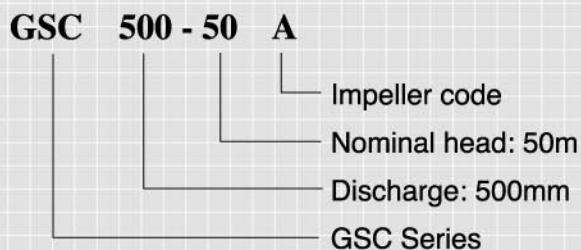




# GSC Series Double Suction Pumps

TECHNICAL BULLETIN

 **LOWARA**  
a xylem brand



Energy saving high efficiency  
Low pulsation unique design  
High reliability  
Less maintenance  
Easy dismantling

## GSC Series

**Double Suction Split Casing Pumps Designed for Wide Range of Applications.**

- Capacities: up to 18000m<sup>3</sup>/h
- Heads: up to 180 m
- Temperatures: up to 105°C
- Pressures: up to 10 Bar  
(special version up to 25 Bar)
- Efficiency: up to 92.5%
- Speed: up to 2970rpm
- Suction: DIN150-DIN1200
- Discharge: DIN100-DIN1000
- 40 Sizes available

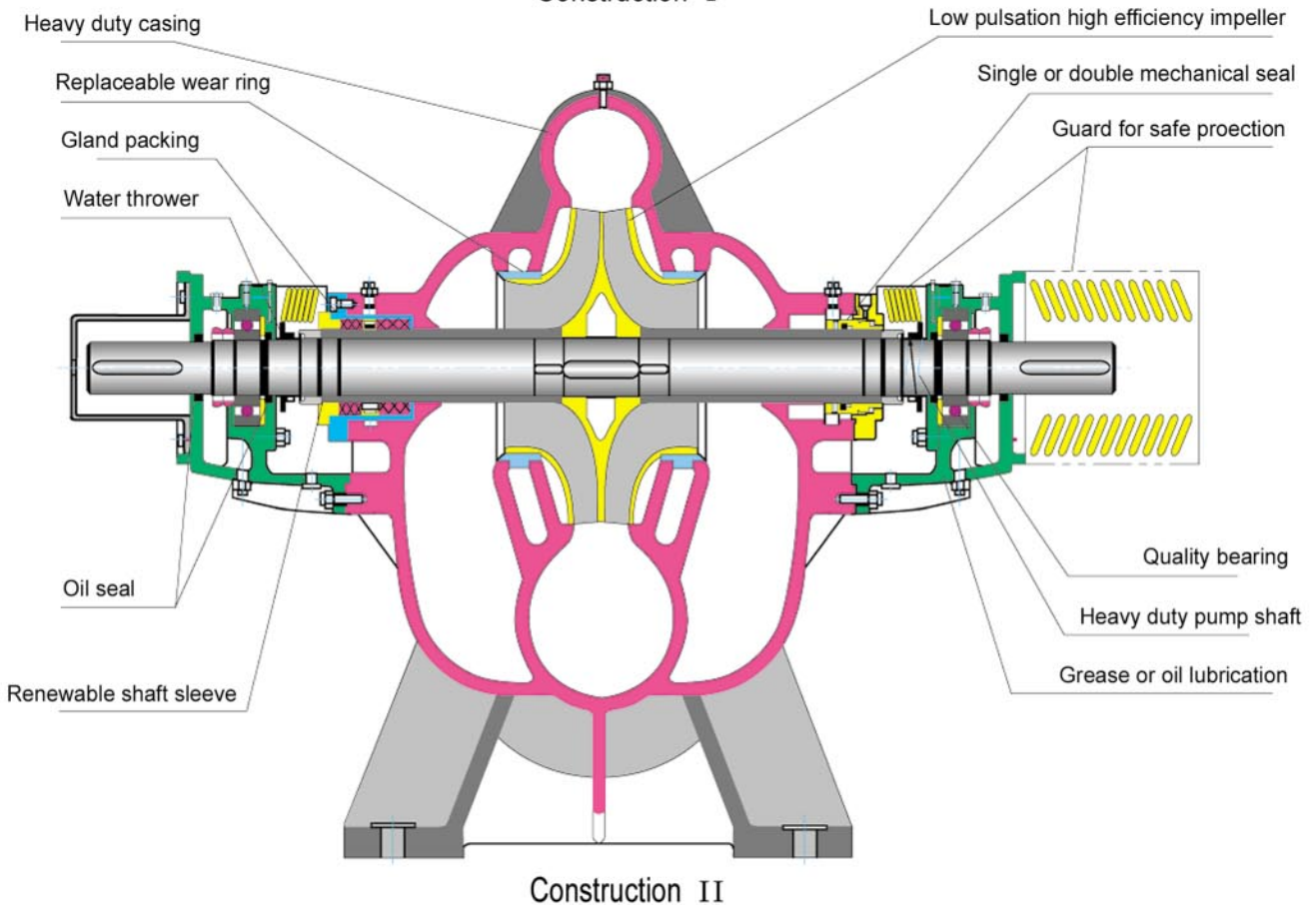
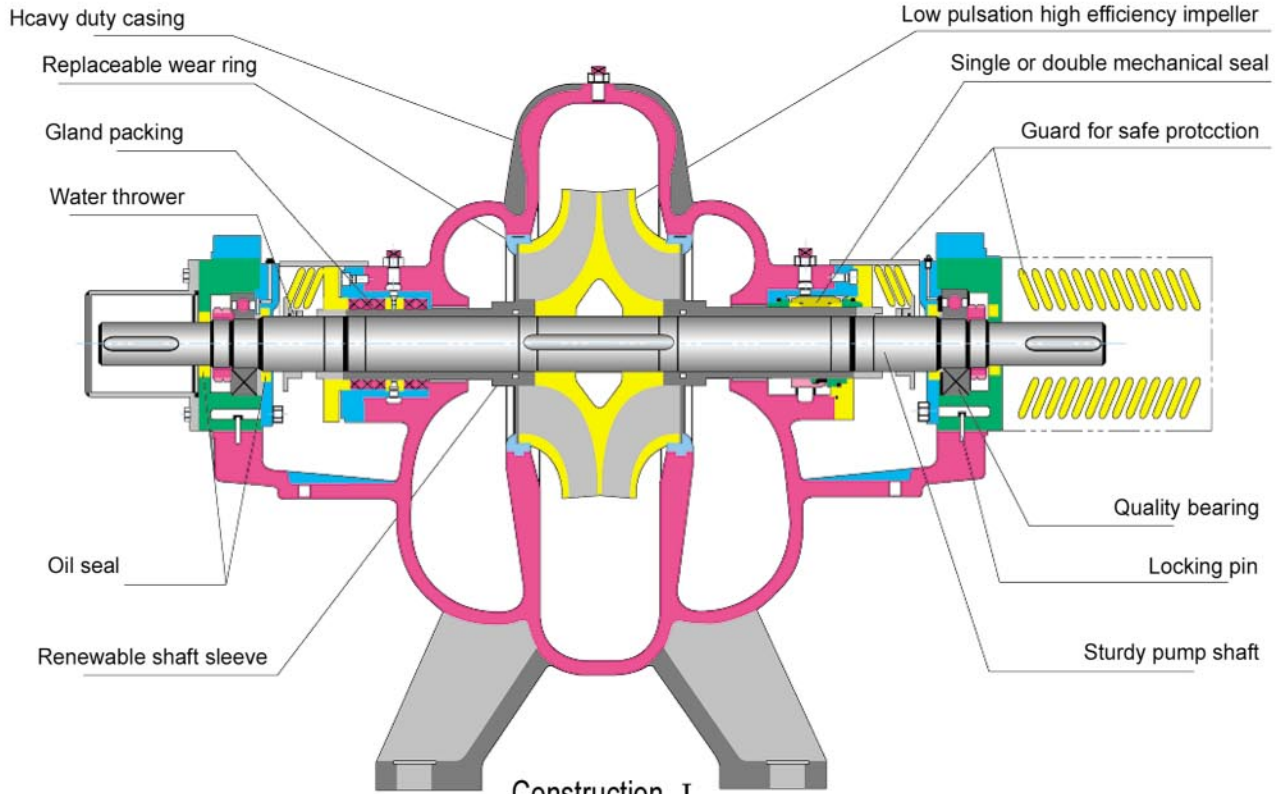
## Design Features

- Durable design
- High efficiency
- Low pulsation
- Various material of construction
- Gland packing or single/double mechanical seal arrangement
- Replaceable wear rings & shaft sleeve

## Applications

- **Water Supply** Primary lift and secondary booster stations
- **Building Service** HVAC water transfer & District heating systems
- **Agriculture** Irrigation drainage and flood control
- **Industry** power plant filtration, water treatment, filtration and cleaning in pulp and paper
- **Marine** Cooling system and fire fighting

**Cross Sectional View**



Heavy duty casing

Replaceable wear ring

Gland packing

Water thrower

Oil seal

Renewable shaft sleeve

Low pulsation high efficiency impeller

Single or double mechanical seal

Guard for safe protection

Quality bearing

Locking pin

Sturdy pump shaft

Heavy duty casing

Replaceable wear ring

Gland packing

Water thrower

Oil seal

Renewable shaft sleeve

Low pulsation high efficiency impeller

Single or double mechanical seal

Guard for safe protection

Quality bearing

Heavy duty pump shaft

Grease or oil lubrication



**Impeller**

Bi-directional rotation and radial balance assure highly efficient performance.

**Heavy Duty Casing**

Durable foot-mounted and design to resist external forces and vibration.

**Replaceable Wear Ring**

Easily replaceable construction permits handy maintenance of proper running clearance for maximum efficiency operation.

**Bearing Housing**

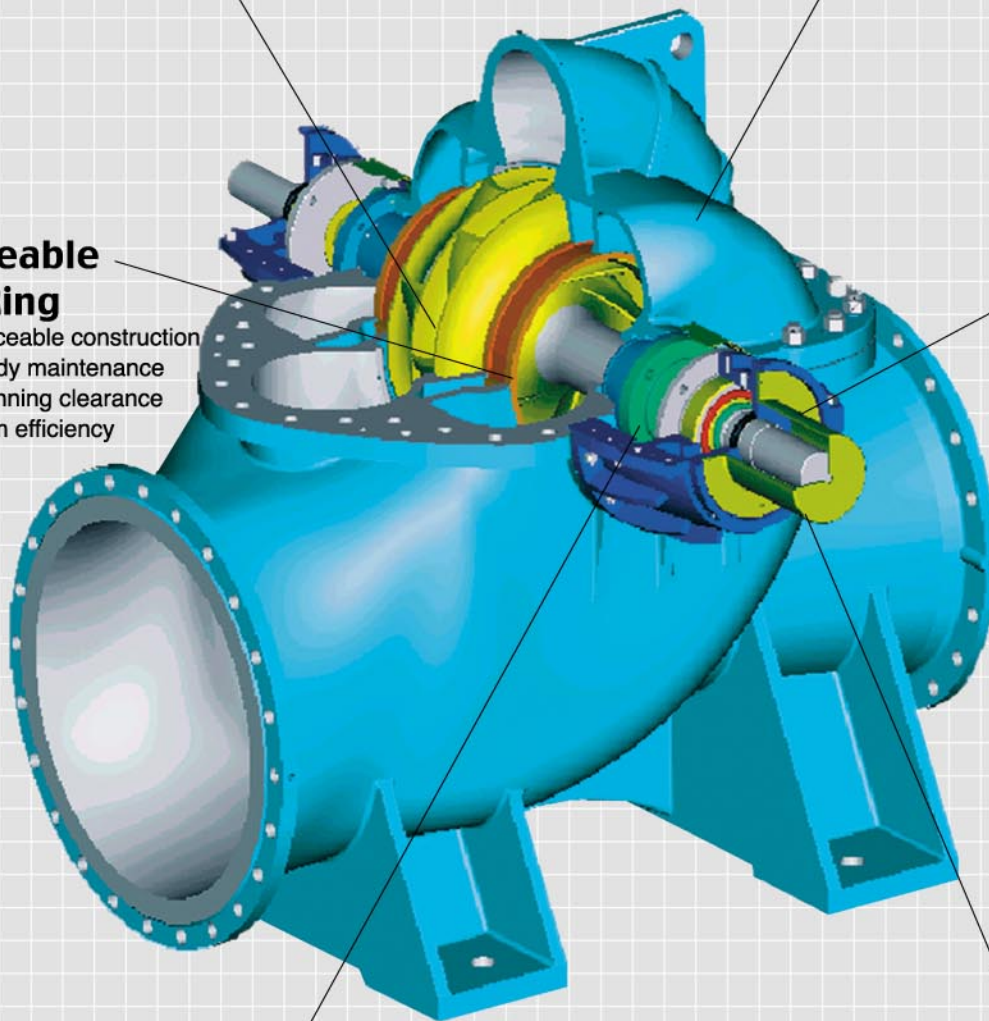
High quality and provides a solid support for the bearing.

**Shaft Sealing by Either Gland Packing or Mechanical Seal**

The shaft can be sealed by either gland packing or mechanical.

**Heavy Duty Shaft**

Solid intensity Shaft provides high thrust and heavy-duty capability.





## Specifications

- **Excellent Hydraulic Profile**

Using latest 3-D CAD and Computational Fluid Dynamics(CFD) analysis ensures optimum hydraulic profile.

- **Double-flow Impeller**

Owing to its unique and innovative design, optimum flow behaviour is guaranteed and thus the impeller features low NPSH requirement, low pulsation and high efficiency

- **Shaft Tailored for Two-sided Drive**

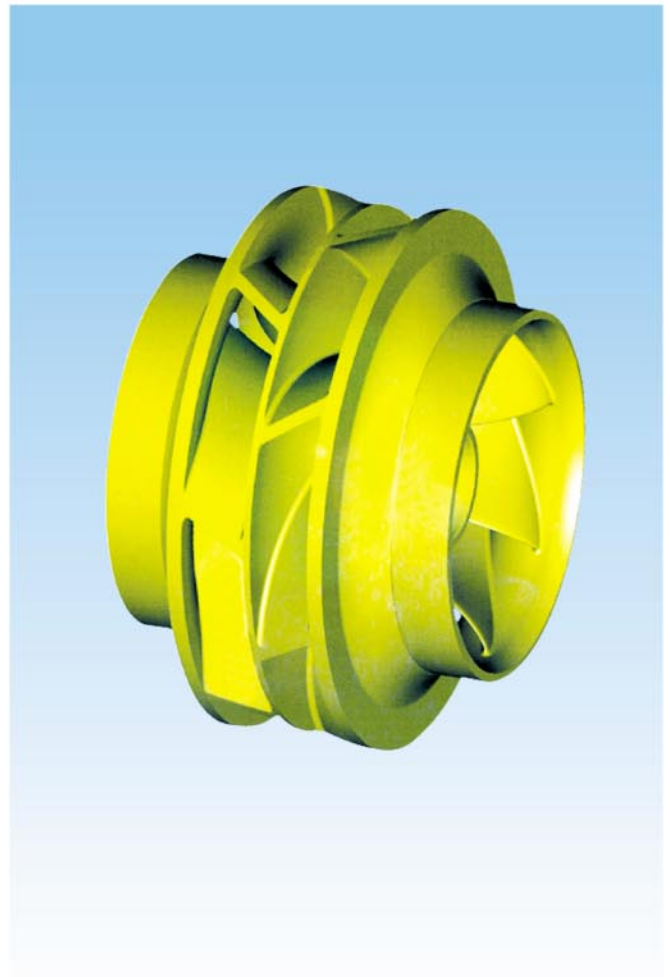
Heavy duty shaft with minimum deflection is designed to ensure vibration free operation. Two-sided drive provides the flexibility of installation requirement.

- **Shaft Seal**

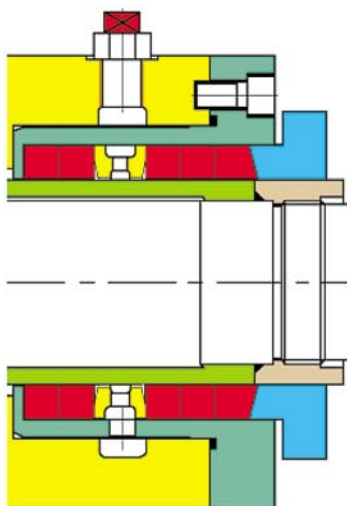
There are options on the sealing arrangements to meet different applications.

- **Diaphragm Coupling**

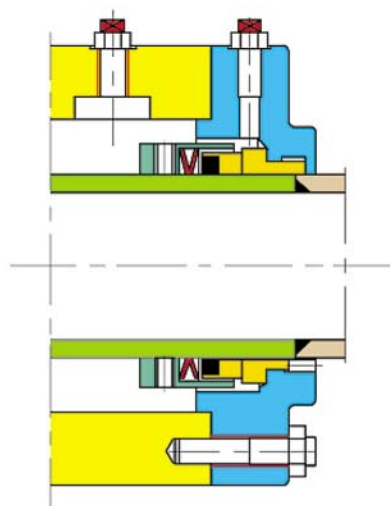
It gives significant loading capacity, high damping and excellent compensation for optional misalignment between the motor shaft and pump shaft.



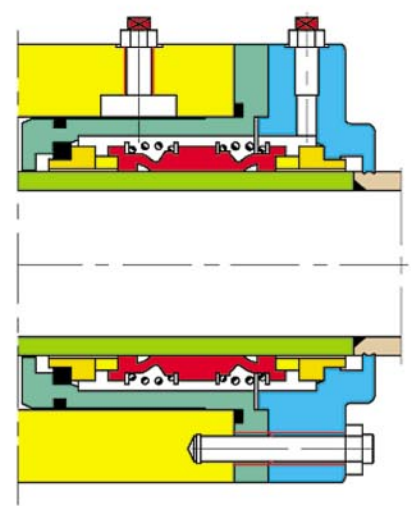
Gland packing

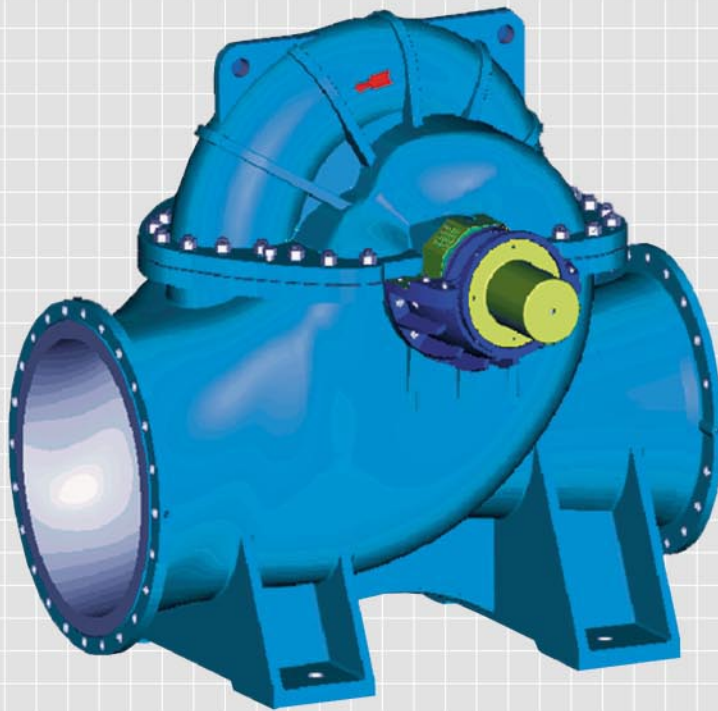


Single mechanical seal



Double mechanical seal

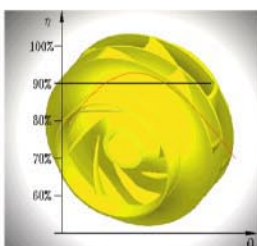




## Technical Characteristics

### Material of Construction

Part Description	Materials of Construction			Part Description	Materials of Construction		
	All Iron	Bronze Fitted	All Stainless Steel		All Iron	Bronze Fitted	All Stainless Steel
Casing	GG25	GG25	1.4460	Seal chamber	GG25	GG25	SS316
Impeller	GG25	LG2	1.4460	Gland cover	GG25	GG25	SS316
Shaft	41Cr4	SS420	1.4462	Lantern ring	GG25	GG25	SS316
Shaft sleeve	SS420	SS420	1.4460	Water thrower	SS420	SS420	SS420
Wear ring	GG25	LG2	1.4460	Bearing Housing	GG25	GG25	GG25
Lock nut	C45E	SS420	SS420	Fastener	mild steel	SS304	SS304

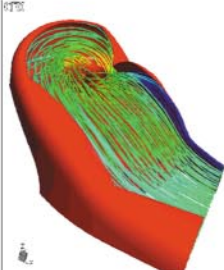


### Unique Hydraulic Design

The maximum efficiency with up to 92.5% & wide HE operation range and the lowest NPSH requirement are ensured by the use of following tools:


- Up to the minute hydraulic research findings.
- Computational Fluid Dynamics calculation
- 3-D CAD Pro-E

## Construction Characteristics




**Optimum hydraulic model**

- Innovative of hydraulic development
- Hydraulic pattern goes through test simulation
- Maximum efficiency and optimal flow behavior towards lowest NPSH

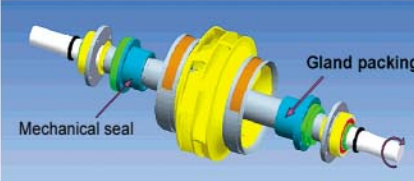


**Smooth casting surface contributes to performance expectation**



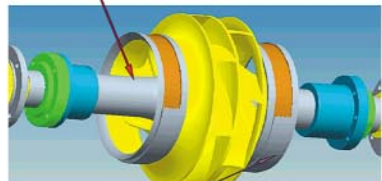
**Double-flow impeller**

- Low pulsation  
-offset blades
- Nil axial thrust  
-Two halves symmetrically combined, gives hydraulically balance



**Low vibration and deflection-**  
in between bearing design, dynamically balanced heavy duty shaft

**Two-sided drive**---The pump can be driven from either right or left side.



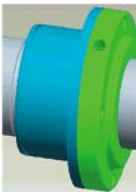
Replaceable shaft sleeves protect the pump shaft

Replaceable wear rings


**Replaceable wear rings**

**Quality seal & bearing**


Mechanical seal  
Burgmann as standard



Soft packing  
Carbonized fibre

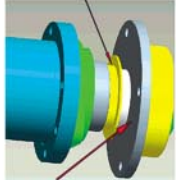


Bearing  
NSK or SKF



**Multi-protection for bearing**

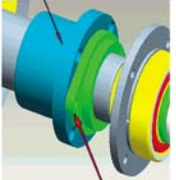
SS water thrower and O ring as primary protection



Oil seal further prevents dust or water ingress

**Separate sealing chamber**

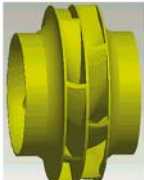
Easy dismantling and change between packing and mech.seal



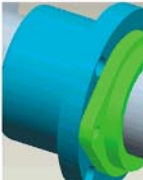
Split type gland makes maintenance easy

**Low spares requirement**


Impeller



Mechanical seal or packing

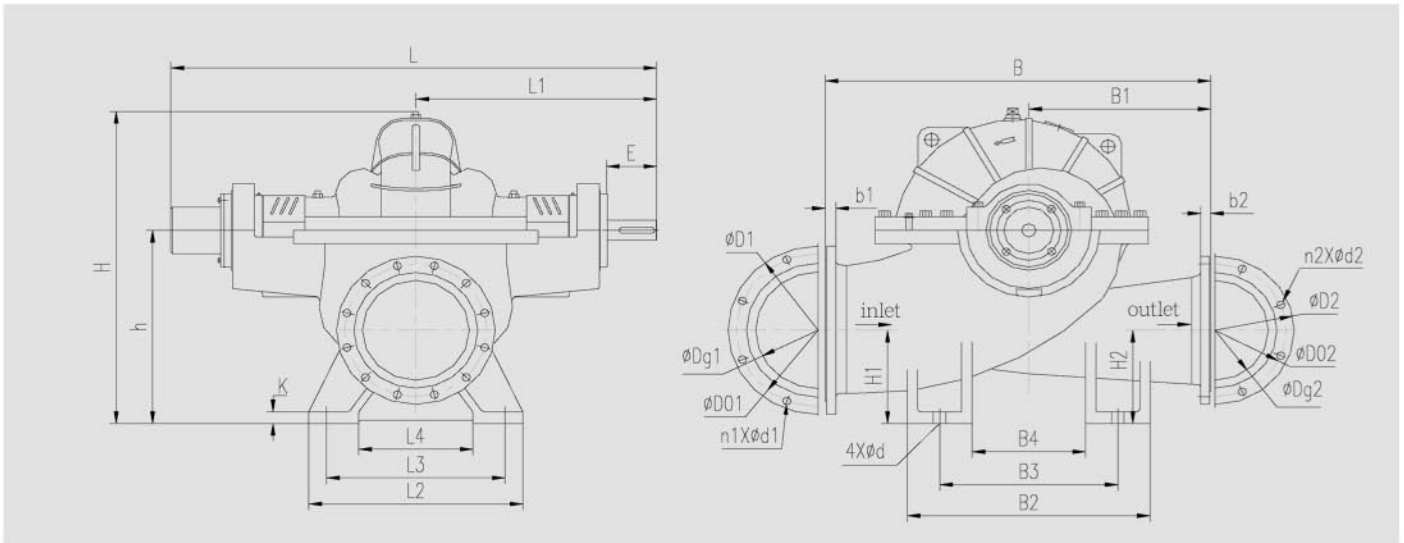


Wear rings

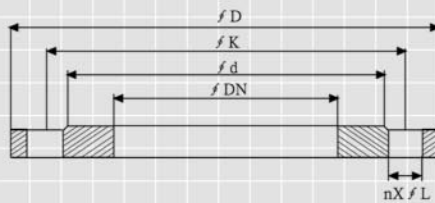
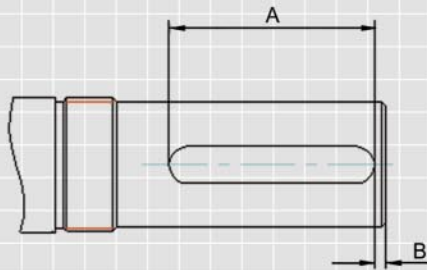
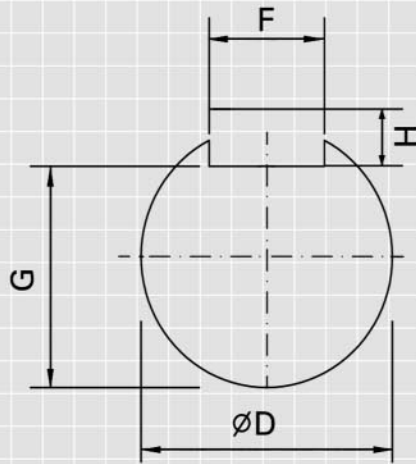




## GSC Series- Dimensions and Weight



No.	Type	L	L1	L2	L3	L4	B	B1	B2	B3	B4	H	H1	H2	h	K	d	De1	D1	D01	n1×Ød1	b1	De2	D2	D02	n2×Ød2	b2	E	Weight
1	300 - 10	1116	535	510	450	330	1000	500	620	550	430	808	245	245	510	40	28	300	445	400	12×Ø22	28	300	445	400	12×Ø22	28	90	500
2	500 - 10	1456	717.5	760	580	420	1550	775	1020	800	580	1251	390	390	800	55	42	500	670	620	20×Ø28	34	500	670	620	20×Ø28	34	130	1280
3	200 - 15	995	485	410	350	230	745	330	510	450	330	709	240	235	450	30	28	250	395	350	12×Ø22	28	200	340	295	8×Ø22	28	85	305
4	250 - 20	1096	537	510	450	330	900	400	620	550	430	803	260	250	510	40	28	300	445	400	12×Ø22	28	250	395	350	12×Ø22	28	105	445
5	350 - 20	1377	675	580	500	380	1168	584	680	600	450	970	310	310	620	50	34	350	505	460	16×Ø22	30	350	505	460	16×Ø22	30	133	454
6	400 - 20	1537	750	760	580	420	1460	640	1020	800	580	1266	390	390	800	55	42	500	670	620	20×Ø28	34	400	565	515	16×Ø28	32	135	1740
7	600 - 20	1908	935	1050	850	550	1700	800	1200	850	600	1622	516	536	1050	50	48	700	895	840	24×Ø31	40	600	780	725	20×Ø31	36	175	2640
8	700 - 20	2058	1010	1250	1000	750	2200	1000	1500	1200	900	1845	595	595	1200	50	48	800	1015	950	24×Ø34	44	700	895	840	24×Ø31	40	175	3330
9	200 - 25	1040	501	410	350	230	850	400	510	400	-	738	220	220	450	30	28	250	395	350	12×Ø22	28	200	340	295	8×Ø22	26	90	375
10	300 - 25	1291	632	580	500	360	1040	460	680	600	450	963	330	320	620	50	34	350	505	460	16×Ø22	30	300	445	400	12×Ø22	28	120	690
11	100 - 30	861	419	300	250	170	520	250	340	270	160	474	170	180	320	20	18	150	285	240	8×Ø22	26	100	220	180	8×Ø18	24	87	150
12	150 - 30	934	453	330	280	190	570	285	340	280	180	565	200	220	370	25	18	200	340	295	8×Ø22	26	150	285	240	8×Ø22	26	82	180
13	250 - 30	1234	610	520	450	330	880	410	600	450	300	824	250	240	510	40	28	300	445	400	12×Ø22	28	250	395	350	12×Ø22	28	135	550
14	300 - 35	1392	675	600	500	360	1080	510	690	500	310	982	320	320	620	50	34	350	505	460	16×Ø22	30	300	445	400	12×Ø22	28	130	895
15	350 - 35	1524	756	760	580	420	1350	630	1020	800	580	1270	385	385	800	55	42	500	670	620	20×Ø28	34	350	505	460	16×Ø22	30	160	1350
16	150 - 45	996	470	300	250	200	620	300	340	250	-	547	185	185	355	25	18	200	340	295	8×Ø22	26	150	285	240	8×Ø22	26	89	224
17	200 - 45	1237	610	410	350	230	890	440	510	400	-	745	250	190	450	30	28	250	395	350	12×Ø22	28	200	340	295	8×Ø22	26	133	418
18	100 - 50	832	400	330	280	190	550	250	340	280	-	435	145	145	285	25	18	150	285	240	8×Ø22	26	100	220	180	8×Ø18	24	78	160
19	350 - 50	1549	768	820	700	480	1185	580	900	700	400	1055	335	270	670	40	34	400	565	515	16×Ø28	32	350	505	460	16×Ø22	30	170	1460
20	500 - 50	1948	955	1050	850	550	1660	760	1100	850	600	1624	503	503	1050	50	48	700	895	840	24×Ø31	40	500	670	620	20×Ø28	34	175	2320
21	700 - 50	2353	1150	1250	1000	750	2100	1000	1500	1200	900	1868	610	610	1200	50	48	800	1015	950	24×Ø34	44	700	895	840	24×Ø31	40	215	4190
22	900 - 50	2633	1305	1400	1200	700	2550	1200	1600	1300	1000	2400	677.5	677.5	1450	70	56	1000	1230	1160	28×Ø37	50	900	1115	1050	28×Ø34	46	245	8160
23	1000-50	2933	1455	1700	1460	1000	3082	1340	2000	1600	1200	2750	805.5	805.5	1750	70	56	1200	1455	1380	32×Ø40	56	1000	1230	1160	28×Ø37	50	245	9780
24	500 - 60	1978	970	1050	850	550	1680	780	1100	850	600	1650	471	471	1050	50	48	700	895	840	24×Ø31	40	500	670	620	20×Ø28	34	175	3250
25	150 - 65	1227	603	510	450	330	880	400	620	550	430	856	270	220	510	40	28	250	395	350	12×Ø22	28	150	285	240	8×Ø22	26	125	500
26	150 - 70	996	470	330	280	190	620	300	360	280	-	544	185	185	355	25	18	200	340	295	8×Ø22	26	150	285	240	8×Ø22	26	89	235
27	250 - 70	1306	625	510	450	330	1070	530	620	550	430	852	260	200	510	40	28	300	445	400	12×Ø22	28	250	395	350	12×Ø22	28	134	607
28	400 - 70	1848	905	850	700	450	1290	600	950	750	550	1267	359	359	800	50	48	500	670	620	20×Ø28	34	400	565	515	16×Ø28	32	175	1840
29	700 - 70	2503	1225	1250	1000	750	2150	1100	1500	1200	900	1946	580	580	1250	50	48	800	1015	950	24×Ø34	44	700	895	840	24×Ø31	40	215	4290
30	800 - 70	2743	1360	1750	1460	1100	2580	1200	1900	1500	1100	2510	718	718	1600	70	56	1000	1230	1160	28×Ø37	50	800	1015	950	24×Ø34	44	245	8850
31	250 - 75	1592	765	600	500	360	1250	600	690	500	310	1118	346	264	620	50	34	350	505	460	16×Ø22	30	250	395	350	12×Ø22	28	173	1285
32	100 - 80	811	401	300	250	160	550	250	340	270	170	455	145	130	285	25	18	150	285	240	8×Ø22	26	100	220	180	8×Ø18	24	74	715
33	200 - 90	1375	674	520	450	330	1046	470	600	450	300	898	242	185	510	40	28	300	445	400	12×Ø22	28	200	340	295	8×Ø22	26	165	760
34	900 - 90	3169	1570	2000	1750	1350	3160	1360	2000	1500	1000	2840	815	815	1800	70	56	1200	1485	1390	32×Ø49	70	900	1125	1050	28×Ø40	62	290	12100
35	125 - 95	991	475	330	280	200	680	330	350	280	200	555	185	185	355	25	18	200	340	295	12×Ø22	30	125	250	210	8×Ø18	26	105	255
36	700-105	2673	1325	1250	1000	750	2330	1080	1500	1200	900	2150	615	615	1370	50	56	900	1125	1050	28×Ø40	62	700	910	840	24×Ø37	54	245	6650
37	500-115	2393	1170	1085	940	710	1710	810	1130	890	650	1555	477	477	1000	50	48	600	840	770	20×Ø37	48	500	715	650	20×Ø34	42	215	3200
38	200-125	1562	775	580	500	360	1210	550	690	600	450	1080	290	210	620	50	34	350	520	470	16×Ø28	36	200	340	295	12×Ø22	30	185	1450
39	200-130	1436	705	520	450	330	1130	500	680	600	450	1040	295	295	620	40	28	300	485	430	16×Ø31	40	200	360	310	12×Ø28	34	180	1600
40	150-140	1060	515	410	350	230	700	320	450	390	270	660	237	237	425	35	28	200	360	310	12×Ø28	34	150	300	250	8×Ø28	34	95	450



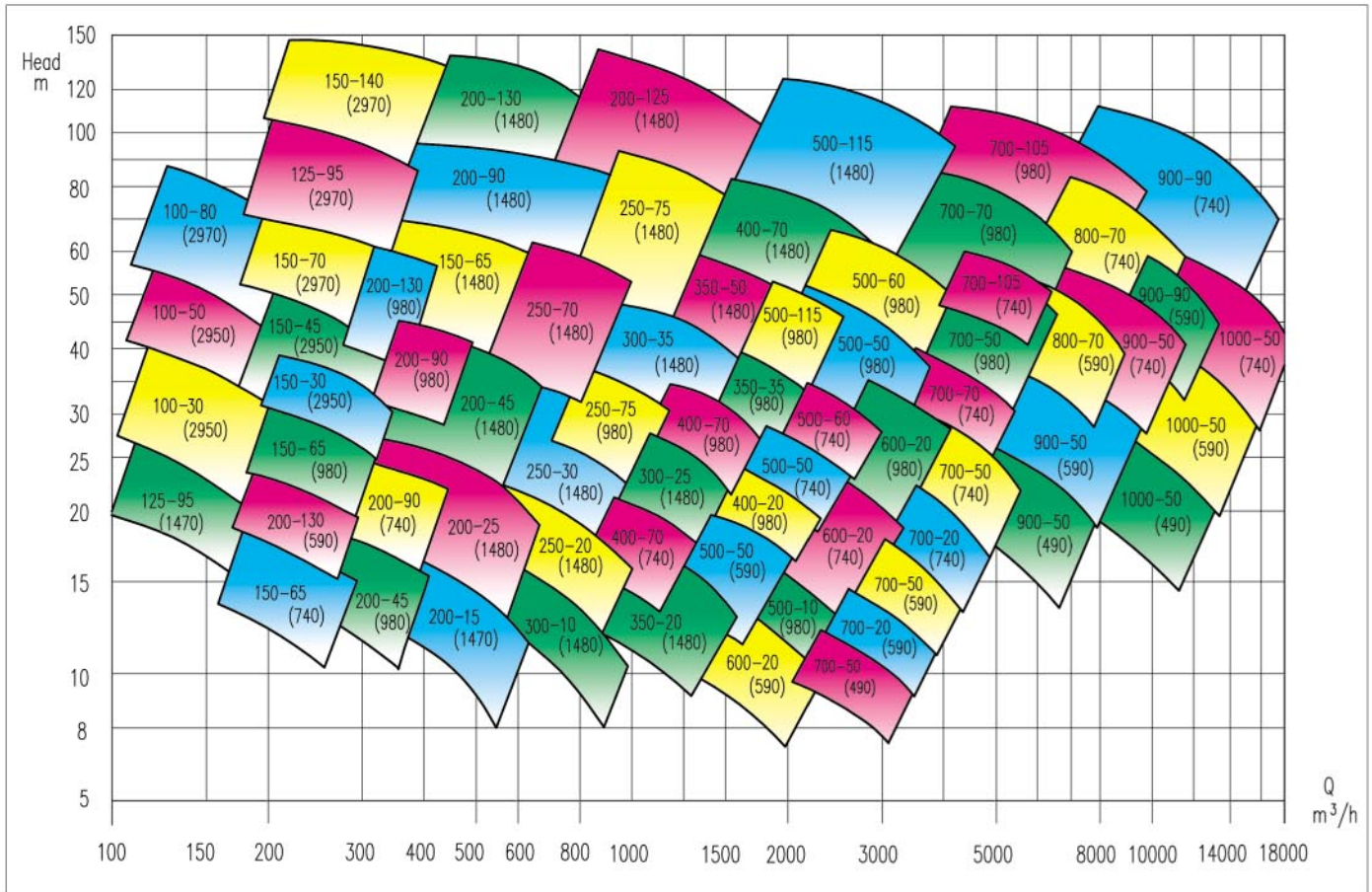
### Shaft End Dimensions

No.	Type	A	B	D	G	F	H	No.	Type	A	B	D	G	F	H
1	300-10	80	5	40	35	12	8	21	700-50	220	5	115	104	32	18
2	500-10	100	5	50	44.5	14	9	22	900-50	250	5	155	142	40	22
3	200-15	63	5	30	26	8	7	23	1000-50	250	5	155	142	40	22
4	250-20	60	5	40	35	12	8	24	500-60	180	5	85	76	22	14
5	350-20	100	5	50	44.5	14	9	25	150-65	100	5	50	44.5	14	9
6	400-20	100	5	60	53	18	11	26	150-70	63	5	40	35	12	8
7	600-20	180	5	85	76	22	14	27	250-70	100	5	60	53	18	11
8	700-20	180	5	85	76	22	14	28	400-70	180	5	85	76	22	14
9	200-25	60	5	40	35	12	8	29	700-70	220	5	115	104	32	18
10	300-25	100	5	50	44.5	14	9	30	800-70	250	5	155	142	40	22
11	100-30	63	5	30	26	8	7	31	250-75	125	5	75	67.5	20	12
12	150-30	63	5	30	26	8	7	32	100-80	63	5	30	26	8	7
13	250-30	100	5	50	44.5	14	9	33	200-90	125	5	60	53	18	11
14	300-35	100	5	60	53	18	11	34	900-90	280	5	185	170	45	25
15	350-35	120	5	50	53	18	11	35	125-95	80	5	40	35	12	8
16	150-45	63	5	40	35	12	8	36	700-105	250	5	155	142	40	22
17	200-45	100	5	50	44.5	14	9	37	500-115	220	5	115	104	32	18
18	100-50	63	5	30	26	8	7	38	200-125	160	5	75	67.5	20	12
19	350-50	130	5	75	67.5	20	12	39	200-130	125	5	60	53	18	11
20	500-50	180	5	85	76	22	14	40	150-140	80		40	35	12	8

### Flange Dimensions

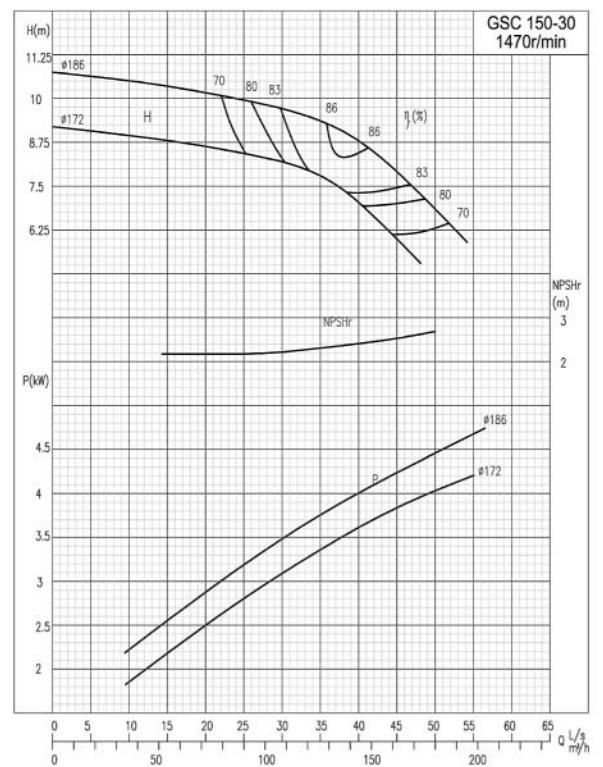
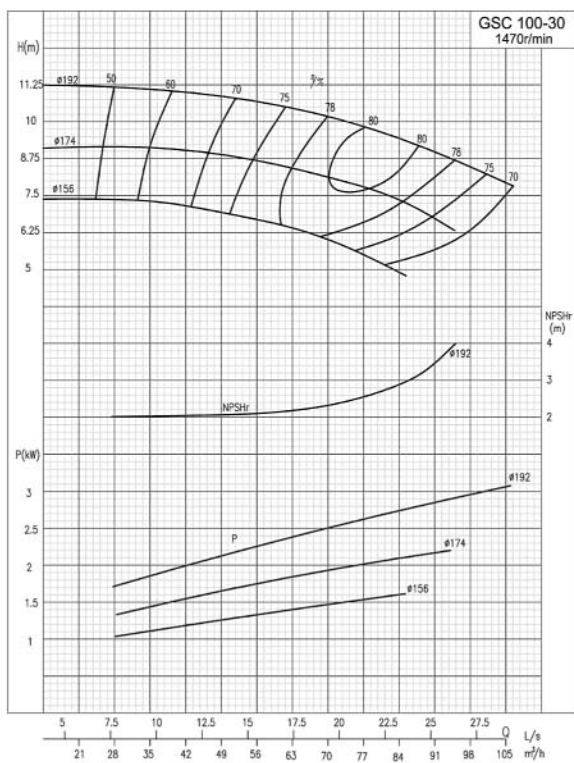
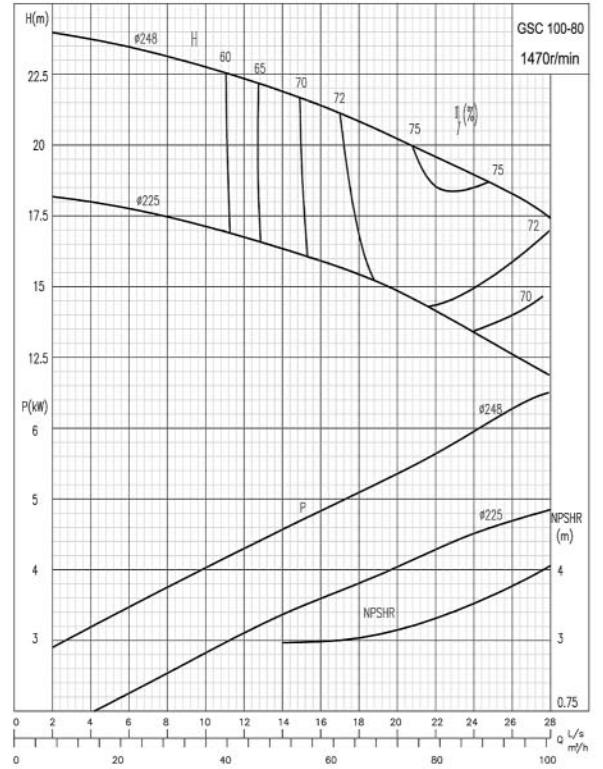
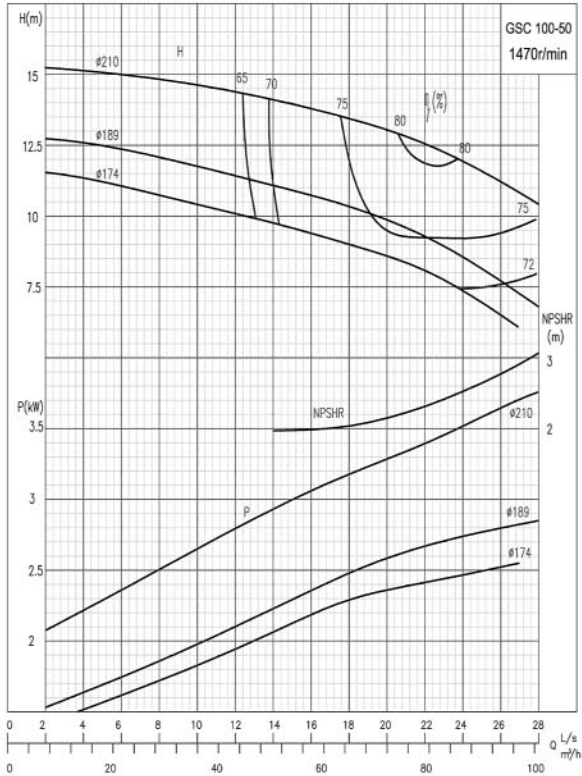
Order	DN	d	K	D	N × f L	Pressure(kg/cm <sup>2</sup> )
1	100	156	180	220	8 × f 18	10
2	125	184	210	250	8 × f 18	10
3	125	184	210	250	8 × f 18	16
4	150	211	240	285	8 × f 22	10
5	150	211	250	300	8 × f 28	25
6	200	266	295	340	8 × f 22	10
7	200	266	295	340	12 × f 22	16
8	200	274	310	360	12 × f 28	25
9	250	320	350	395	12 × f 22	10
10	250	320	355	405	12 × f 28	16
11	300	370	400	445	12 × f 22	10
12	300	370	410	460	12 × f 28	16
13	300	389	430	485	16 × f 31	25
14	350	428	460	505	16 × f 22	10
15	350	429	470	520	16 × f 28	16
16	400	480	515	565	16 × f 28	10
17	400	480	525	580	16 × f 31	16
18	500	582	620	670	20 × f 28	10
19	500	609	650	715	20 × f 34	16
20	600	680	725	780	20 × f 31	10
21	600	720	770	840	20 × f 37	16
22	700	794	840	895	24 × f 31	10
23	700	794	840	910	24 × f 37	16
24	800	901	950	1015	24 × f 34	10
25	800	901	950	1025	24 × f 40	16
26	900	1001	1050	1115	28 × f 34	10
27	900	1001	1050	1125	28 × f 40	16
28	1000	1112	1160	1230	28 × f 37	10
29	1000	1112	1170	1255	28 × f 43	16
30	1200	1328	1380	1455	32 × f 40	10
31	1200	1328	1390	1485	32 × f 49	16

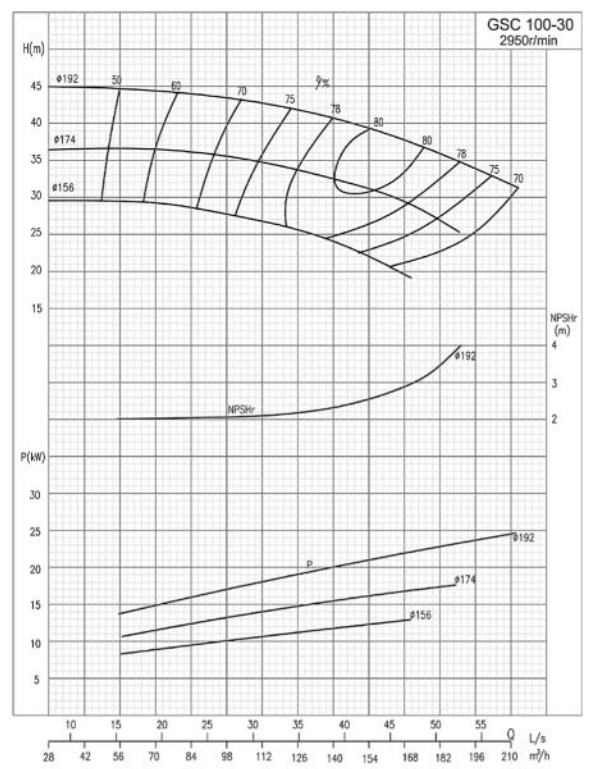
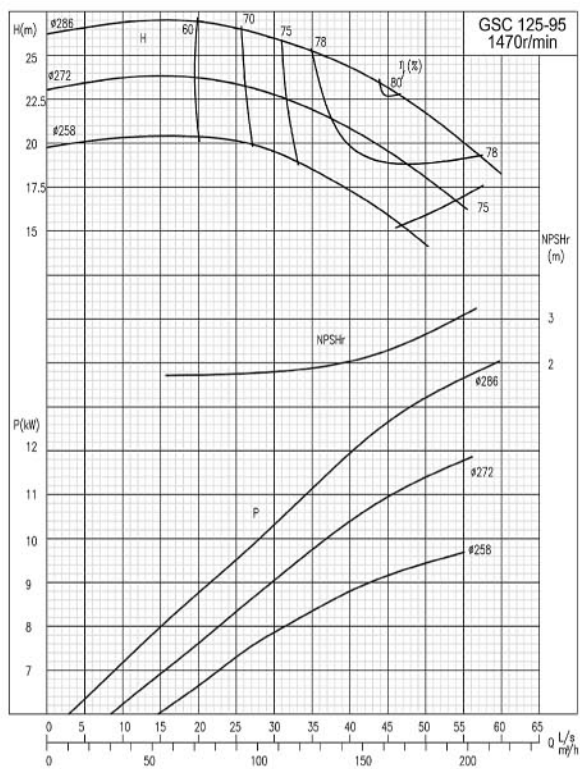
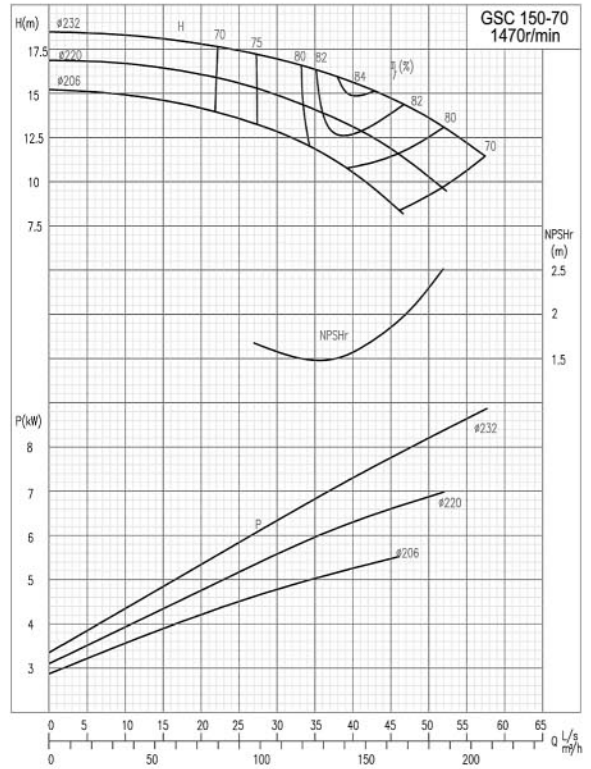
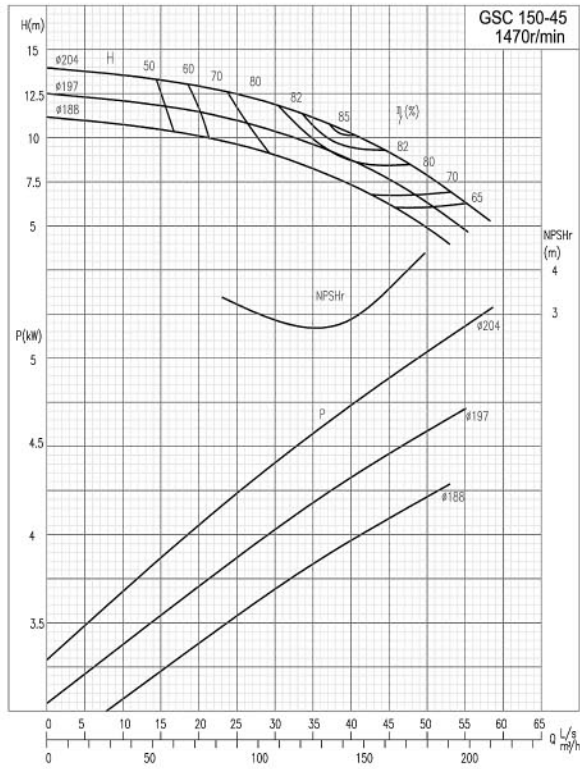






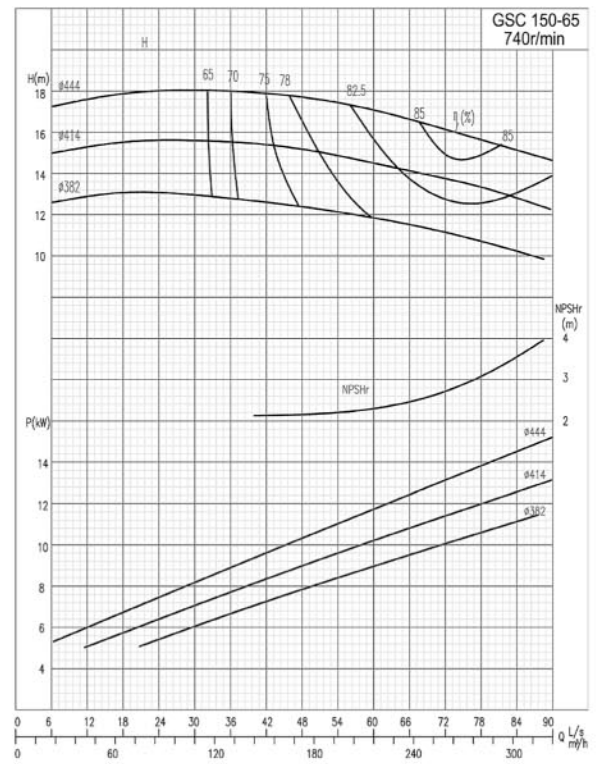
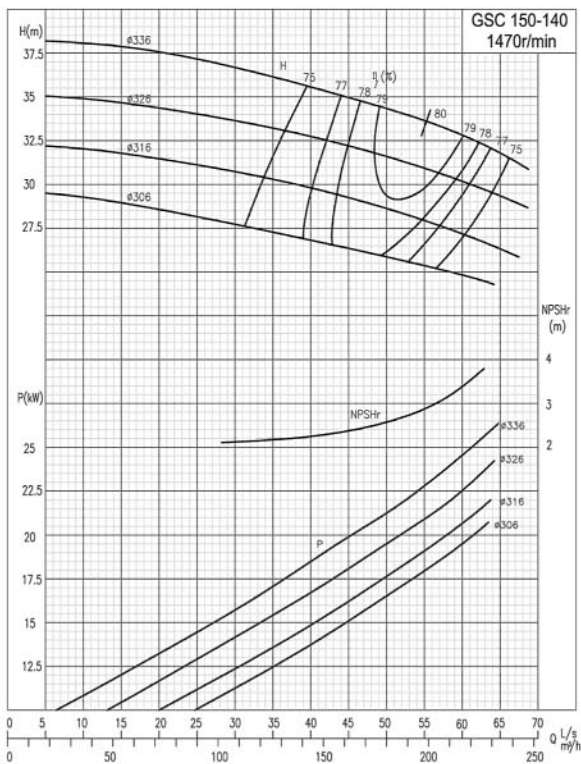
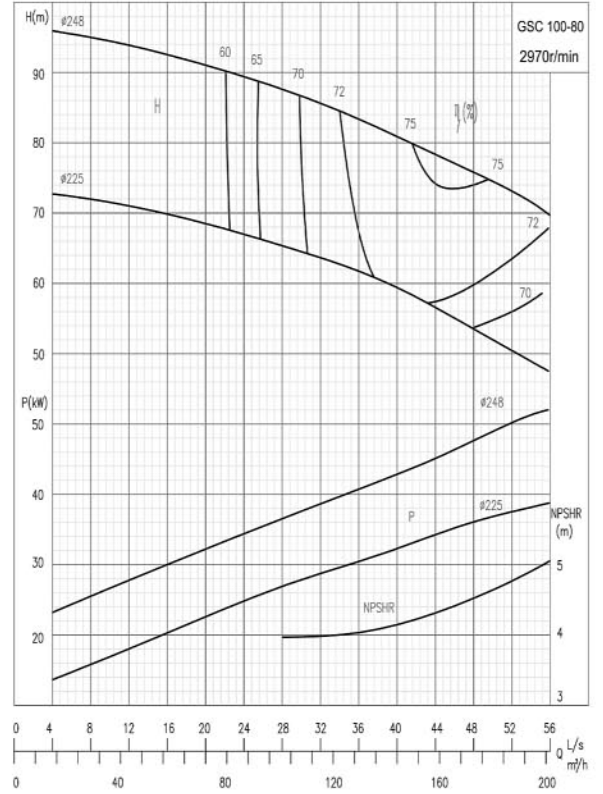
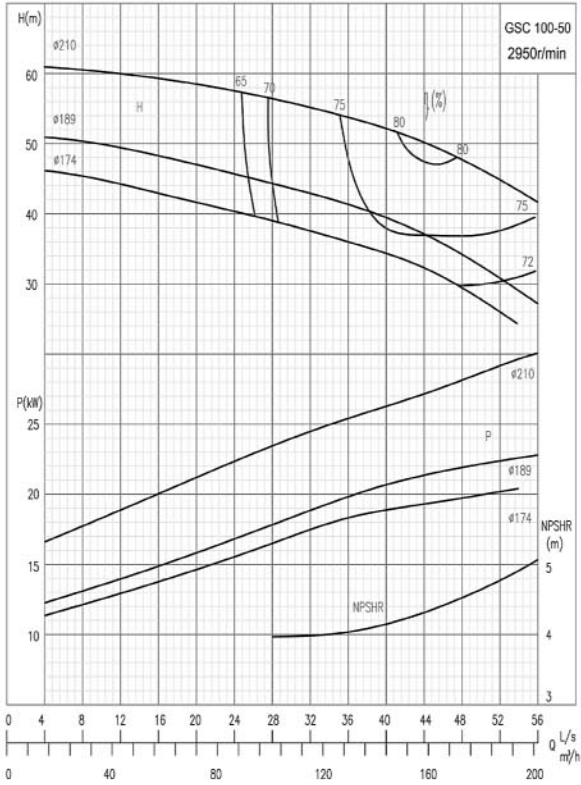
Performance Curves



**Performance Curves**


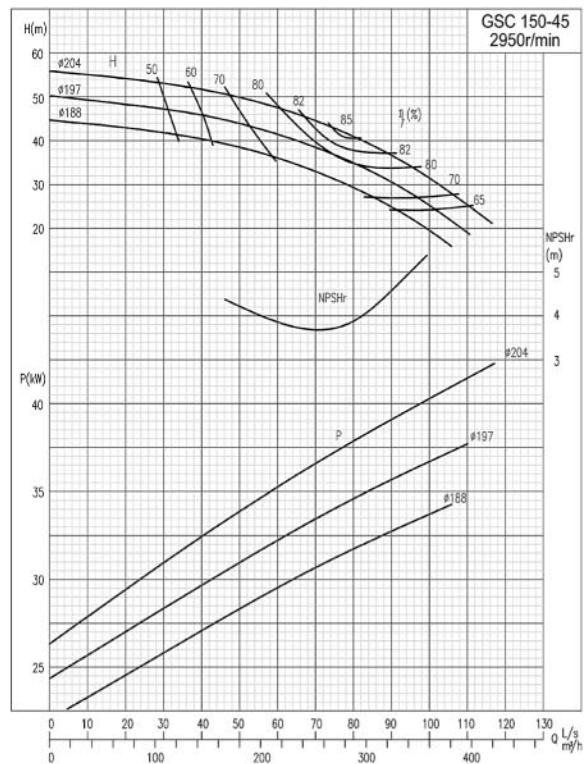
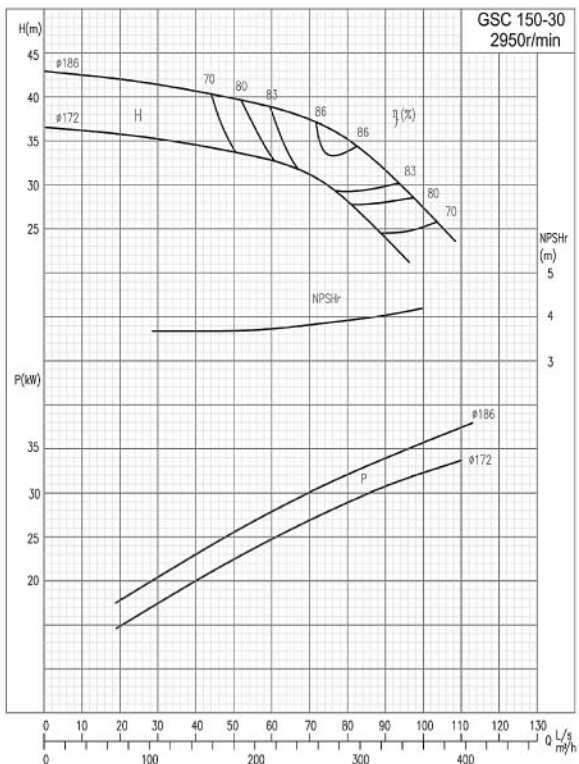
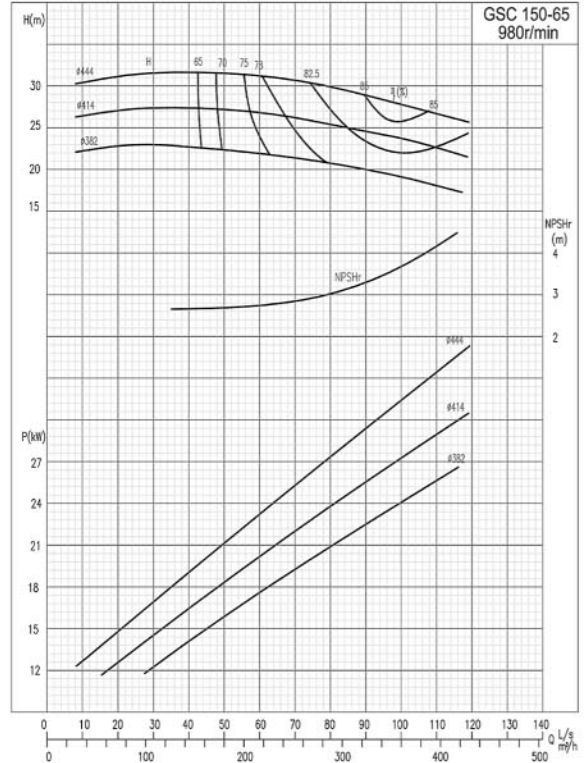
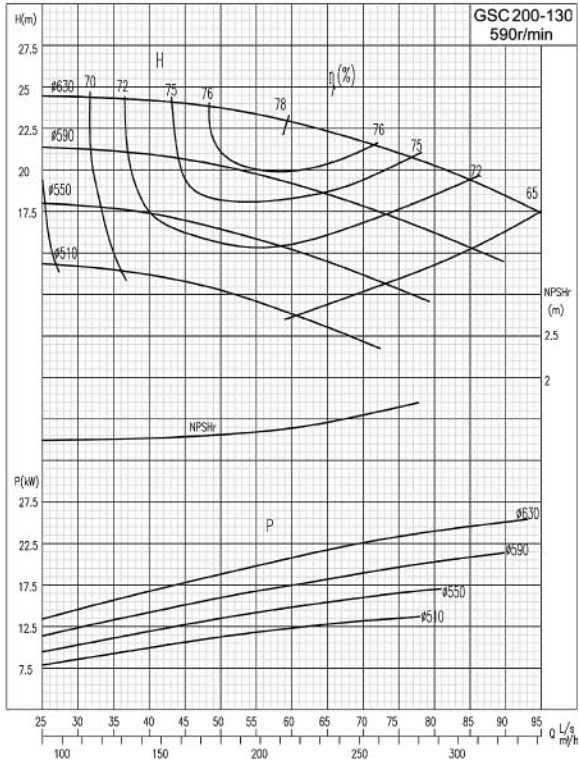


Performance Curves

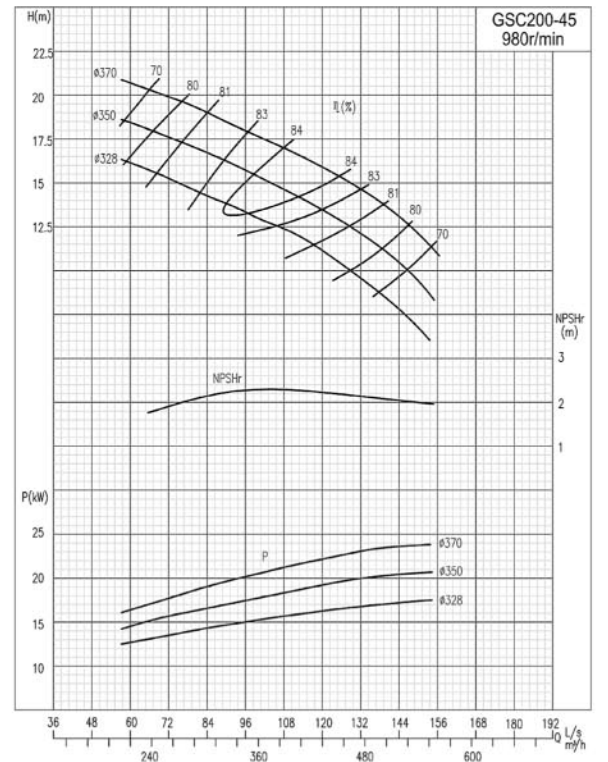
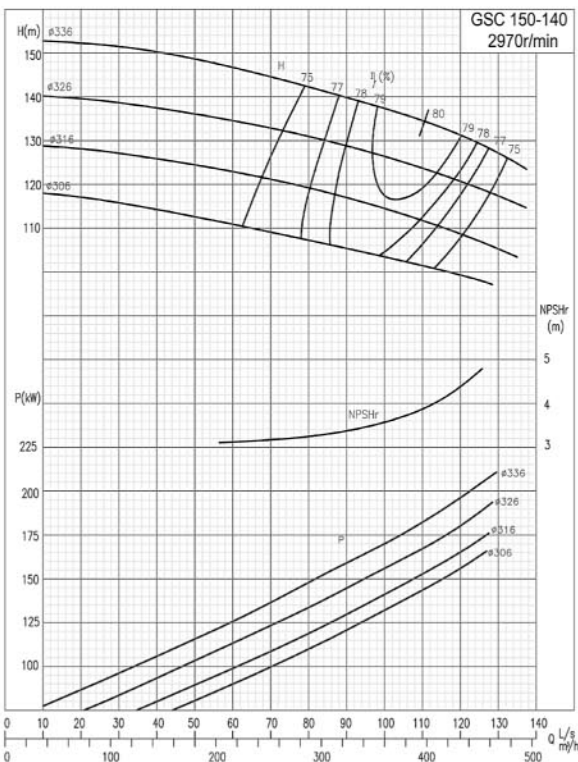
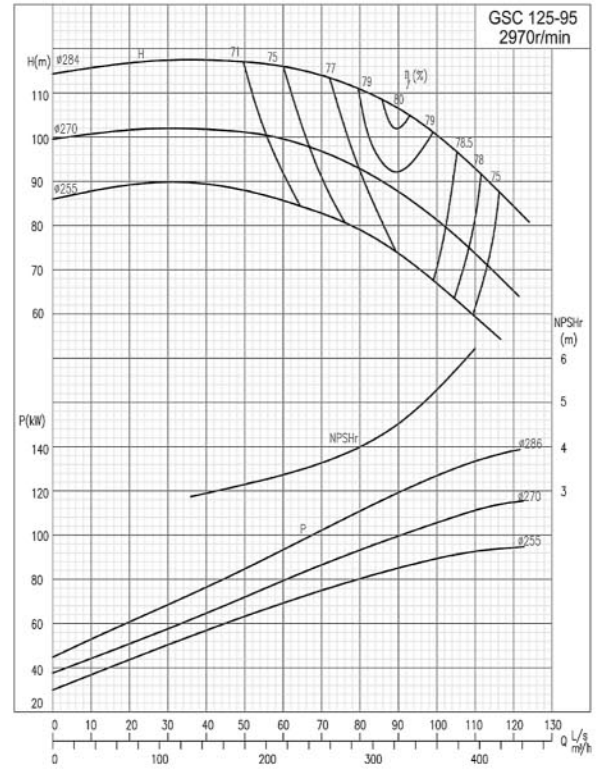
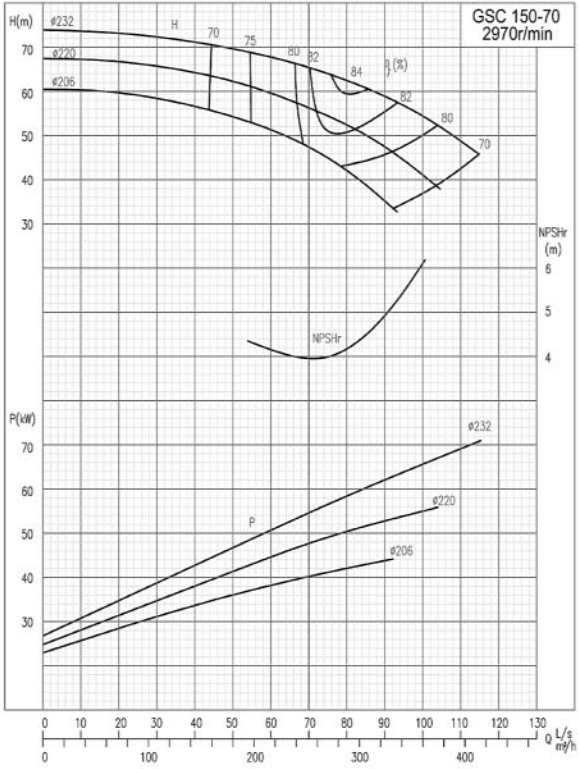




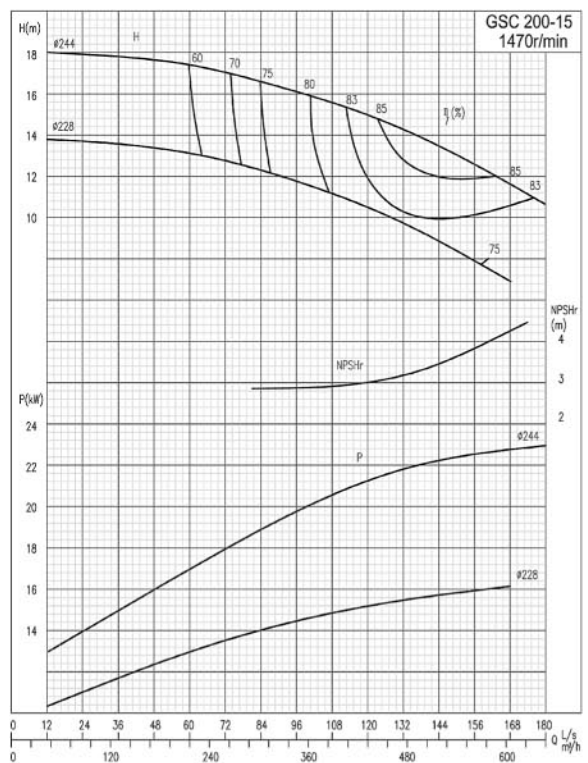
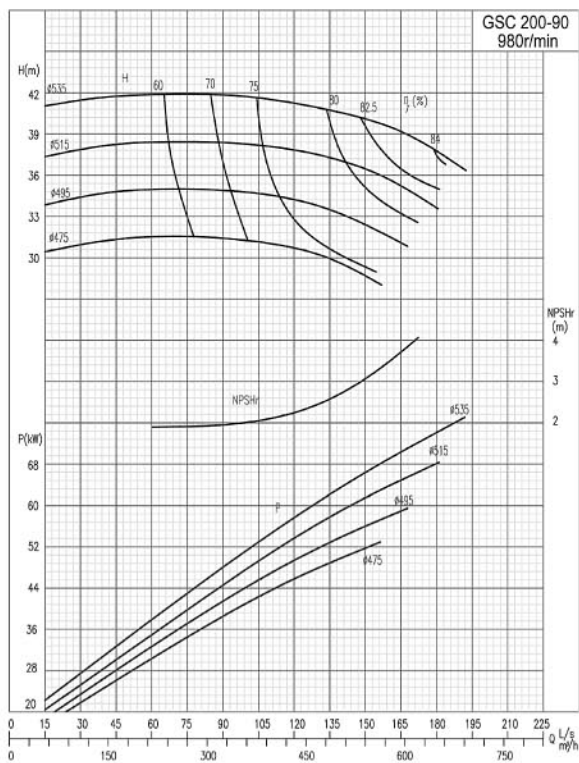
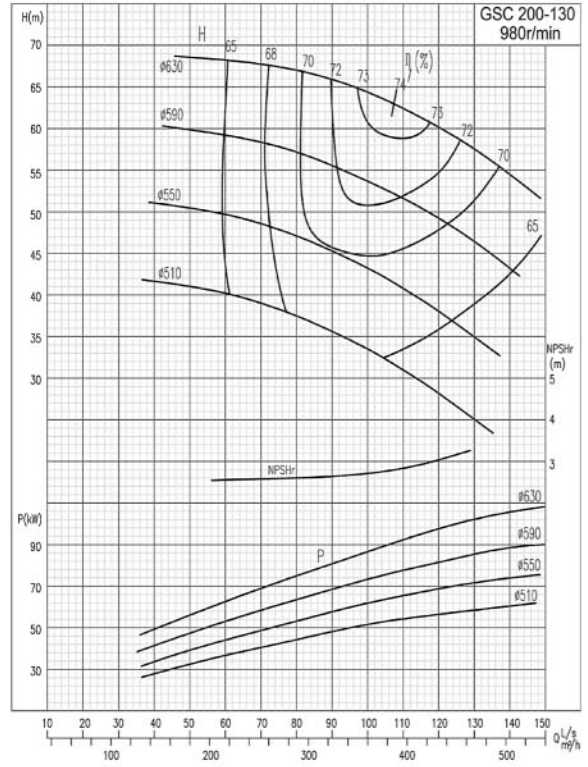
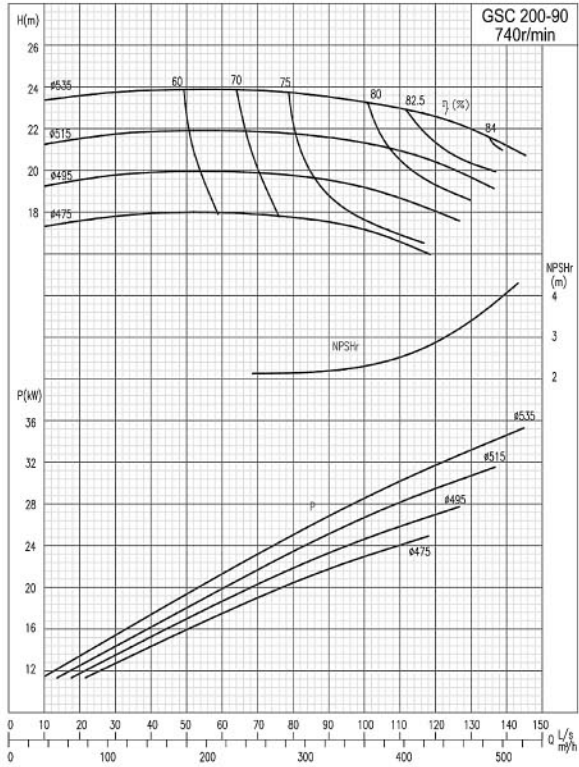
Performance Curves



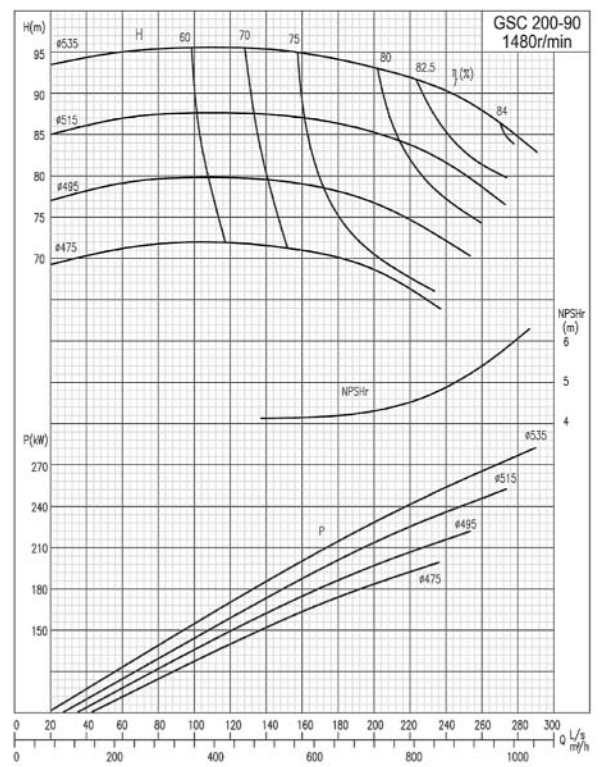
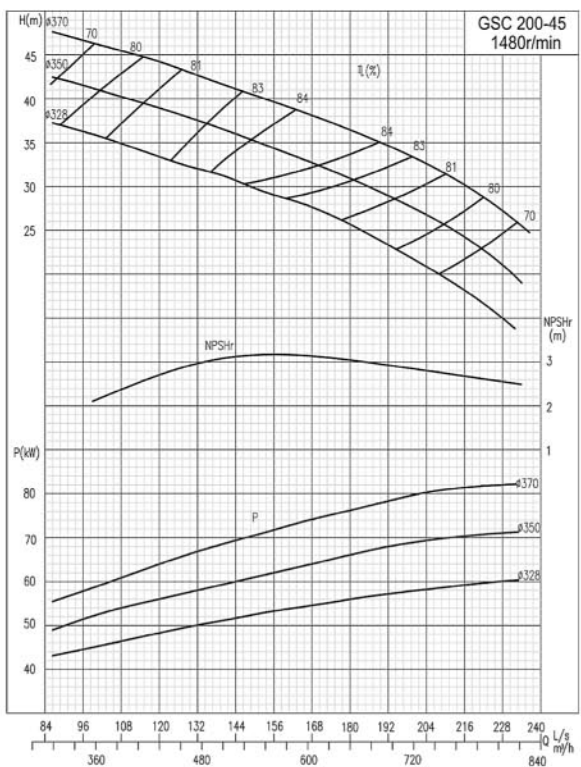
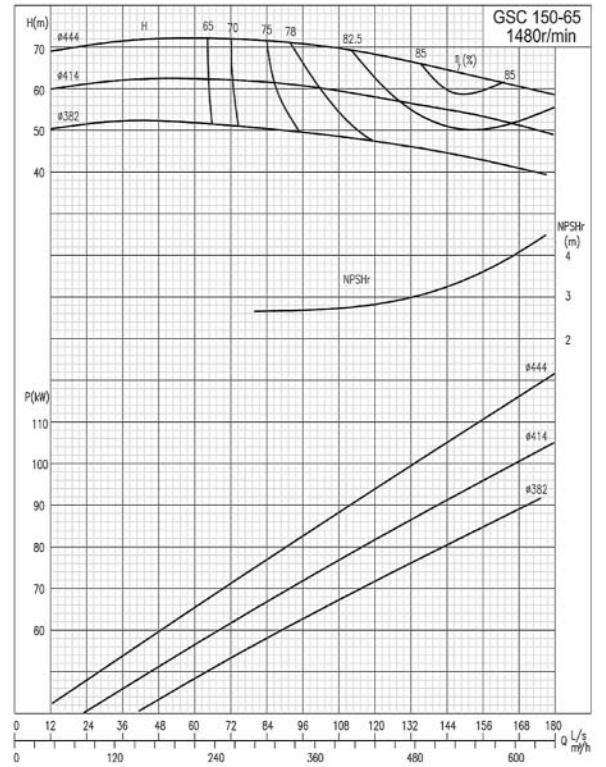
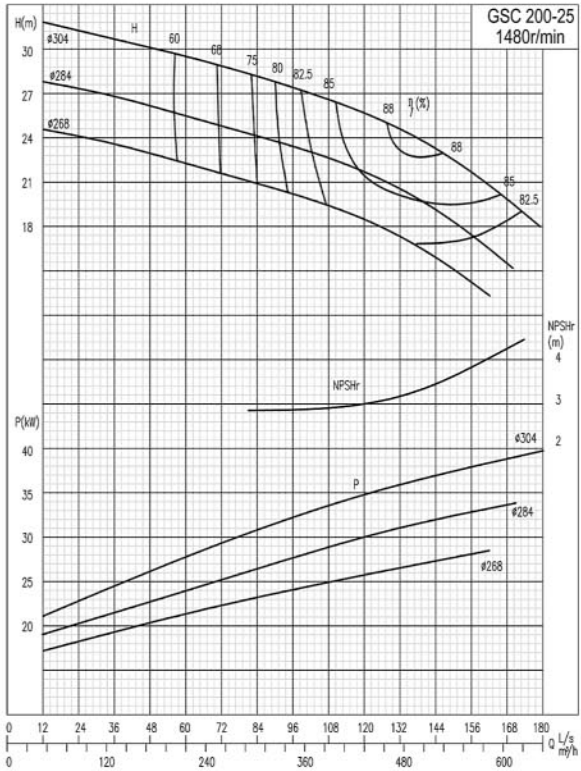
Performance Curves



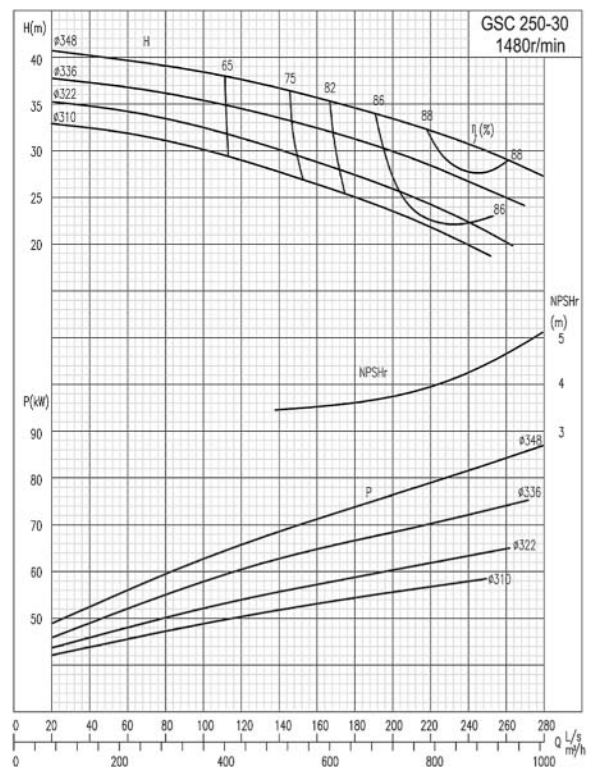
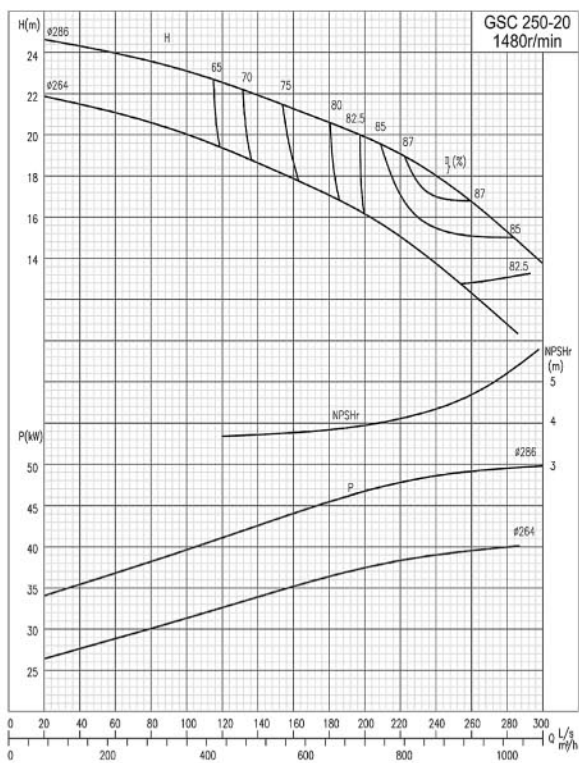
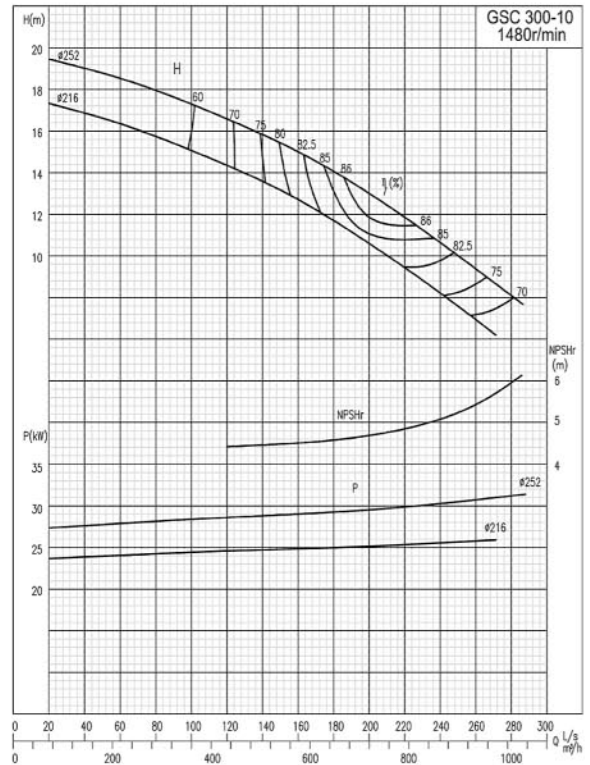
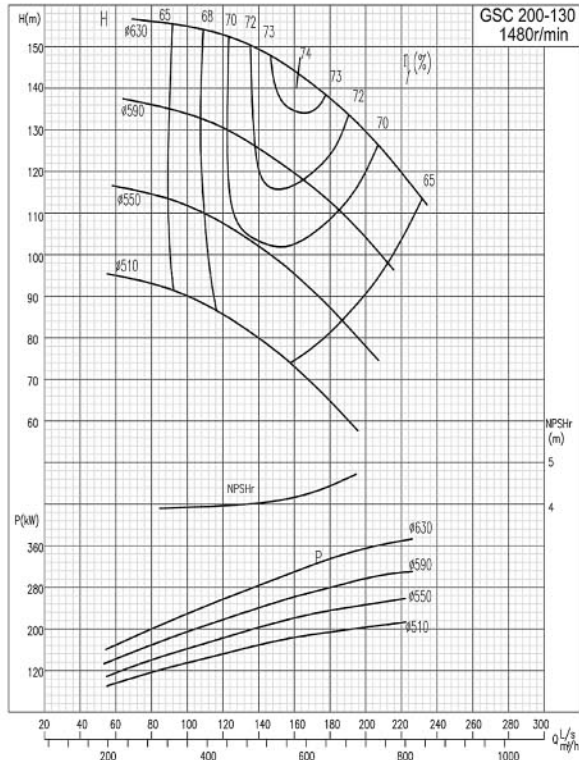


**Performance Curves**




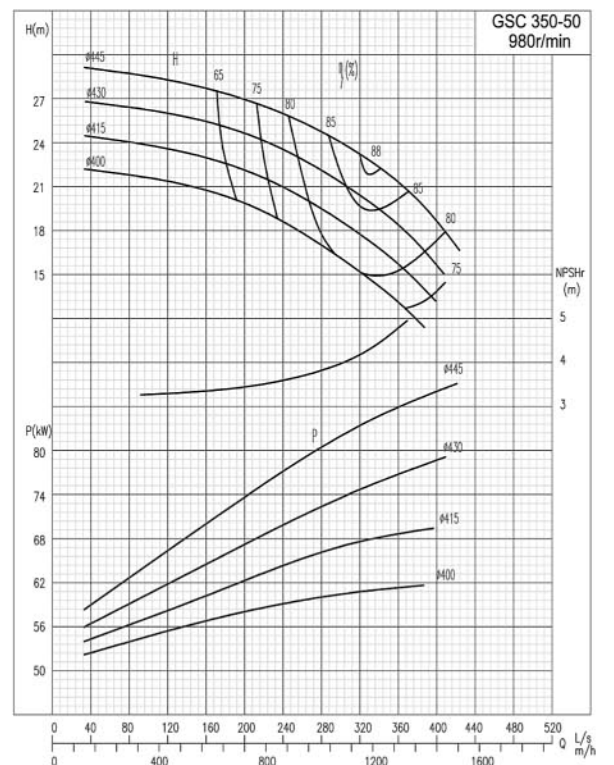
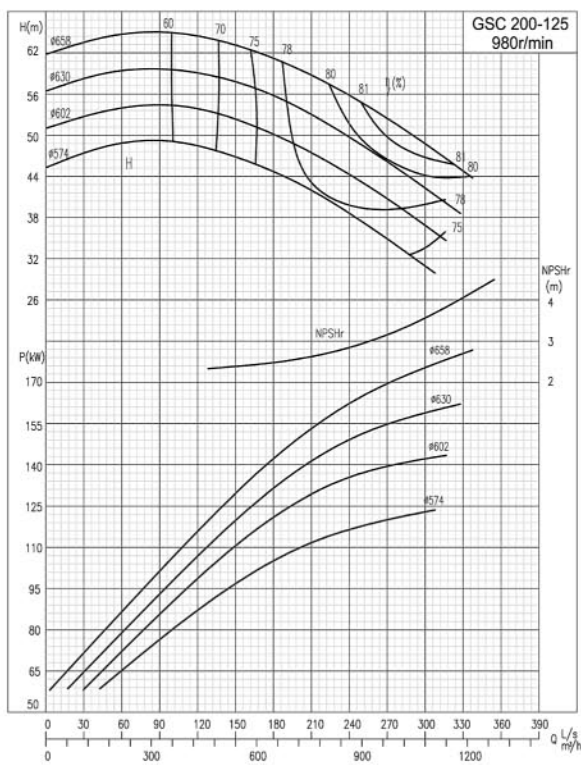
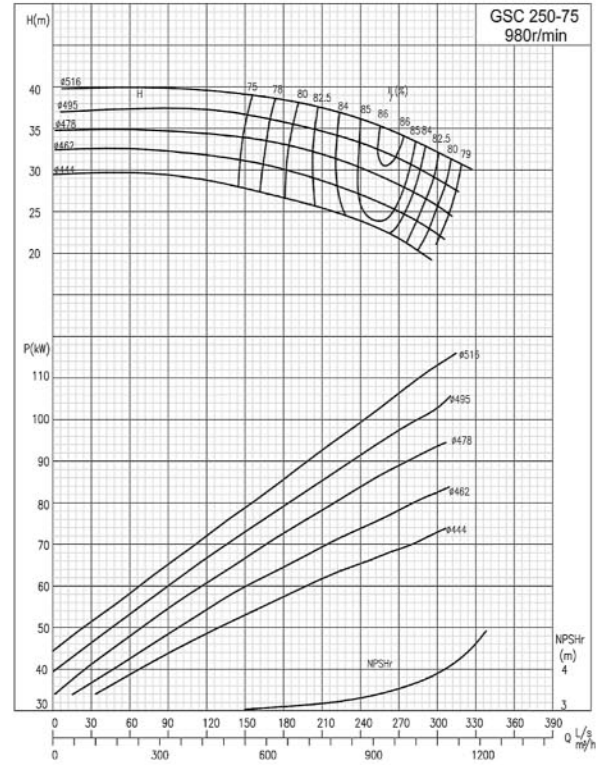
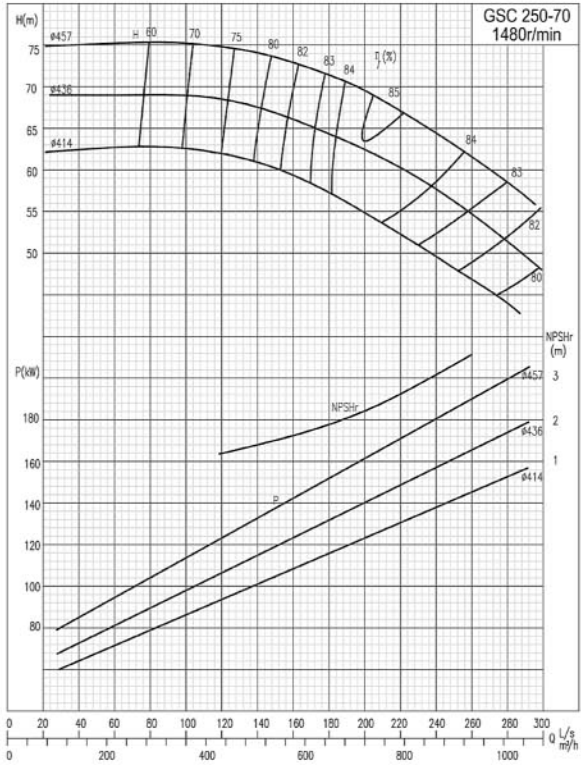
**Performance Curves**


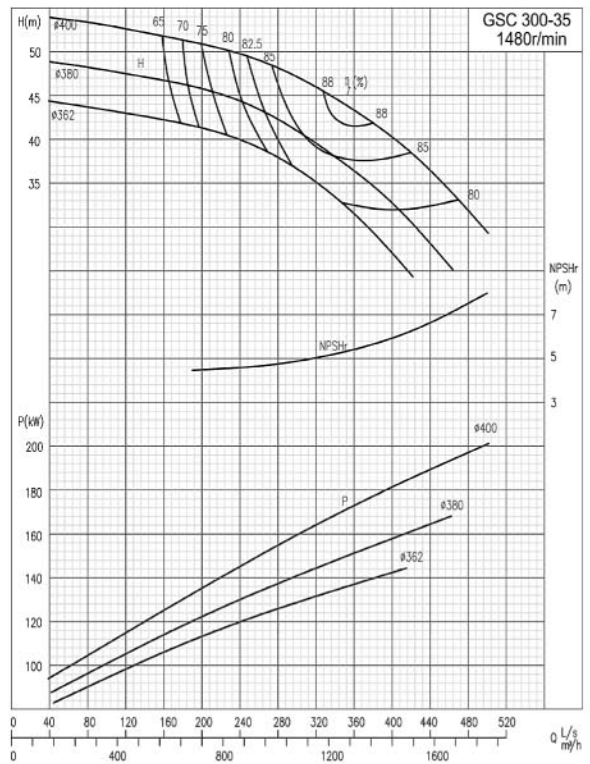
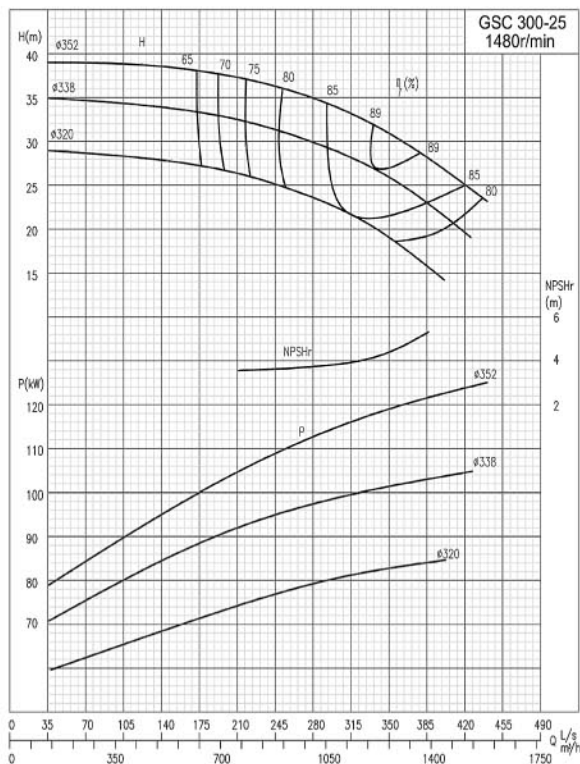
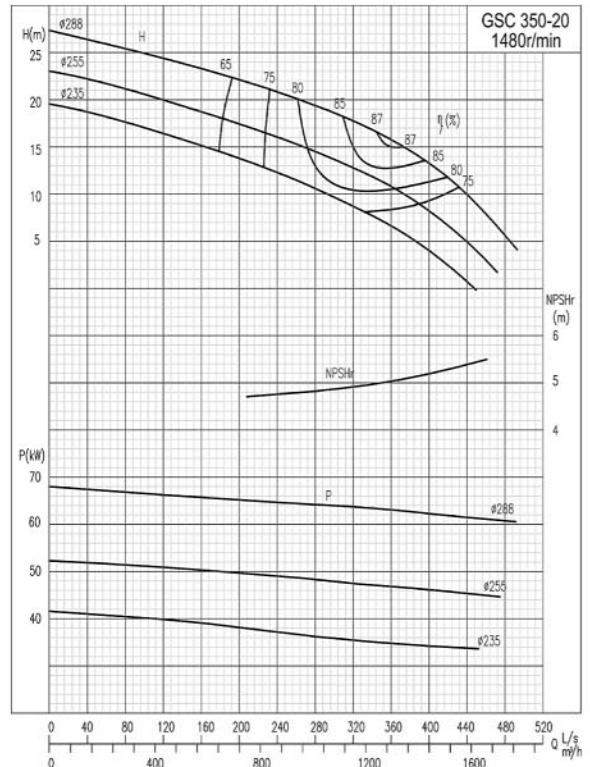
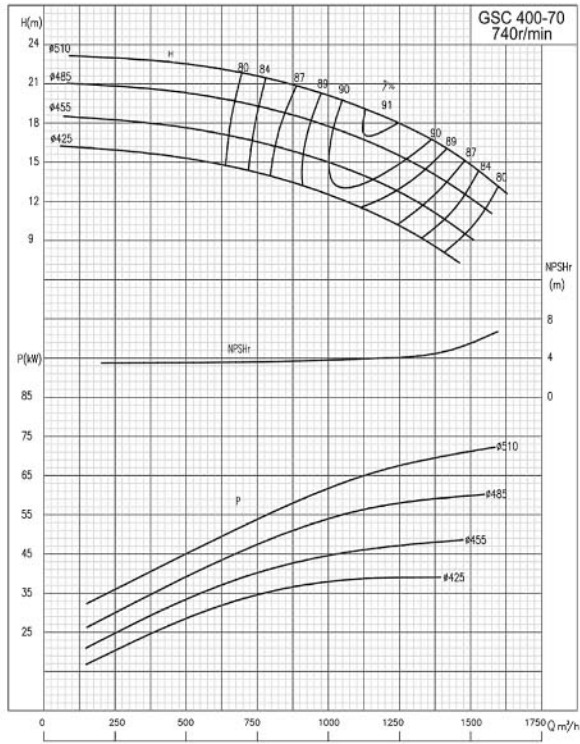
Performance Curves





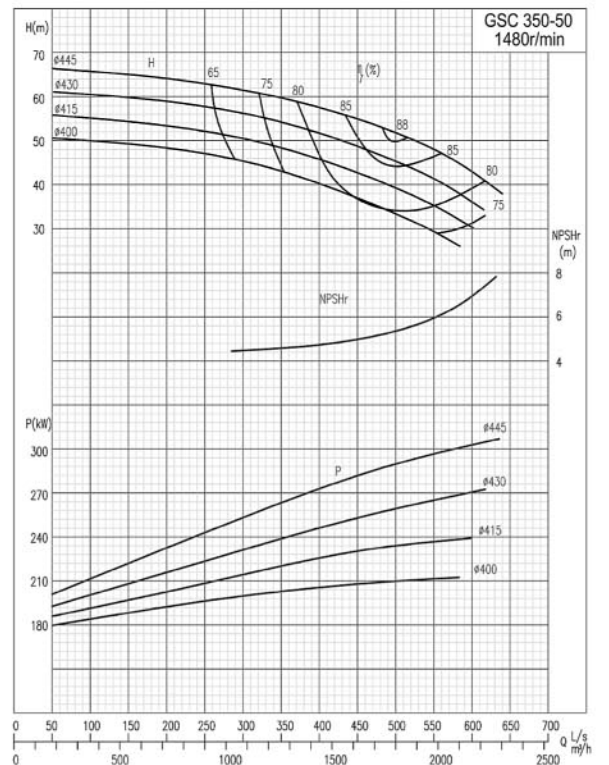
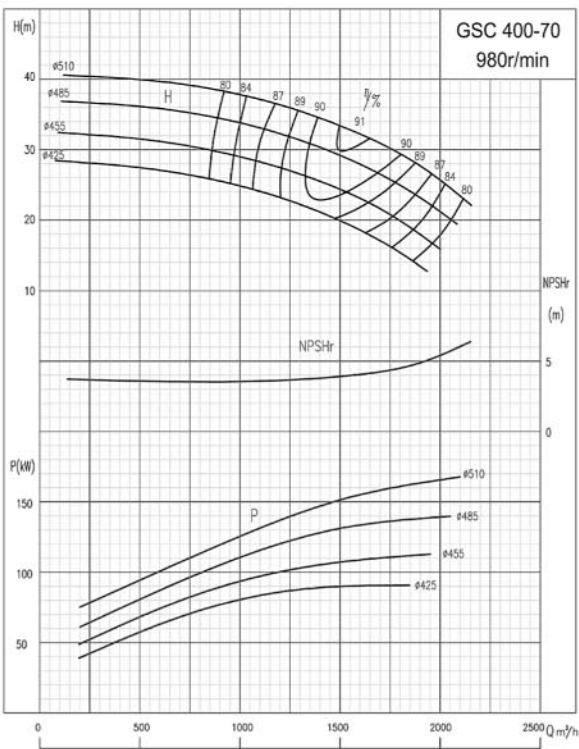
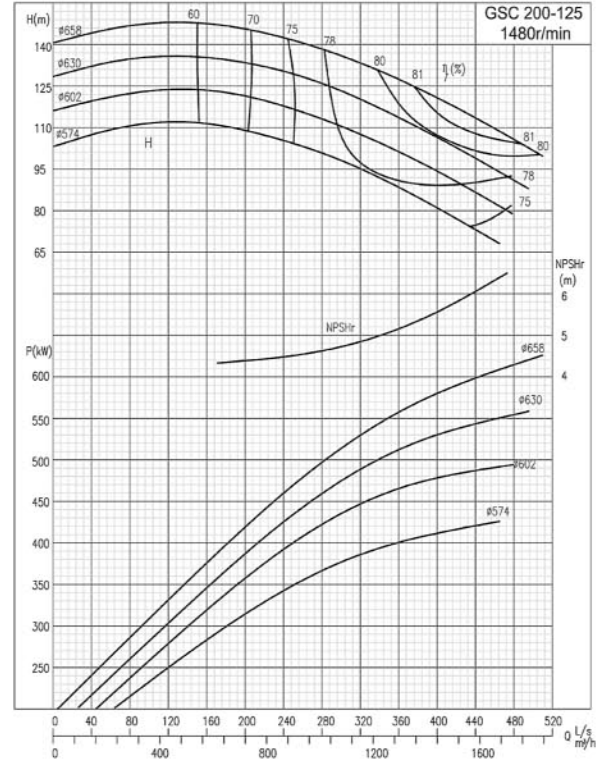
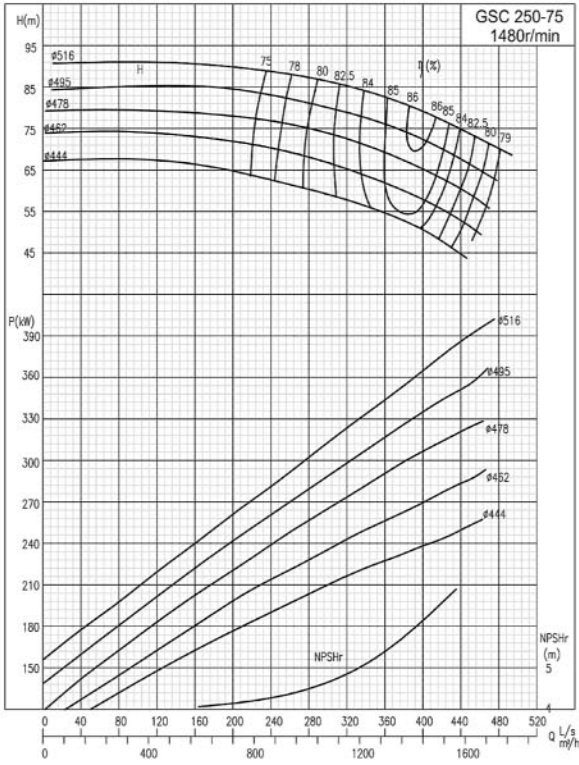
Performance Curves



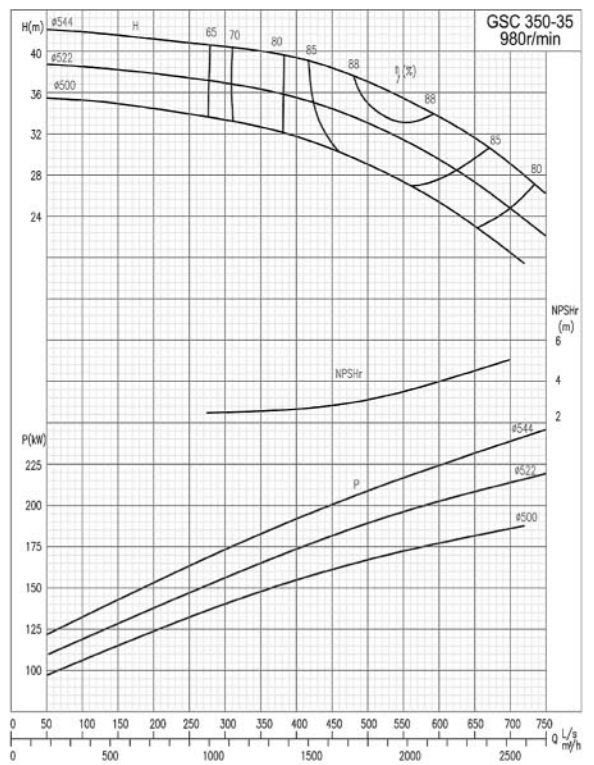
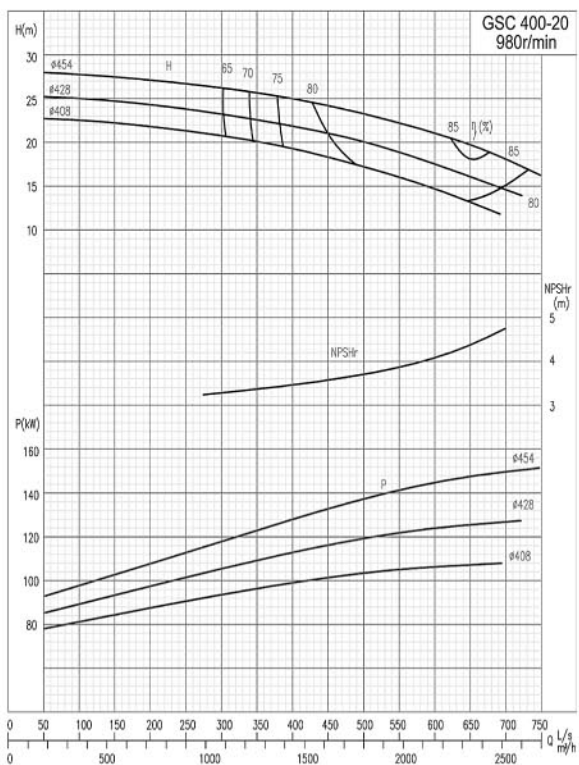
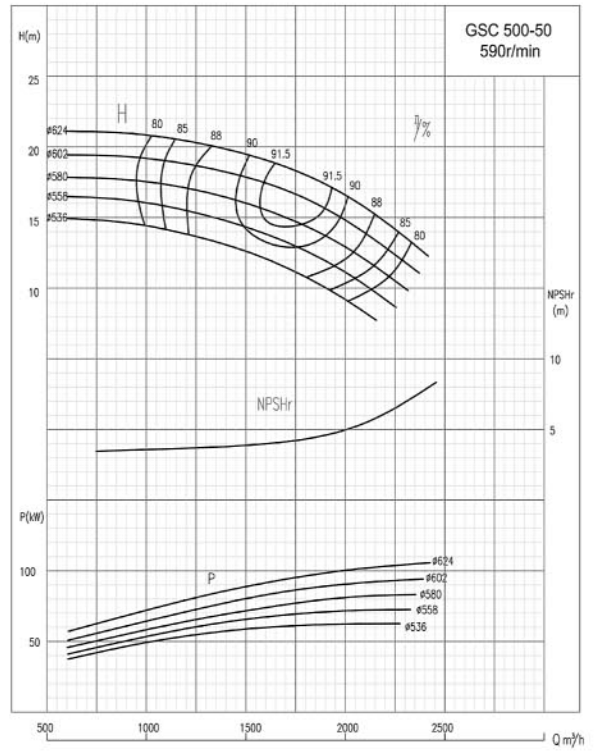
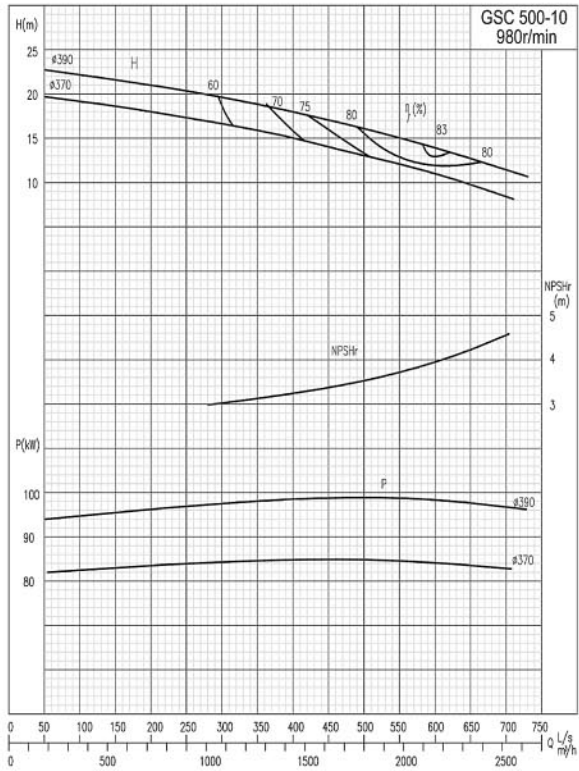
**Performance Curves**




Performance Curves

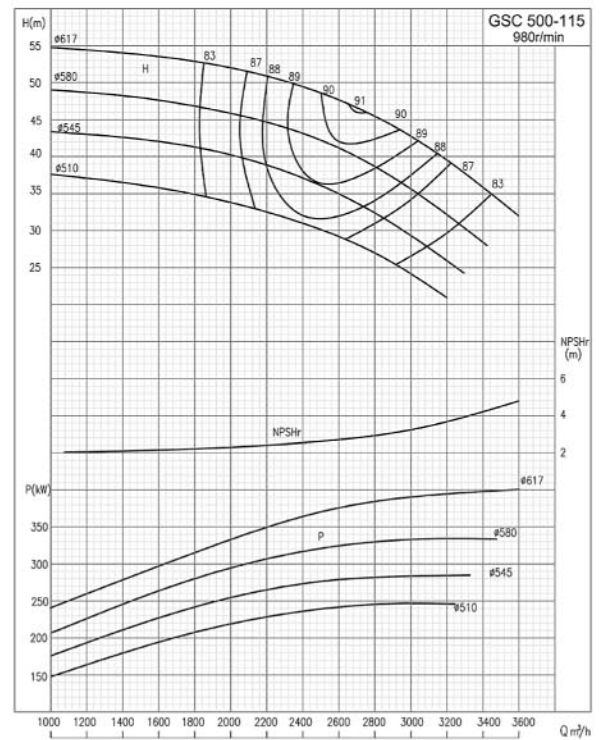
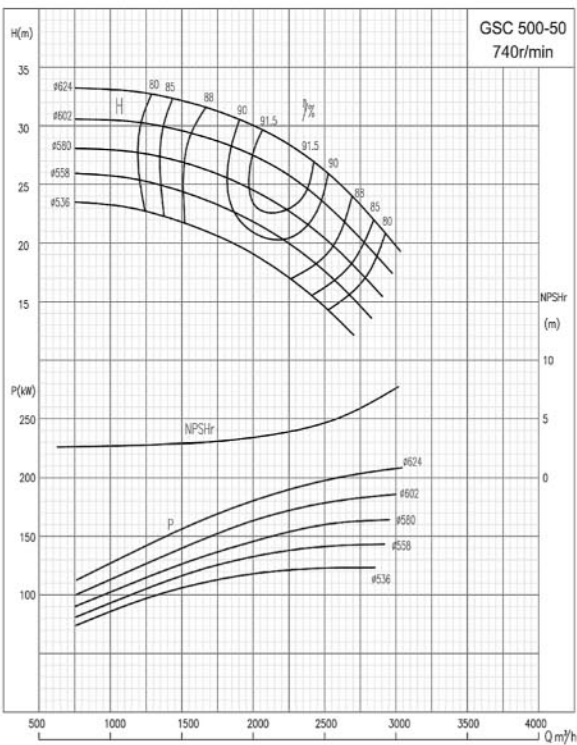
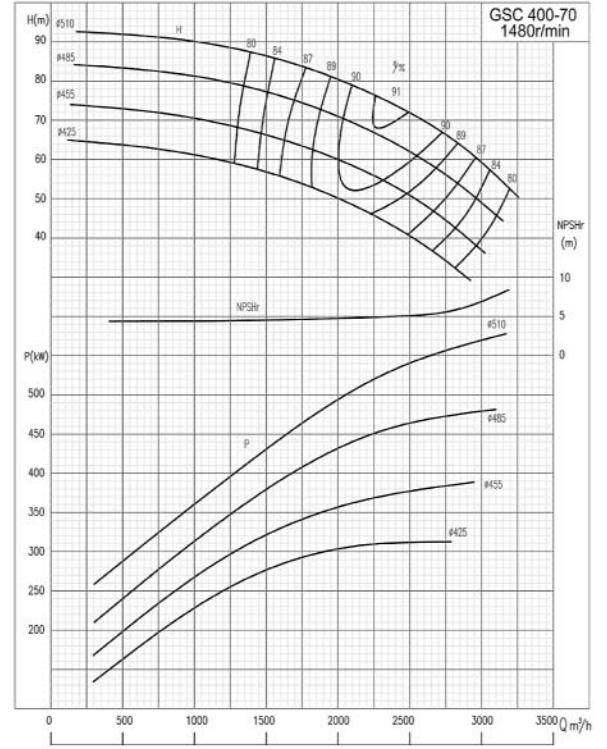
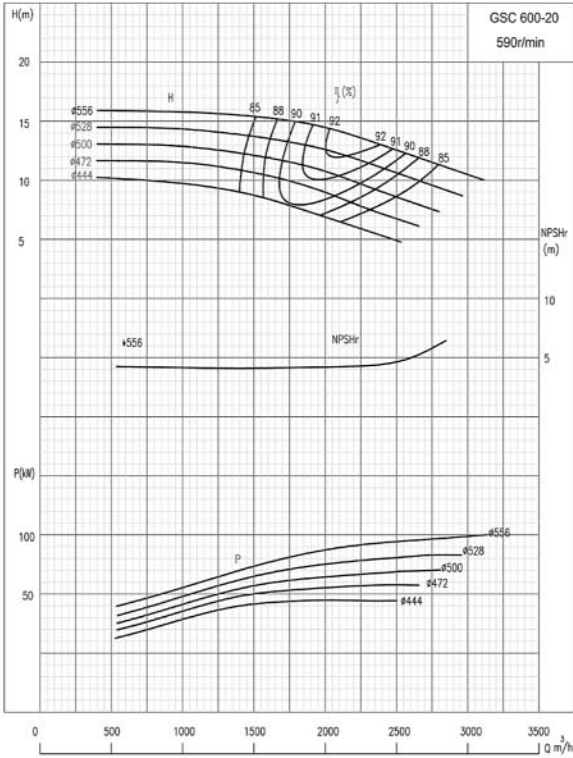


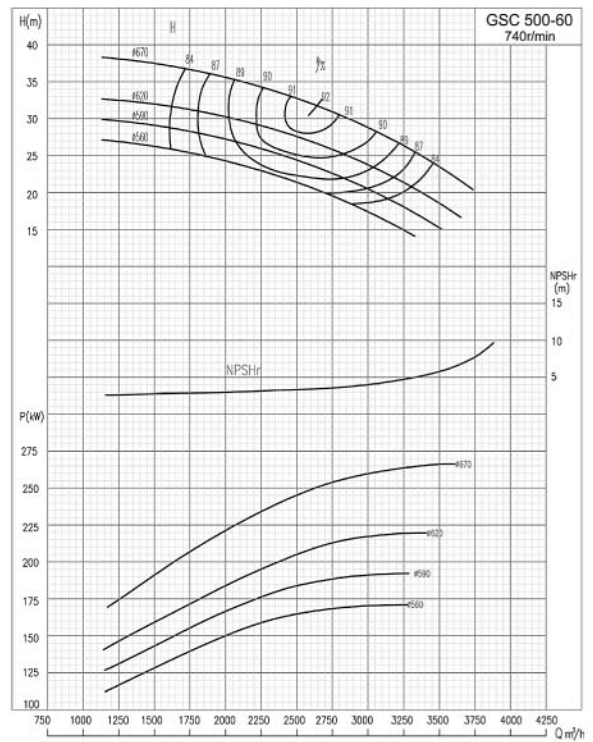
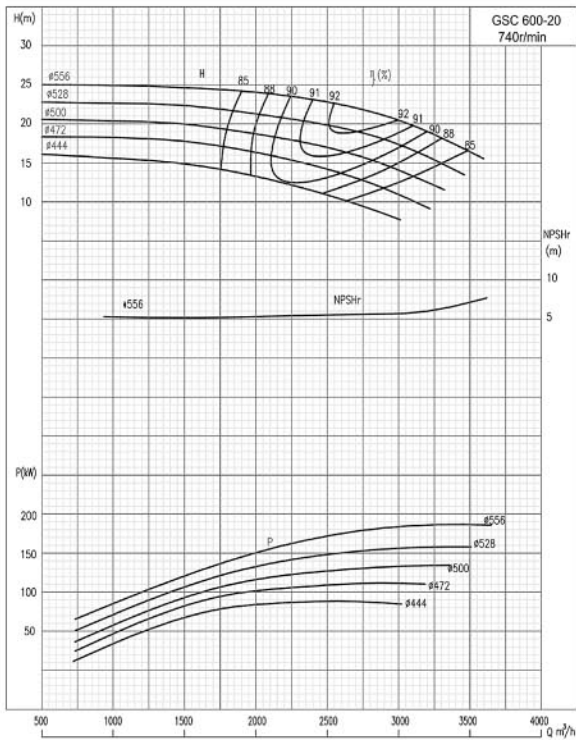
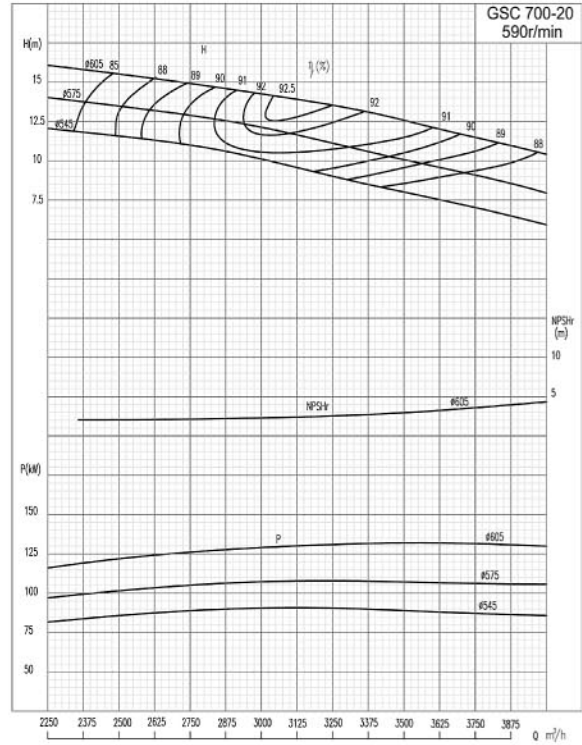
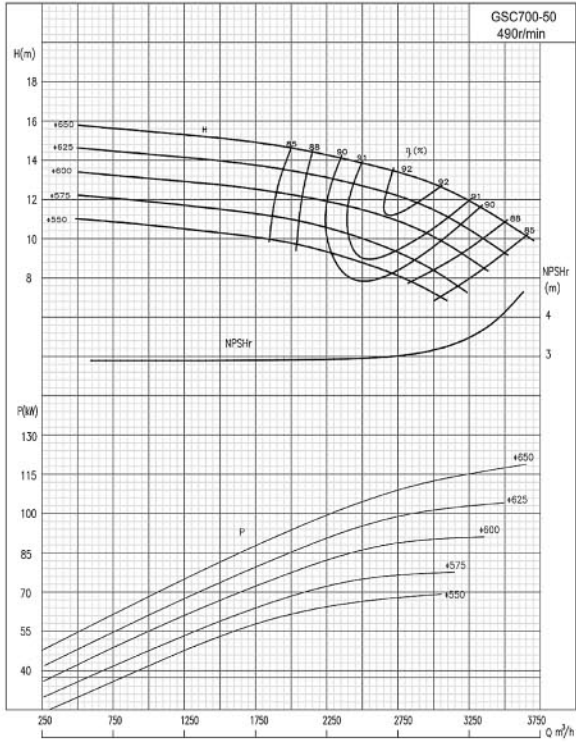
Performance Curves





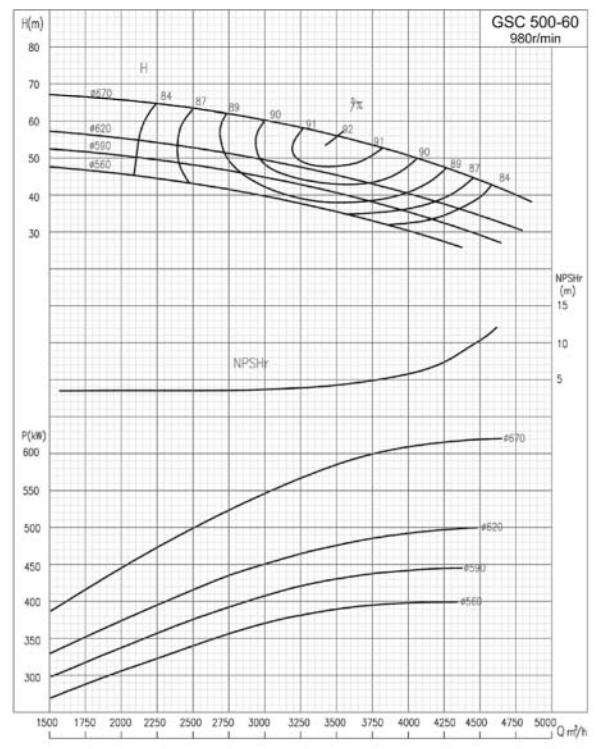
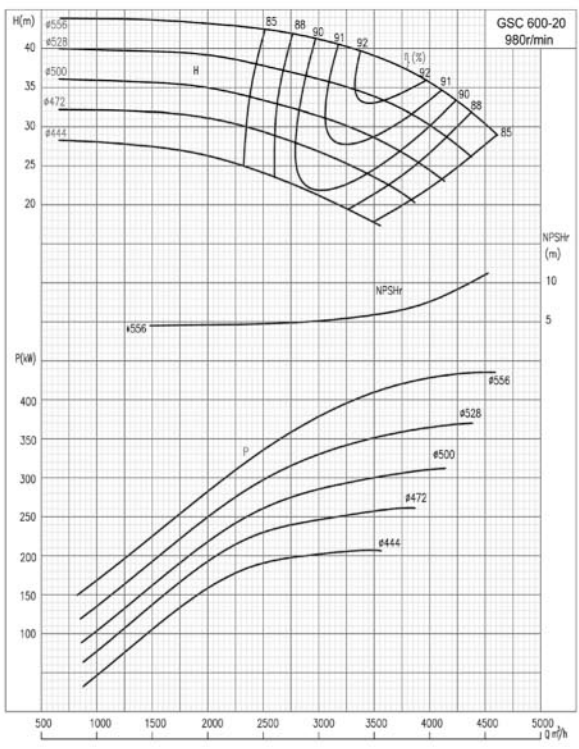
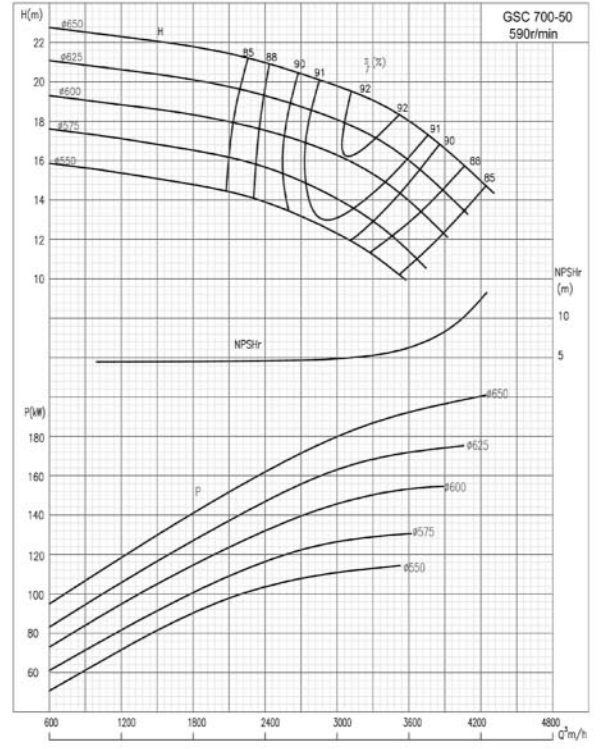
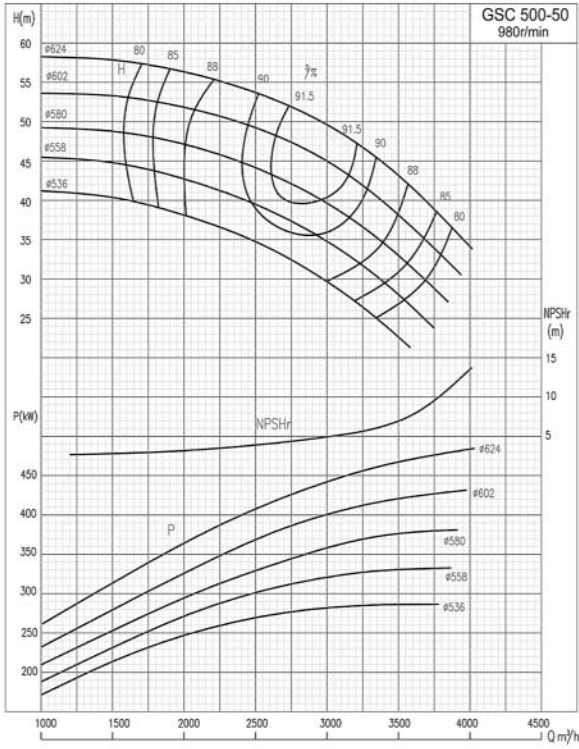
Performance Curves

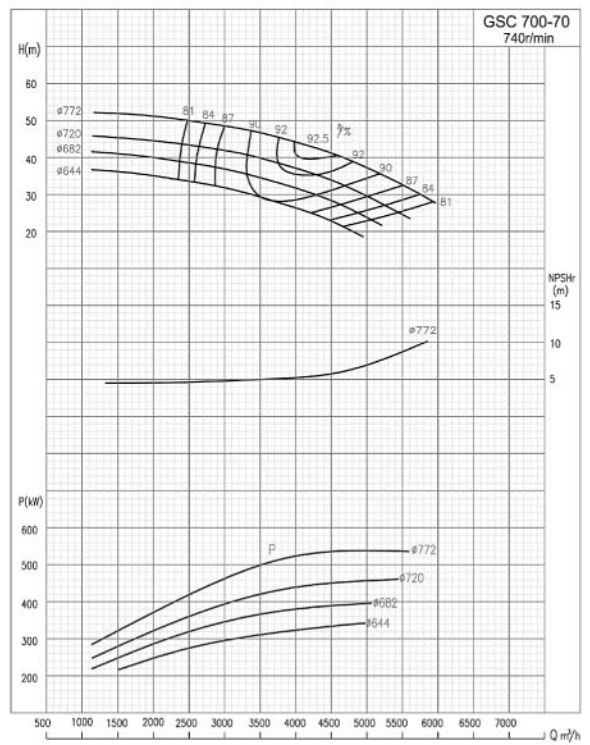
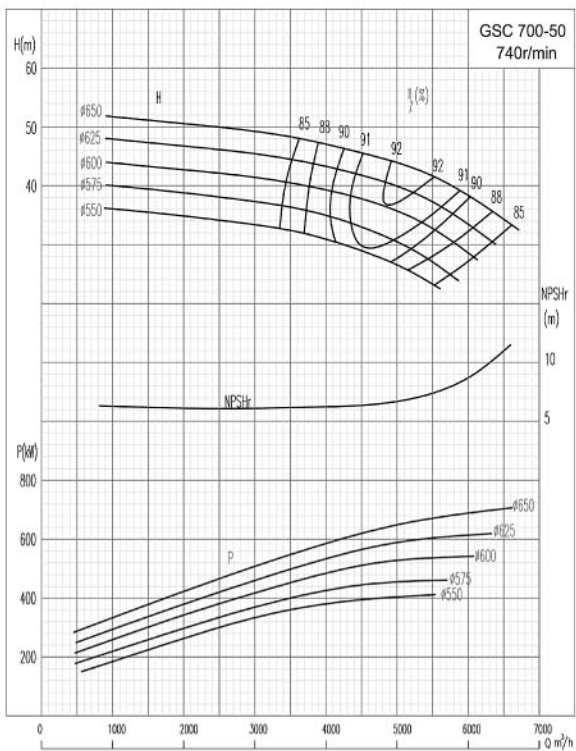
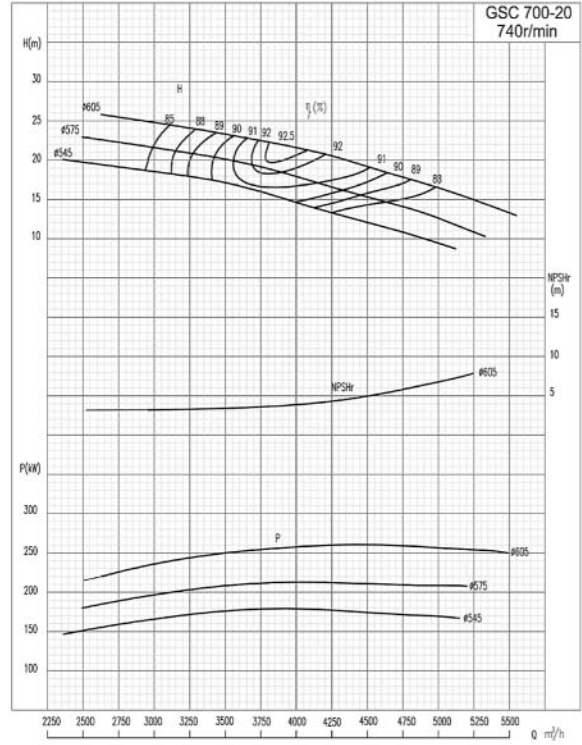
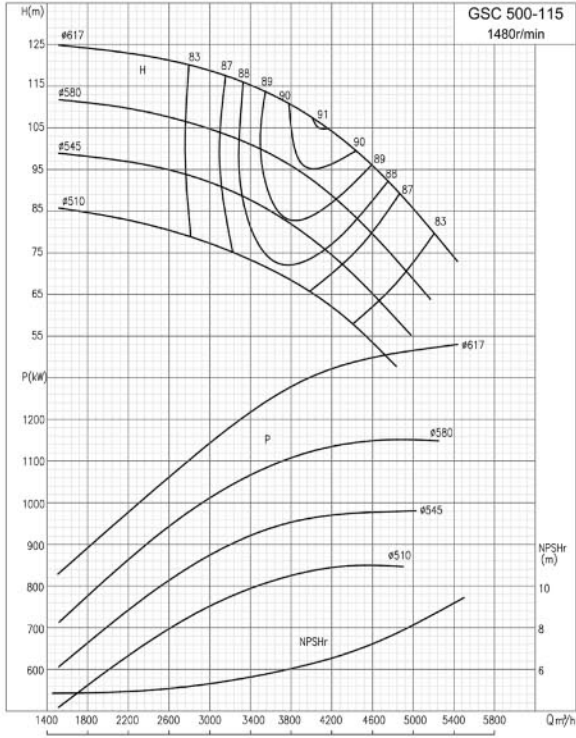


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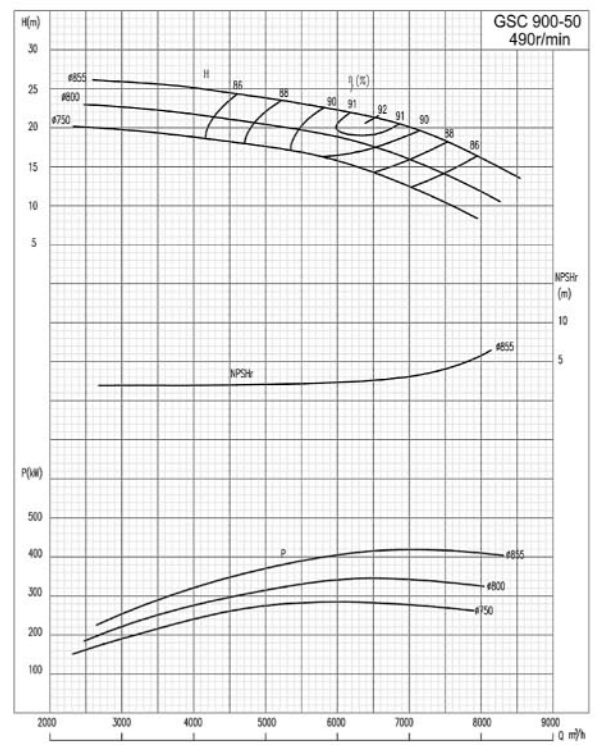
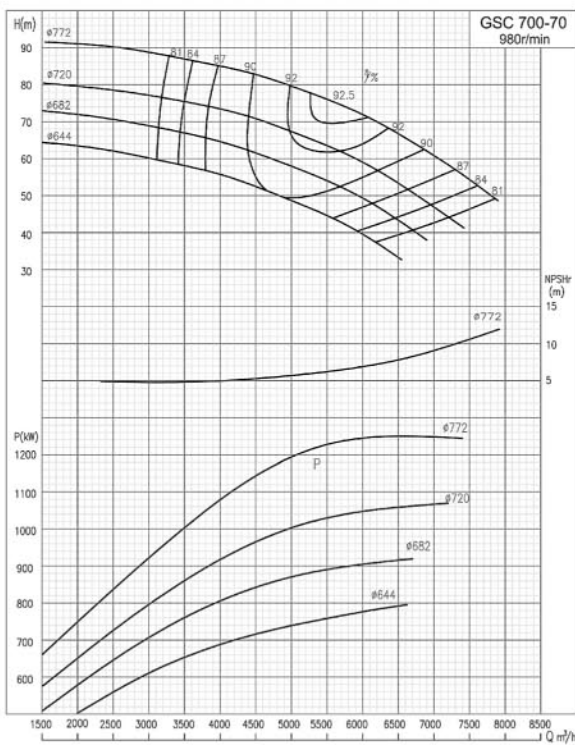
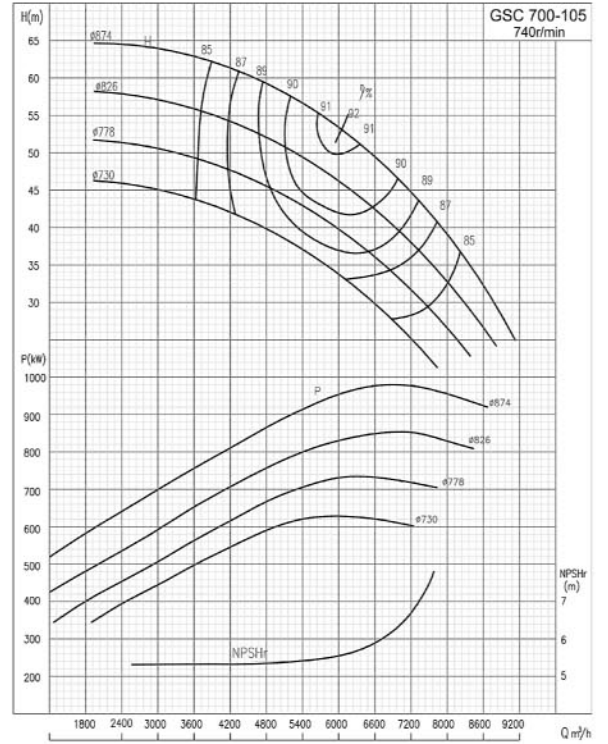
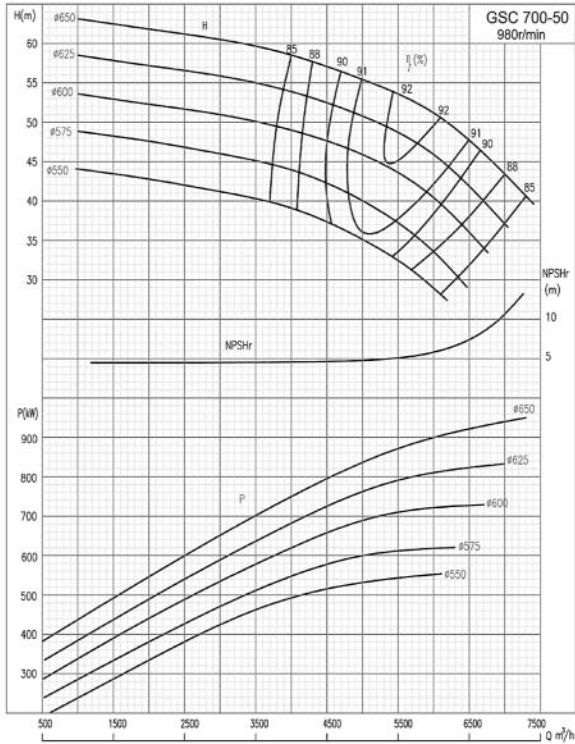
Performance Curves

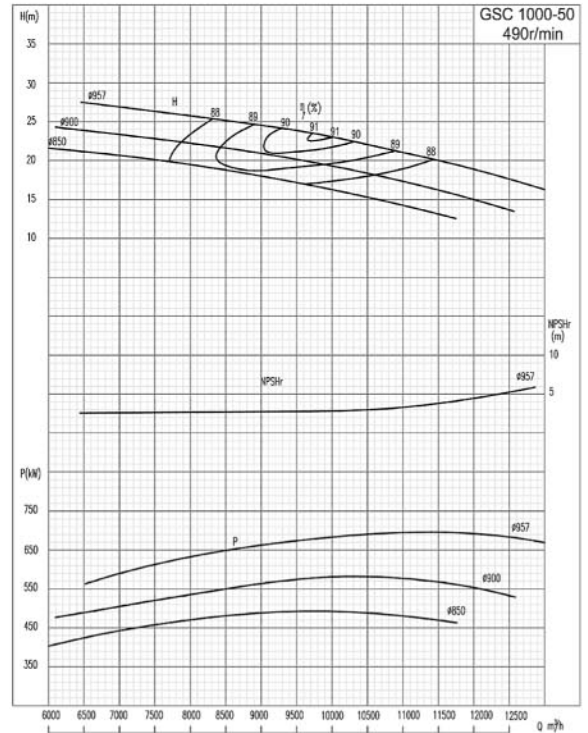
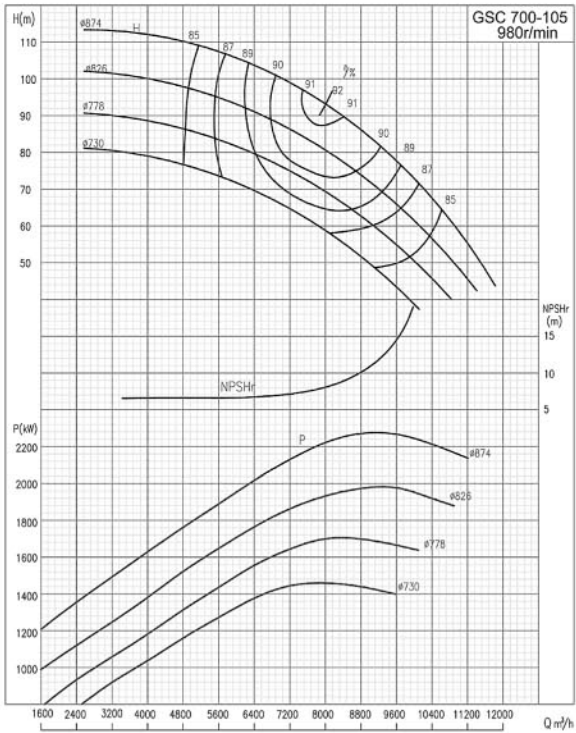
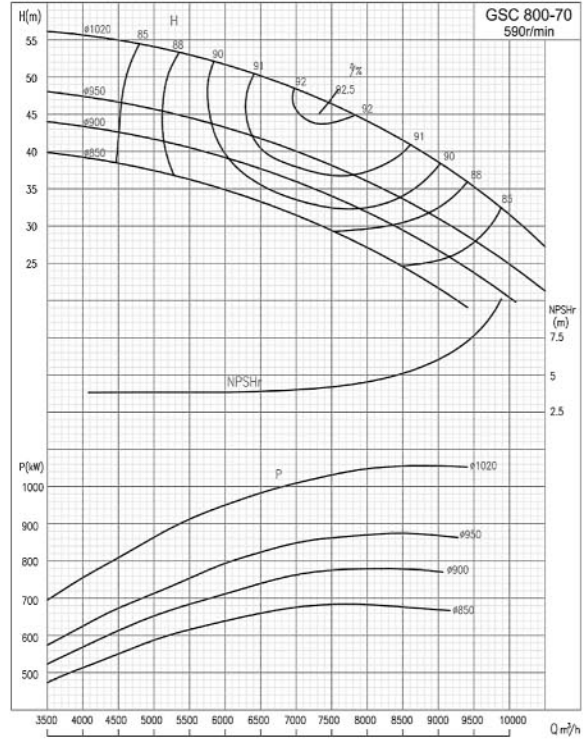
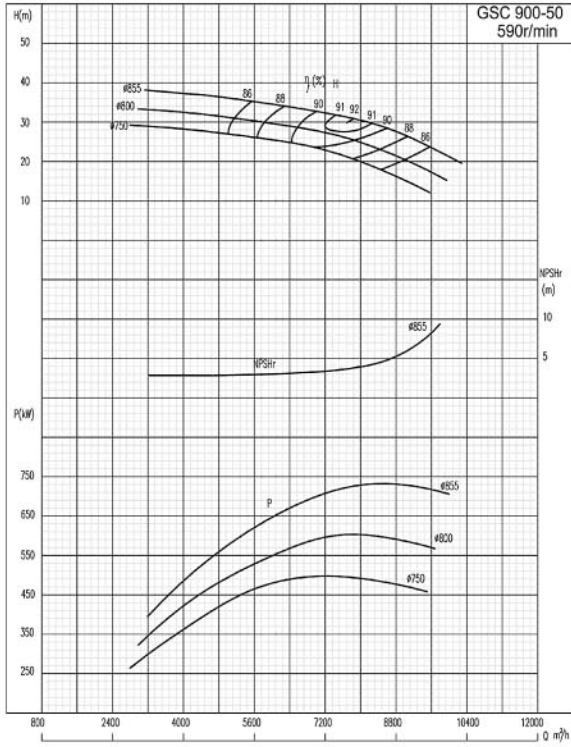


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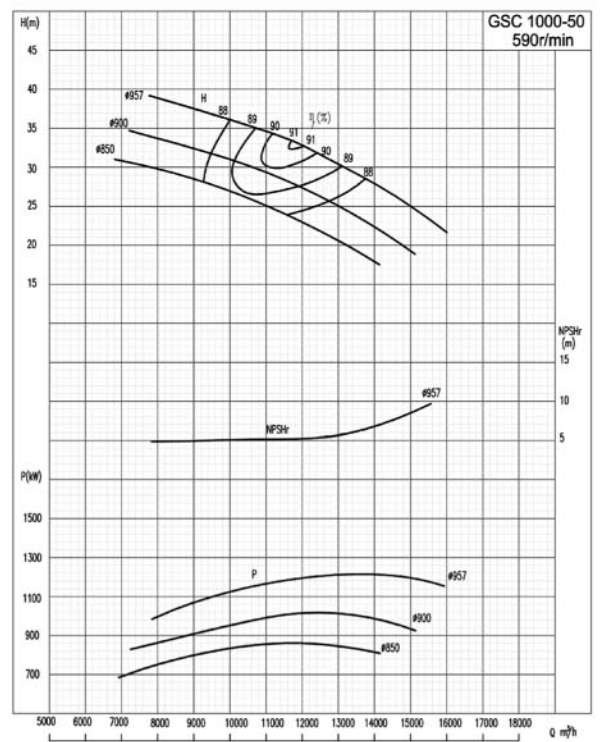
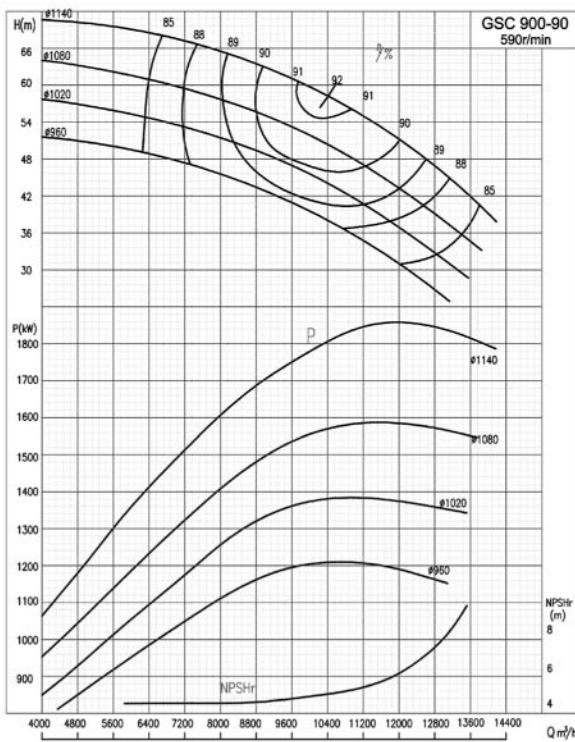
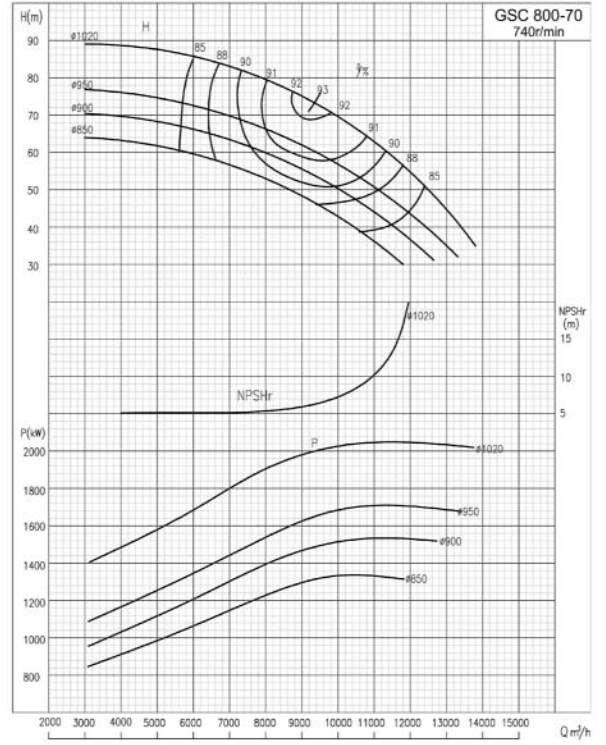
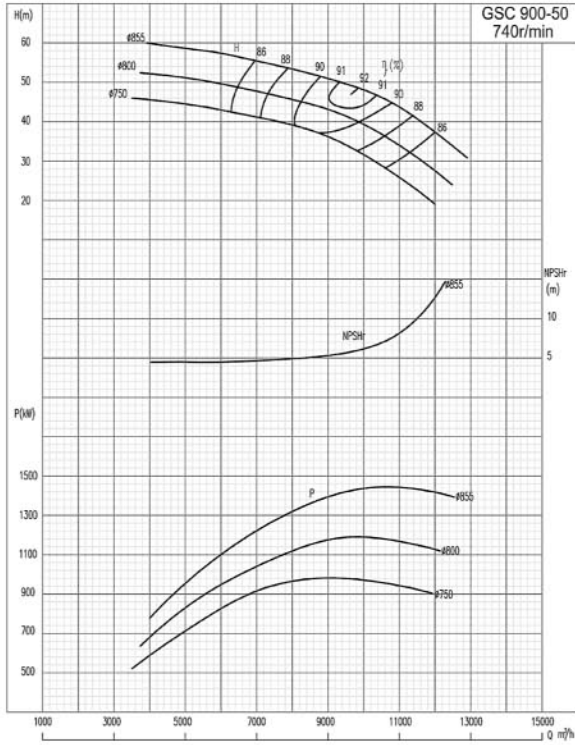


Performance Curves

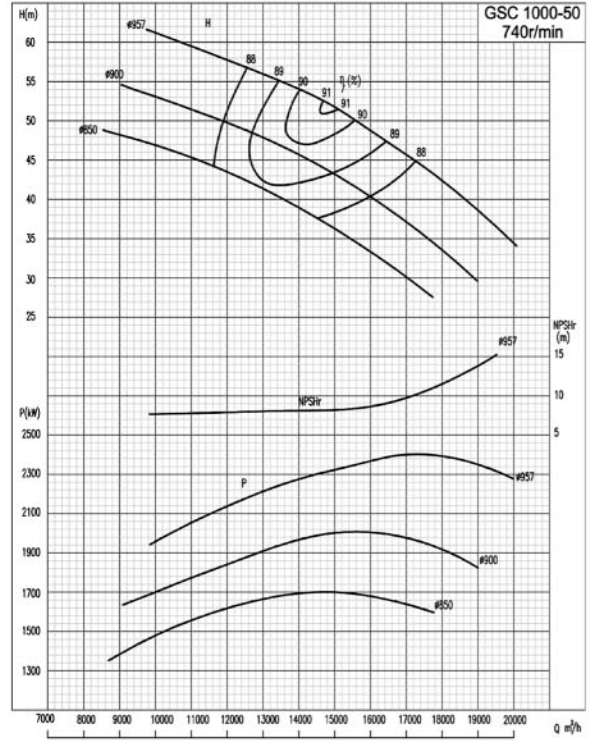
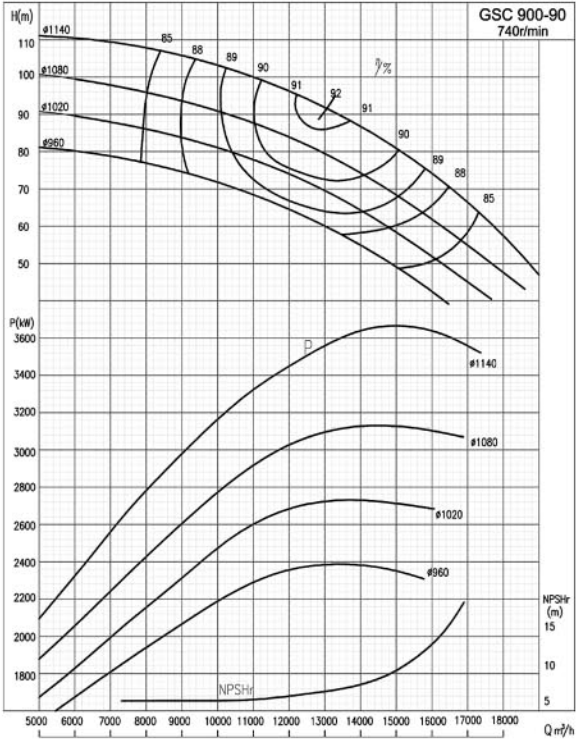


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