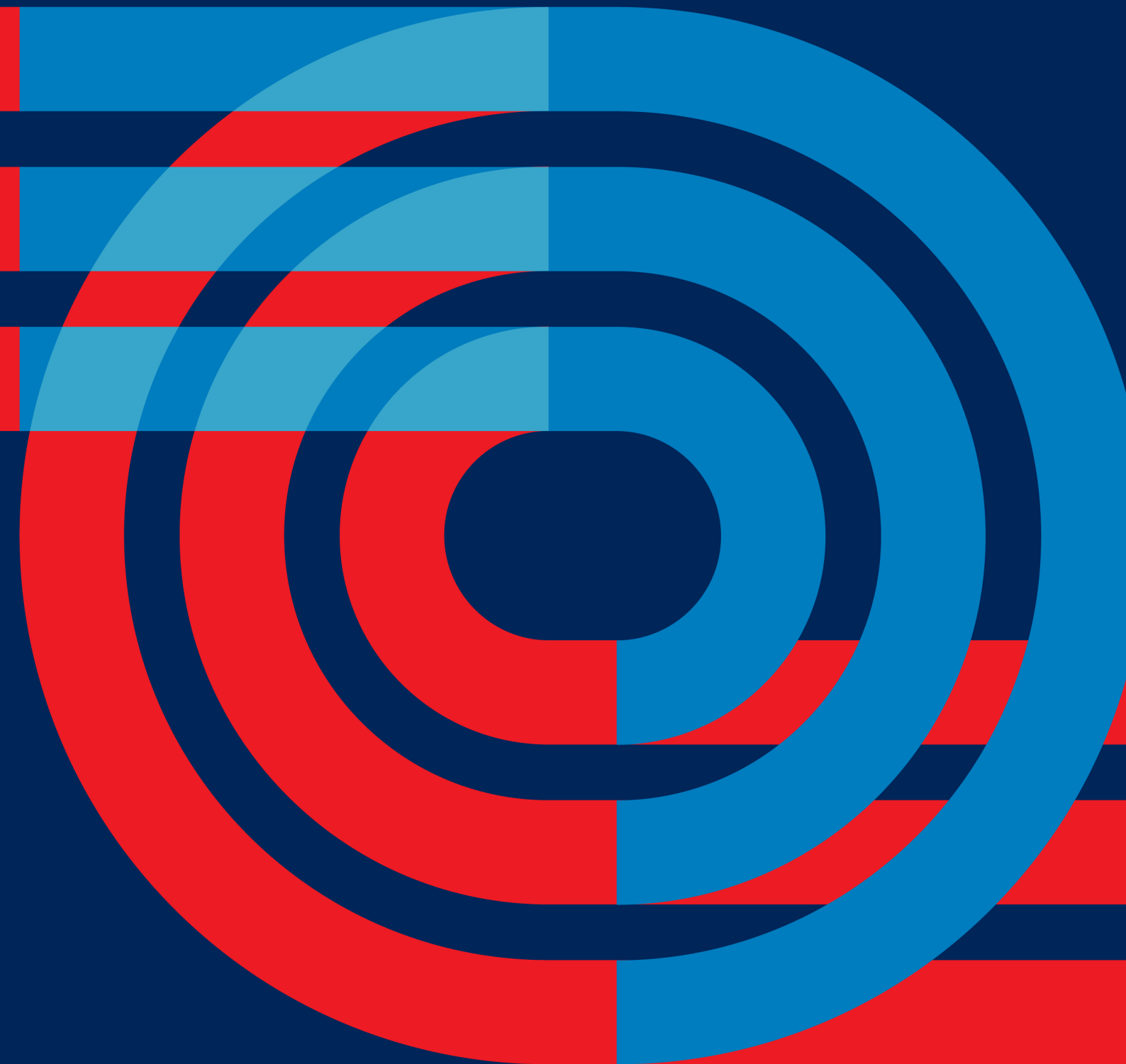


Dvoulazne pumpe s jednim stupnjem Tipa DH, DHv



CROATIA PUMPE

Dvoulazne pumpe s jednim stupnjem Tipa DH, DHv

Ove pumpe su sigurne i trajne u pogonu, te jednostavne za održavanje i nadzor. Dodatna odlika je u njihovoj neosjetljivosti na manje nečistoće radnog medija. Za vodu temperature od 100 do 150°C primjenjuju se DHv pumpe nastale prilagođavanjem DH pumpi. To znači da se svaka od navedenih DH pumpi - po želji kupca - može primijeniti u DHv izvedbi.

DH i DHv pumpe najčešću primjenu nalaze za dobavu:

- čiste vode
- sirove vode
- morske vode
- ulja
- celuloznih masa
- kemikalija
- tekućina s jačim primjesama nečistoće

Zastupljene su u:

- energetskim postrojenjima
- vodovodnim sustavima
- kemijskoj industriji
- procesnoj industriji
- brodogradnji
- rudarstvu
- protupožarnim sustavima

Konstruktivne karakteristike

Spiralno kućište je aksijalno podijeljeno u osi vratila, što uz smještaj usisne i tlačne priрубrice na donjem dijelu kućišta omogućava laganu demontažu rotora bez odvajanja cjevovoda.

Kolo rotora je dvouzaino te praktički ne stvara aksijalnu silu. Rasporni prstenovi, koji su lako izmenjivi, brtve prostor između rotora i kućišta.

Vratilo je zaštićeno izmjenjivim zaštitnim tuljcima, koji ga štite od radnog medija.

Kuglični ležaji su podmazivani mašću s dugačkim radnim vijekom. Na zahtjev kupca mogu se ugraditi klizni ležaji podmazivani uljem.

Brtvenice su vrlo pristupačne. Umjesto normalnih brtvenih pletenica ugrađuju se i mehaničke brtve prema posebnom zahtjevu.

Materijali

Kod normalne izvedbe pumpe, kućišta kao i kolo rotora izrađuje se iz kvalitetnog lijevanog željeza, rasporni prstenovi i zaštitni tuljci su od bronce, a vratilo iz čelika.

Za ugradnju pumpi u kemijskoj i procesnoj industriji, te u brodogradnji, materijali se obrađuju ovisno o namjeni i vrsti medija koji pumpa dobavlja.

Double Suction DH and DHv Type Pumps

Although outstanding by the simplicity of their maintenance and control during operation, double inlet single stage nonself-priming DH and self-priming DHs pumps, as such, represent a kind of highly serviceable, long-life and tested pump devices. DHv pumps adaptable from DH pumps are used for temperature of 100 to 150°C. It means that each of the mentioned DH pumps - on the purchaser's wish - can be used in DHv design. These pumps are mostly applicable to:

- clean
- raw water
- oils
- cellulose masses
- chemicals
- liquids containing impure ingredients

Also suitable for:

- waterworks,
- pumping stations,
- mining,
- power plants,
- sugar mills,
- shipbuilding,
- paper industries.

Features Of Construction

Being axially split in a shaft axis, a volute casing is provided with suction and delivery flanges at its lower part, thus enabling an easy dismantling of rotor without disconnecting pipe lines.

No axial thrust is practically formed by a double suction impeller. The space between rotor and casing is sealed by means of very easily replaceable wearing rings.

A shaft, covered with replaceable sleeves ensures a proper protection against liquids being supplied.

Very serviceable ball bearings, grease lubricated are normally installed. Oil lubricated slide bearings can be, however, installed upon application.

Packings are very accessibly installed. If particularly required, adequate mechanical seals can be fitted instead of ordinary gaskets.

Materials

Pumps, casing and impellers, when designed as standard equipment are made of qualitative cast iron; wearing rings and protecting sleeves of bronze and shafts are made of steel. The selection of materials is however made for naphtha refineries, cellulose, paper and chemical industries and shipbuilding; depending on pump applications and variety of mediums being supplied.

Područje dobave

Područja dobave DH i DHv pumpi dana su u dijagramu. Svaka veličina pumpe pokriva određeno polje, unutar kojega se može po volji birati potrebna točka dobave. Za područja izvan navedenih dijagrama, kao i za specijalne konstruktivne izvedbe, pumpe nudimo na osnovu posebnog upita.

Brojevi ispod oznake tipa pumpe označavaju broj okretaja u minuti.

Agregatiranje

Prema zahtjevu pumpe agregatiramo s elektromotorima, Diesel ili benzinskim motorima, te parnim turbinama. Agregati mogu biti smješteni na jednodijelnim ili dvodijelnim temeljnim pločama. Uz pumpe isporučujemo i armaturu.

Projektiranje

Projektiramo pumpna postrojenja i kompletne pumpne stanice. Preuzimamo izvođenje i nadzor nad montažom. Sudjelujemo u projektiranju pumpnih postrojenja, a u cilju odabiranja najpovoljnijih veličina i izvedbi pumpi, naš iskusni inženjerski kadar je našim kupcima uvijek na usluzi.

Narudžba pumpe

Preporučujemo da se kod narudžbe navede:

- karakteristike medija
- količina dobave
- visina dobave
- NPSH postrojenja ili potrebnu usisnu visinu
- tlak na ulazu u pumpu
- temperaturu medija

Ranges Of Supply

Ranges of supply of our standard pump sizes are shown on a .diagram. Each pump size covers an adequate range within which an optional choice of supply is available. All other ranges out of these diagrammatically presented ones, as well as some special pump designs, can be obtained upon an individual customer's application.

Installation Of Pump Units

Depending on a customer's requirement, pumps can be combined with electro-motors, diesel and petrol motors steam turbines and other machinery. Such pump sets are installed on single or double, either cast or welded, profile base plates. Pumps are also provided with adequate fittings.

Design

Complete pump plants and stations are planned in our own Design Department and their performance and control are cared for by our highly experienced Technical Staff who will readily provide all information, particularly that regarding the most suitable pump sizes to be used to ensure their successful construction and operation.

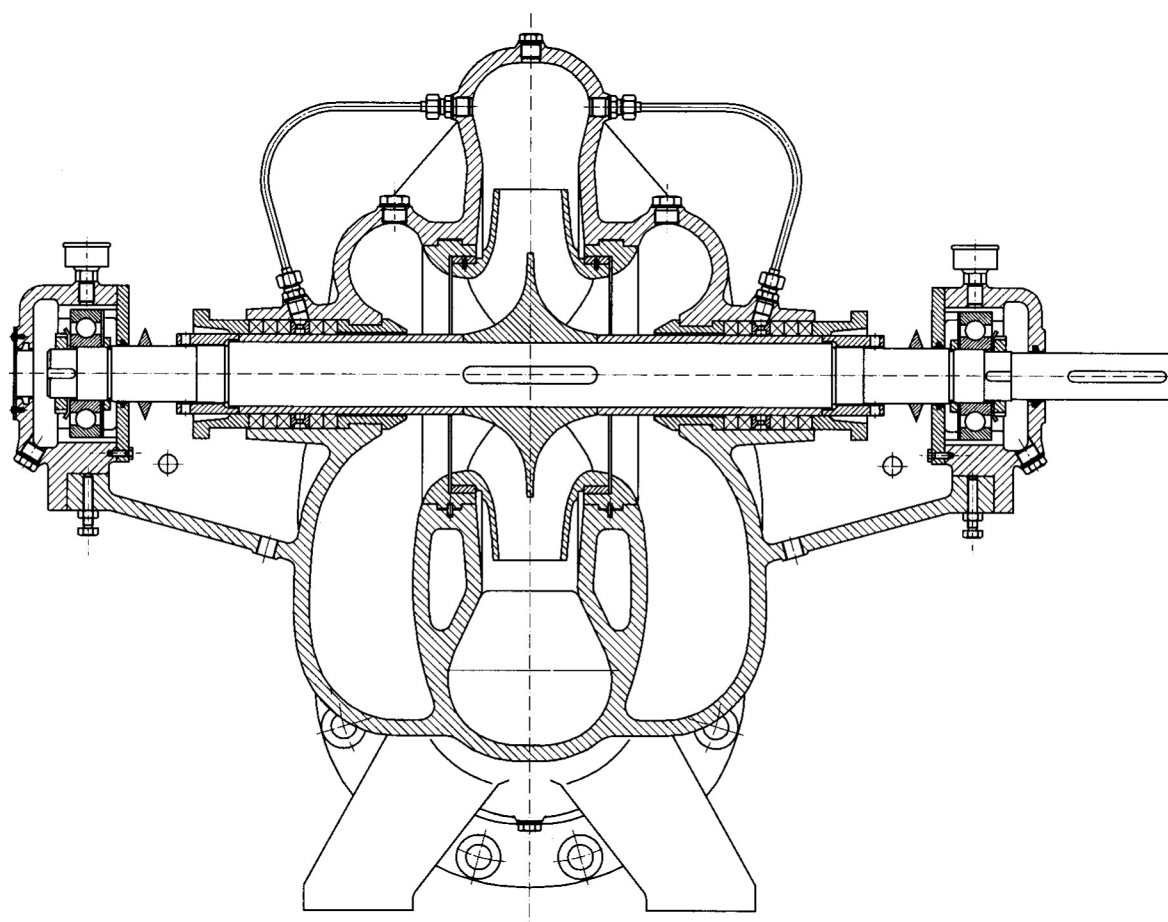
Order Of The Pumps

The following to be mentioned at order:

- *fluid characteristics*
- *capacity*
- *total head*
- *NPSH or necessary suction head*
- *pump inlet pressure*
- *fluid temperature*

Presjek pumpe tipa DH

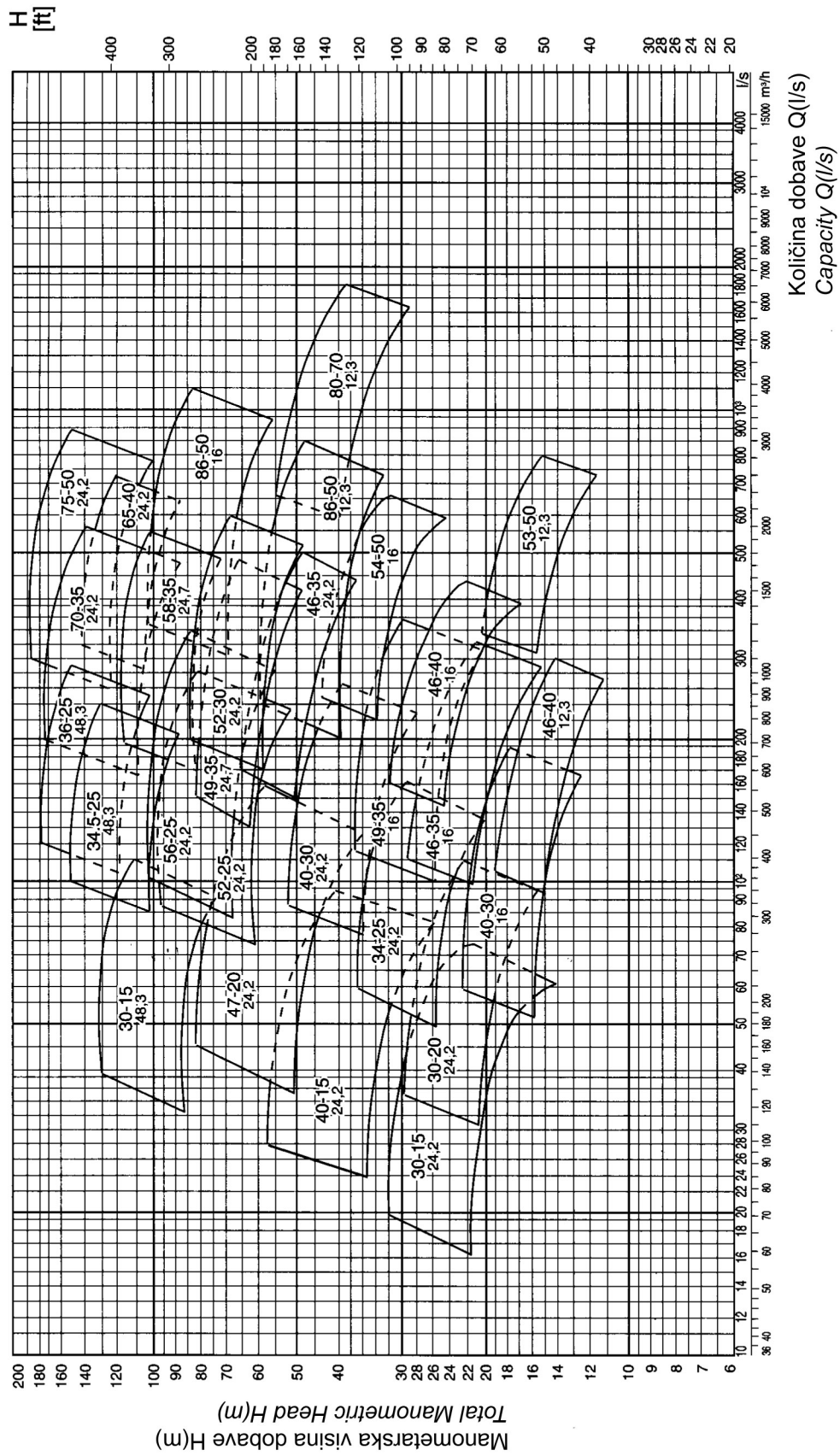
DH Type Pump Cross Section



Presjek pumpe tipa DH DH Type Pump Cross Section	30-15	40-15	30-20	47-20	34-25	34,5-25	52-25	56-25	40-30	46-35	49-35	58-35
G (kg)	300	555	310	580	600	610	860	936	850	1070	1075	1320
GD ² (kgm ²)	0,54	1,37	0,52	2,81	0,86	1,12	1,9	2,25	1,8	4,9	5,5	3,8

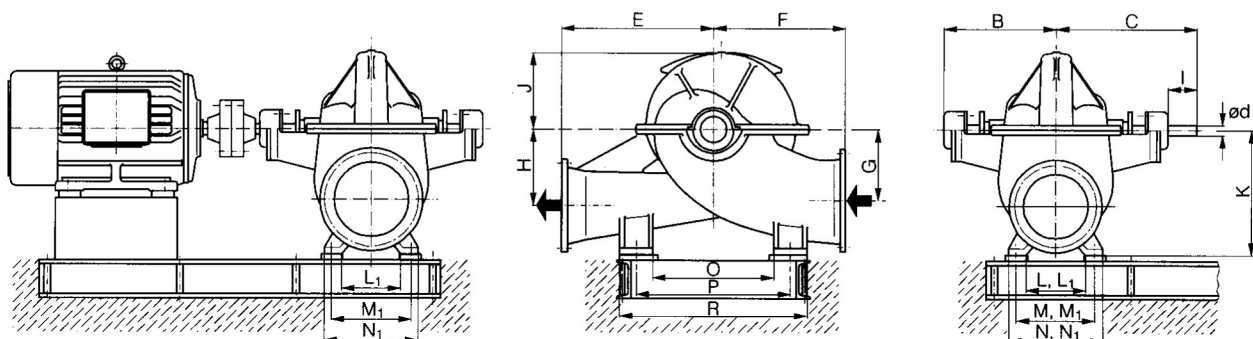
Presjek pumpe tipa DH DH Type Pump Cross Section	46-40	48-50	53-50	54-50	86-50	80-70	36-25	52-30	70-35	75-50	65-40	60-30
G (kg)	1350	2150	2440	2030	3200	6000	580	1350	1850	2850	2150	1150
GD ² (kgm ²)	4,6	5,6	15,8	11,5	58	84,2	0,92	4,35	16	35	16	15

Ranges Of Supply – Pumps Type DH



Mjerna skica DH pumpe

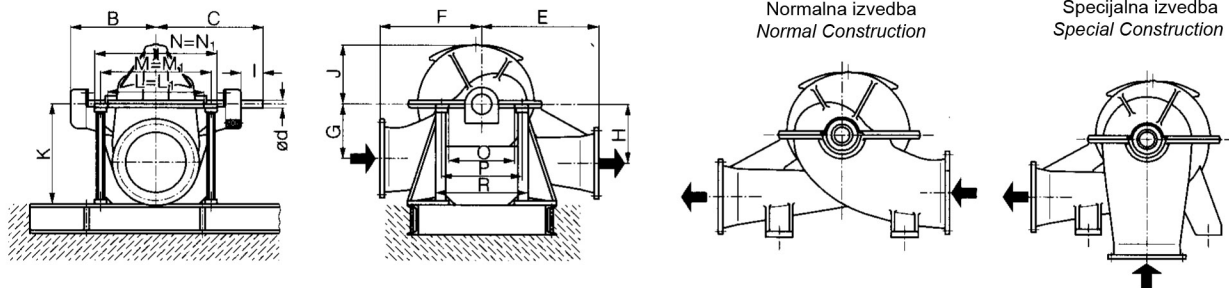
DH Type Pump Sketch With Dimensions



Tip pumpe Pump Type	Dimenzije pumpe Pump Dimensions																			Usisna priрубnica Discharge Flange			Tlačna priрубnica Pressure Flange		
	B	C	E	F	G	H	J	K	L	L ₁	M	M ₁	N	N ₁	O	P	R	d	I	NO	NP	DIN	NO	NP	DIN
DH 30-15	405	540	450	450	161	190	228	280	190	190	280	280	350	350	460	560	660	48	139	200	10	2532	150	16	2533
DH 40-15	443	557	450	450	220	260	305	400	190	260	280	350	350	420	350	480	610	50	121	250	10	2532	150	10	2532
DH 30-20	405	490	450	450	230	240	266	425	200	200	290	290	360	360	380	490	600	40	92	250	10	2532	200	16	2533
DH 47-20	445	565	500	500	230	310	360	460	190	250	330	390	380	440	500	600	700	50	124	250	10	2532	200	10	2532
DH 34-25	463	582	550	550	270	270	315	500	230	320	320	410	410	500	480	620	760	50	122	300	10	2532	250	10	2532
DH 34,5-25	463	582	550	550	270	270	315	500	230	320	320	410	410	500	480	620	760	50	118	300	10	2532	250	16	2533
DH 52-25	526	680	650	600	300	350	370	560	300	380	400	480	480	560	460	640	820	65	160	350	10	2532	250	10	2532
DH 56-25	558	733	650	600	310	350	410	550	130	350	260	480	330	550	460	640	820	70	180	350	10	2532	250	16	2533
DH 40-30	528	658	650	650	320	320	370	560	310	310	400	400	470	470	540	700	860	55	133	350	10	2532	300	10	2532
DH 46-35	586	740	800	700	370	400	420	660	350	350	450	450	530	530	620	800	980	65	165	400	10	2532	350	10	2532
DH49-35	586	740	800	700	370	400	420	660	350	350	450	450	530	530	620	800	980	65	157	400	10	2532	350	10	2532
DH 58-35	594	806	850	700	350	400	562	680	350	450	450	550	550	650	700	900	1100	85	209	400	10	2532	350	16	2533
DH 46-40	656	814	800	800	400	380	420	670	340	480	460	600	540	680	580	760	940	70	165	500	10	2532	400	10	2532
DH 48-50	810	1000	900	900	470	470	520	830	550	550	700	700	800	800	1000	1200	1400	85	200	600	10	2532	500	10	2532
DH 53-50	810	955	900	900	550	600	660	930	550	550	700	700	800	800	1000	1200	1400	75	145	ANSI B 16.5 150 lb. 24" RF			ANSI B 16.5 150 lb. 20" RF		
DH 54-50	710	926	900	900	470	480	590	850	410	550	560	700	660	800	1000	1200	1400	85	126	600	10	2532	500	10	2532
DH 86-50	835	1050	1100	1000	520	600	672	950	560	660	700	800	820	920	950	1200	1450	100	210	600	10	2532	500	10	2532
DH 80-70	1050	1300	1300	1200	600	650	790	1150	760	760	900	900	1020	1020	1070	1320	1570	125	250	API 605 150 lb. 32" FF			API 605 150 lb. 28" FF		
DHv 36-25	488	638	540	540	276	288	310	575	560	560	640	640	720	720	400	520	600	65	150	300	16	2543	250	25	2544
DHv 52-30	633	809	570	580	370	400	460	650	680	680	820	820	880	880	470	600	680	75	175	350	16	2533	300	16	2533
DHv 70-35	715	945	850	800	400	480	520	715	710	710	820	820	920	920	600	760	860	95	230	400	10	2532	350	25	2534
DHv 75-50	765	1020	1050	900	450	510	600	755	835	835	940	940	1040	1040	660	800	920	100	260	600	25	2544	500	25	2544
DH 65-40	788	1000	950	800	400	450	525	760	480	480	620	620	730	730	750	1000	1250	100	215	ANSI B 16.5 150 lb. 20" RF			ANSI B 16.5 300 lb. 16" RF		
DH 60-30	701	898	650	650	350	400	470	750	620	620	720	720	820	820	600	700	800	75	200	400	16	2533	300	25	2534

Mjerna skica DH pumpe

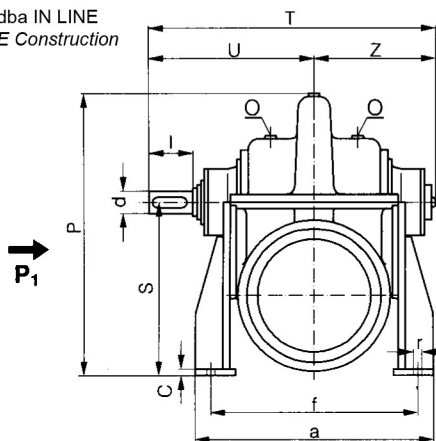
DH Type Pump Sketch With Dimensions



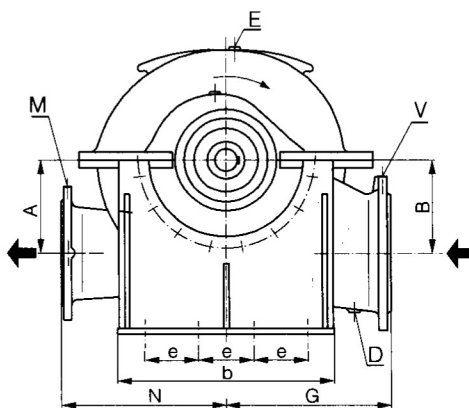
Mjerne skice

Pump Sketch With Dimensions

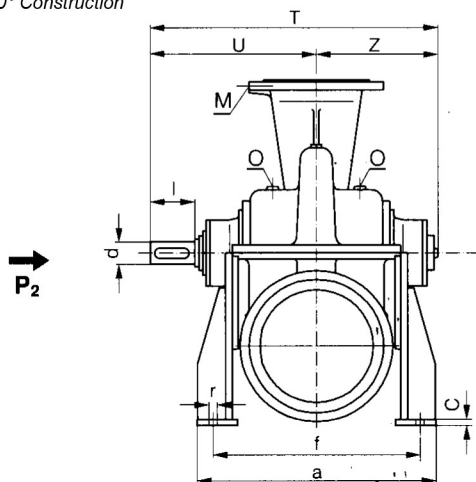
izvedba IN LINE
IN LINE Construction



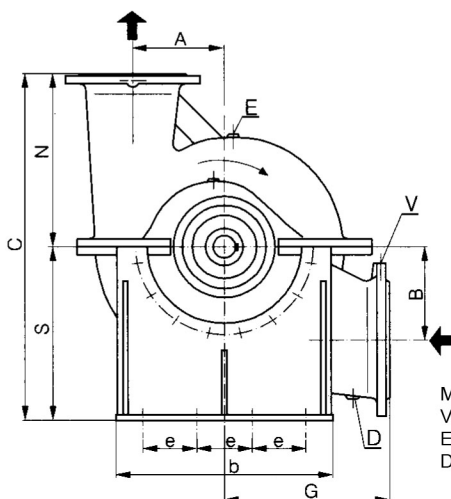
Pogled P₁
View P₁



izvedba 90°
90° Construction



Pogled P₂
View P₂



M – manometer / air gauge
V – vakuumetar / vacuum meter
E – evakuacija / evacuation
D – drenaža / drainage

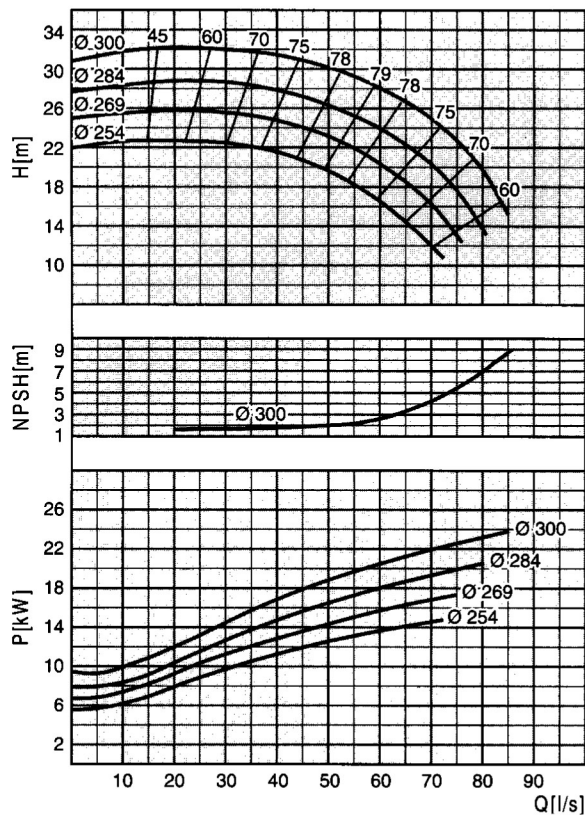
Tip pumpe <i>Pump Type</i>	Dimenzije pumpe <i>Pump Dimensions</i>																				Usisna priрубnica <i>Discharge Flange</i>			Tlačna priрубnica <i>Pressure Flange</i>			
	A	a	B	b	C	d	e	F	f	G	H	K	L	I	N	P	r	S	T	U	Z	NO	NP	DIN	NO	NP	DIN
CH 46-40	380	1040	400	920	23	80	240	-	940	800	1540	-	-	150	800	1100	23	740	1335	740	595	500	6	2531	400	6	2531
CH 52-30	320	590	350	820	35	75	520	-	640	600	1205	-	-	140	650	960	35	565	1343	758	585	400	16	2533	300	16	2533
CH 60-25	375	870	350	800	23	85	300	-	770	600	1070	-	-	160	650	830	23	420	1075	610	465	350	16	2533	250	16	2533
CH 60-30	350	890	350	820	23	85	200	-	770	600	1300	-	-	160	650	1060	23	650	1075	610	465	400	16	2533	300	25	2534
CH 60-60	650	1580	600	1100	30	90	300	-	1460	1000	2160	-	-	180	1100	1680	30	1060	1785	980	805	700	10	2532	600	10	2532
CH 73-40	510	1120	510	880	23	95	230	-	1010	850	1780	-	-	235	900	1821	33	880	1307	832	575	500	16	2533	400	16	2533
CV 46-40	380	1000	400	850	30	80	750	800	860	800	1470	475	330	150	740	350	33	730	-	-	-	500	6	2531	400	6	2531
CV 52-30	380	1000	310	750	40	75	-	650	930	600	1270	370	230	150	620	690	22	650	-	-	-	350	16	2533	300	16	2533
CV 60-25	375	800	350	750	30	80	650	650	700	600	1160	260	310	160	810	410	33	550	-	-	-	350	16	2533	250	16	2533
CV 60-30	350	800	350	750	30	85	650	650	700	600	1160	260	310	160	610	500	33	550	-	-	-	400	16	2533	300	25	2534
CV 60-60	650	1200	600	1050	35	90	950	1100	1100	1000	1900	500	530	180	980	620	33	920	-	-	-	700	10	2532	600	10	2532
CV 73-40	510	950	510	1130	35	95	1030	900	810	850	1658	300	510	235	832	941	33	826	-	-	-	500	16	2533	400	16	2533

Pojedinačni dijagrami

Single Diagrams

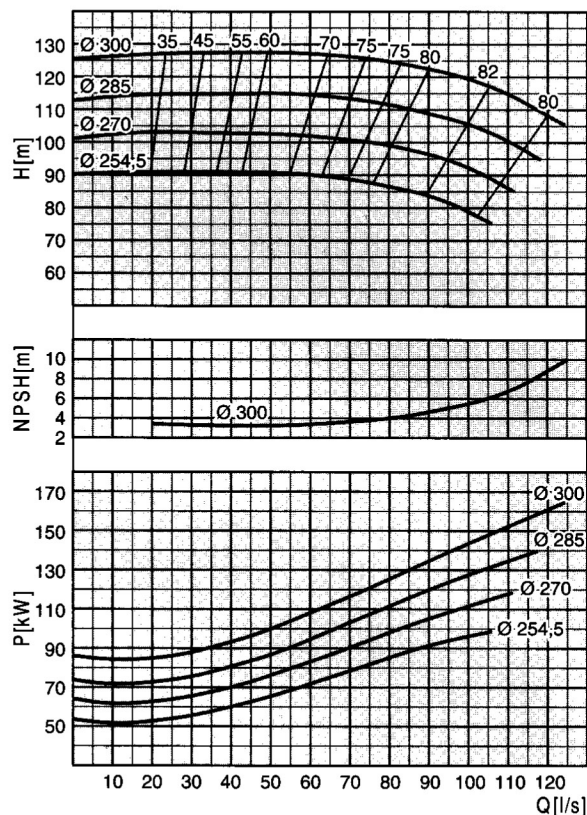
DH 30-15

$n=24,2s^{-1}$



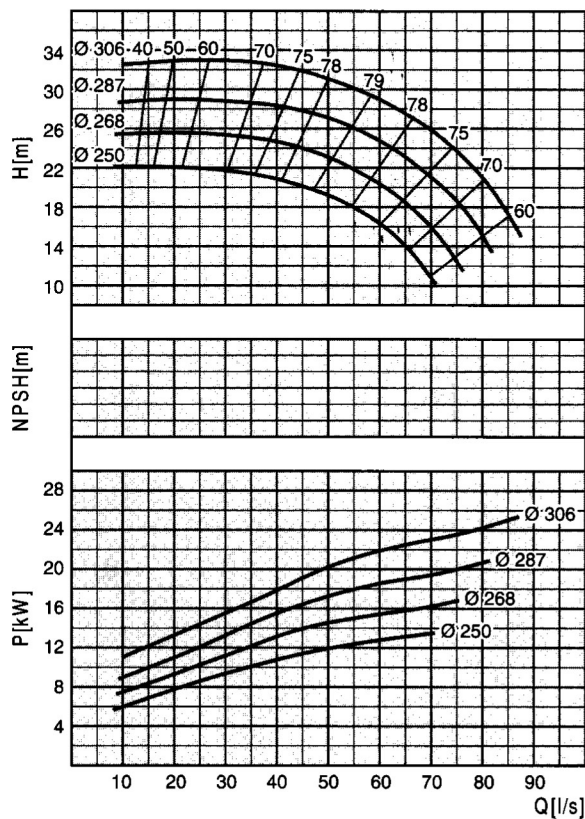
DH 30-15

$n=48,3s^{-1}$



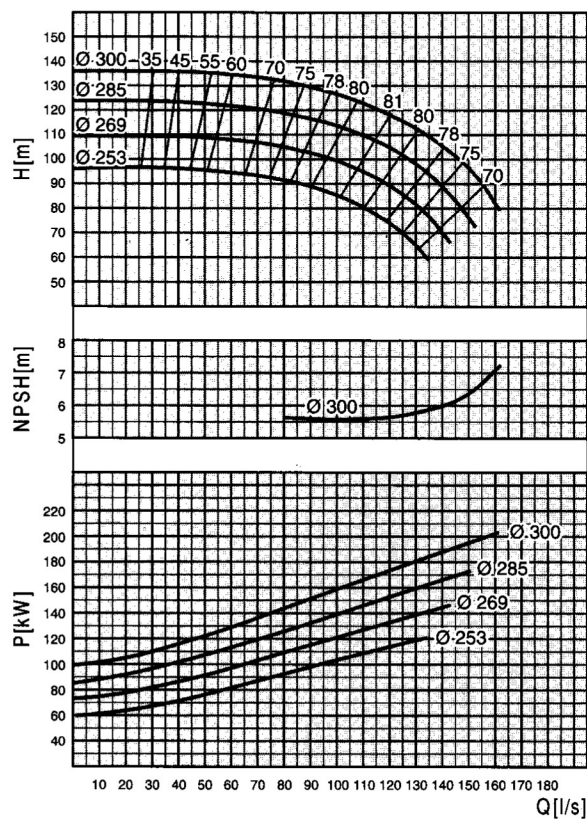
DH 30-15/A

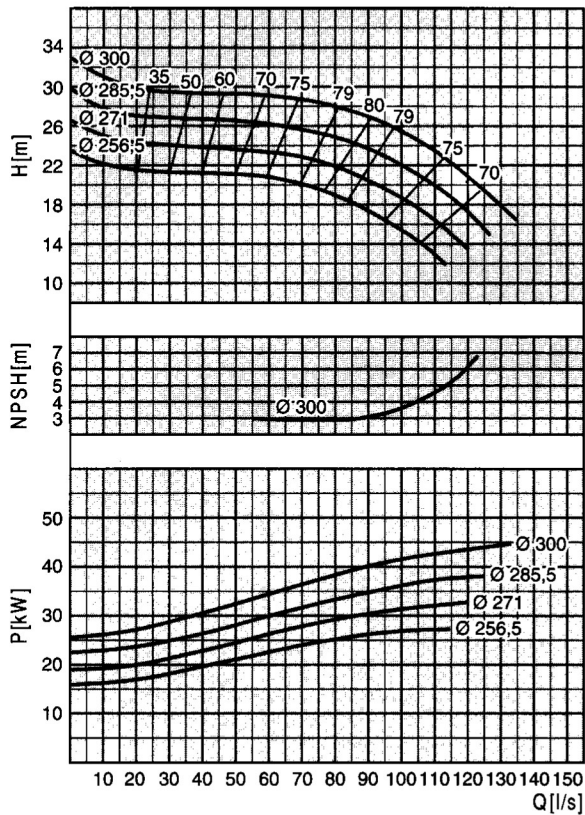
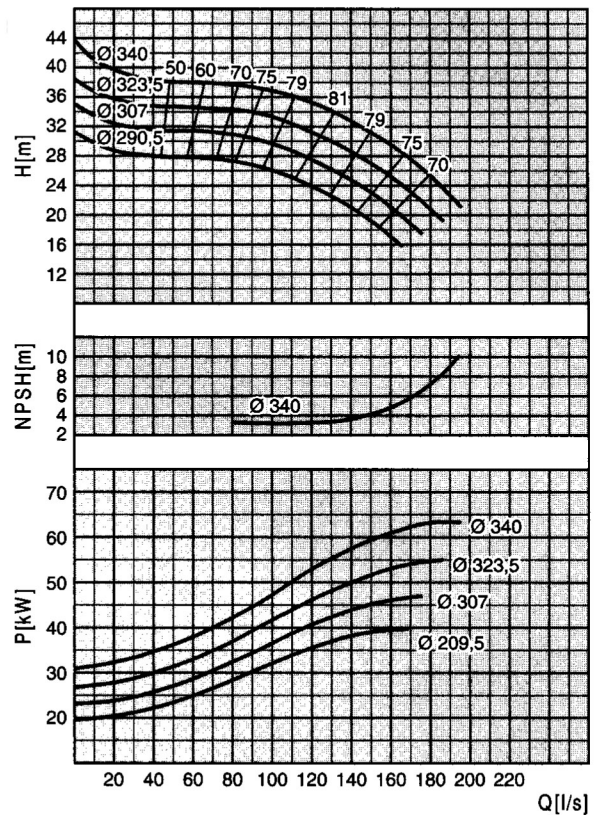
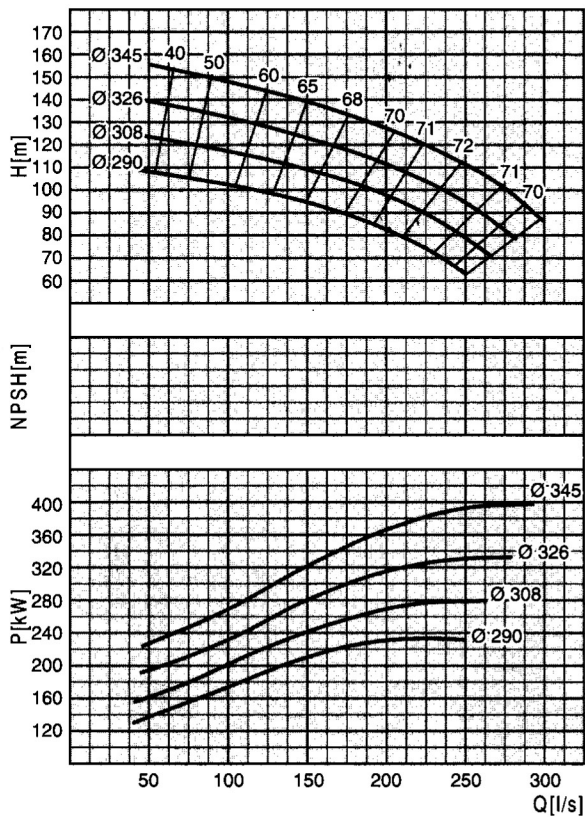
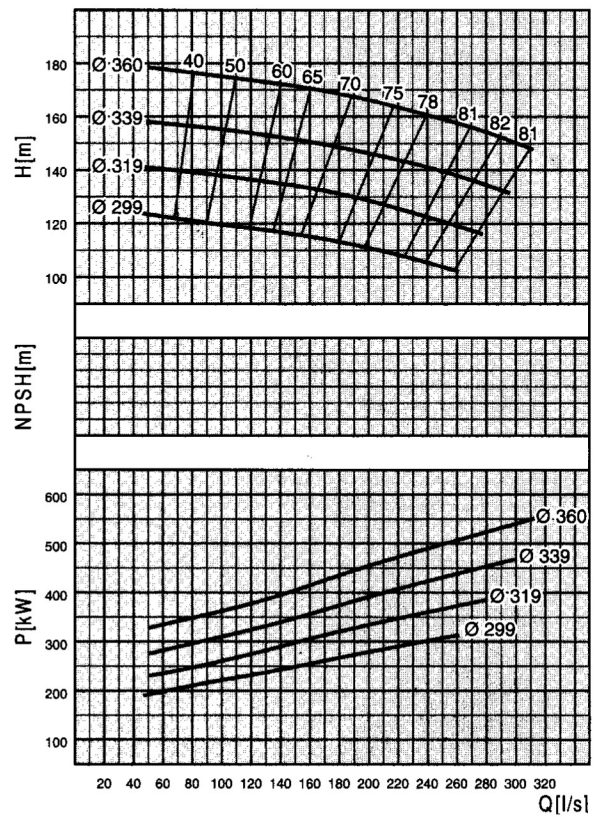
$n=24,2s^{-1}$

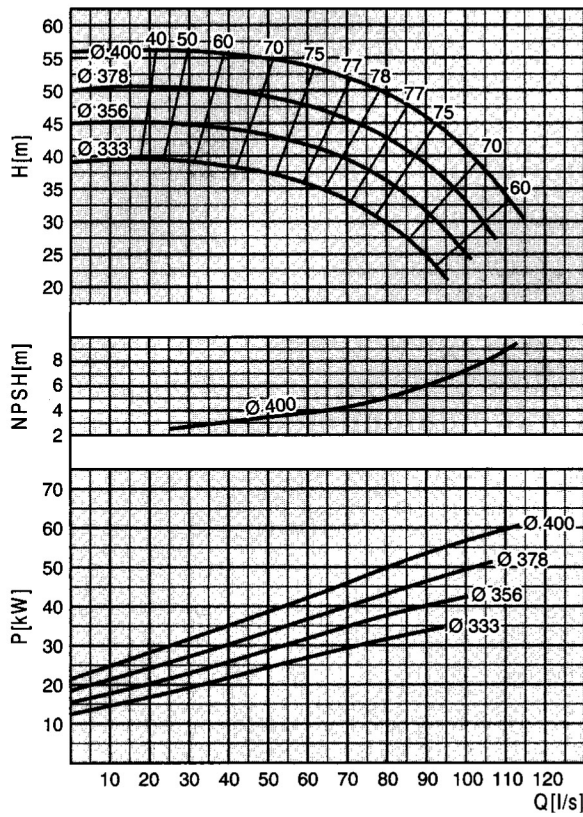
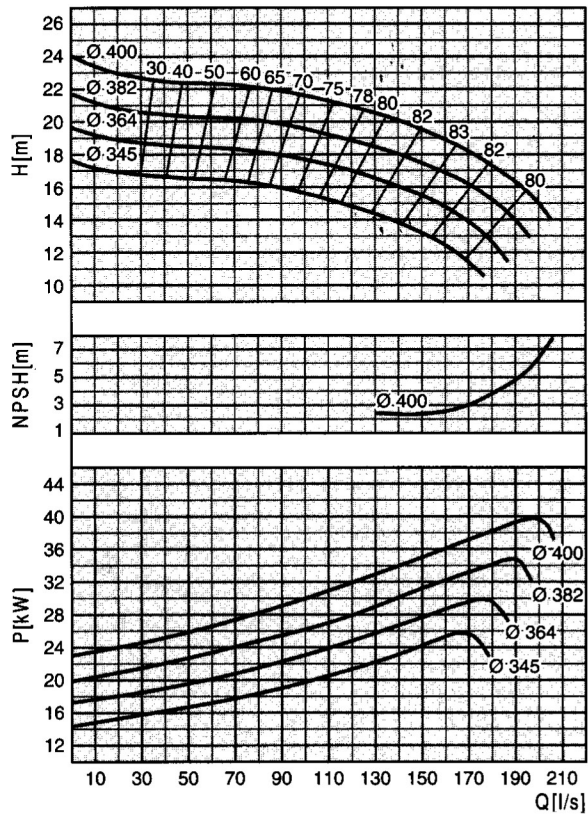
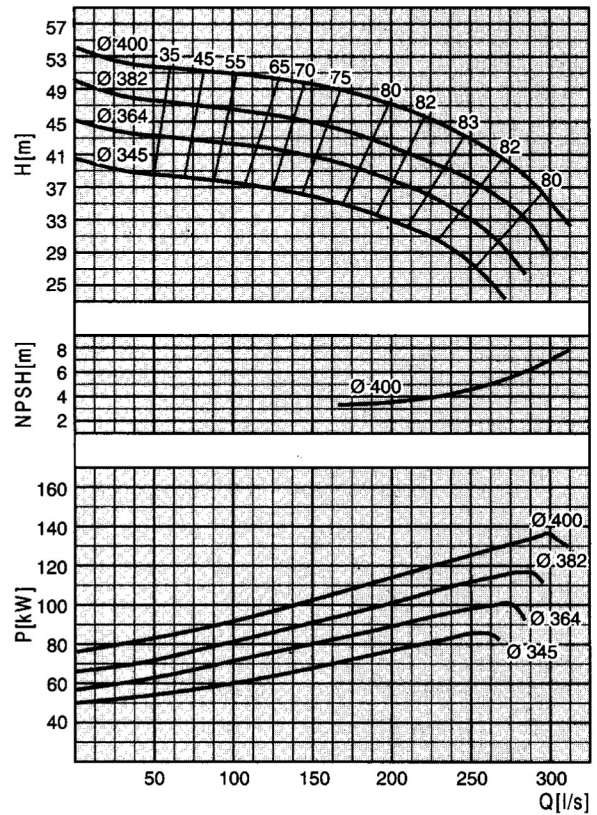


DH 30-15/A

$n=49,7s^{-1}$

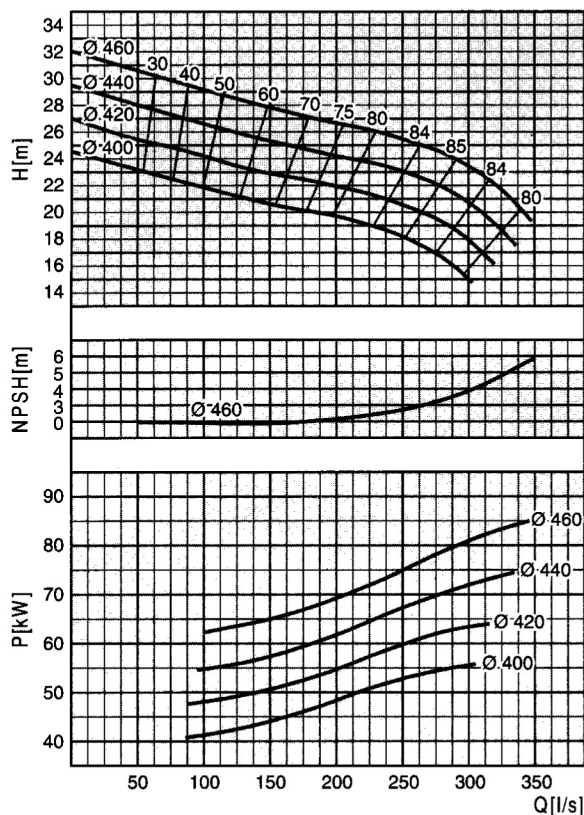


DH 30-20 $n=24,2s^{-1}$ **DH 34-25** $n=24,2s^{-1}$ **DH 34,5-25** $n=48,3s^{-1}$ **DHv 36-25** $n=48,3s^{-1}$ 

DH 40-15 $n=24,2s^{-1}$ **DH 40-30** $n=16s^{-1}$ **DH 40-30** $n=24,2s^{-1}$ 

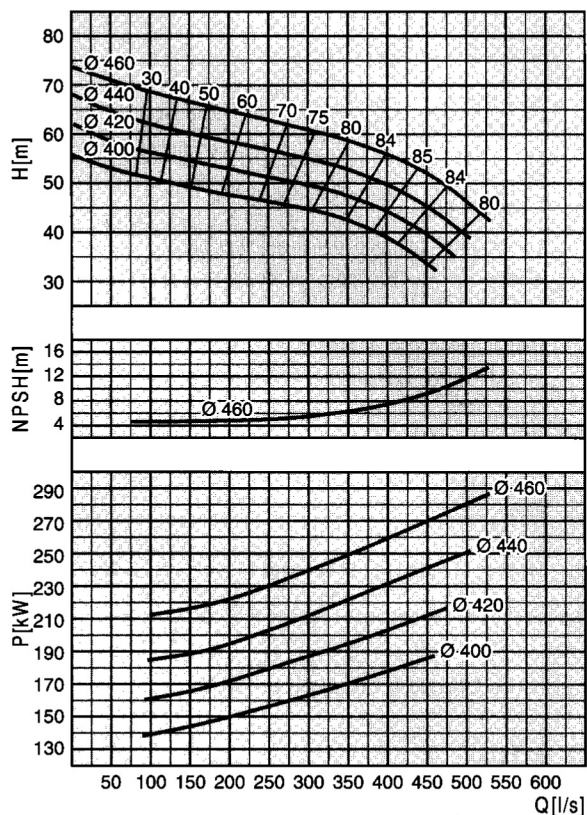
DH 46-35

$n=16s^{-1}$



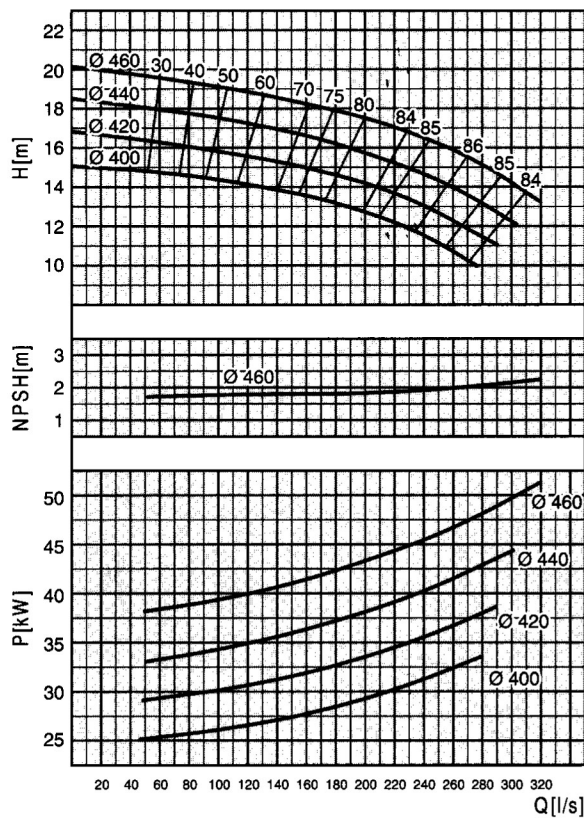
DH 46-35

$n=24,2s^{-1}$



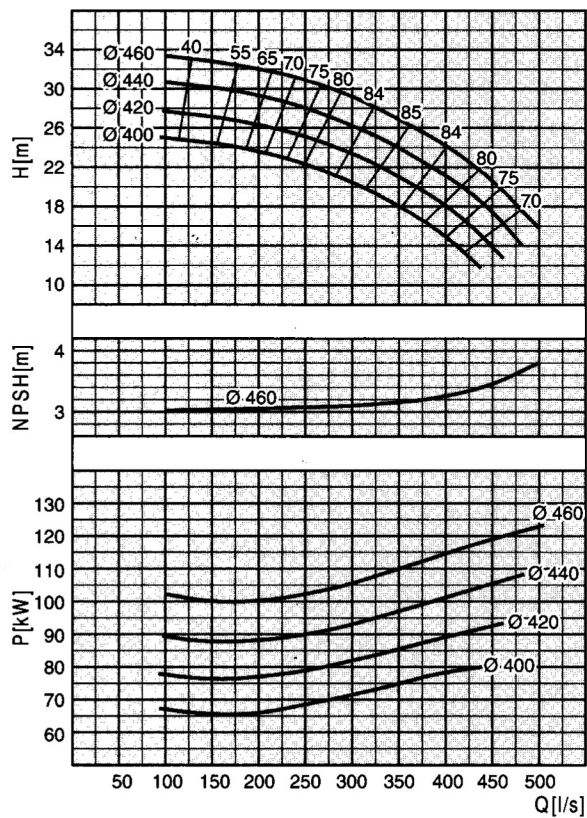
DH 46-40

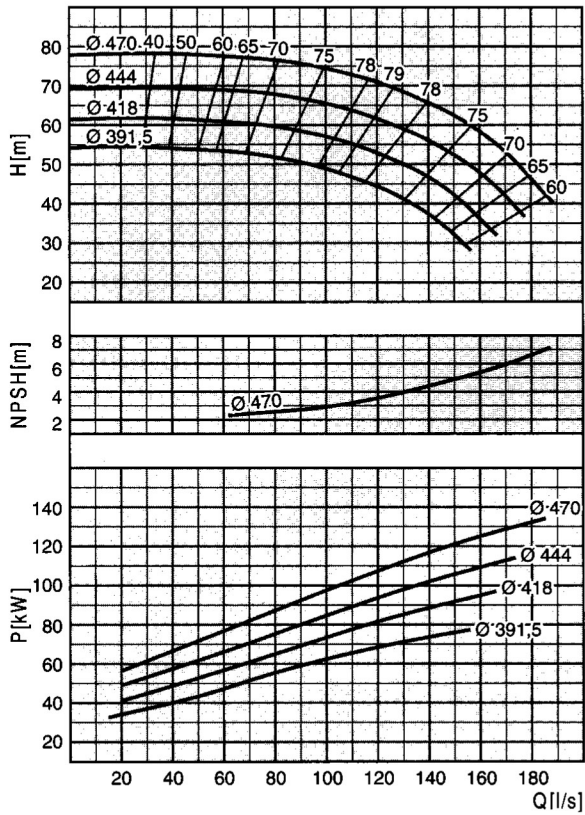
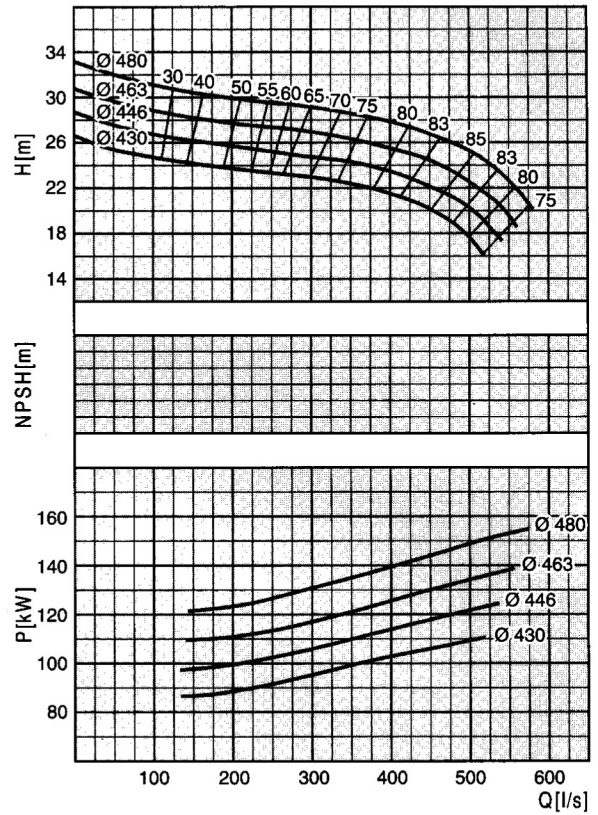
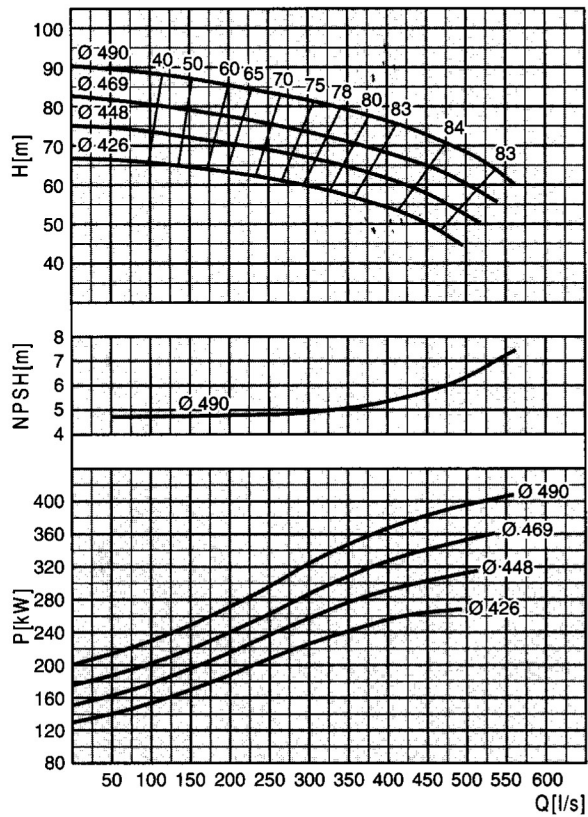
$n=12,3s^{-1}$

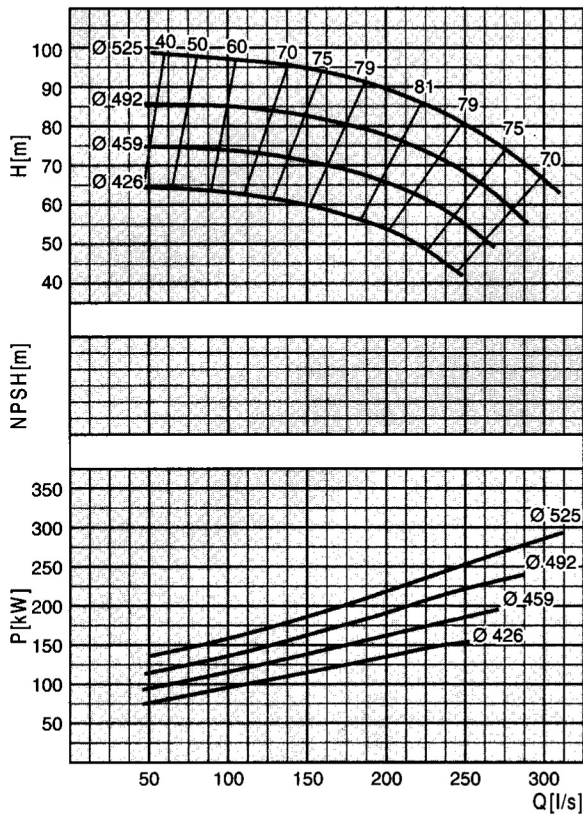
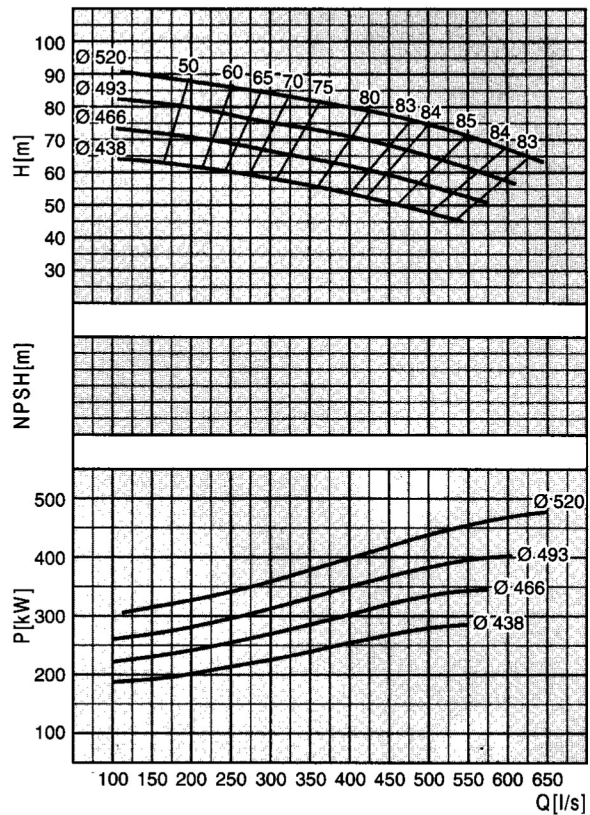
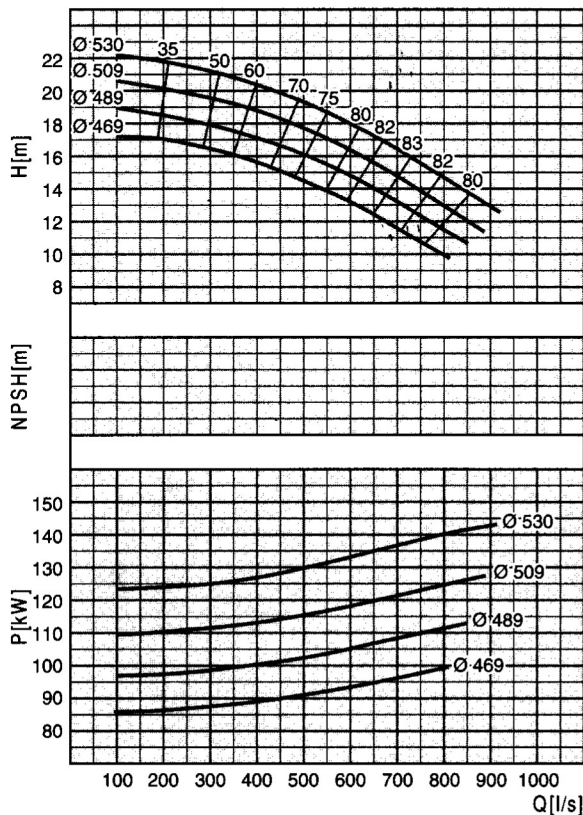
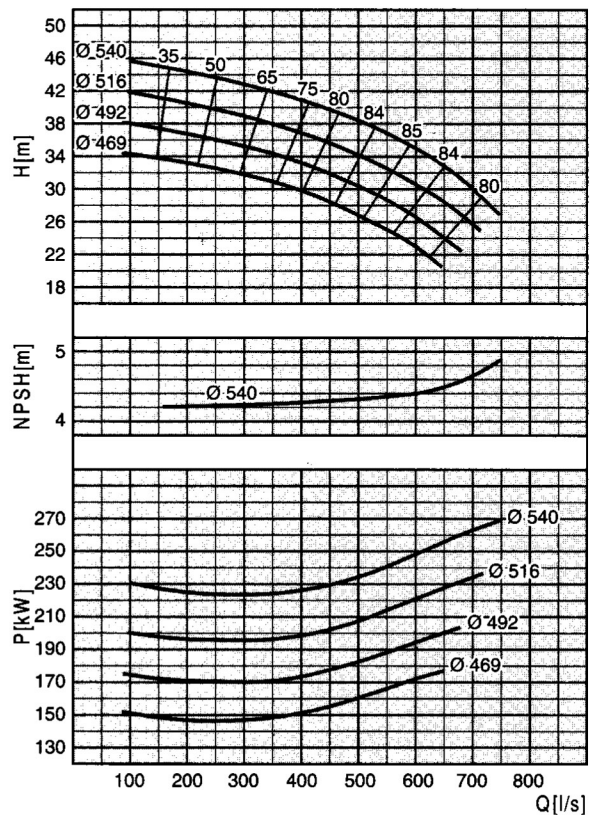


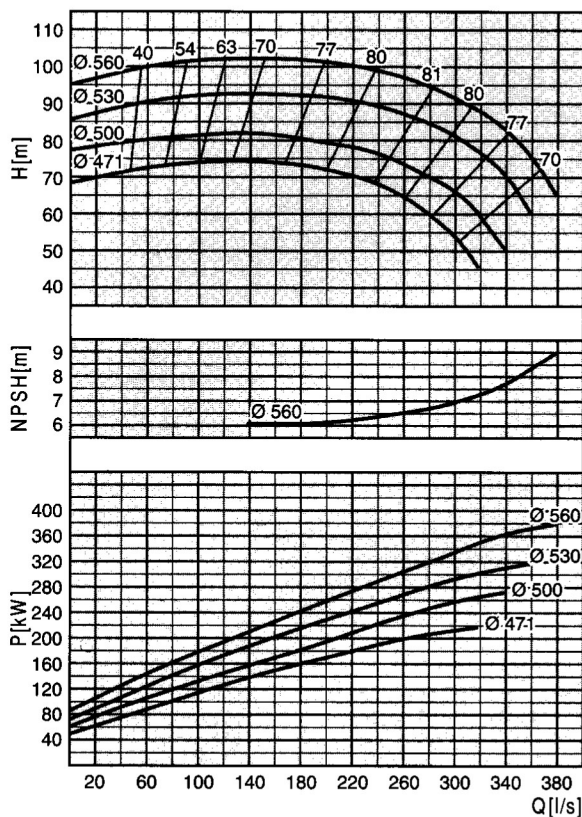
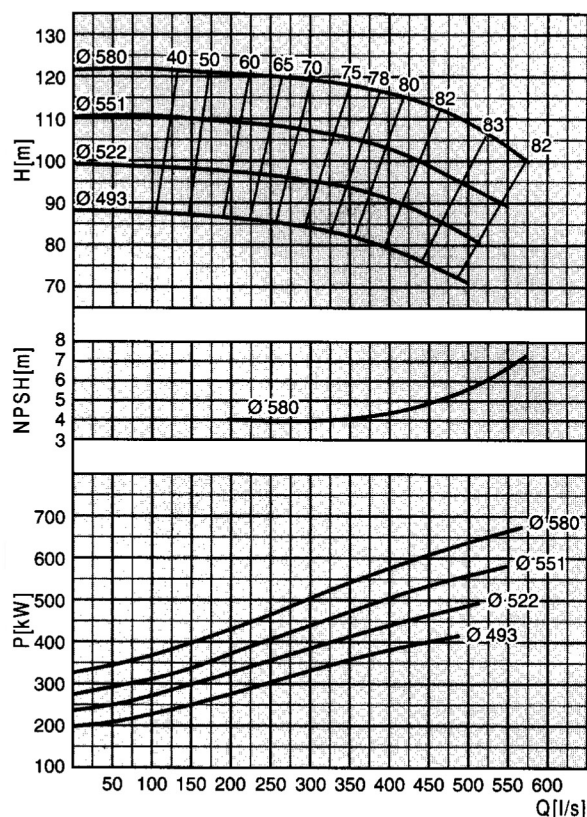
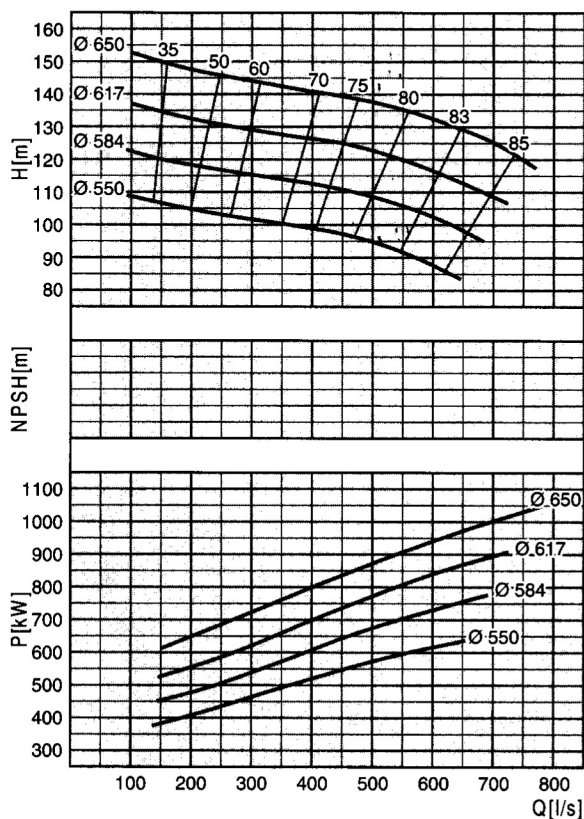
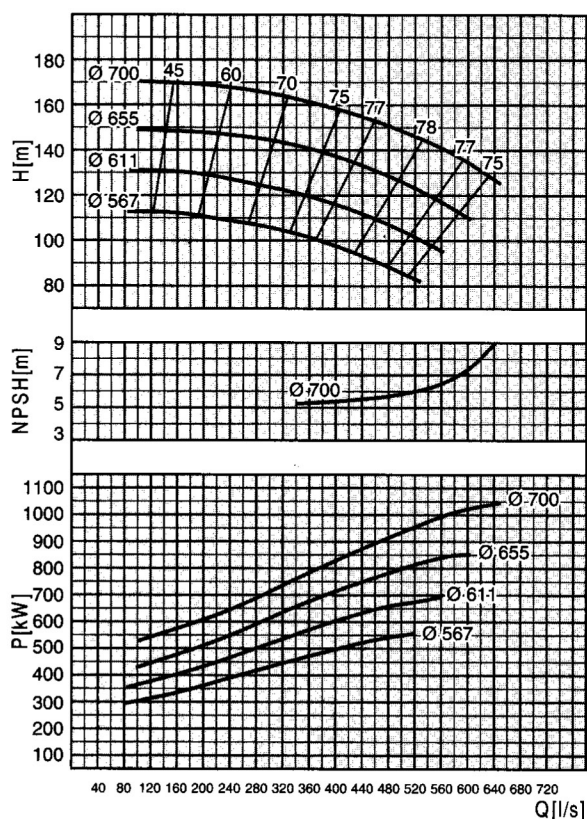
DH 46-40

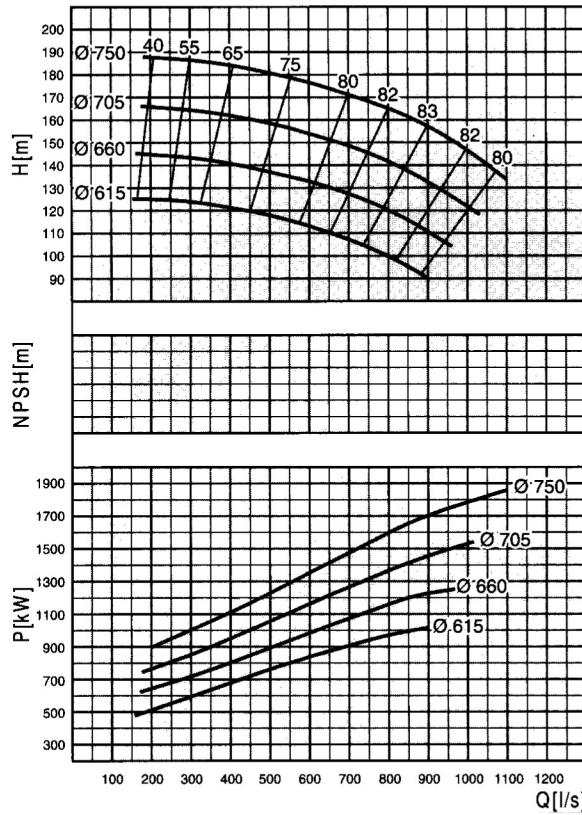
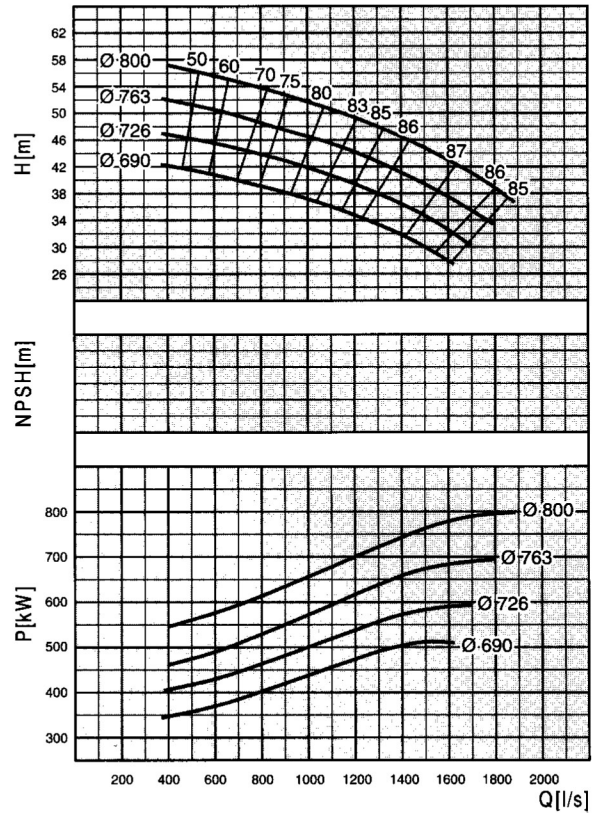
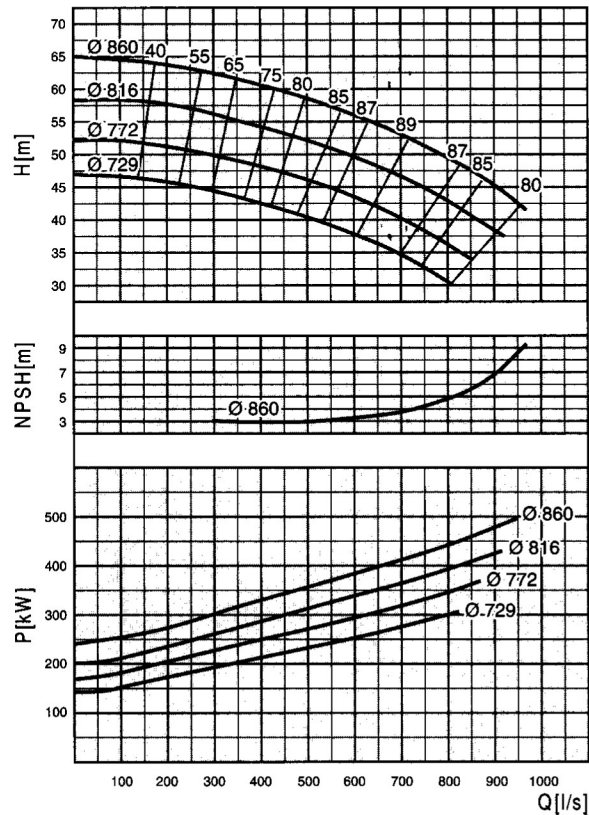
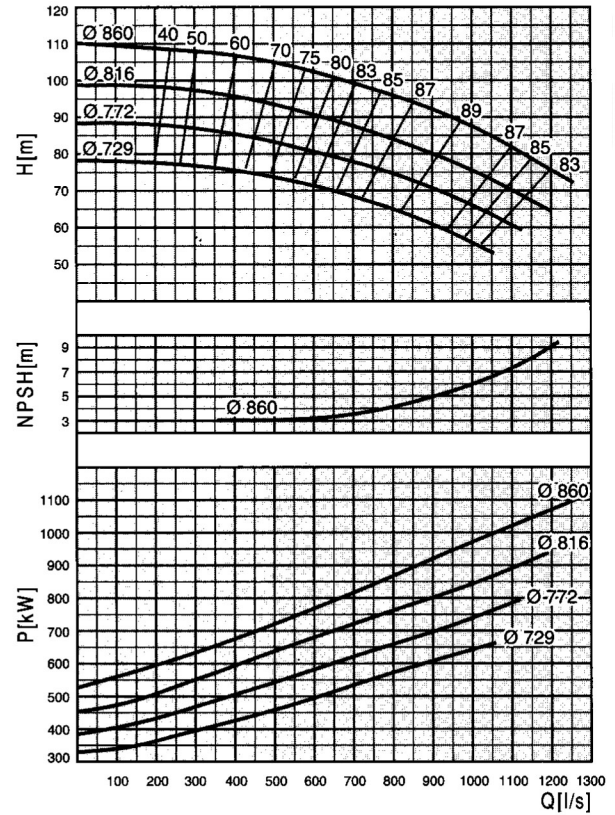
$n=16s^{-1}$



DH 47-20 $n=24,2s^{-1}$ **DH 48-50** $n=16s^{-1}$ **DH 49-35** $n=24,7s^{-1}$ 

DH 52-25/A $n=24,2s^{-1}$ **DHv 52-30** $n=24,2s^{-1}$ **DH 53-50** $n=12,3s^{-1}$ **DH 54-50** $n=16s^{-1}$ 

DH 56-25 $n=24,2s^{-1}$ **DH 58-35** $n=24,7s^{-1}$ **DH 65-40** $n=24,2s^{-1}$ **DHv 70-35** $n=24,2s^{-1}$ 

DHv 75-50 $n=24,2s^{-1}$ **DH 80-70** $n=12,3s^{-1}$ **DH 86-50** $n=12,3s^{-1}$ **DH 86-50** $n=16s^{-1}$ 



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