, high efficiency, good NPSH-values and constant pressure course.**

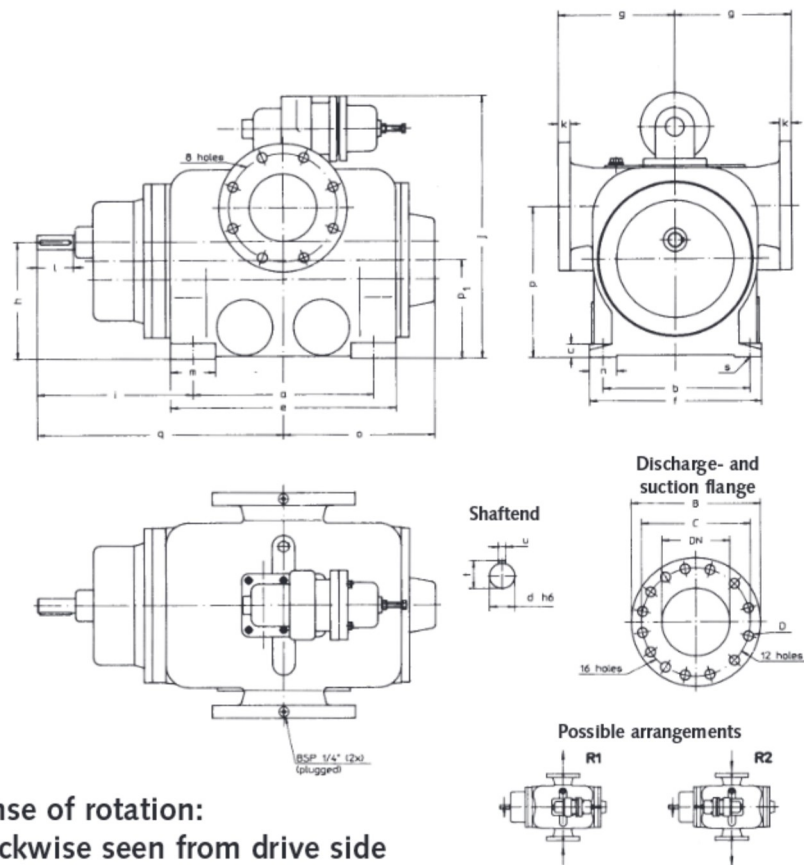
Axial forces balanced through double entry spindles

Rigid spindles of solid material therefore compared with multi-part spindles **no crevice corrosion.**

Heating of the pump foot is optional.



ONLY SIZE 088



**Sense of rotation:
clockwise seen from drive side**

PUMPEN SIZE	PUMP DIMENSIONS								FLANGES PN 16 DIN 2533				RELIEF VALVE SIZE
	a	b	c	e	f	m	n	s	DN	B	C	D	
088	325	310	35	415	350	90	60	4x18	100	228	180	8x18	46
105	370	330	35	460	370	90	60	4x18	125	254	210	8x18	46
118	400	335	35	500	380	100	60	4x22	150	285	240	8x22	70
135	480	400	40	570	450	100	70	4x22	200	340	295	12x22	70
150	580	450	40	670	500	100	70	4x22	250	405	355	12x26	100
165	620	490	45	740	550	120	90	4x26	250	405	355	12x26	100
180	670	540	45	790	600	120	90	4x26	300	460	410	12x26	100
195	680	590	45	800	650	120	90	4x26	300	460	410	12x26	135
210	690	600	45	840	660	150	120	4x26	300	460	410	12x26	135
225	700	660	45	850	720	150	120	4x26	350	520	470	16x26	135

PUMP SIZE	PUMP DIMENSIONS								SHAFT END					WEIGHT KG (CA)
	g	h	i	j	k	o	p	p1	q	d	l	t	u	
088	230	230	292,5	478	26	287	305	197,5	455	28	60	31	8	150
105	240	245	300	496	26	312	310	207,5	485	28	60	31	8	200
118	250	260	345	590	26	335	335	218	545	32	80	35	10	250
135	275	280	341	635	30	373	355	233	581	38	80	41	10	350
150	300	305	387	785	32	430	400	252,5	677	42	110	45	12	500
165	320	335	426	812	32	477	425	277,5	736	45	110	48,5	14	720
180	350	355	440	877	32	505	465	292	775	50	110	53,5	14	950
195	370	375	460	927	32	513	480	307	800	55	110	59	16	1050
210	390	395	525	979	32	535	520	321,5	870	60	140	64	18	1250

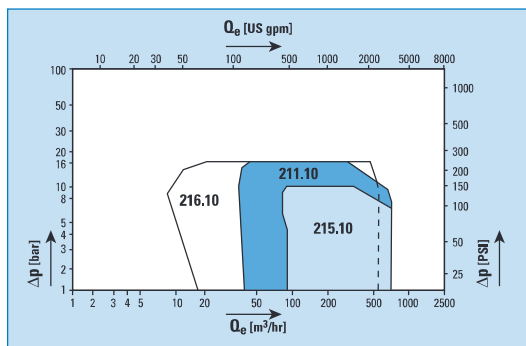
*) The diagrams show the performance range of the different pump series in our pump program and are for information only.

STANDARD PUMPS

With Internal Bearings

for lubricating liquids

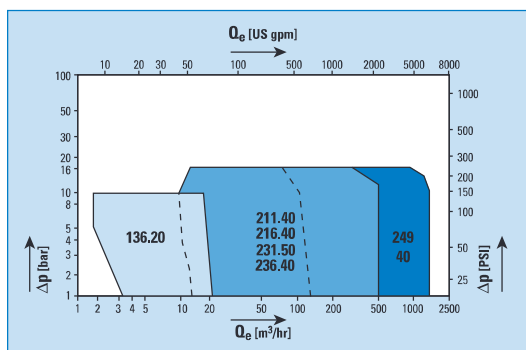
viscosity range : 20 - 760 cSt
: 98 - 3500 SSU



With External Bearings

for non-lubricating liquids

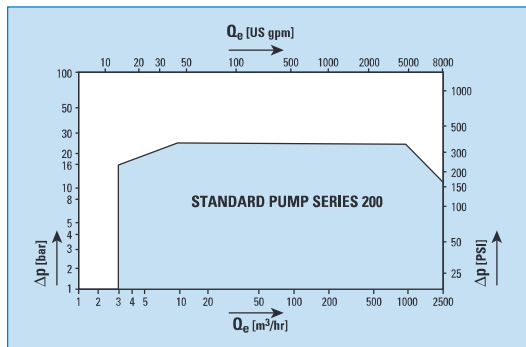
viscosity range : 0,6 - 1500 cSt
: 32 - 7000 SSU



With External Bearings

for lubricating and non-lubricating liquids

viscosity range : 0,6 - 100.000 cSt
: 32 - 466.000 SSU

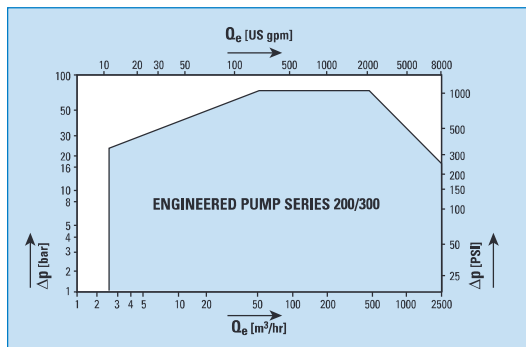


ENGINEERED PUMPS

With External Bearings

for lubricating and non-lubricating liquids

viscosity range : 0,6 - 100.000 cSt
: 32 - 466.000 SSU



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