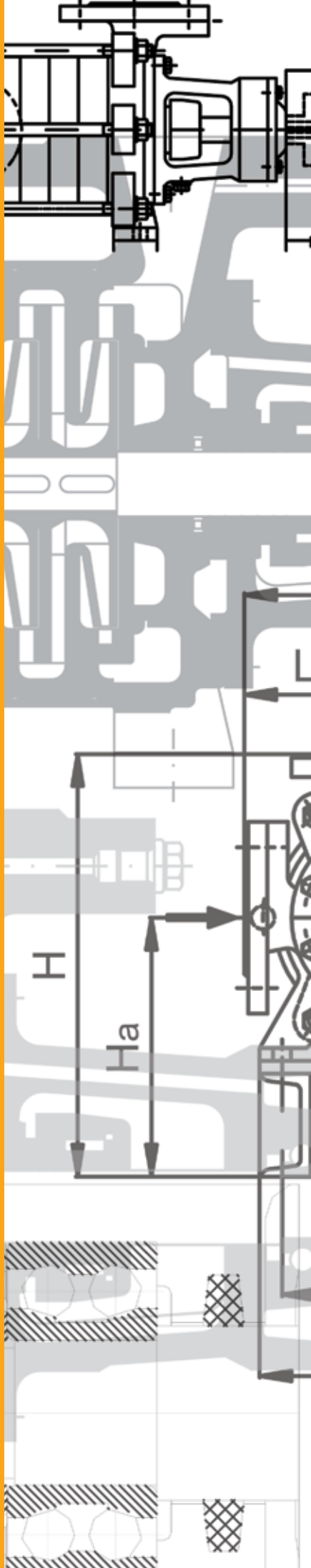




KCP - MULTISTAGE CENTRIFUGAL PUMPS





MZT Pumpi a.d is one of the leading manufacturers of industrial pumps in the region of South-East Europe. With its extensive experience of more than 60 years, justified with existence of broad product range, it continuously strives to satisfy the utmost needs of the customer.

The key elements to survive in this globalized market are flexibility towards market changes and ability to innovate-both in product designs as well as business processes. By following the worldwide development in the pump industry, our staff constantly faces with the growing challenge to keep abreast of the numerous innovations in pump designs and this is justified by having a separate R&D department.

The basic objective of MZT Pumpi is expanding the business partnerships and building the brand name of our products worldwide. All of our employees live up to our motto: "Pump your way to success".

CONTENT

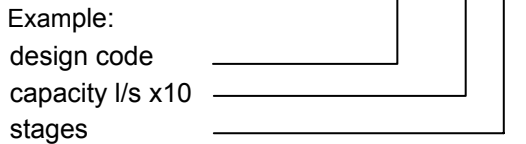
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GENERAL DATA

Technical data:

Capacity:	up to 45 l/s
Head:	up to 250 m
Temperature:	up to 105 °C

Pump type key



design code execution:

C – standard execution

KCP – for higher temperature

VCP – vertical execution

Design:

The C type range is the basic range of our centrifugal ring section multistage pumps. The simplified design, utilising hydraulically balanced impellers by means of holes into impeller, or by “back to back” impeller execution, provides the optimum pumping solution for medium pressure applications. Pump casing is consisting of suction and discharge housing, middle chambers and bearing brackets.

All pump's parts are connected by strong bolts. The shaft made of high grade steel, equipped with impellers is guided by means of roller bearings on both ends of it, the one of the bearing also bears of axial thrust.

All of the impellers are centrifugal of closed type, all are statically and dynamically balanced. As standard the shaft is sealed by means of gland packing, as an option the mechanical seals are available.

Applications:

- Agriculture irrigation
- Boiler feed
- Chemical and light hydrocarbon transfer
- Coating and surface treatment
- High rise building sprinklers
- Paper mill shower water
- Pressure boosting systems
- Sanitary wash down services
- Rotating equipment lube and seal oil supply

Standard material executions:

Casing.....	Gray iron
Impeller.....	Cast iron or bronze
Middle chamber.....	Cast iron
Shaft.....	High grade steel
Sleeve.....	Hardened stainless steel
Wear rings.....	Gray iron or bronze

Delivery options

The pumps can be ordered as individual pump or as complete pumping unit which consist of pump, driver, flexible coupling and mounted base frame. As standard the pumps drivers are electrical motors, but it could be any other device as: internal combustion engine, turbine etc.

Besides the pump aggregate we could deliver all necessary equipment (valves, pipes, suction strainers, piping, and equipment for automatic pump operation...)



Flexible coupling:

- Standard version
- Spacer coupling

Bearing assembly with shaft:

The bearings are located in two bearing housings, which are positioned at both sides of the pump lubricated with nipple greasers. The protection ring on the shaft prevents liquid from entering the bearing housing. KCP pumps can be supplied with plain journal bearings with ring oil lubrication.

Shaft sealing:

The shaft sealing could be arranged by soft packing or mechanical seal. In soft packing arrangements the shaft is protected by replaceable stainless sleeve while the stuffing box is furnished with lantern ring for introduction of cooling liquid into the packing.

On special demand the pumps could be furnished with mechanical seal in accordance with the characteristics of the liquid and the operating conditions.

Wear Rings

KCP pumps have replaceable wear rings, providing consistent pump efficiency. The inner diameter of the KCP pumps wear rings matches the impeller inlet diameter, which produces undisturbed flow conditions.

Cylindrical clearance between impeller and wear ring is of a special design which reliability and effectiveness have been well proven. Leakage is therefore limited, which ensures high efficiency and no fibres trapped in the clearance.

Range of program:

A wide variety of models makes it possible to select a pump to suit any fields of the industry and the agriculture. Proper choice is important in order to minimize the energy consumption and to assure long trouble-free operation of the pump.

Performance

The performance curves are given in the diagrams below, indicating: Q-H, Q-P, Qefficiency, and Q-NPSH. KCP pumps can operate continuously in whole the operating region within the motor power limitation.

All the pumps can run at different speeds, depending on the size of the pump and the customer requirements. For higher speeds it is necessary to check the pump limitation.

The performance curves are based on a liquid density of 1000 kg/m³. For working fluid density below or above 1000 kg/m³ it is necessary to multiply the power.

Drive

The drive is generally a direct coupled electric motor, using a flexible coupling. For sizing of the drivers you have to add a minimum of 10 to 15% to the pump absorbed power, depending on operating condition, eventually a higher could necessary.

GENERAL DATA– Design of KCP pump

Impellers

Fully shrouded impellers statically and dynamically balanced

O-rings

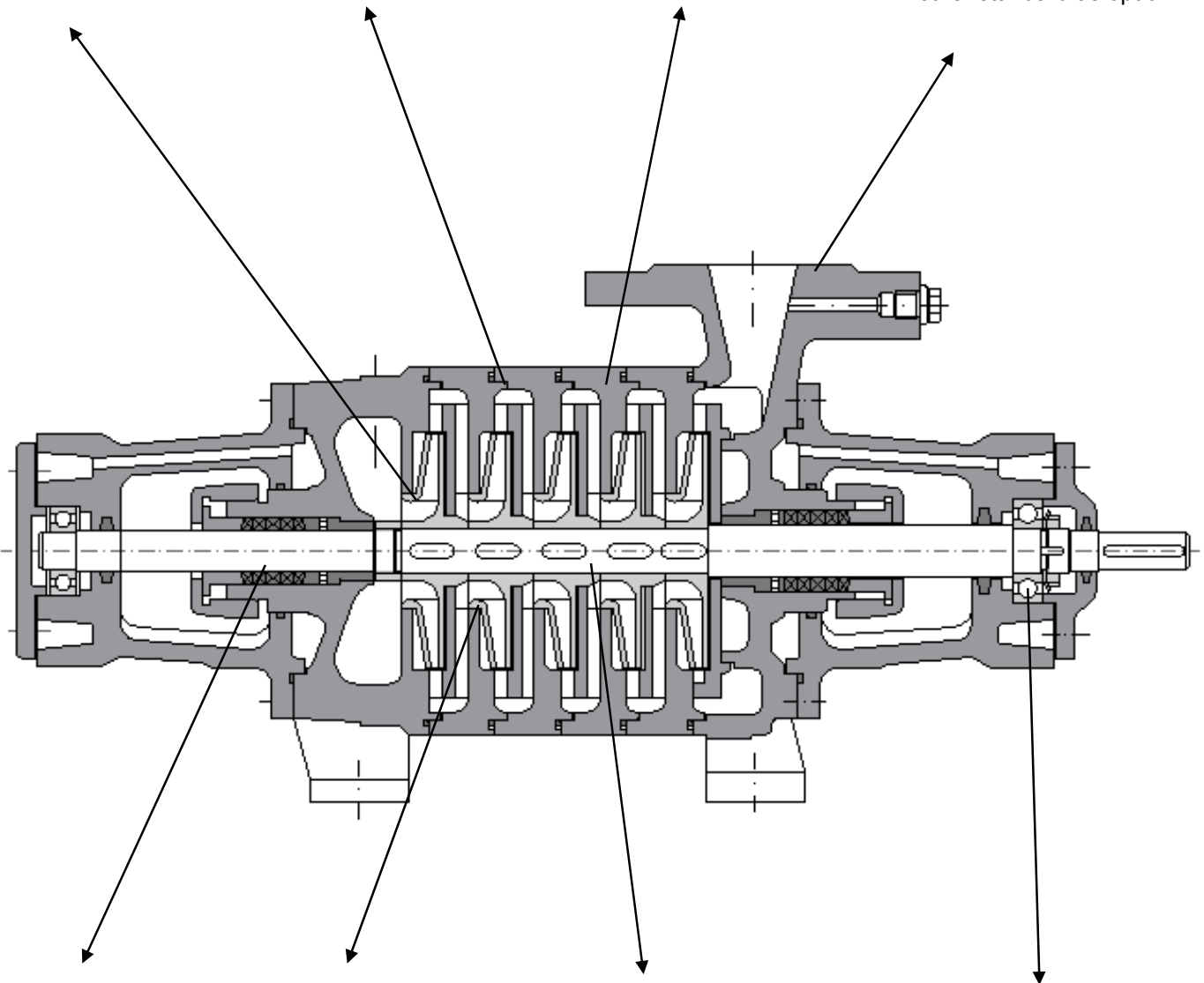
O-rings sealed casing stages means leak less operation

Casing

Gray iron as standard, other material executions available

Flanges

Suction and discharge flanges designed According DIN standard other standard as option



Shaft sealing

Gland packing as standard mechanical seals as option

Wear rings

Easily replaceable and highly resistant gray iron or bronze wear rings at each pumps stage

Shaft

Stainless steel shaft, precisely machined and ground

Ball bearings

Grease lubricated ball bearings to handle axial thrust in either direction

GENERAL DATA– Design of DMS pump

Impellers

“Back to back” impeller execution provides an axial thrust balancing

Casing

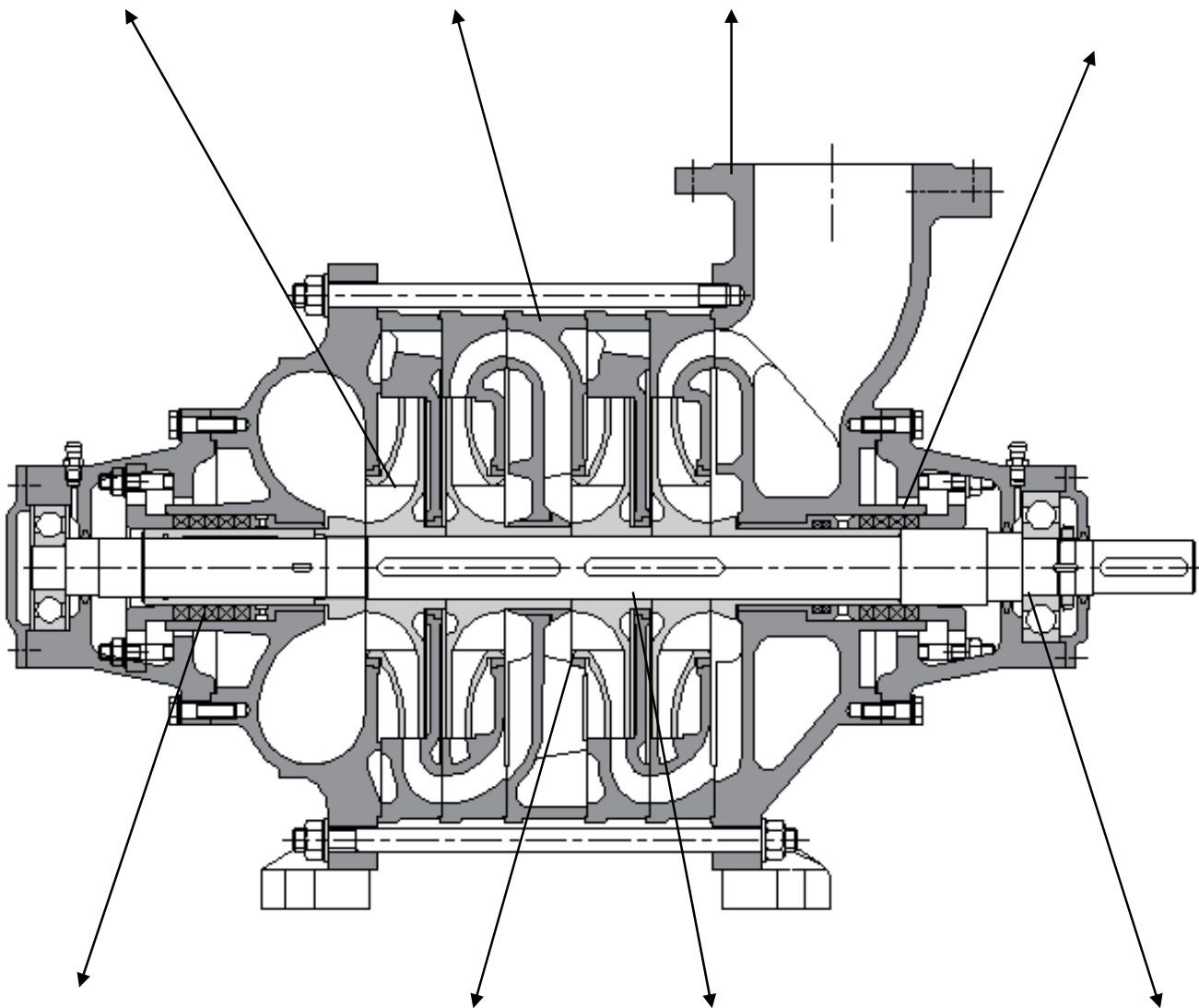
High quality casings available in grey iron as standard, other material combinations as option

Flanges

Suction and discharge flanges designed According DIN standard other standard as option

O-ring

O-rings is used when hot water is a working medium, seals chamber protecting it of leaking operation



Shaft sealing

Gland packing as standard mechanical seals as option

Wear rings

Replaceable wear rings fitted to casing as standard, through the pump life efficiency is maintained

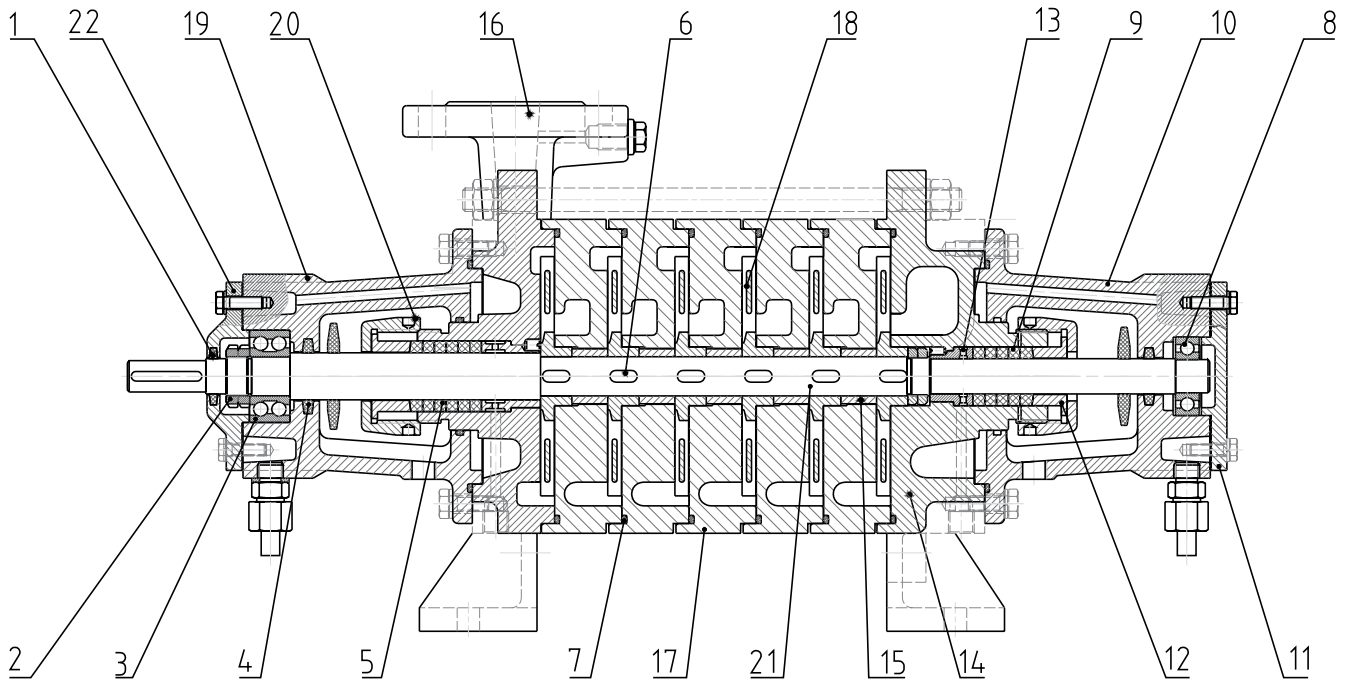
Shaft

Heavy-duty shaft available in different materials

Ball bearings

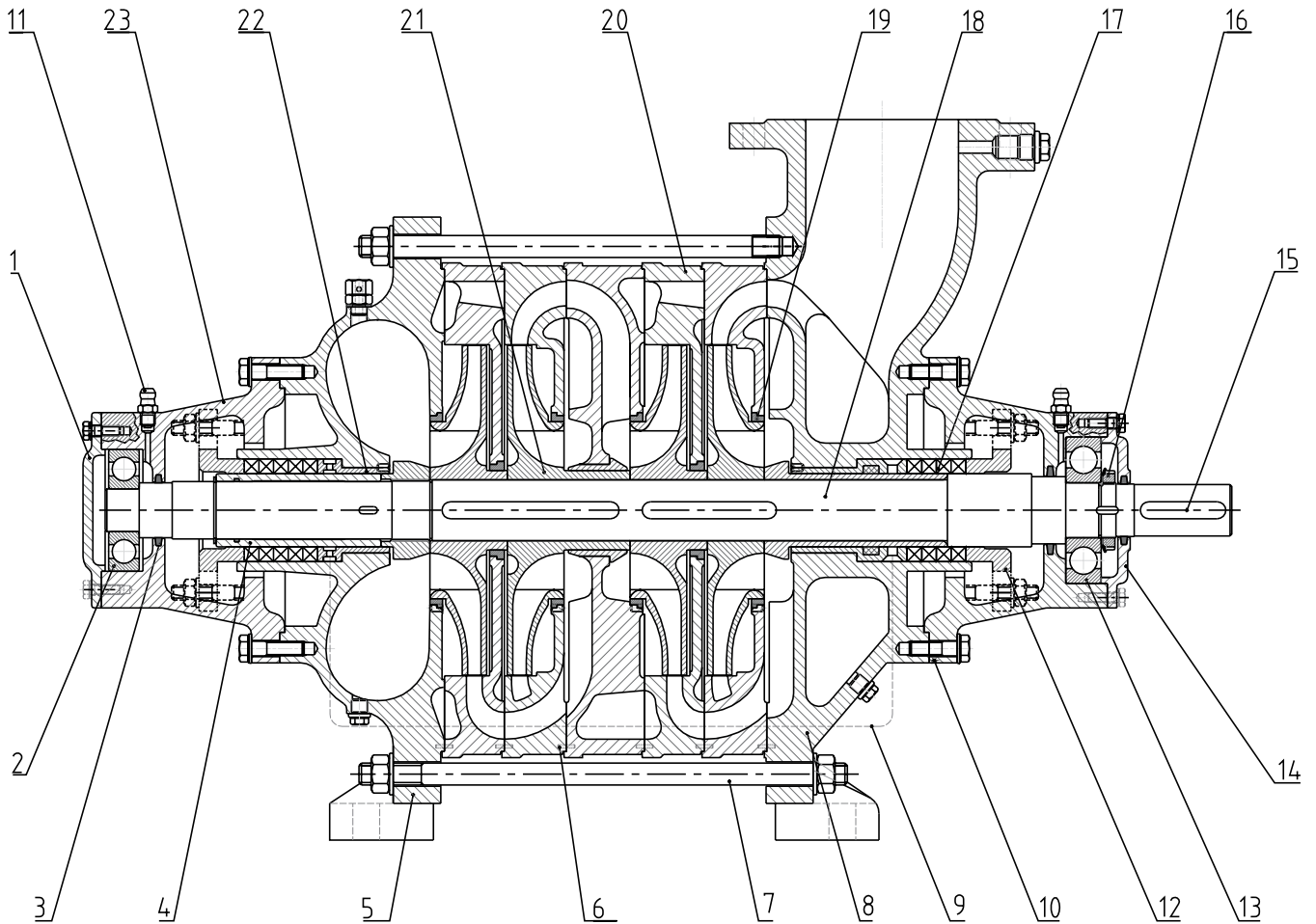
Grease lubricated ball bearings to handle axial thrust in either direction

GENERAL DATA– Sectional drawing of K06



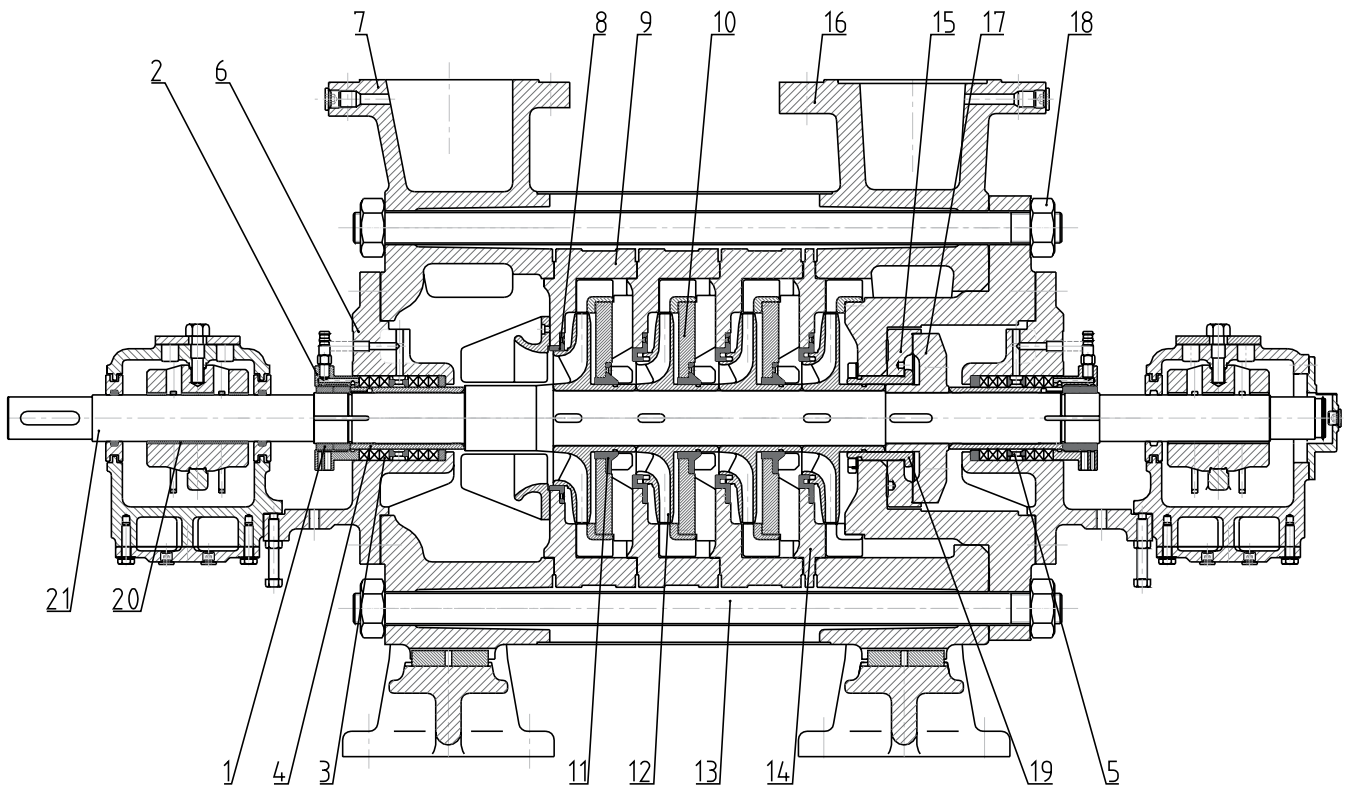
Pos.	Description	Pos.	Description
1.	Cord	12.	Gland cover
2.	Lock nut	13.	Lantern ring
3.	Double row ball bearing	14.	Suction casing
4.	Cord	15.	Shaft protecting sleeve
5.	Gland packing	16.	Discharge casing
6.	Key	17.	Stage casing
7.	O-ring	18.	Impeller
8.	Single row ball bearing	19.	Bearing housing
9.	Gland packing	20.	Gland cover
10.	Bearing housing	21.	Shaft
11.	Cover	22.	Bearing cover

GENERAL DATA– Sectional drawing of KCP 122-C12



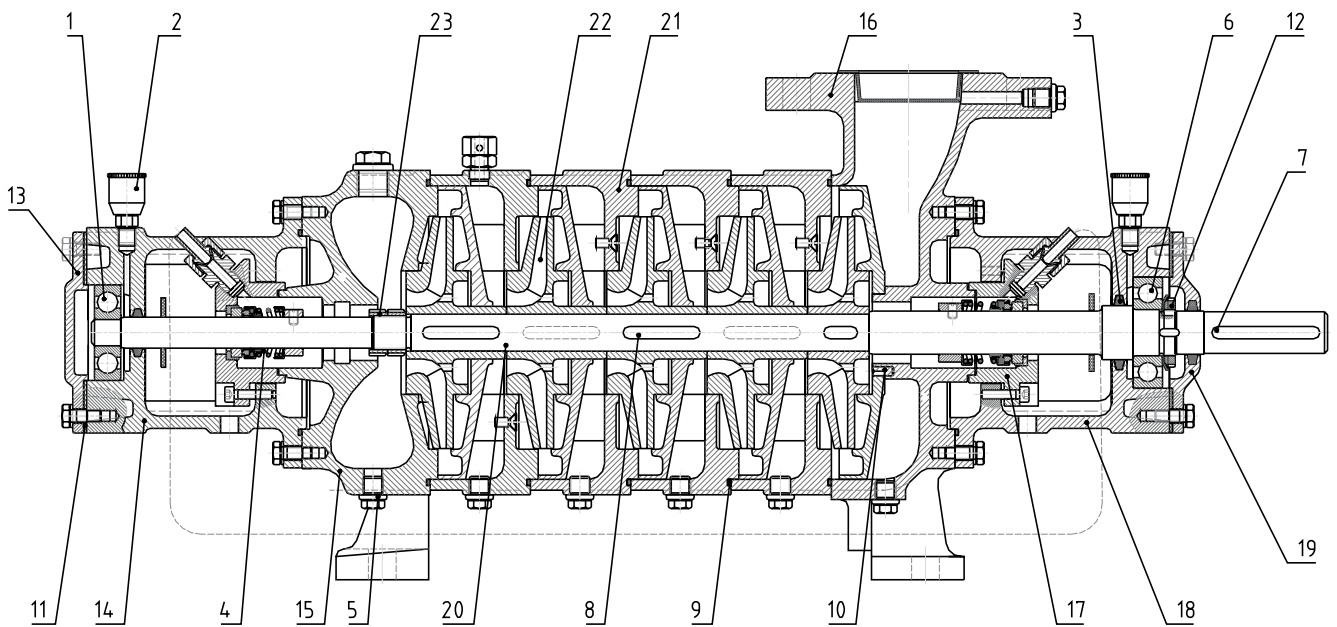
Pos.	Description	Pos.	Description
1.	Bearing cover	13.	Single row bearing
2.	Single row bearing	14.	Bearing cover
3.	Cord	15.	Key
4.	Shaft protecting sleeve	16.	Lock nut
5.	Suction casing	17.	Soft packing/Gland packing
6.	Stud	18.	Shaft
7.	Double side stud	19.	Casing wear ring
8.	Discharge casing	20.	Stage casing
9.	Piping	21.	Impeller
10.	Bearing housing	22.	Shaft sleeve
11.	Lubricating nipple	23.	Bearing housing
12.	Gland		

GENERAL DATA– Sectional drawing of KCP 162



Pos.	Description	Pos.	Description
1.	Nut	12.	Impeller
2.	Gland cover	13.	Tie bolt
3.	Gland packing	14.	Stage casing
4.	Shaft protecting sleeve	15.	Disc
5.	Cooling ring – Lantern ring	16.	Discharge casing
6.	Cover	17.	Balance drum
7.	Suction casing	18.	Screwed plug
8.	Wear ring	19.	Shaft sleeve
9.	Stage casing	20.	Plain bearing
10.	Stage casing	21.	Shaft
11.	Wear ring		

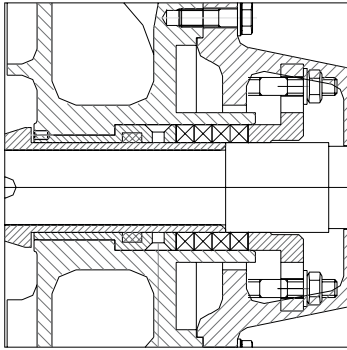
GENERAL DATA– Sectional drawing of KCP 32 – C3



Pos.	Description	Pos.	Description
1.	Single row ball bearing	13.	Bearing cover
2.	Lubricating nipple	14.	Bearing housing
3.	Cord	15.	Suction casing
4.	Mechanical seal	16.	Discharge casing
5.	Joint ring	17.	Seal cover
6.	Single row ball bearing	18.	Bearing housing
7.	Key	19.	Bearing cover
8.	Key	20.	Shaft
9.	O-ring	21.	Stage casing
10.	Tie bolt	22.	Impeller
11.	Lip seal	23.	Lock nut
12.	Lock nut		

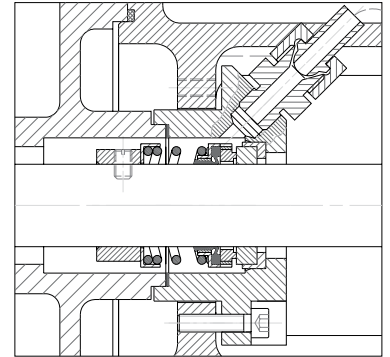
GENERAL DATA

Stuffing boxes



- Cooled stuffing box with internal barrier fluid for pumping of clean liquids in suction operation or at inlet pressures up to 4 bar.

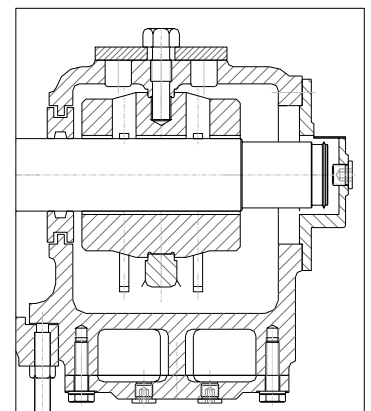
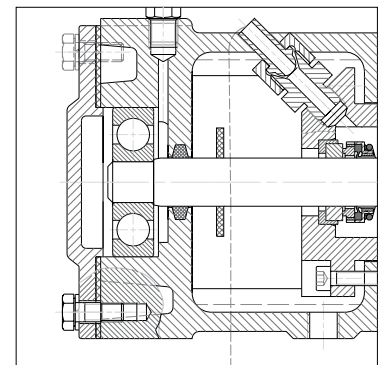
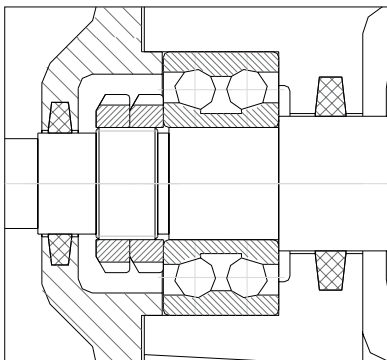
Single mechanical shaft seal



- Mechanical seal with cooling of seal surface (connection with pump case)

Bearing Bracket

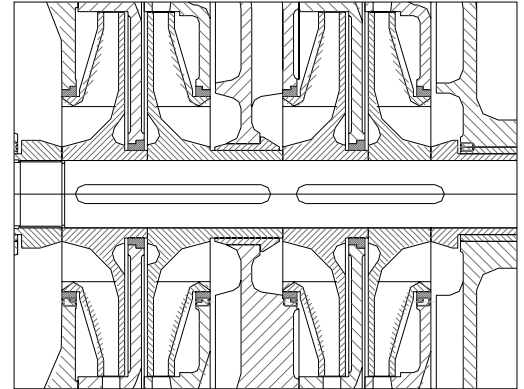
- Depending on pump size, a deep groove double row ball bearings is used, or a single row roller bearing. Plain bearings are used at some special design of these multistage pumps. The bearings are protected against moisture and dirt ingress.



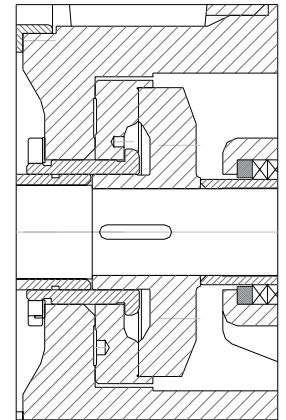
GENERAL DATA

Balancing the axial thrust

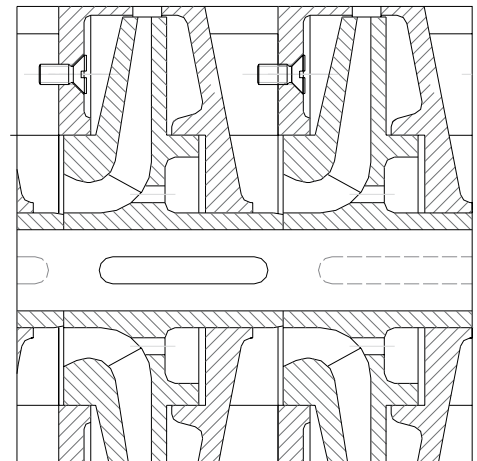
- One way to balance the axial thrust in pumps is to arrange the impellers in opposed direction. With even number of impellers, such an arrangement can eliminate the axial thrust complete.



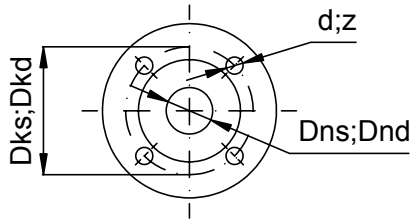
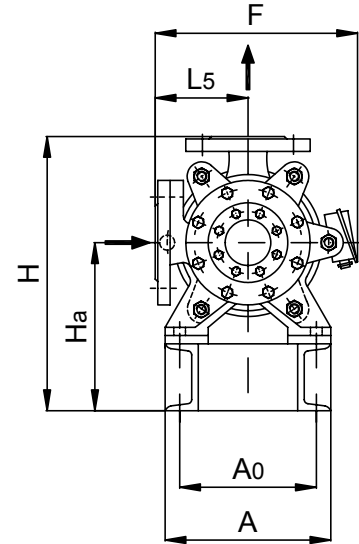
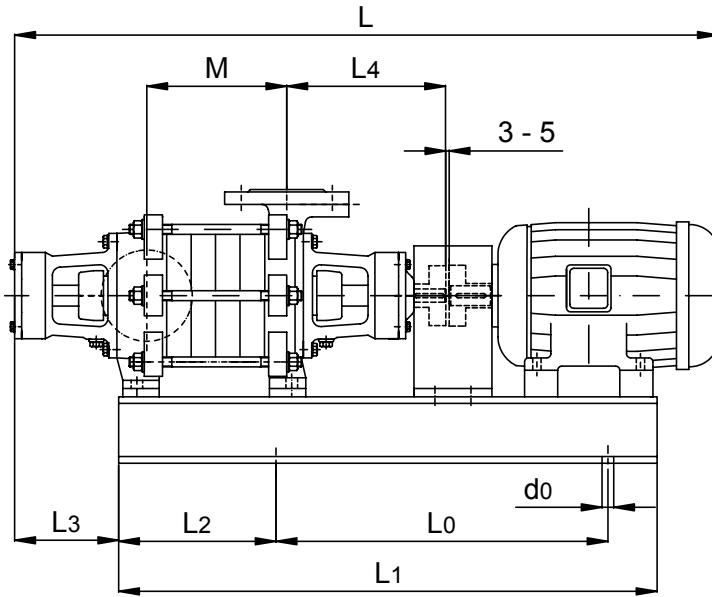
- Another way to balance the axial thrust is to use a balancing disc. In such case, the axial thrust is being taken up by a single disc. This device is subjected to total pressure developed by the pump on one of its faces. On its other face, it is subjected to the suction pressure at the inlet of the first impeller.



- Balancing holes provided in the impeller for balancing on hydraulic axial thrust



TECHNICAL DATA – Main dimensions: Pump unit 2900 [rpm]



FLANGES :

suction DIN. 2533

discharge DIN. 2533,
DIN. 2544

DIMENSION

mm

PUMP TYPE	n rpm	P kW	DIMENSION													m (kg)								
			L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	Pump	Agr.			
KCP 12 – 2	2900	1.1	680	500	370	64		83				328		245									27	53
KCP 12 – 3	2900		725	530	345	88		113															28	58
KCP 12 – 4	2900	2.2	805	640	435	96		143	200	160	360	200	272	110	110		4	4					29	66
KCP 12 – 5	2900		835	940	450	112		130															173	30
KCP 12 – 6	2900	3	910	705	490	128	177	203			374		286										31	79
KCP 12 – 7	2900		940	735	505	142		233															32	82
KCP 12 – 8	2900	4	975	770	530	115		263	240	195	400		334										33	95

TECHNICAL DATA – Main dimensions: Pump unit 2900 [rpm]

DIMENSION																			mm				
PUMP TYPE	n rpm	P kW	L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg)			
																				Pump	Agr.		
KCP 22 – 2	2900	2.2	870	635	465	90	158 236	105	255	215	412	252	300	125	125	140	4	4	18	18	40	83	
KCP 22 – 3	2900	3	950	700	500	110		141			430										320	48	110
KCP 22 – 4	2900	4	995	745	530	120		177			450										340	56	128
KCP 22 – 5	2900	5.5	1095	820	590	140		213	280	240	427	360	50	50	140	18	18	18	18	18	64	150	
KCP 22 – 6	2900		1130	860	610	160		249													72	159	
KCP 22 – 7	2900	7.5	1165	895	625	180		285	325	280	480	270	400	50	50	140	18	18	18	18	18	80	175
KCP 22 – 8	2900		1200	930	640	195		321														88	184
KCP 22 – 9	2900	11	1385	1090	750	210		357	325	280	480	270	400	50	50	140	18	18	18	18	18	96	230
KCP 22 – 10	2900		1420	1125	775	230		393														104	245
KCP 22 – 11	2900		1455	1160	780	250		429														112	254
KCP 22 – 12	2900		1495	1195	795	270		465														120	236

DIMENSION																			mm						
PUMP TYPE	n rpm	P kW	L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg)					
																				Pump	Agr.				
KCP 32 - 2	2900	5.5	1070	795	590	115	165 271	160	270	220	480	272	380	145	145	165	4	4	18	18	18	18	62	154	
KCP 32 - 3	2900	7.5	1135	895	655	150		225															72	190	
KCP 32 - 4	2900	11	1350	1075	735	180		290	335	285	82	228													
KCP 32 - 5	2900	15	1415	1115	770	210		355	500	292	425	145	145	165	18	18	18	18	18	18	18	92	259		
KCP 32 - 6	2900	19	1525	1125	870	200		420														325	280	102	284
KCP 32 - 7	2900		1590	1270	920			485	350	300	112	292													
KCP 32 - 8	2900	22	1670	1325	975	200		550	410	350	685	375	480	145	145	165	18	18	18	18	18	18	18	122	366
KCP 32 - 9	2900		1735	1450	1065			615																132	378
KCP 32 - 10	2900	30	1905	1565	1050	680		410	350	685	375	480	145	145	165	18	18	18	18	18	18	142	499		

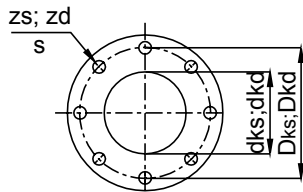
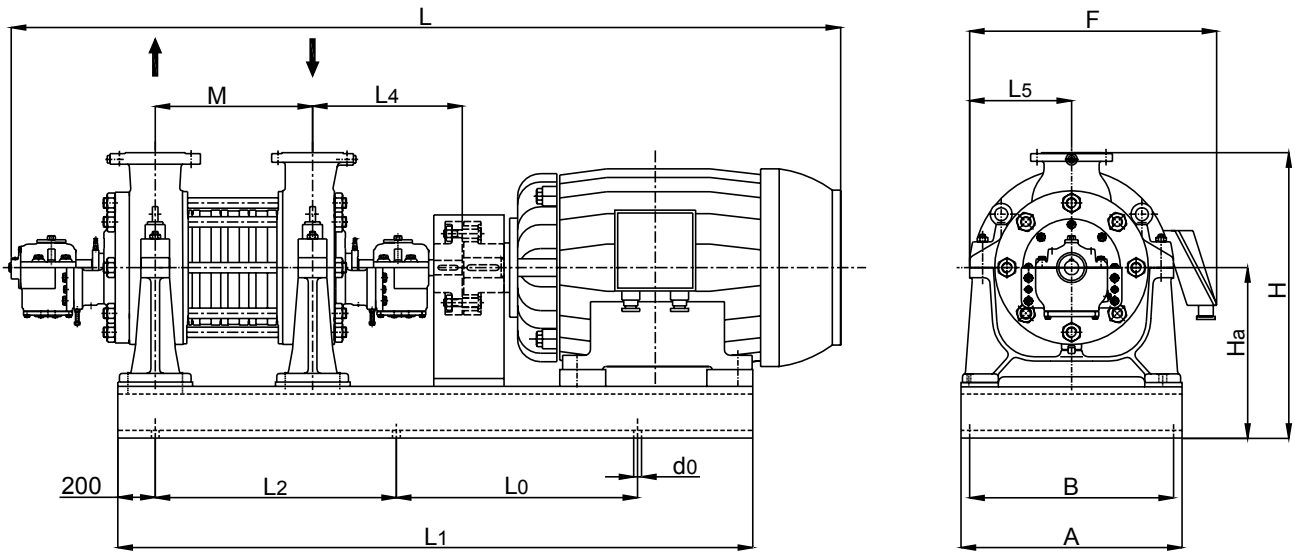
DIMENSION																			mm								
PUMP TYPE	n rpm	P kW	L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg)							
																				Pump	Agr.						
KCP 42 - 2	2900	7.5	1110	820	595	115	165 271	160	270	220	480	272	380	145	145	165	4	4	18	18	18	18	18	18	62	160	
KCP 42 - 3	2900	11	1285	980	600	150		225																	72	216	
KCP 42 - 4	2900	15	1340	1050	735	180		290	335	285	82	250															
KCP 42 - 5	2900		1415	1115	770	210		355	500	292	425	145	145	165	18	18	18	18	18	18	18	18	18	92	259		
KCP 42 - 6	2900	19	1525	1225	870	200		420																350	300	550	312
KCP 42 - 7	2900	22	1605	1285	935			200	485	410	350	685	375	480	145	145	165	18	18	18	18	18	18	18	18	18	112
KCP 42 - 8	2900		1775	1440	1050	550			122																		474
KCP 42 - 9	2900	30	1840	1505	1050	200		615	410	350	685	375	480	145	145	165	18	18	18	18	18	18	18	18	18	132	486
KCP 42 - 10	2900		1905	1565				680																		142	499

TECHNICAL DATA – Main dimensions: Pump unit 2900, 1450 [rpm]

DIMENSION																			mm									
PUMP TYPE	n	P	L	L ₁	L ₀	L ₂	L ₃	M	A	A ₀	H	H _a	F	Dks	Dkd	L ₅	zs	zd	d ₀	m (kg)								
	rpm	kW					L ₄							dns	dnd		s	s		Pump	Agr.							
KCP 52 - 2	2900	15	1340	1020	750	140	304	216	410	360	580	340	500	160	160	240	8	8	18	130	306							
KCP 52 - 3	2900	22	1480	1150	820	180		296			570	330	520							190	495							
KCP 52 - 4	2900	30	1665	1315	905	200		376	600	340	555	170	446															
KCP 52 - 5	2900	37	1745	1395	1000	456		616				445	385							685	400	585	230	650				
KCP 52 - 6	2900	45	1825	1475	1180	220		536	616	445	385	685	400							585	180	180	240	8	8	18	210	530
KCP 52 - 7	2900		1980	1570				1180																			616	445
KCP 52 - 8	2900	55	2135	1750	1310	220		696	505	445	750	430	610							250	785							

DIMENSION																			mm								
PUMP TYPE	n	P	L	L ₁	L ₀	L ₂	L ₃	M	A	A ₀	H	H _a	F	Dks	Dkd	L ₅	zs	zd	d ₀	m (kg)							
	rpm	kW					L ₄							dns	dnd		s	s		Pump	Agr.						
KCP 62 - 2	1450	5.5	1165	870	639	120	317	172	271	225	512	312	455	180	160	240	8	8	18	111	216						
KCP 62 - 2a	1450	4	1100	825	600			252	205	492	292	440	196														
KCP 62 - 3	1450	11	1390	1070	780	160		253	315	265	525	325	500							180	160	240	8	8	18	125	281
KCP 62 - 3a	1450	7.5	1280	985	698			271	225	512	312	455	250														
KCP 62 - 4	1450	11	1470	1155	803	200		333	315	265	525	325	500							180	160	240	8	8	18	139	308
KCP 62 - 4a	1450	7.5	1365	1070	738			271	225	512	312	455	266														
KCP 62 - 5	1450	15	1600	1275	866	240		414	315	265	525	325	500							180	160	240	8	8	18	153	350
KCP 62 - 5a	1450	11	1555	1235	844			317	100	80	18	18	320														
KCP 62 - 6	1450	18.5	1695	1365	913	280	494	350	290	550	312	520	180	160	240	8	8	18	167	405							
KCP 62 - 6a	1450	15	1675	1355	906		315	265	525	325	500	365															
KCP 62 - 7	1450	18.5	1780	1445	953	320	575	350	290	550	312	520	180	160	240	8	8	18	181	423							
KCP 62 - 7a	1450	15	1760	1440	947		315	265	525	325	500	385															
KCP 62 - 8	1450	22	1896	1565	1012	360	655	350	290	550	312	520	180	160	240	8	8	18	195	466							
KCP 62 - 8a	1450	18.5	1860	1525	1020		445																				

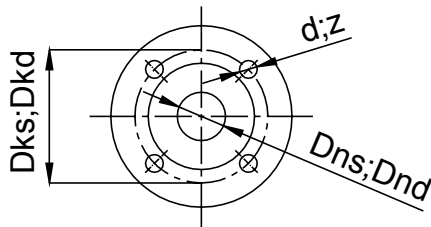
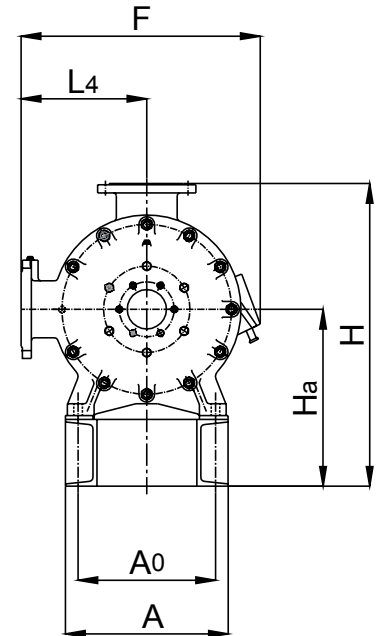
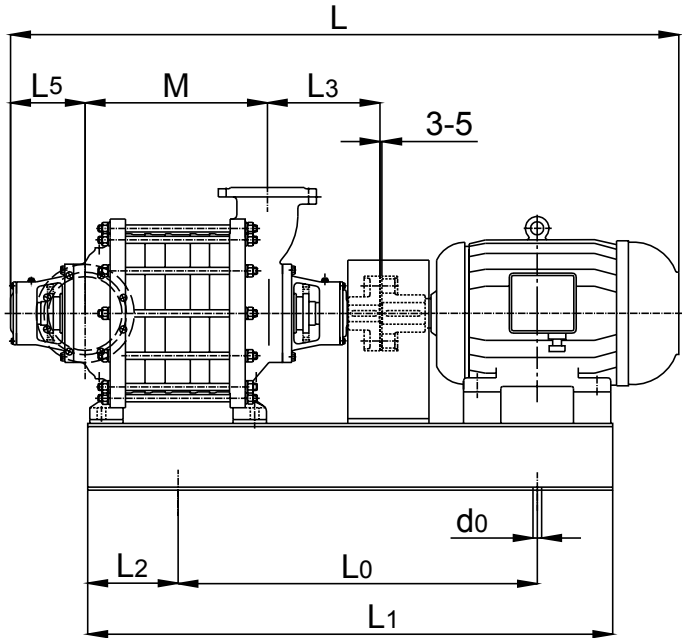
TECHNICAL DATA – Main dimensions: Pump unit 2900 [rpm]



FLANGES:
 suction DIN 2533
 discharge DIN 2547

DIMENSION																	mm					
PUMP TYPE	n rpm	P kW	L	L ₁	L ₀	L ₂	L ₄	M	A	B	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg)		
																				Pump	Agr.	
KCP 162 – 2	2900	75	2360	1755	1035	350	516	326	770	710	1000	600	723	240	250	355	8	8	27	35	762	1650
KCP 162 – 3	2900	110	2560	1925	770	770		426													852	1900
KCP 162 – 4	2900	160	2892	2215	840	840		526													942	2475
KCP 162 – 5	2900	200	2990	2315	890	890		626	1032												2635	
KCP 162 – 6	2900	250	3395	2775	1060	1060		726	780												1122	2902
KCP 162 – 6a	2900	160	3092	2415	840	890		726	770												1122	3082
KCP 162 – 7	2900	315	3645	3025	1150	1150		826	780												1212	3180
KCP 162 – 8	2900		3740	3125	1200	1200		926													1302	3295

TECHNICAL DATA – Main dimensions: Pump unit 1450 [rpm]



FLANGES :

suction
discharge
DIN. 2502

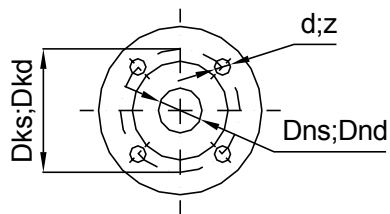
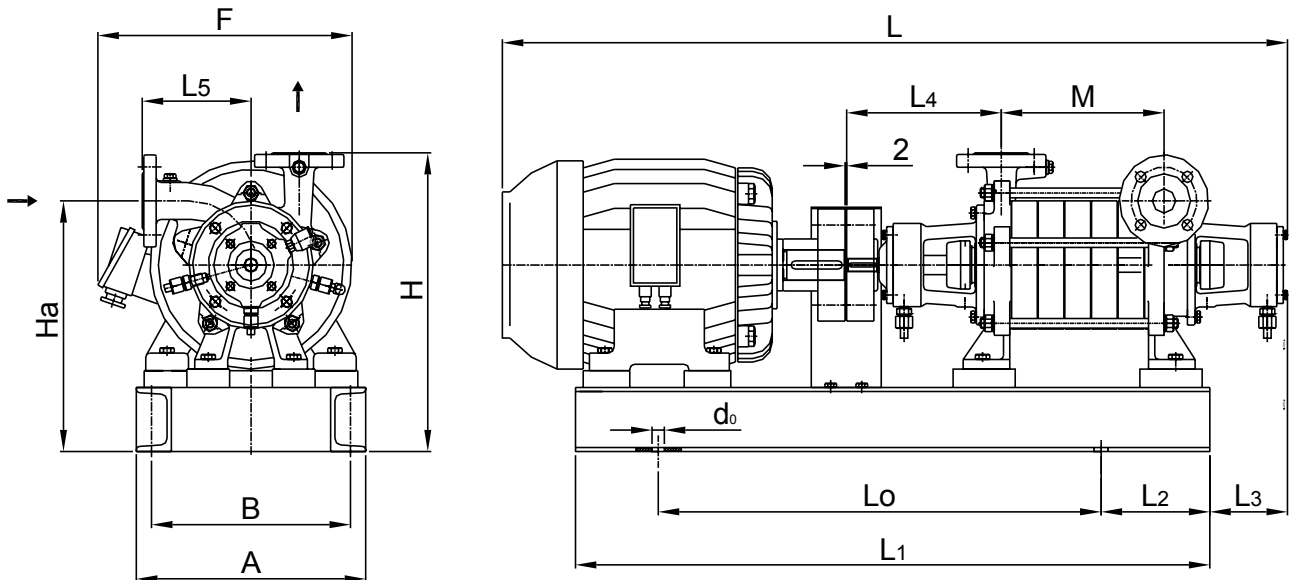
PUMP TYPE	n rpm	P kW	DIMENSION													mm					
			L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg) Pump Agr.	
KCP 122 – 2	1450	15	1410	1085	780	150	185	300	415	355	765	445	578	210	220	320	18	8	22	250	494
KCP 122 – 2 a	1450	11	1365	1040																	287
KCP 122 – 4	1450	30	1700	1340	915	230	287	464	445	385	770	450	634	210	220	320	18	8	22	300	686
KCP 122 – 4 a	1450	22	1635	1290																	310
KCP 122 – 6	1450	45	1955	1560	1060	310	185	628	445	385	770	450	662	125	220	320	18	8	27	350	895
KCP 122 – 6a	1450	37	1930	1535																	1030
KCP 122 – 8	1450	55	2195	1795	1180	390	297	792	515	455	790	470	688	662	220	320	18	8	27	380	990
KCP 122 – 8 a	1450	45	2120	1725																	1145
KCP 122 -10	1450	75	2425	2025	1330	470	185 319	956	580	520	840	480	715							410	1150

TECHNICAL DATA – Main dimensions: Pump unit 1450 [rpm]

PUMP TYPE	DIMENSION																			mm			
	n	P	L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg)			
	rpm	kW																		Pump	Agr.		
KCP 182 – 2	1450	45	1765	1320	950	175	248	350	450	395	845	470	687							22	342	597	
KCP 182 - 2 b	1450	22	1625	1220	875		314						623									676	
KCP 182 – 4	1450	75	2110	1635	1125	280		553	575	515		500	740									502	1260
KCP 182 - 4 a	1450	55	2045	1560	1025				505	445		713	240										250
KCP 182 – 6	1450	132	2490	1990	1330	380	248	756	635	575	900	510	792	150	150	345	23	27			27	662	1748
KCP 182 – 6a	1450	110	2440	1940	1310		324		576	515	845	500	740										1648
KCP 182 - 6 b	1450	90	2365	1905	1260	480		960	635	575	900	510	792									822	1475
KCP 182 – 8	1450	160	2695	2190	1440																		2238
KCP 182 - 8 a	1450	132																					1918

PUMP TYPE	DIMENSION																			mm				
	n	P	L	L ₁	L ₀	L ₂	L ₃ L ₄	M	A	A ₀	H	Ha	F	Dks dns	Dkd dnd	L ₅	zs s	zd s	d ₀	m (kg)				
	rpm	kW																		Pump	Agr.			
KCP 252 – 2	1450	110	2395	1780	1300	220		257	640	710	1165	640	952										875	1910
KCP 252 - 2 a	1450	90	2330	1735	1260								900											1720
KCP 252 – 4	1450	250	3325	2725	1850	350		732	780			640	895									1200	3185	
KCP 252 - 4 a	1450	200	3275	2575	1775								640										570	952
KCP 252 - 4 b	1450	160	2710	2090	1475	351																	2660	
KCP 252 – 6	1450	315	3585	2980	1975	480	494	989	780	710	1185	660	890	295	320	505	8	12	27				1525	3825
KCP 252 - 6 a	1450	250												200	200	23	30	3525						
KCP 252 - 6 b	1450	200	3430	2830	1900																		3375	
KCP 252 – 8	1450	450	3880	3260	2200	535		1246	980	910	1240	790	995										1850	5175
KCP 252 - 8 a	1450	400																						4575
KCP 252 - 8 b	1450	360																						

TECHNICAL DATA – Main dimensions: Pump unit 2900 [rpm]

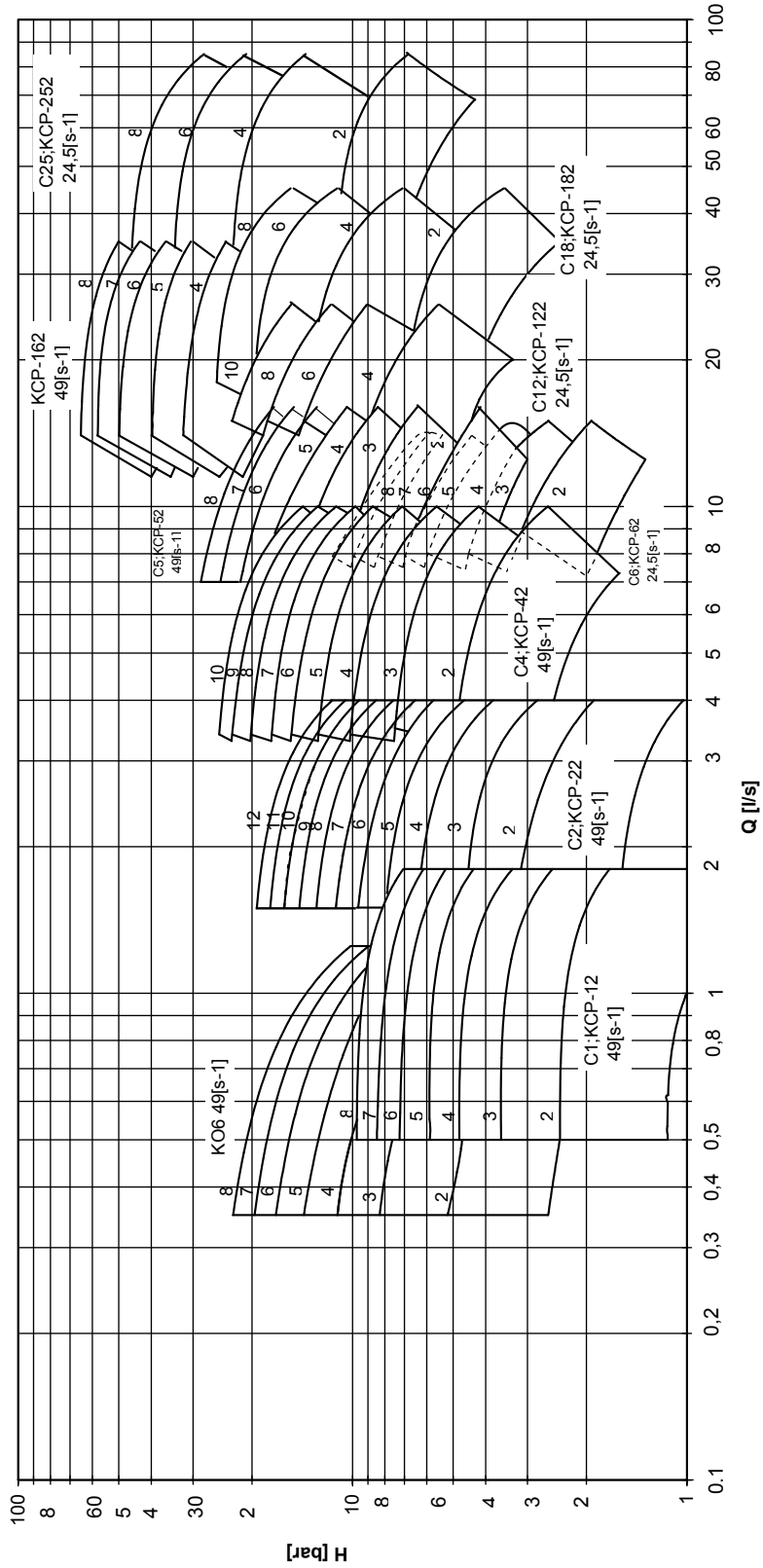


FLANGES :
 suction
 discharge
 DIN. 2544

PUMP TYPE	DIMENSION																mm					
	n	P	L	L ₁	L ₀	L ₂	L ₃	M	A	B	H	H _a	F	D _{ks}	D _{kd}	L ₅	z _s	z _d	d ₀	m (kg)		
	rpm	kW					L ₄							d _{ns}	d _{nd}		s	s		Pump	Agr.	
KO6 - 2	1450	0.75	745	490	410	80		73	240	200	400	287	280								27	49
KO6 - 4	2900	4	920	675	465	120		143	240	200	421	287	375								37	108
KO6 - 5	2900	5.5	1020	750	520	140	111	178						85	85	130	4	4	14	42	129	
KO6 - 6	2900	5.5	1055	785	540	155	197	213	280	240	400	302	390	30	25		14	14		47	134	
KO6 - 7	2900	7.5	1096	820	560	170		248												52	146	
KO6 - 8	2900	7.5	1125	855	575	190		283												57	152	

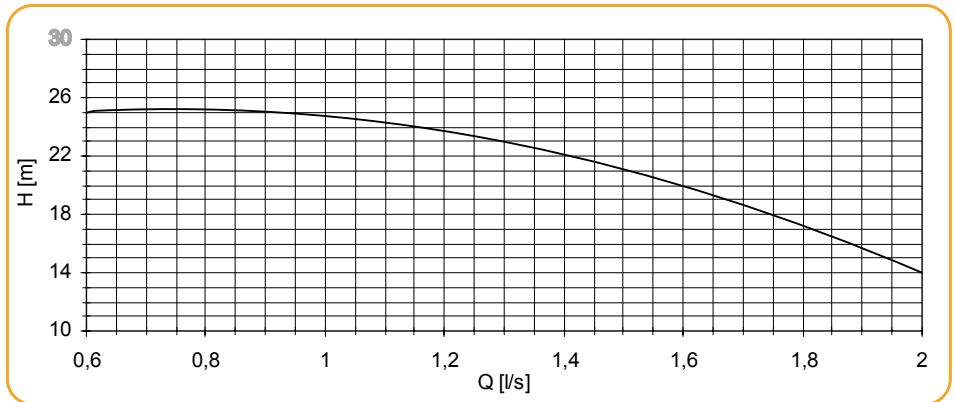
General performance curves

MULTI STAGE PUMPS, C, KCP

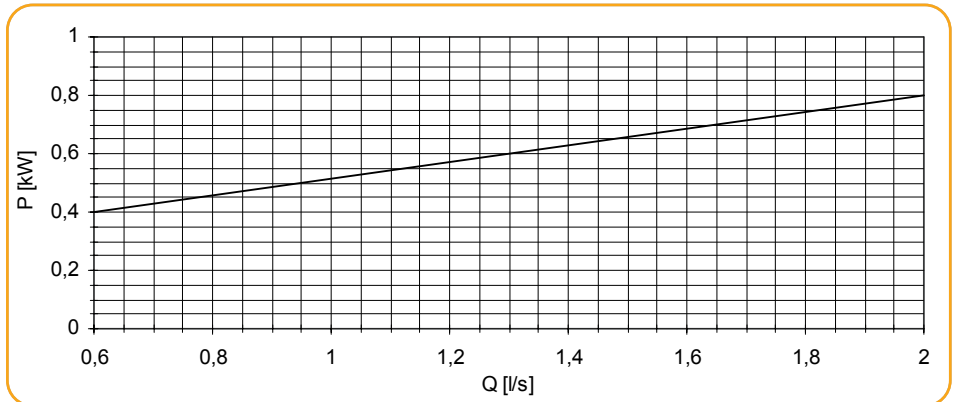


Pump performance curves

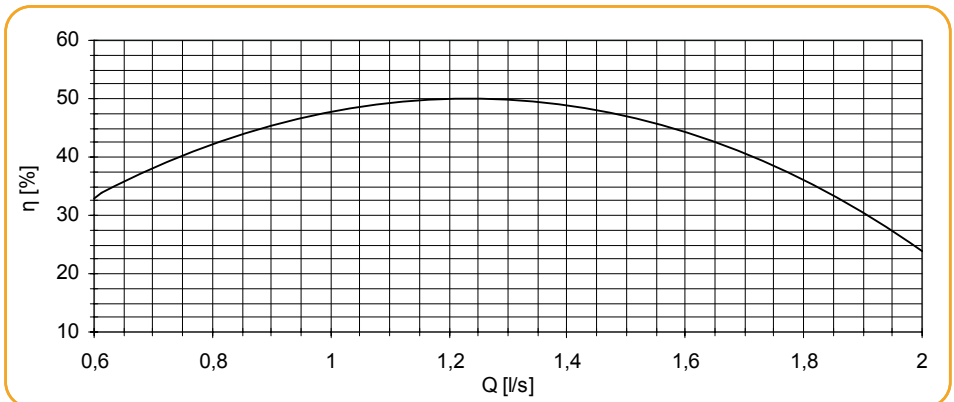
Total
Differential
Head



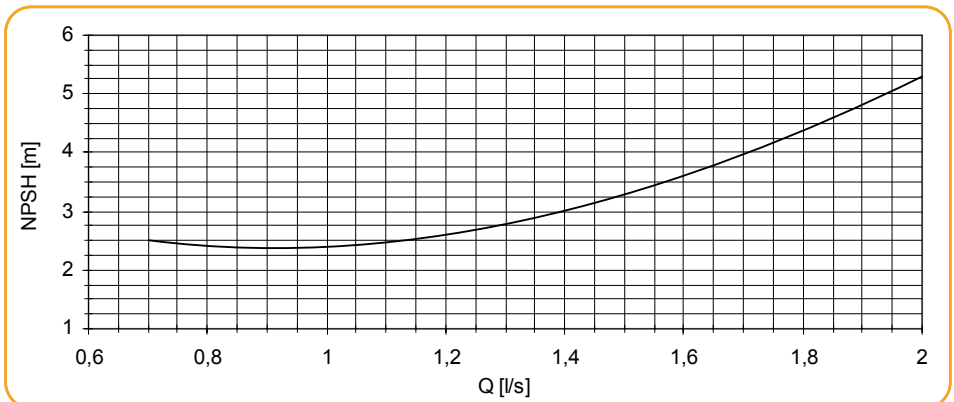
Power Input



Efficiency

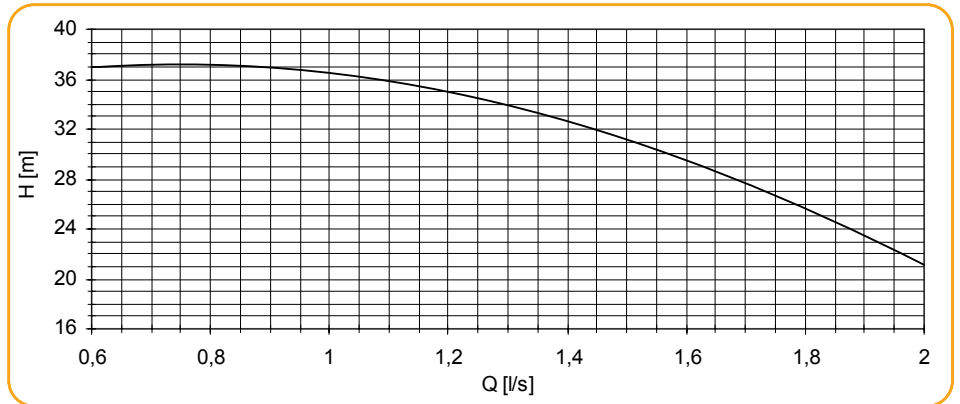


Net Positive
Suction Head

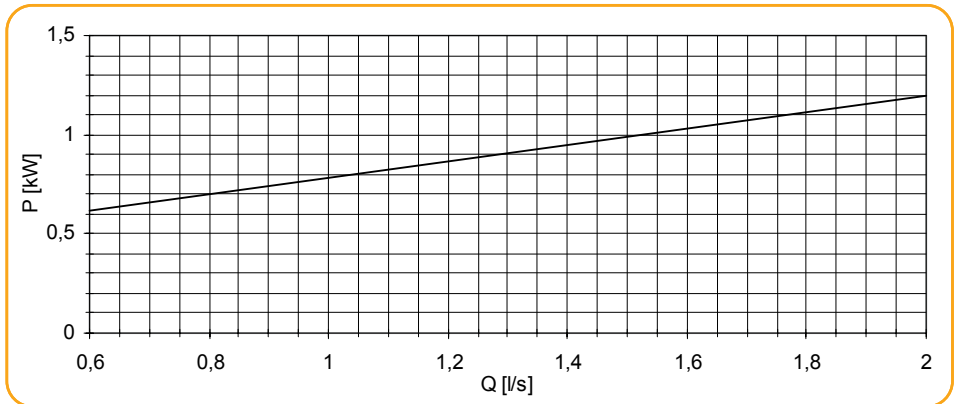


Pump performance curves

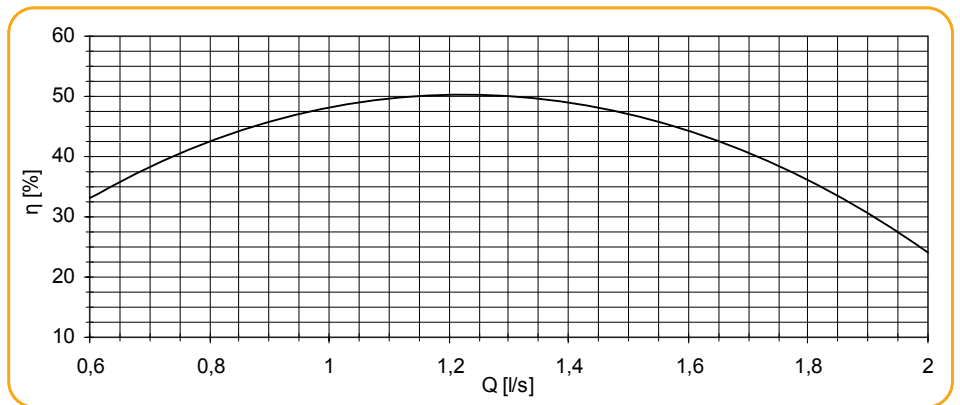
Total
Differential
Head



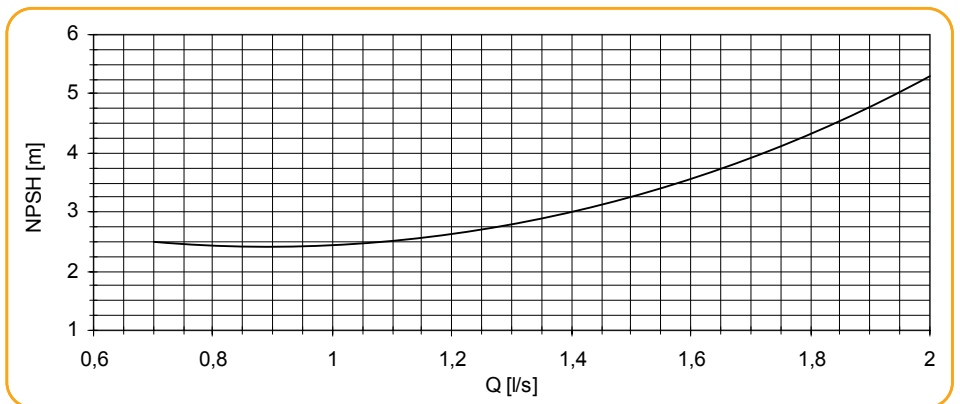
Power Input



Efficiency

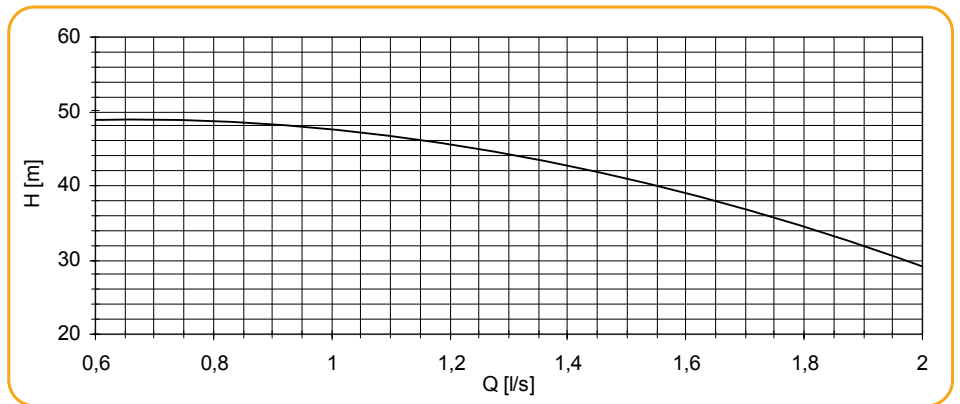


Net Positive
Suction Head

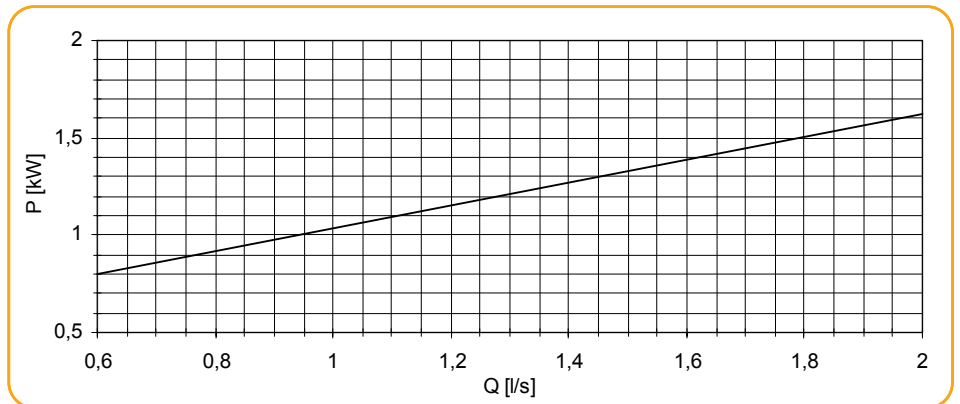


Pump performance curves

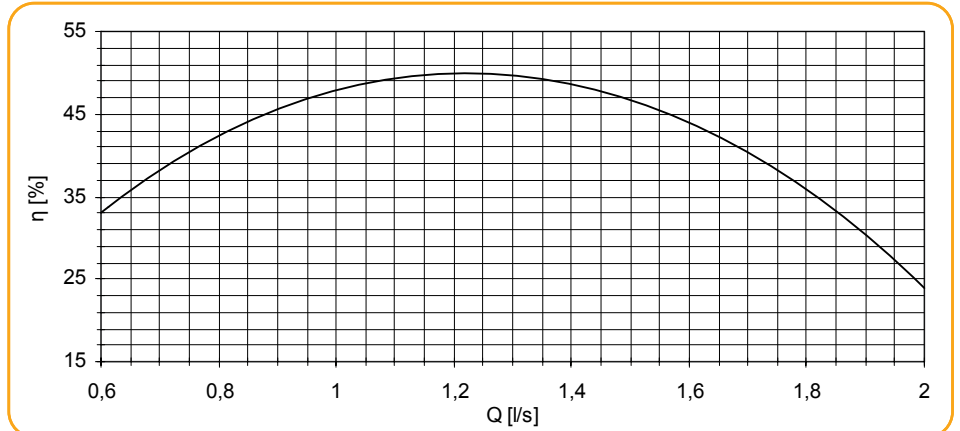
Total
Differential
Head



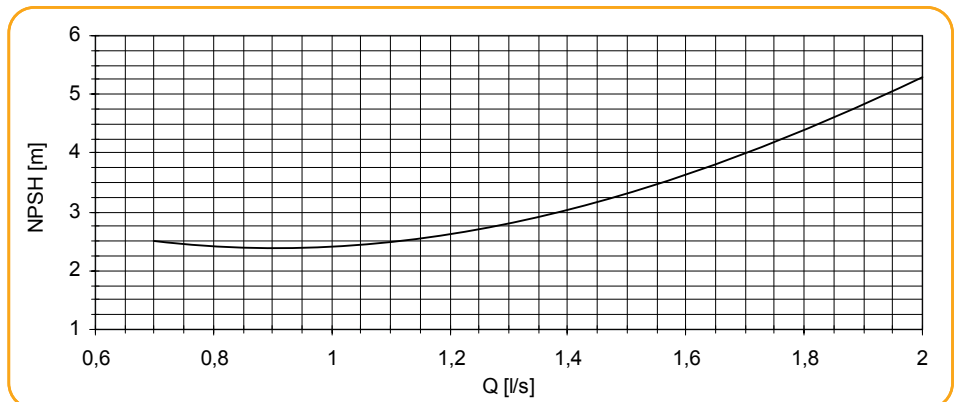
Power Input



Efficiency

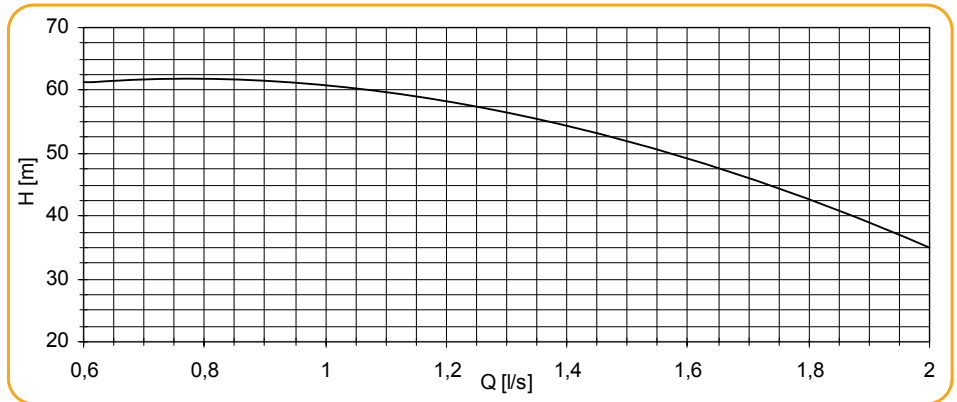


Net Positive
Suction Head

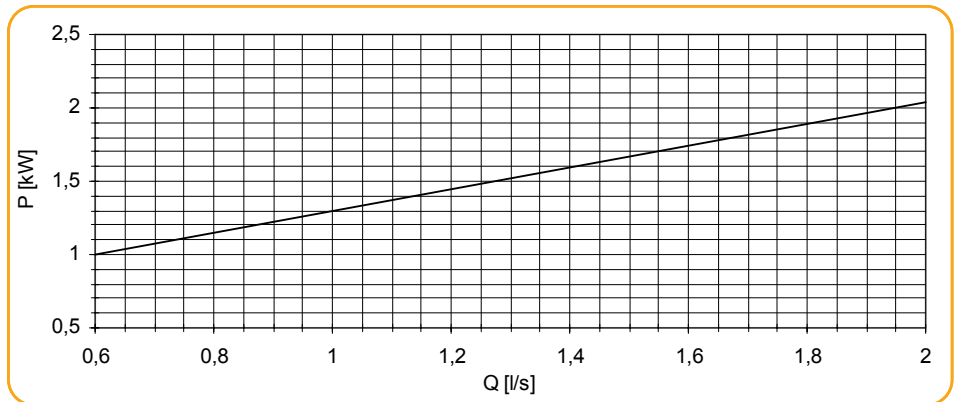


Pump performance curves

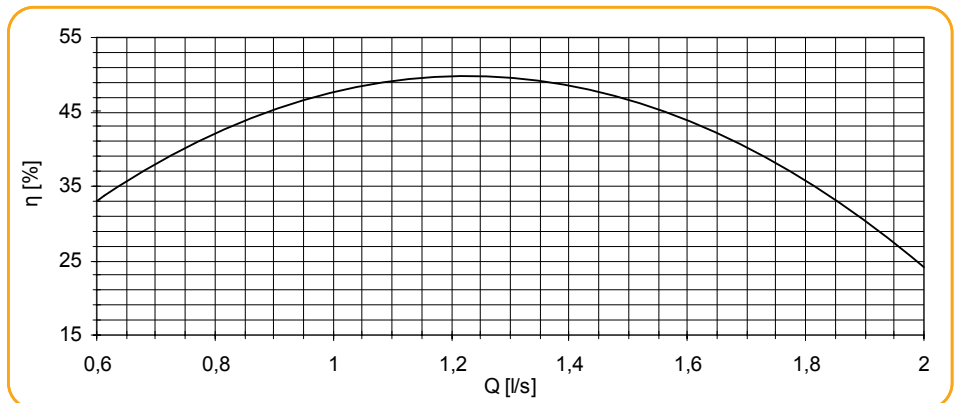
Total
Differential
Head



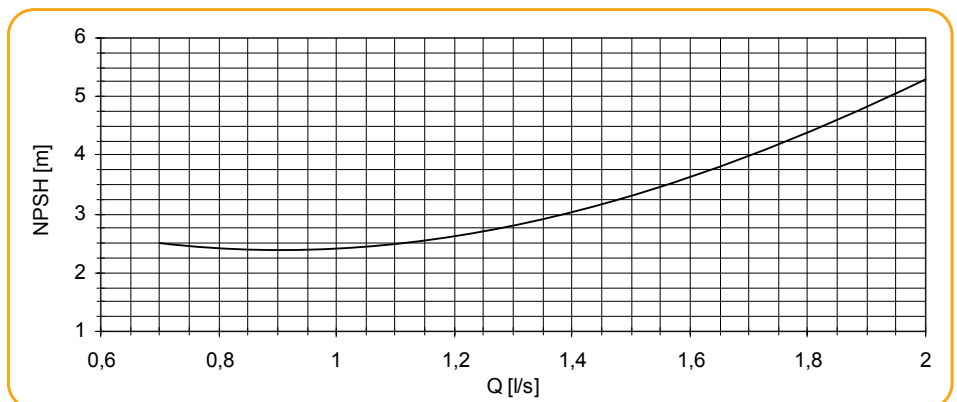
Power Input



Efficiency

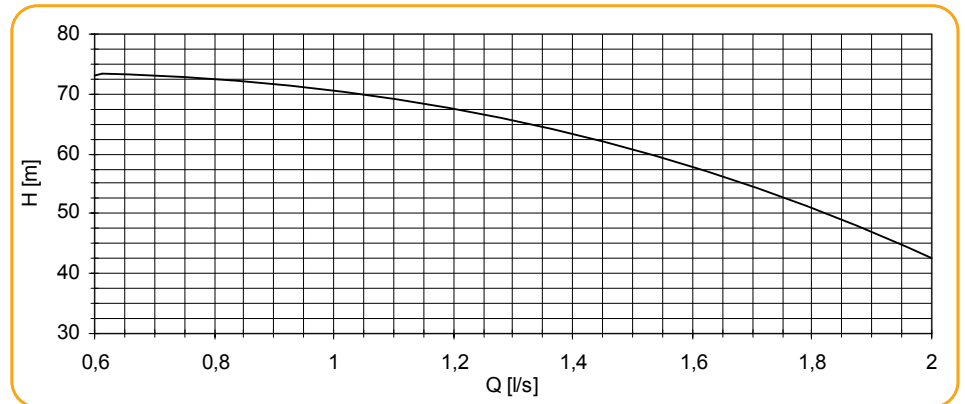


Net Positive
Suction Head

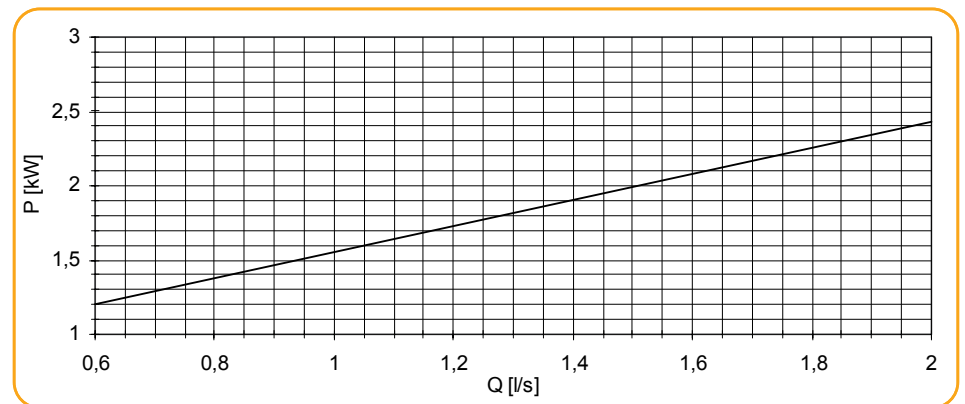


Pump performance curves

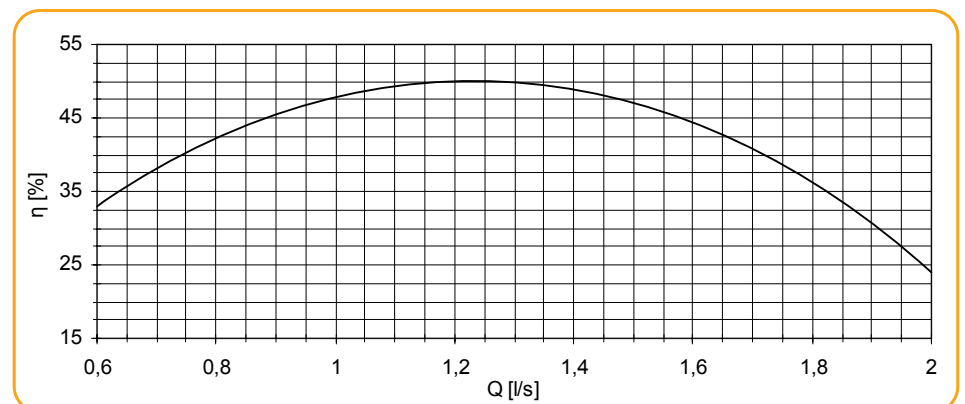
Total
Differential
Head



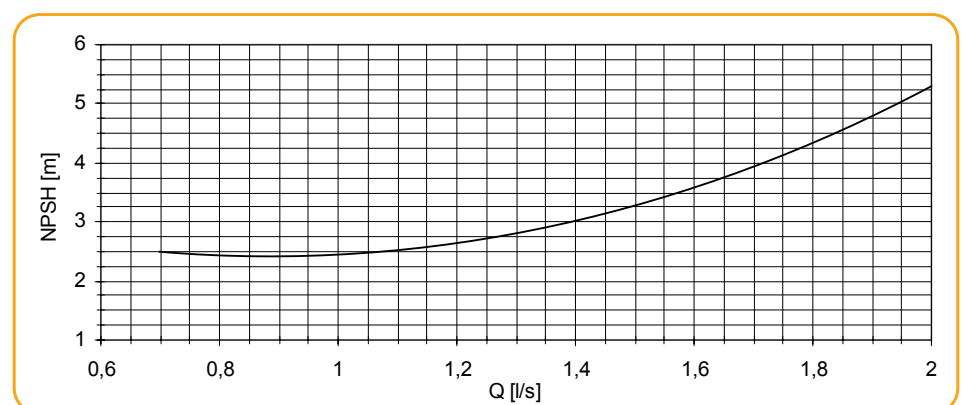
Power Input



Efficiency

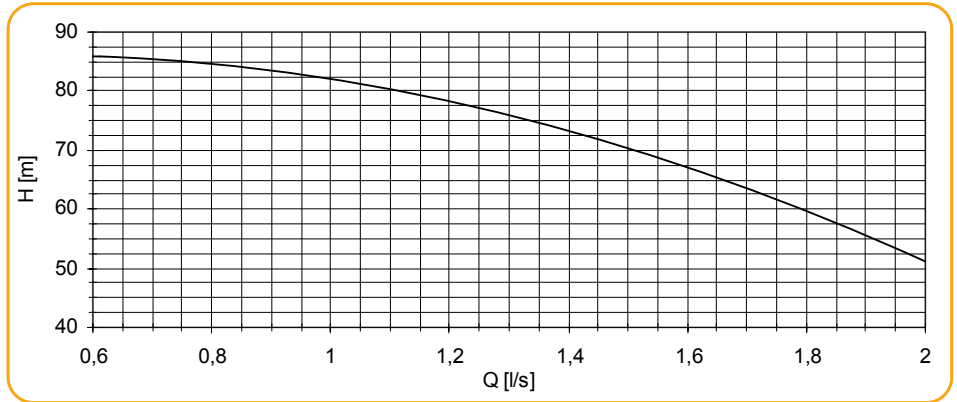


Net Positive
Suction Head

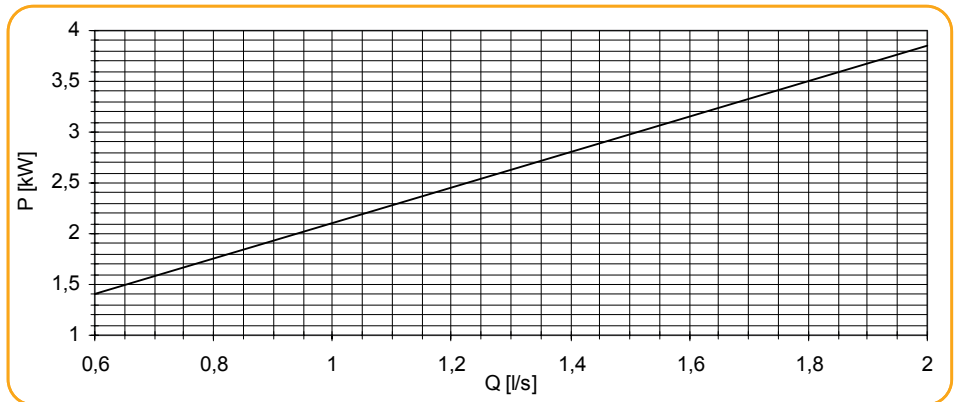


Pump performance curves

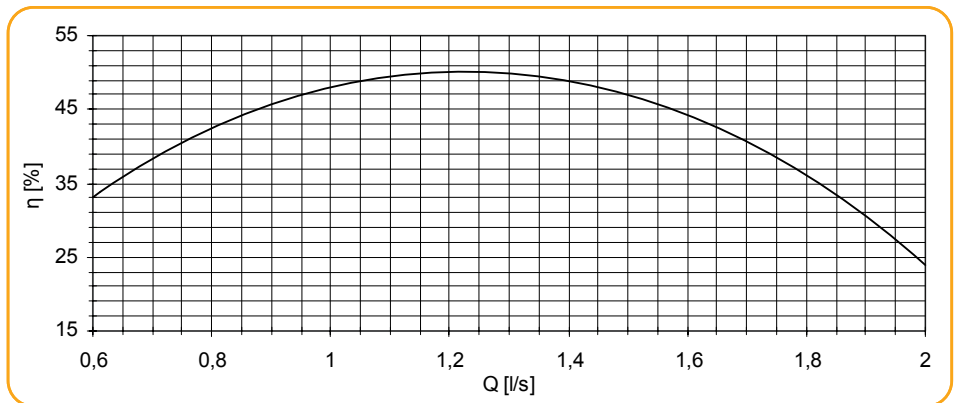
Total
Differential
Head



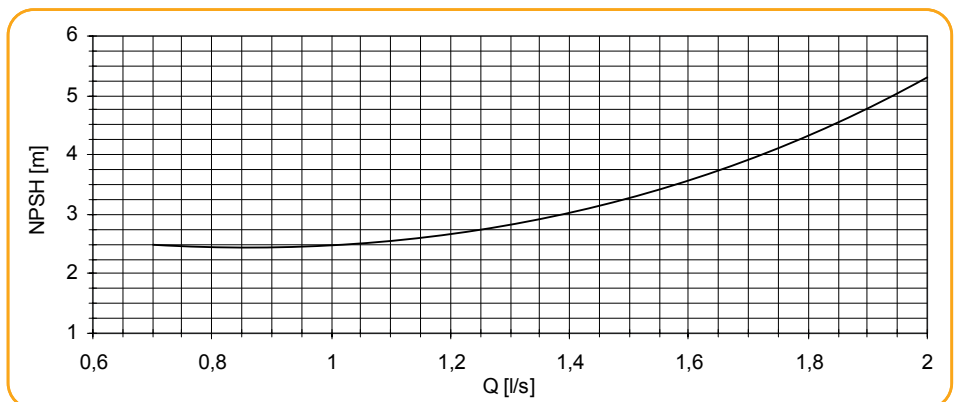
Power Input



Efficiency

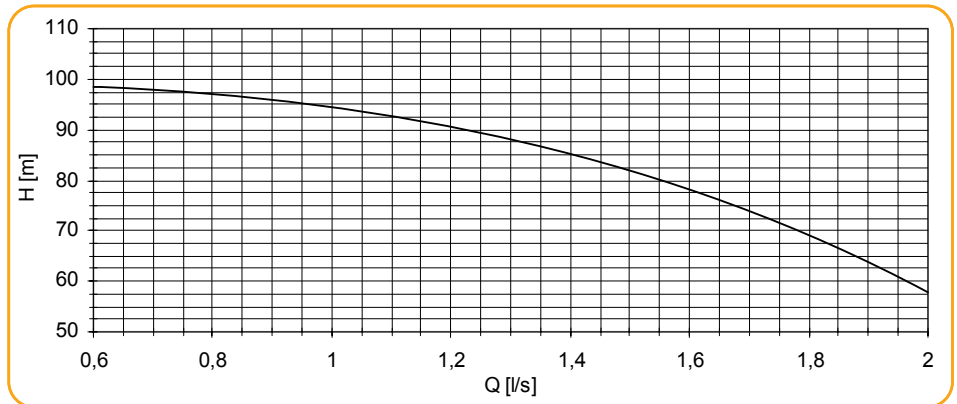


Net Positive
Suction Head

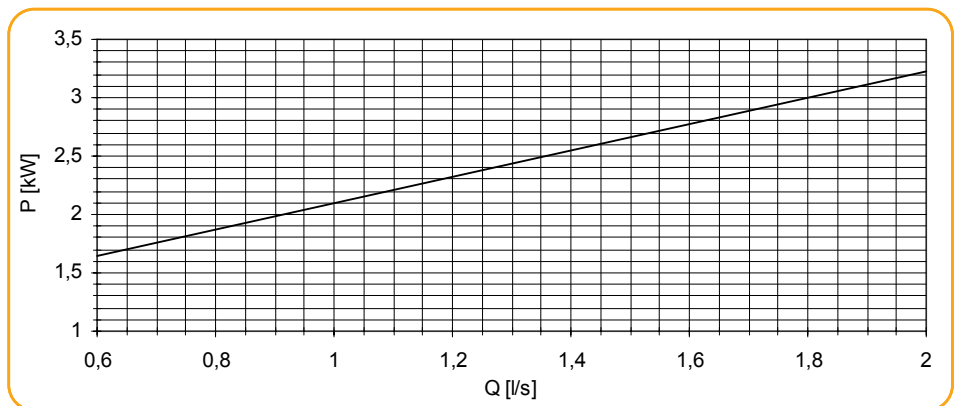


Pump performance curves

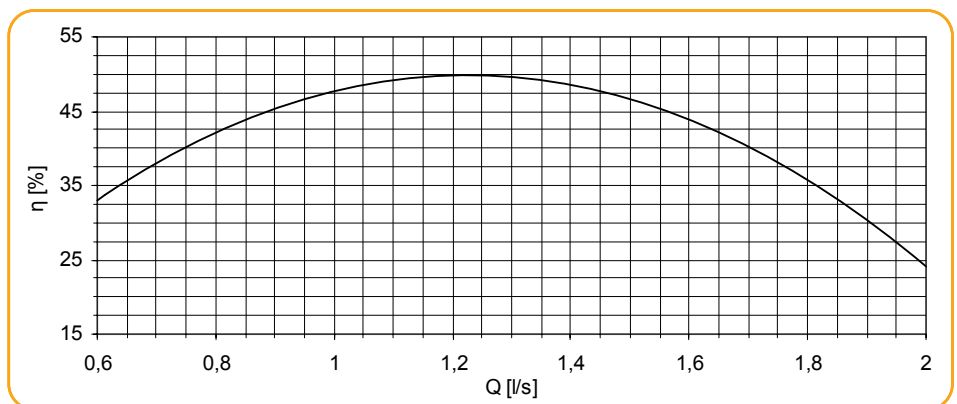
Total
Differential
Head



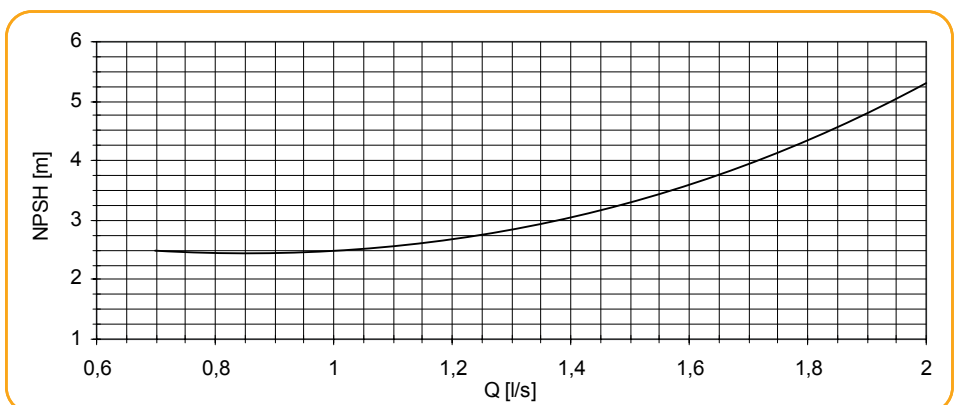
Power Input



Efficiency

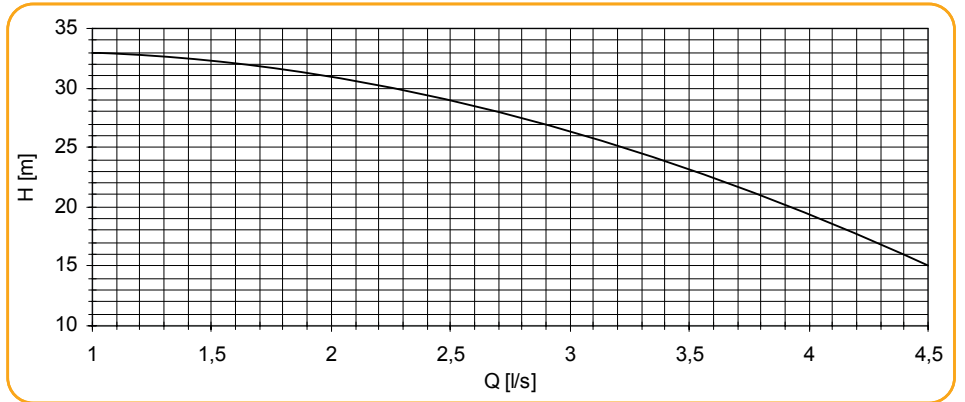


Net Positive
Suction Head

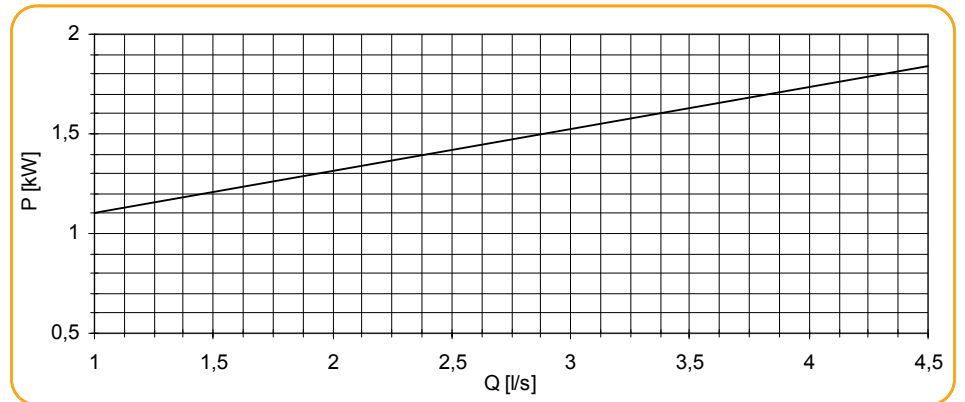


Pump performance curves

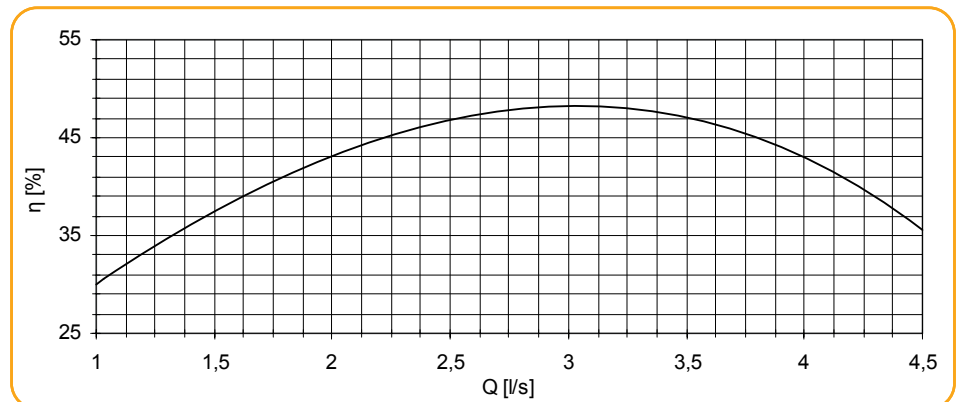
Total
Differential
Head



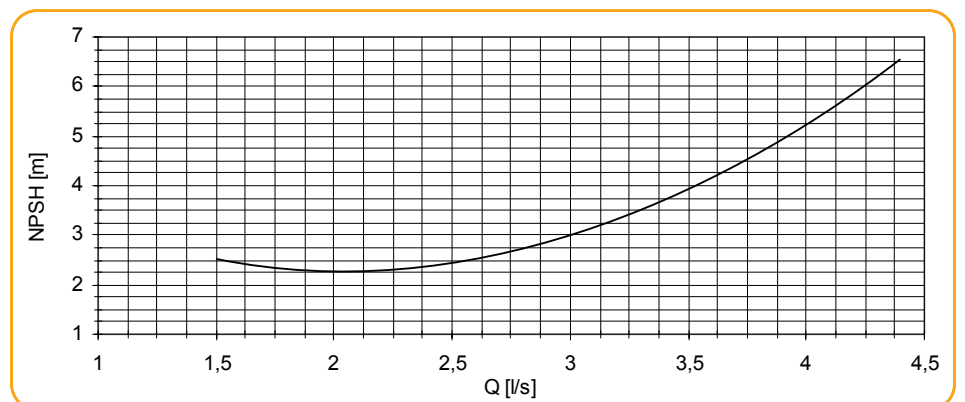
Power Input



Efficiency

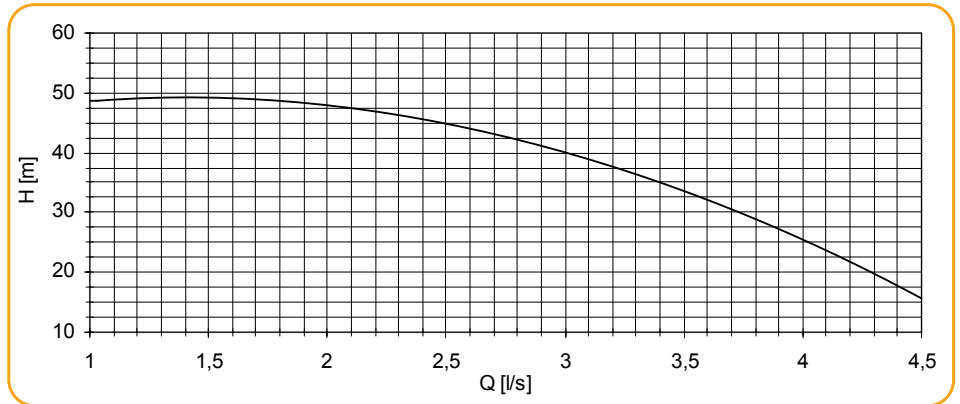


Net Positive
Suction Head

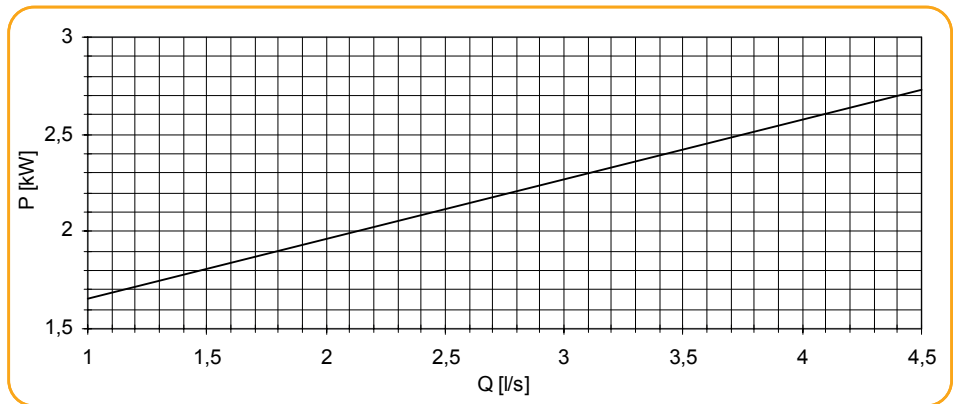


Pump performance curves

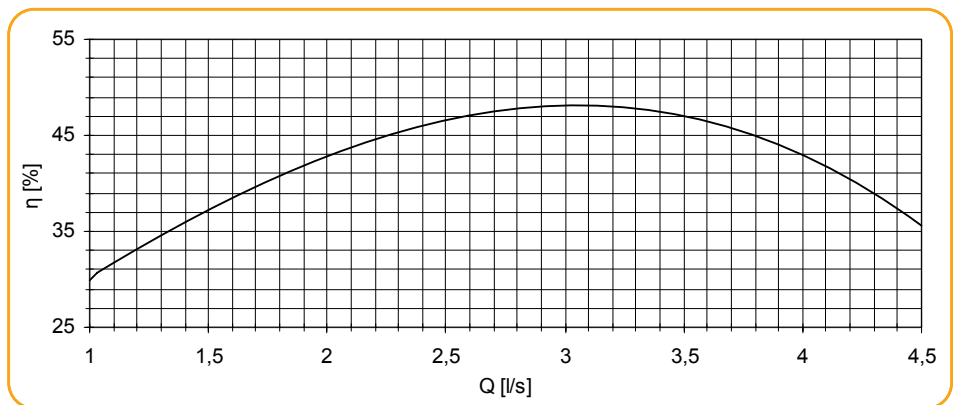
Total
Differential
Head



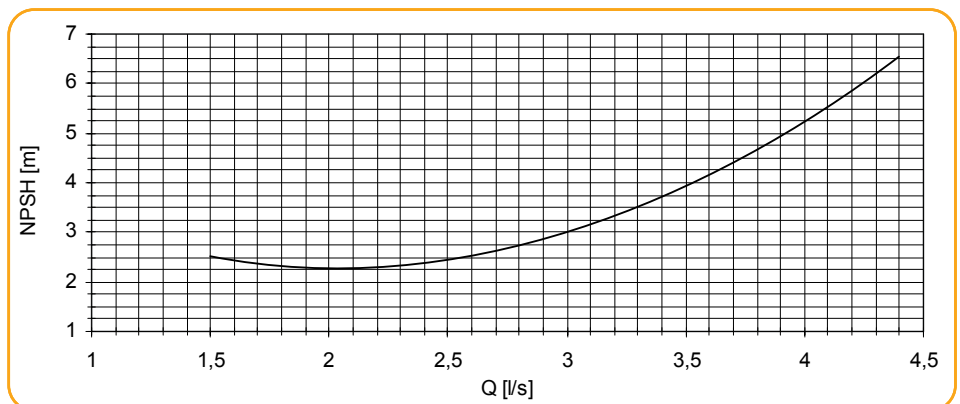
Power Input



Efficiency

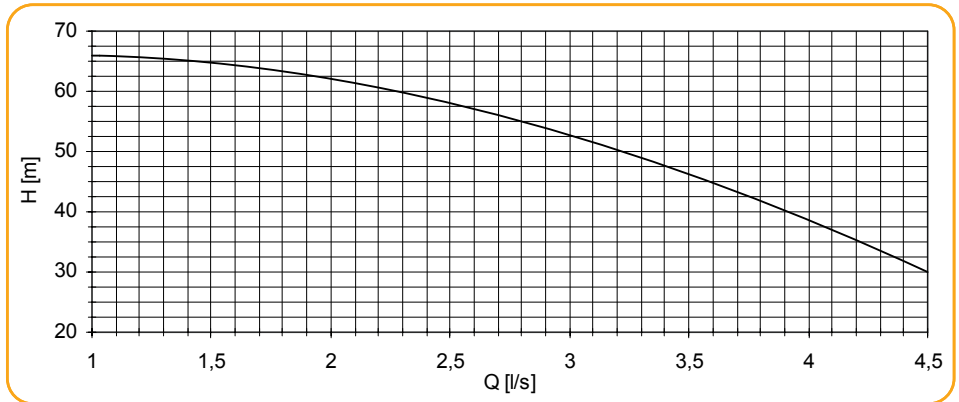


Net Positive
Suction Head

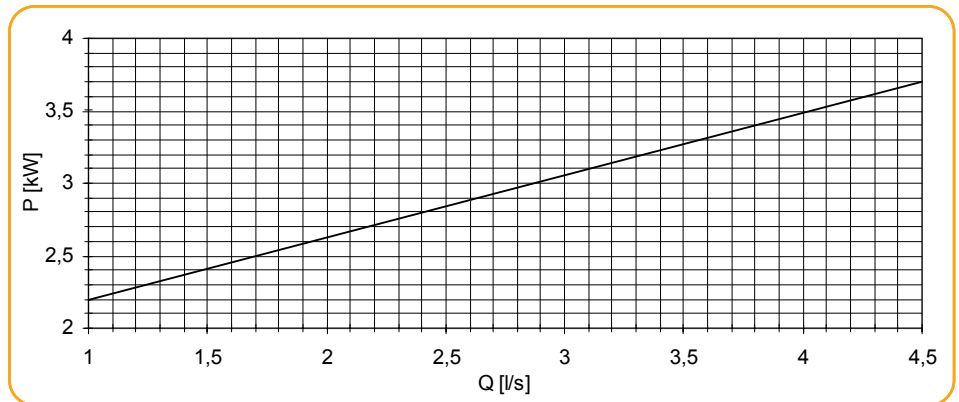


Pump performance curves

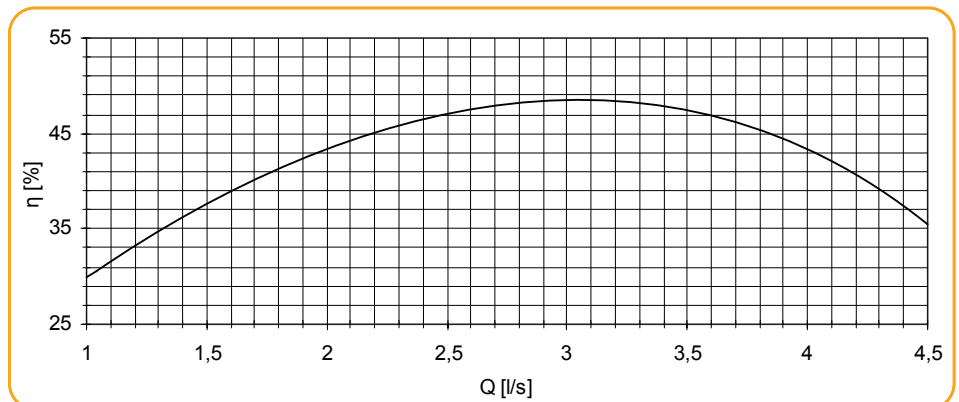
Total Differential Head



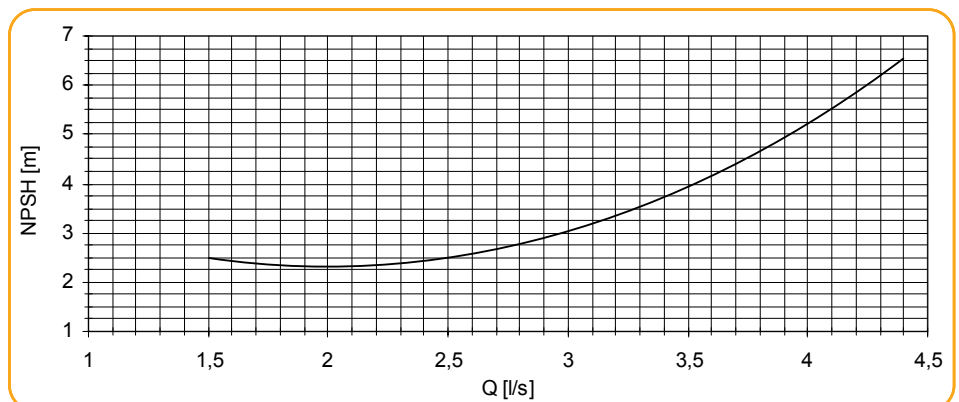
Power Input



Efficiency

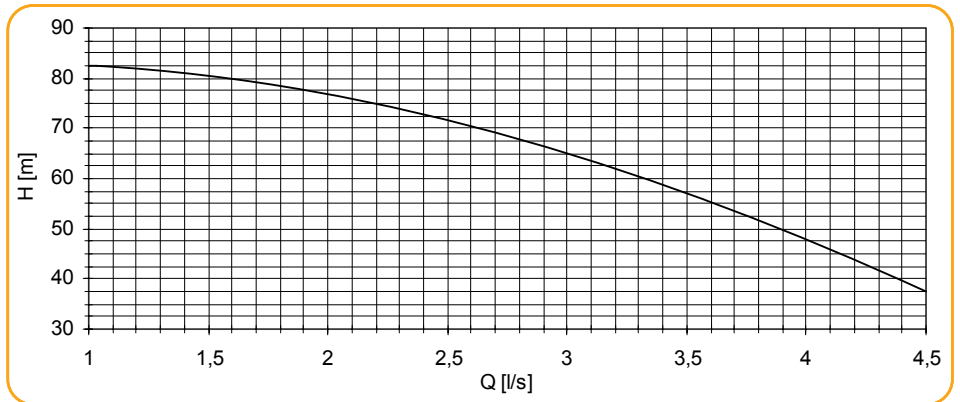


Net Positive Suction Head

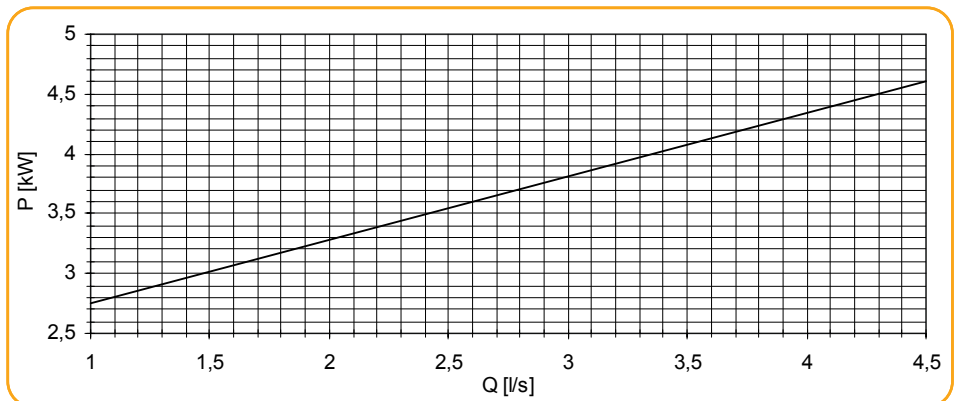


Pump performance curves

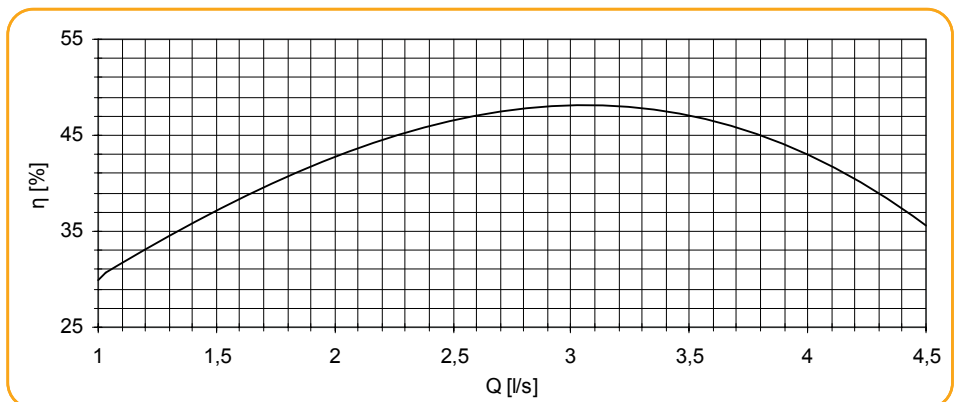
Total
Differential
Head



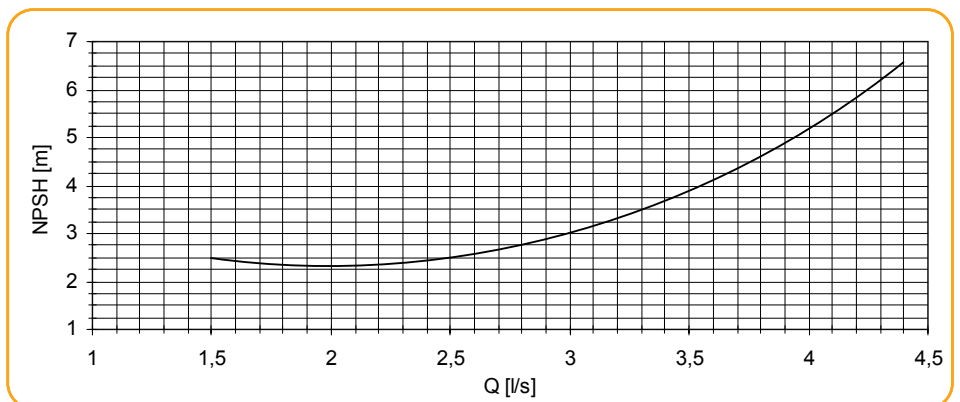
Power Input



Efficiency

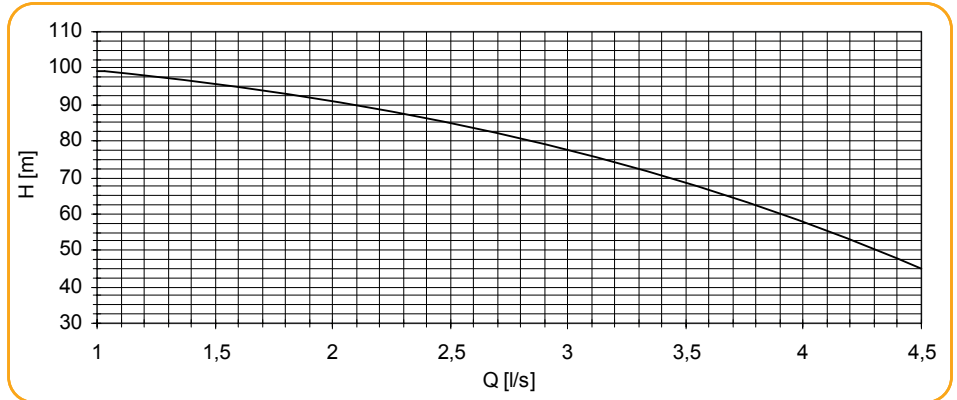


Net Positive
Suction Head

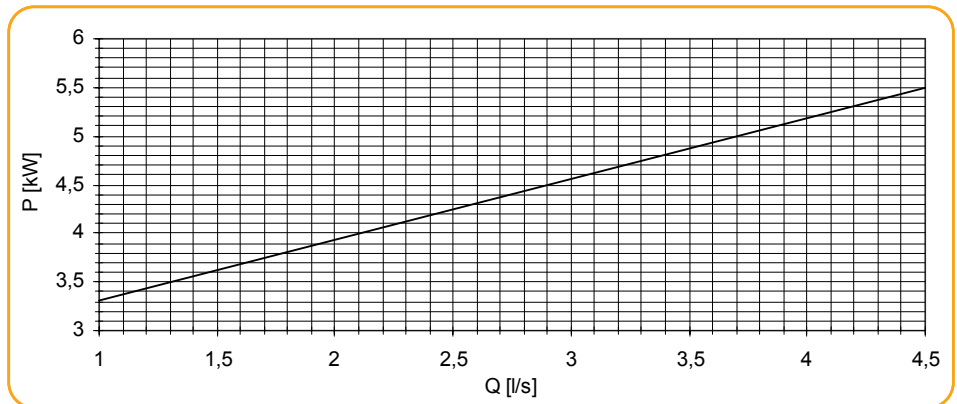


Pump performance curves

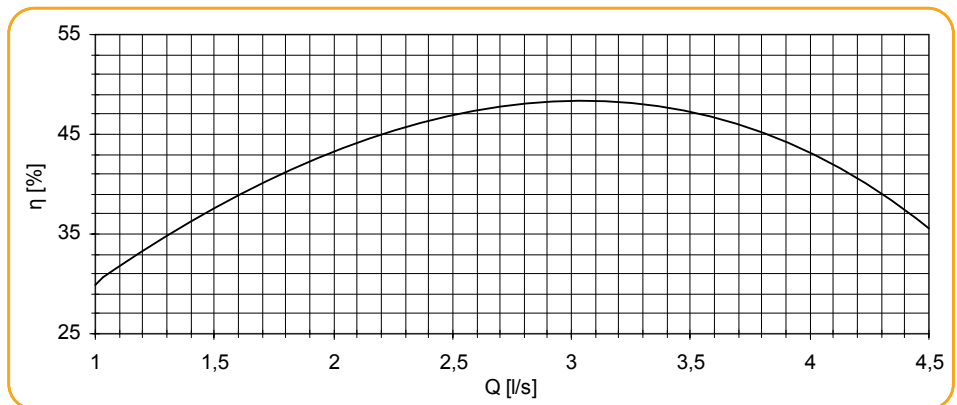
Total
Differential
Head



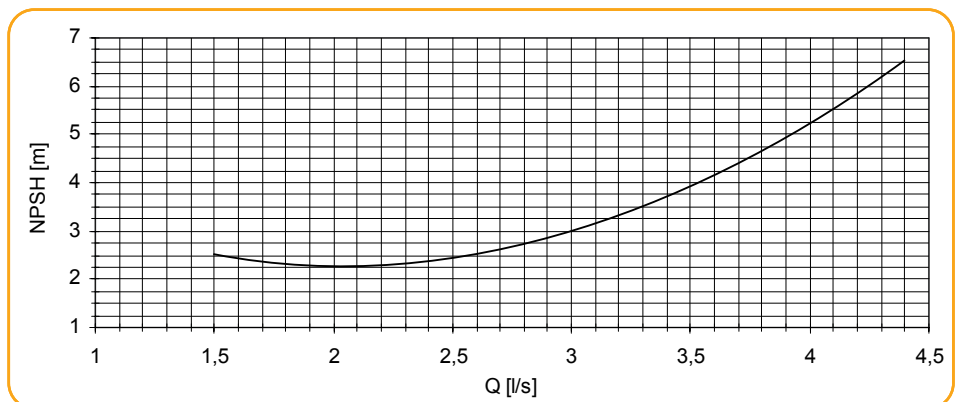
Power Input



Efficiency

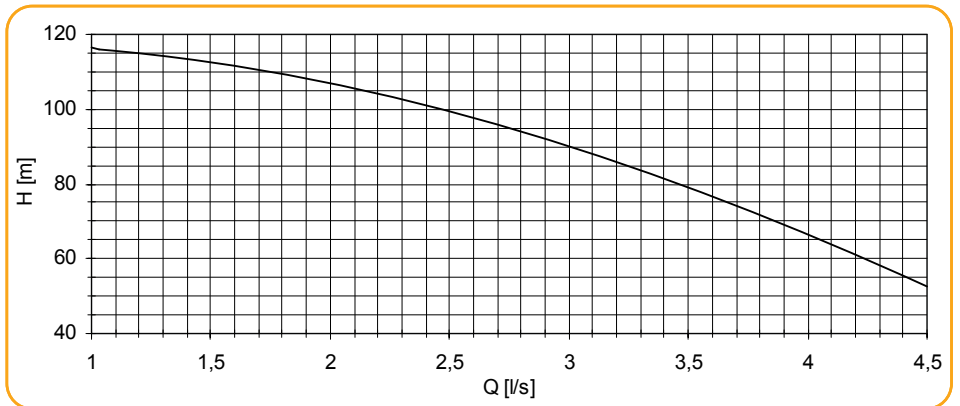


Net Positive
Suction Head

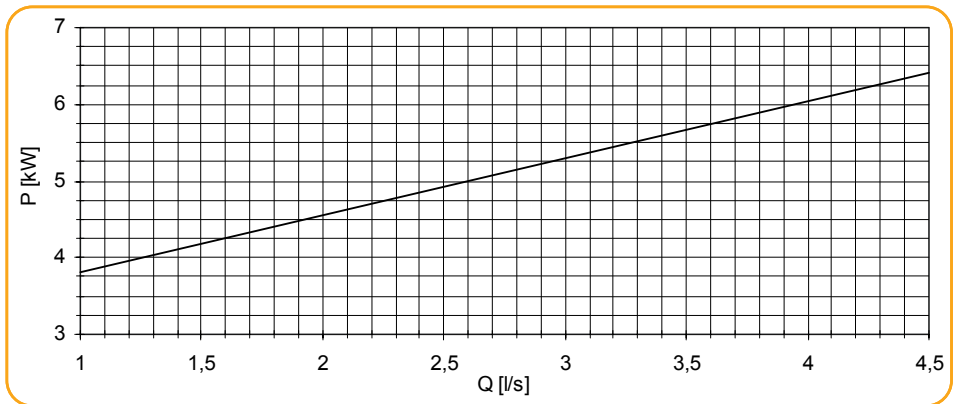


Pump performance curves

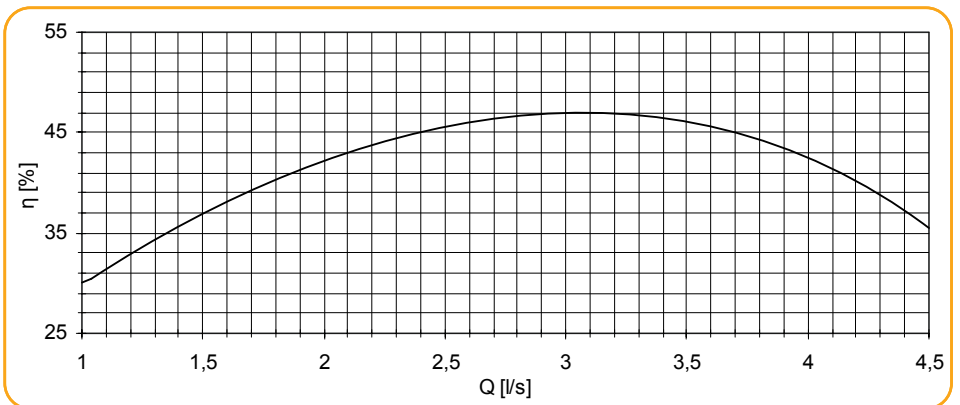
Total
Differential
Head



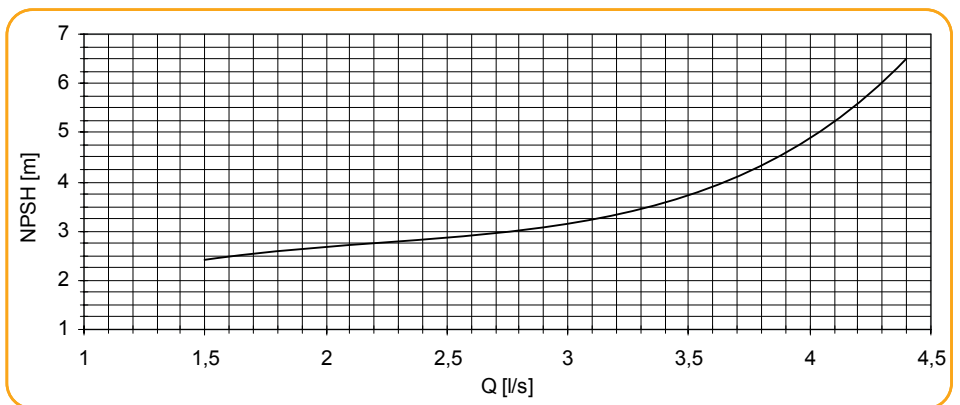
Power Input



Efficiency

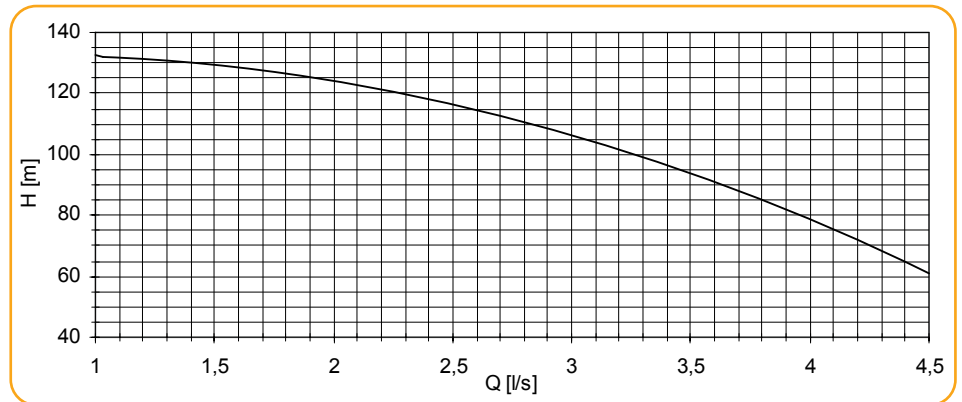


Net Positive
Suction Head

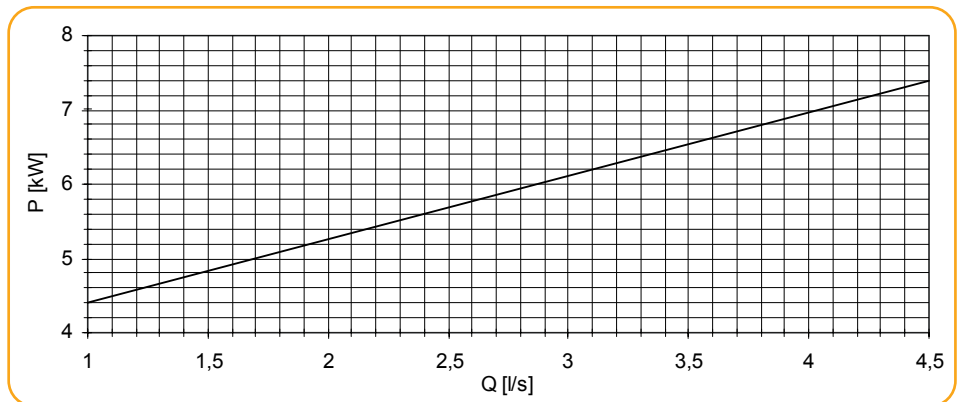


Pump performance curves

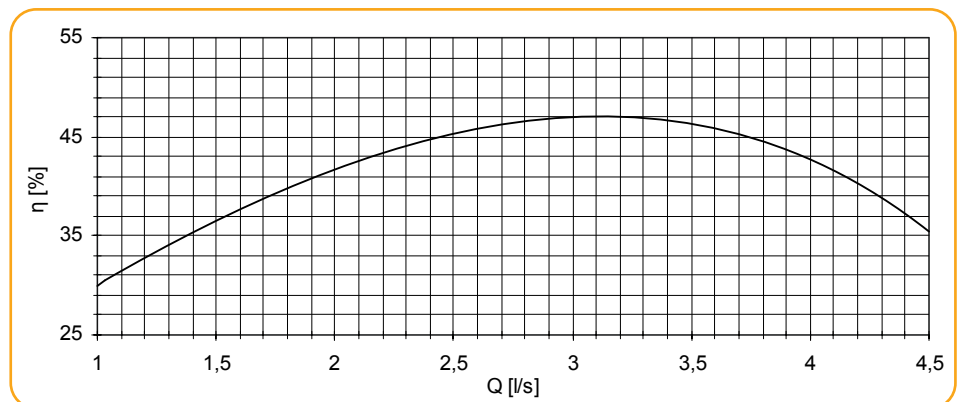
Total
Differential
Head



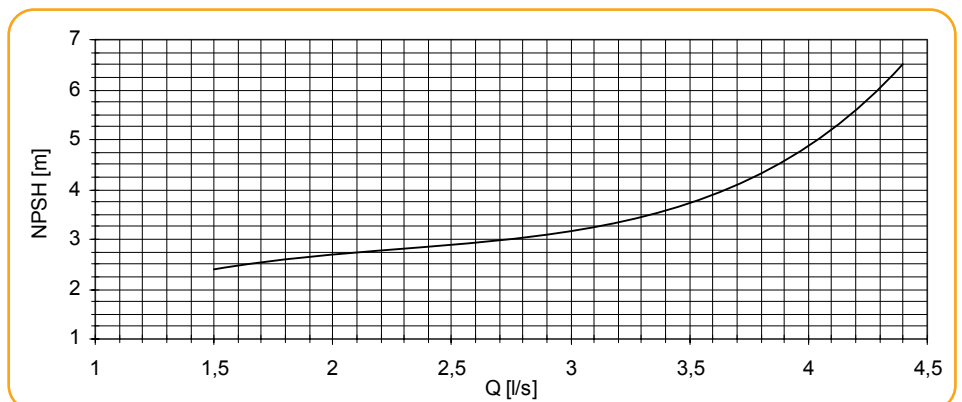
Power Input



Efficiency

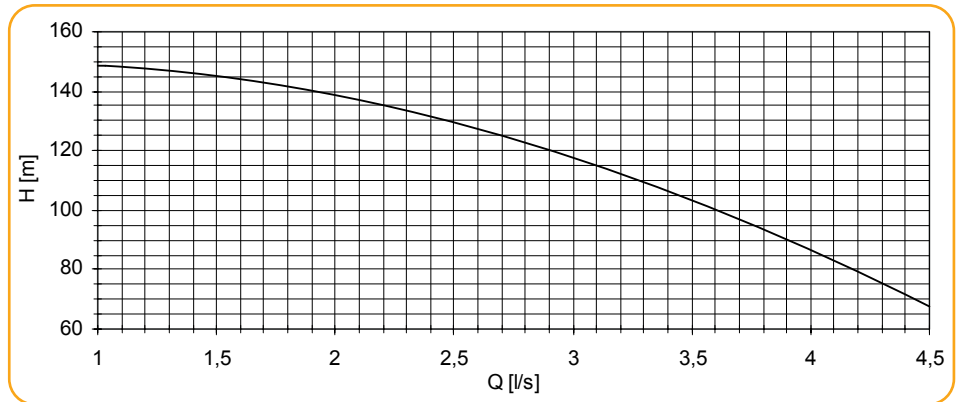


Net Positive
Suction Head

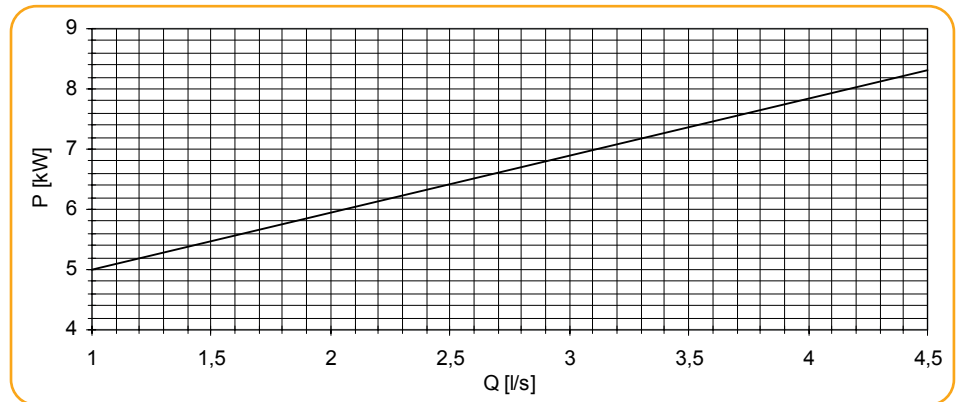


Pump performance curves

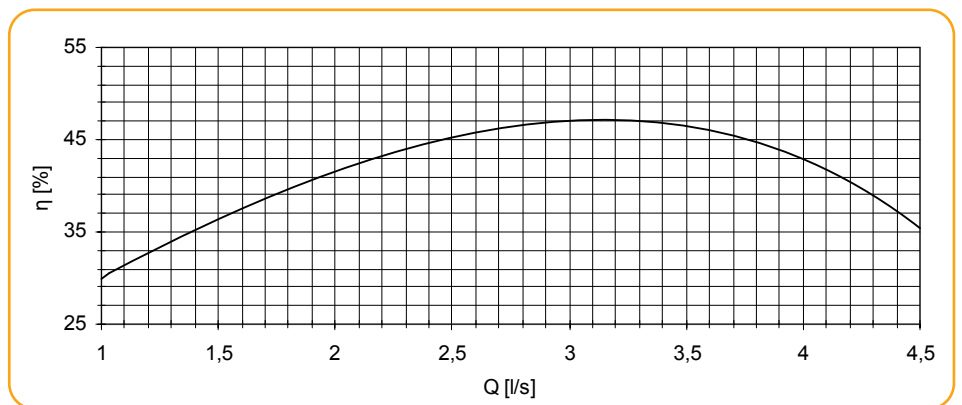
Total
Differential
Head



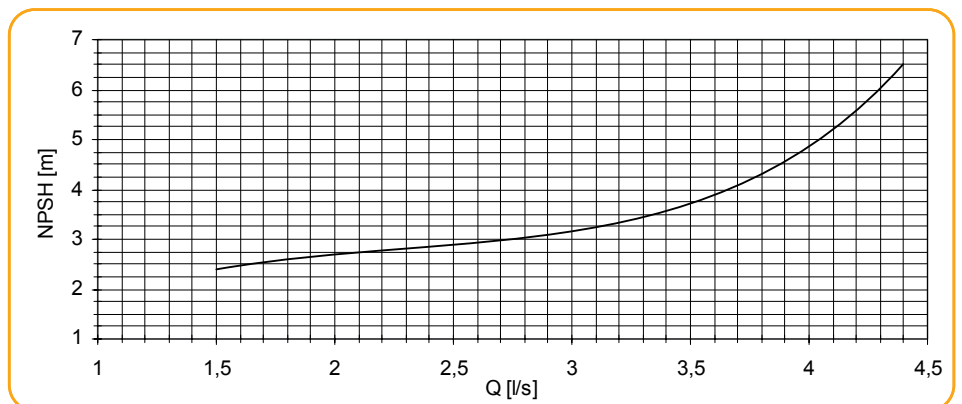
Power Input



Efficiency

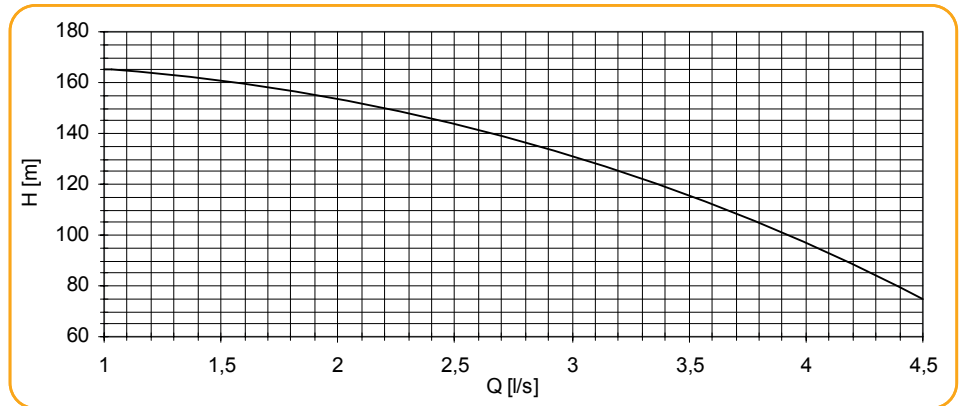


Net Positive
Suction Head

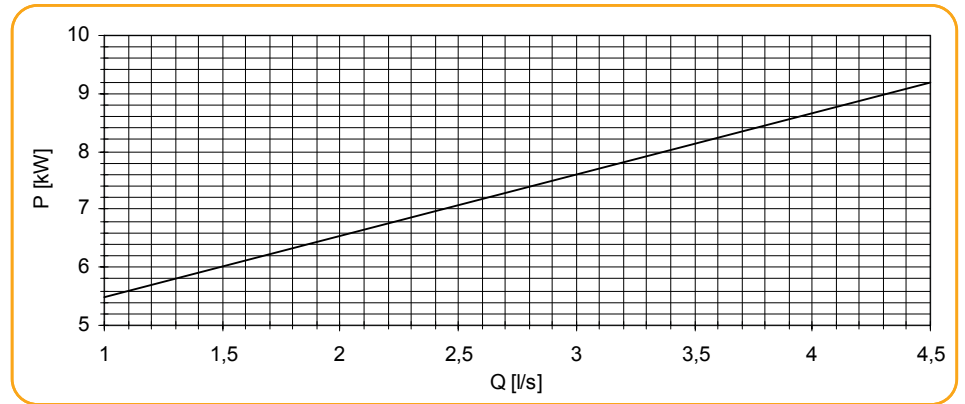


Pump performance curves

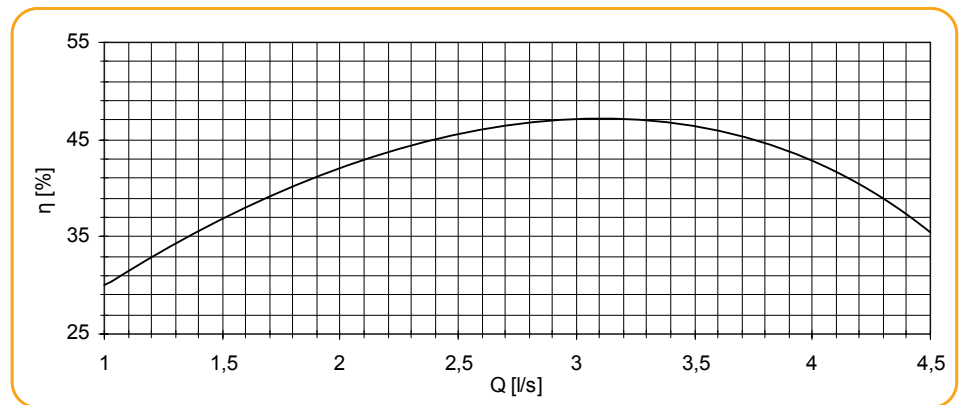
Total
Differential
Head



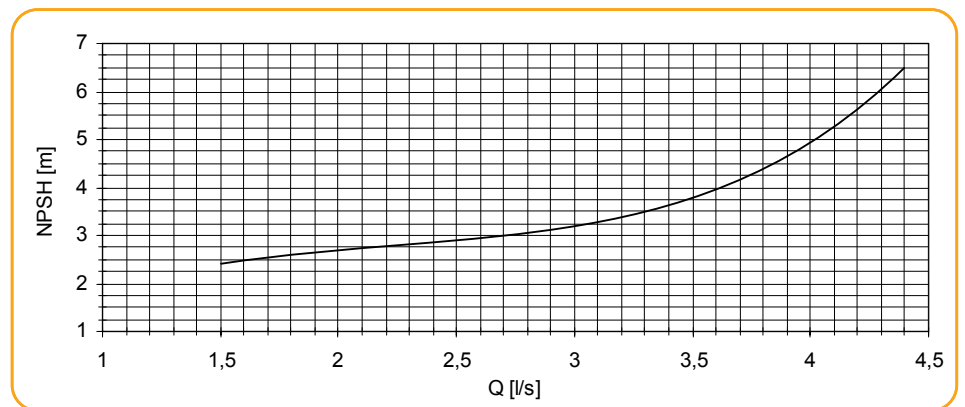
Power Input



Efficiency

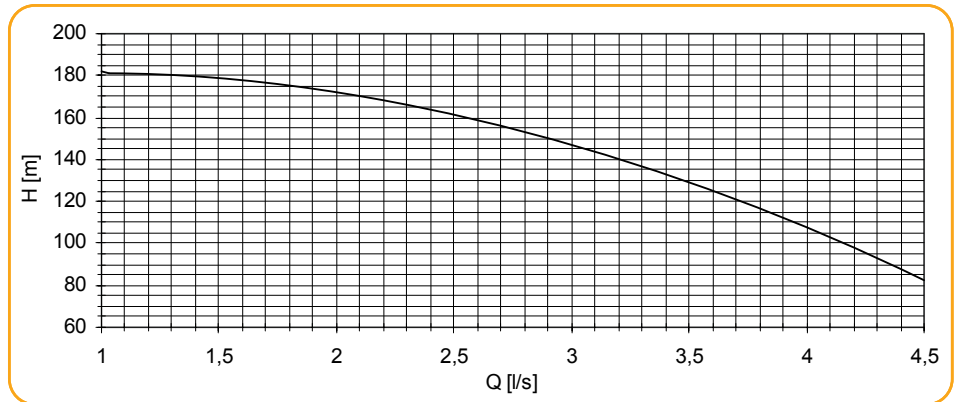


Net Positive
Suction Head

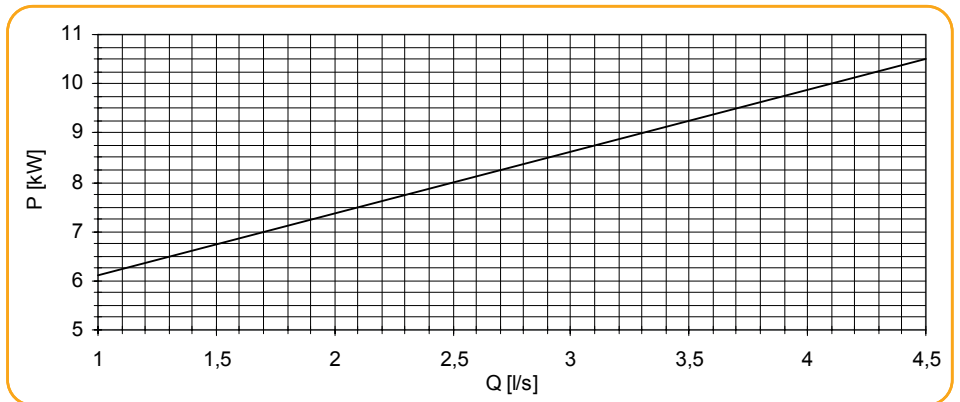


Pump performance curves

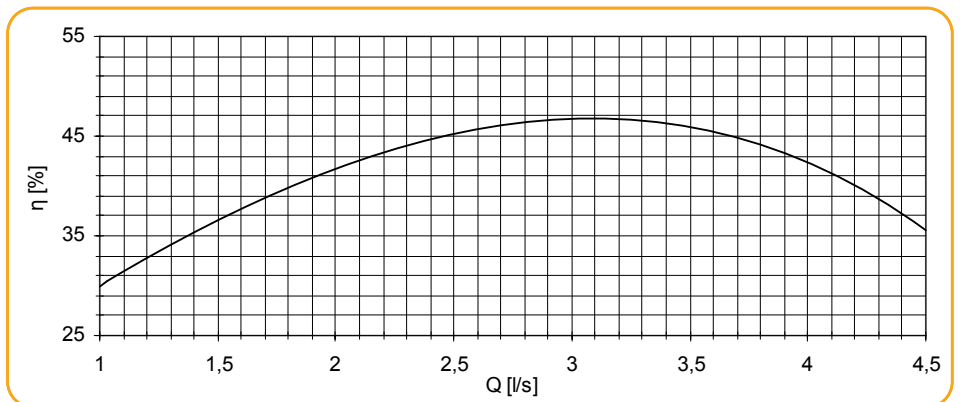
Total
Differential
Head



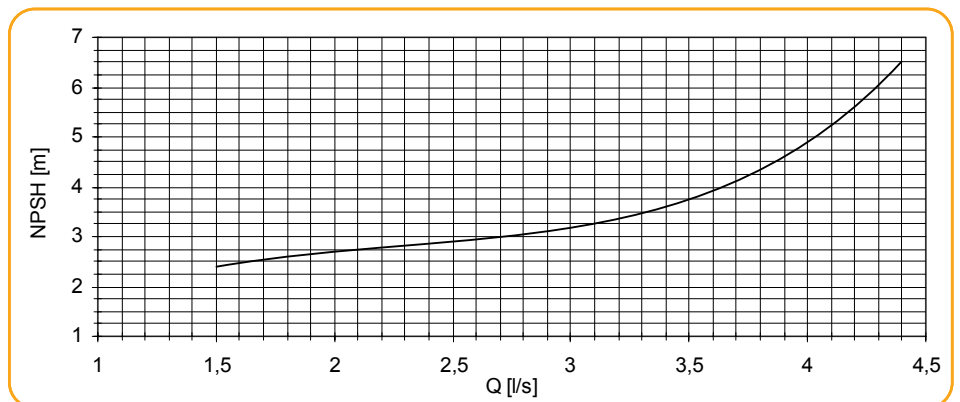
Power Input



Efficiency

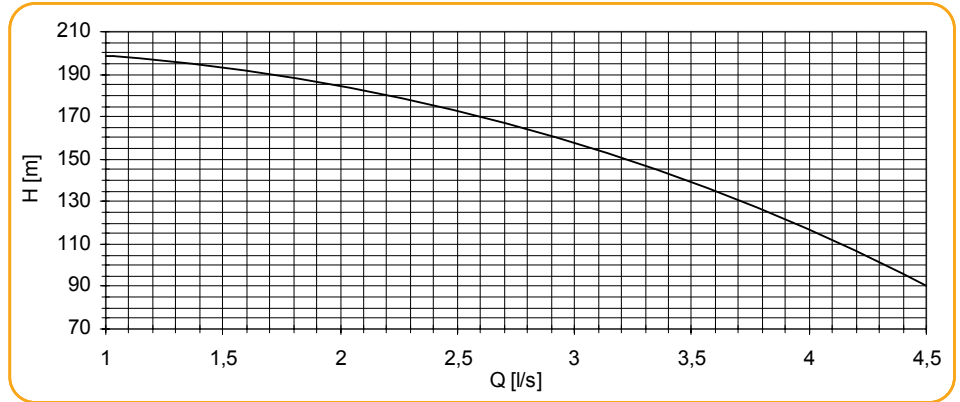


Net Positive
Suction Head

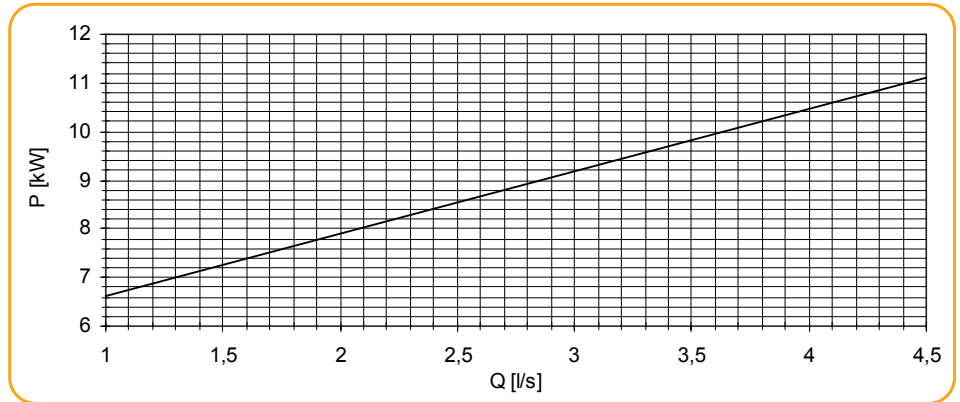


Pump performance curves

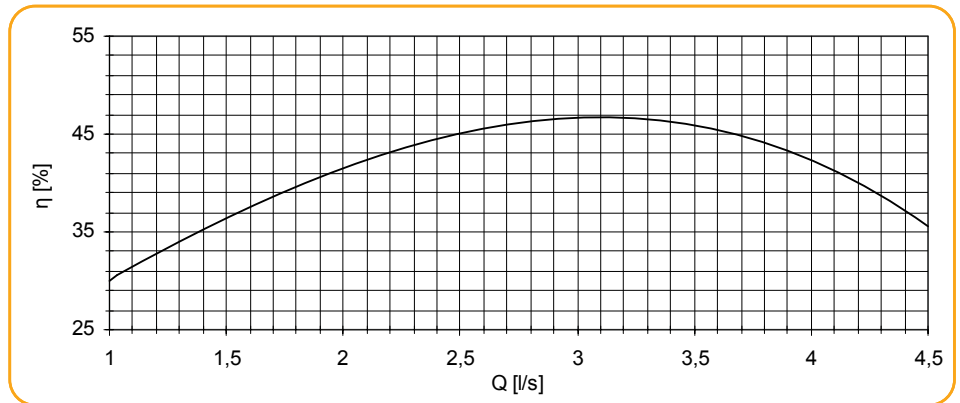
Total
Differential
Head



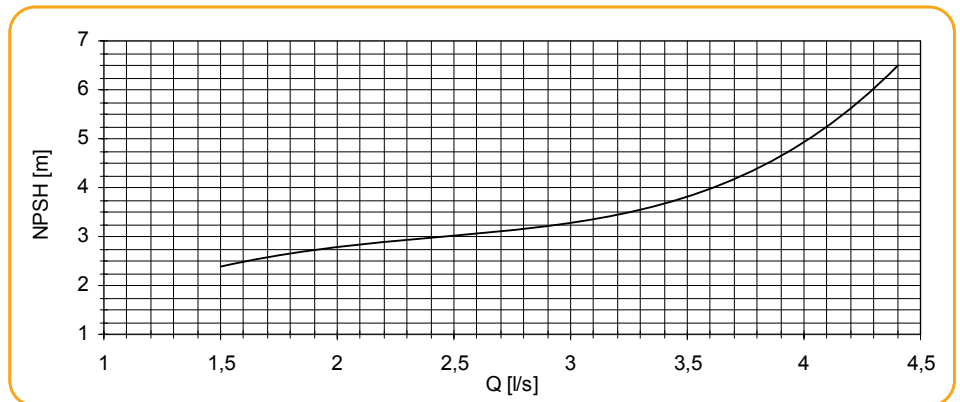
Power Input



Efficiency

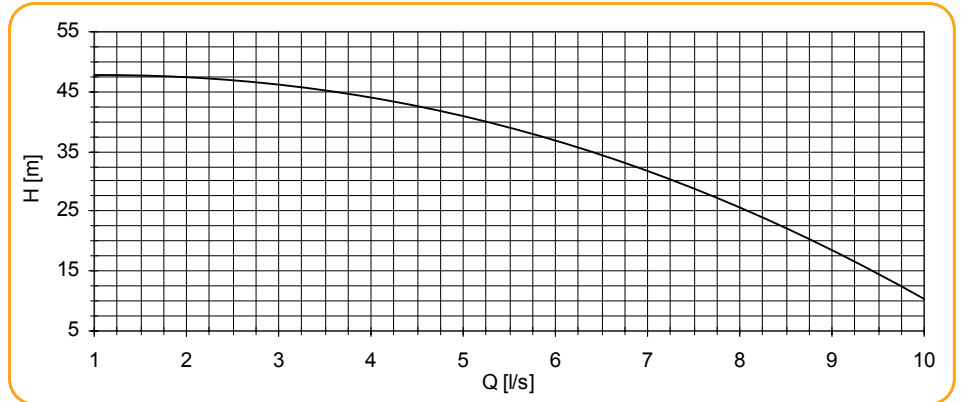


Net Positive
Suction Head

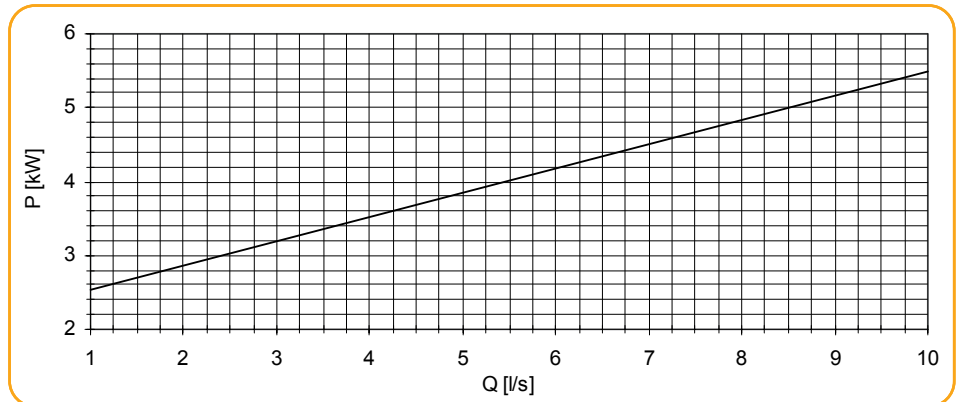


Pump performance curves

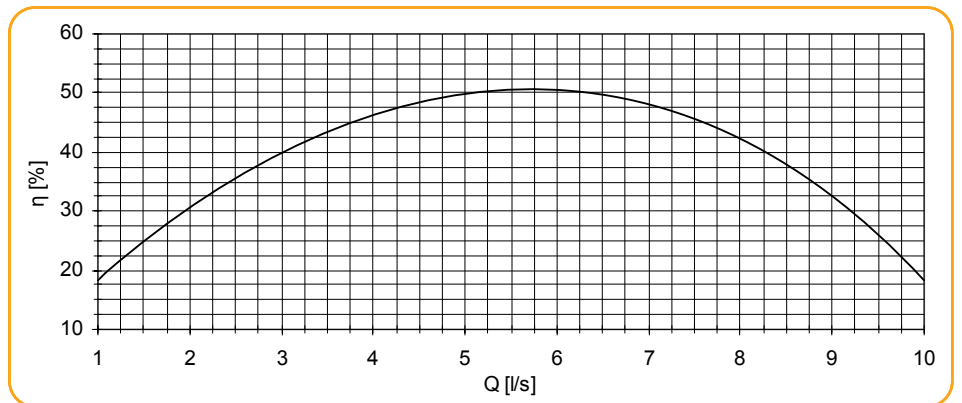
Total Differential Head



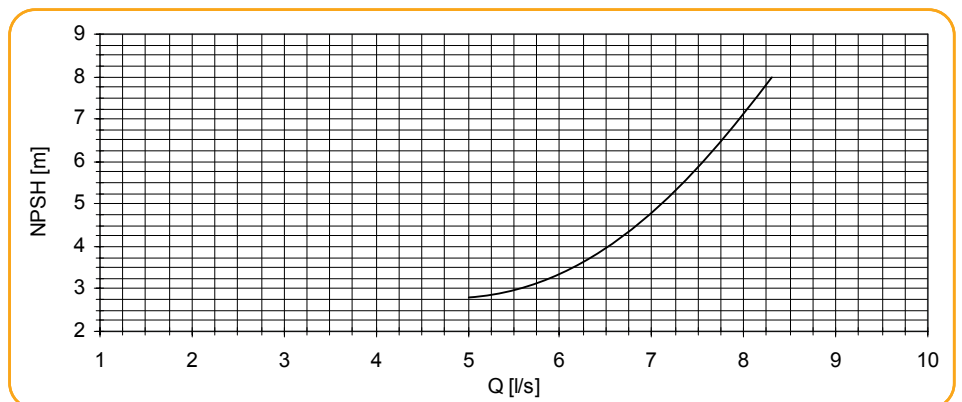
Power Input



Efficiency

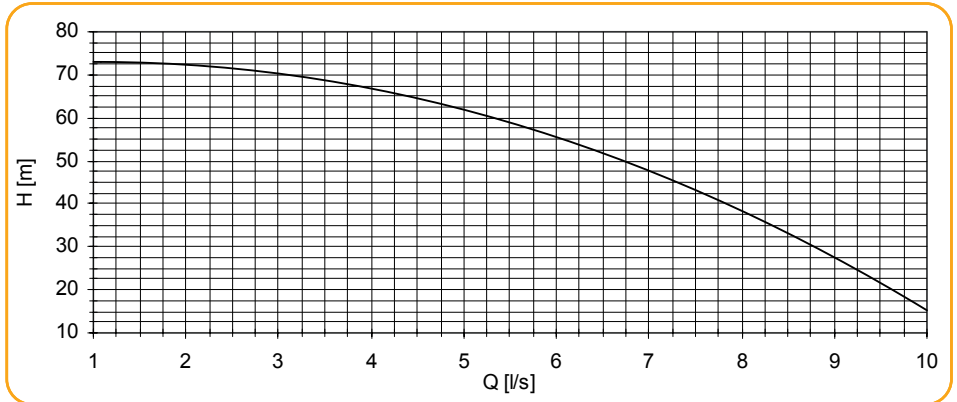


Net Positive Suction Head

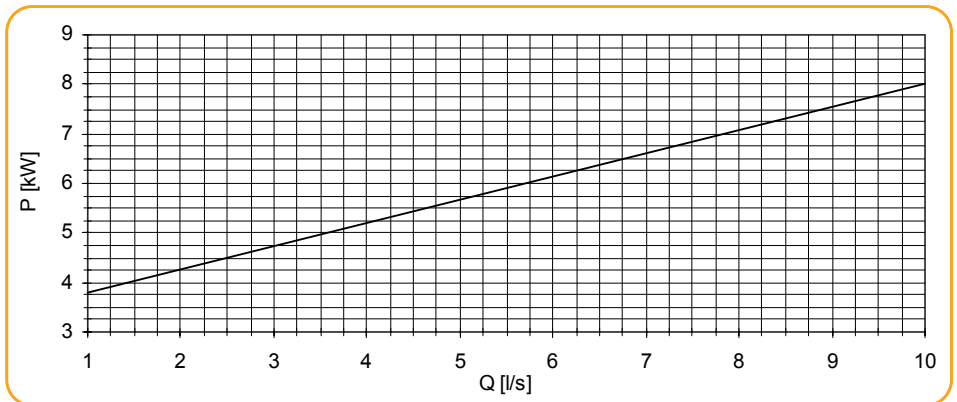


Pump performance curves

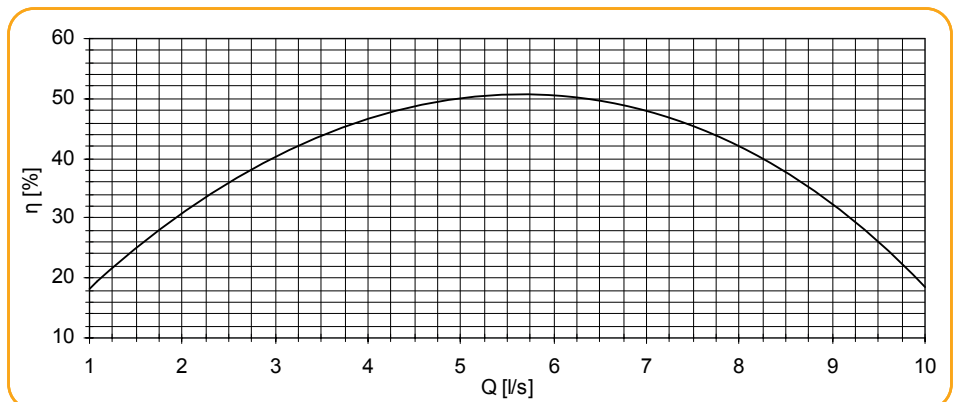
Total
Differential
Head



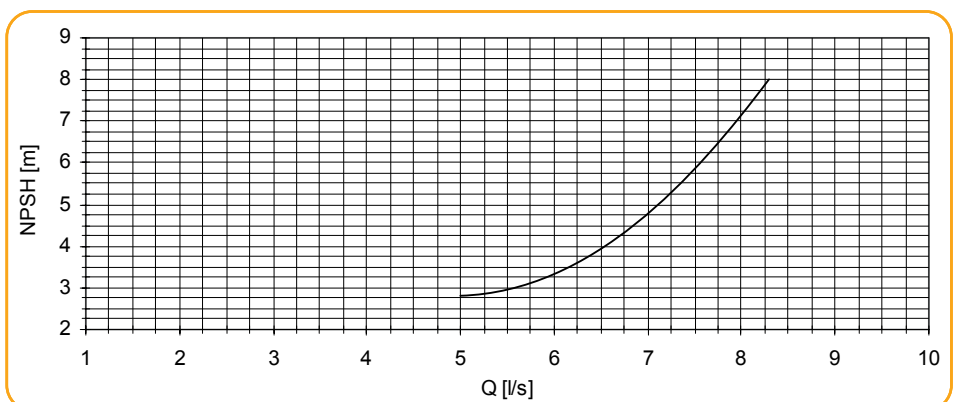
Power Input



Efficiency

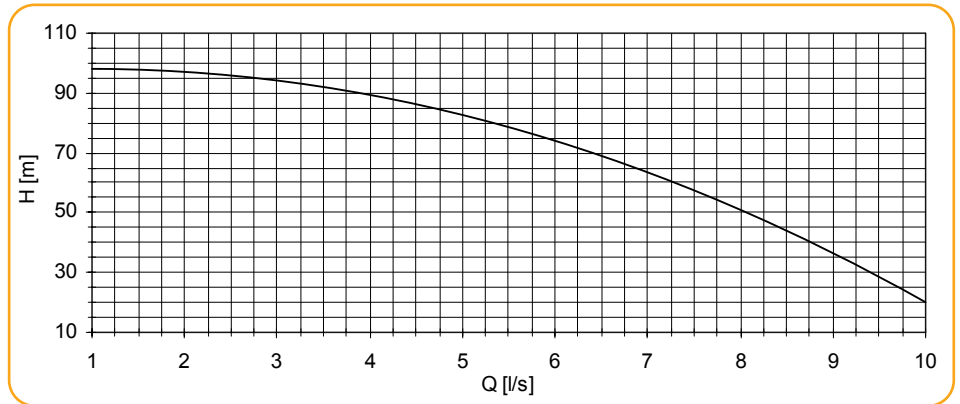


Net Positive
Suction Head

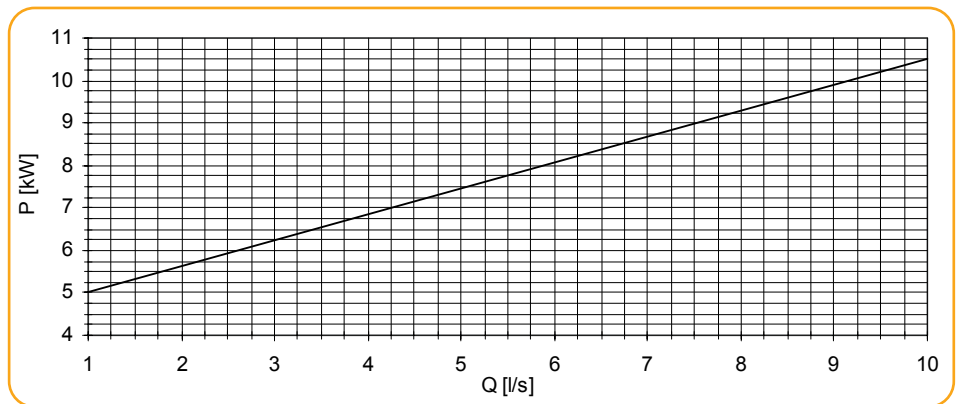


Pump performance curves

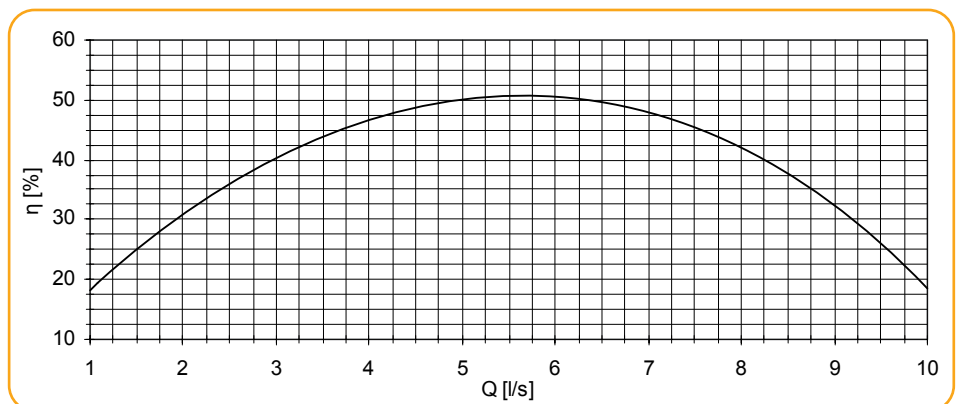
Total
Differential
Head



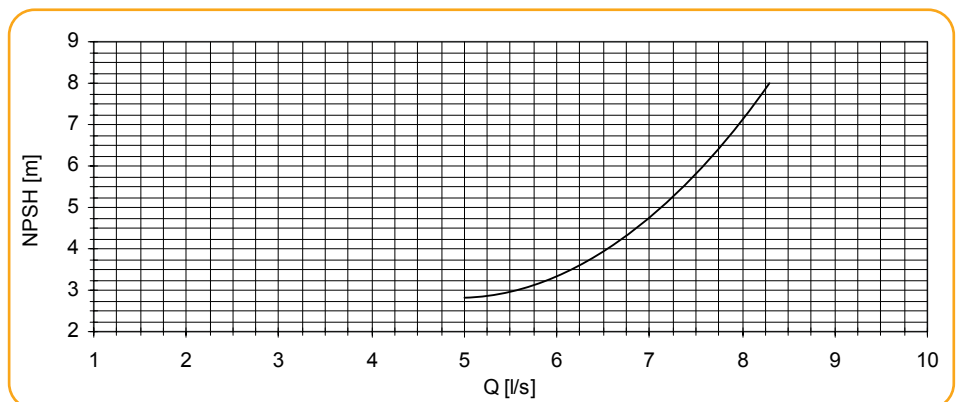
Power Input



Efficiency

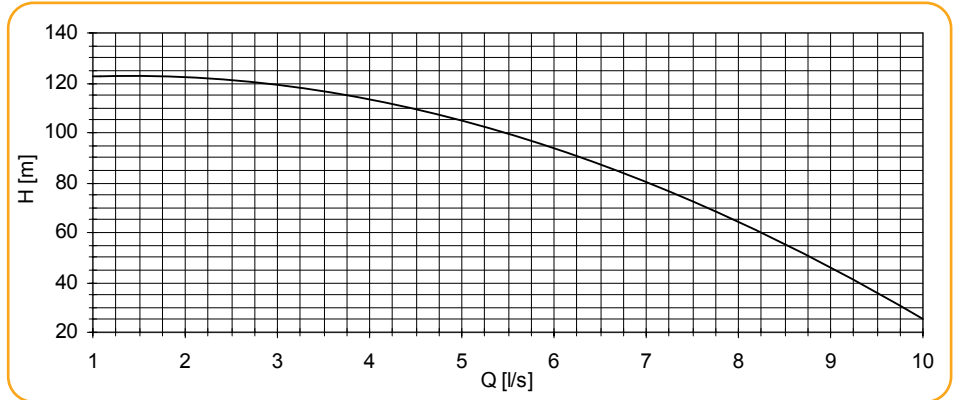


Net Positive
Suction Head

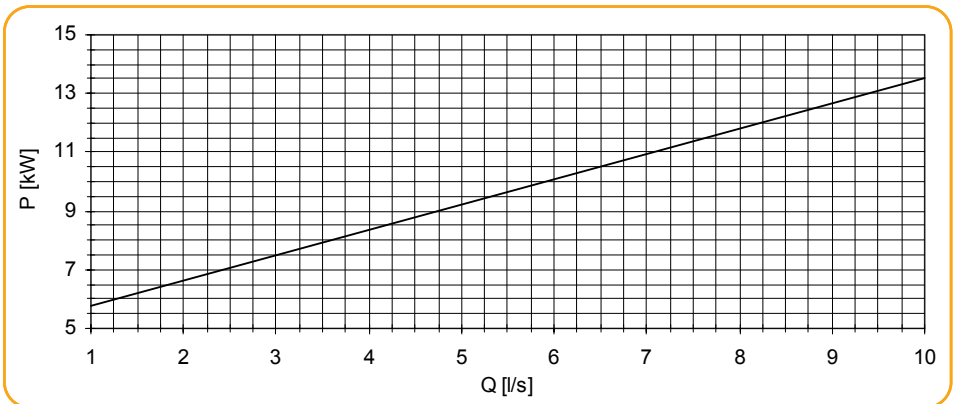


Pump performance curves

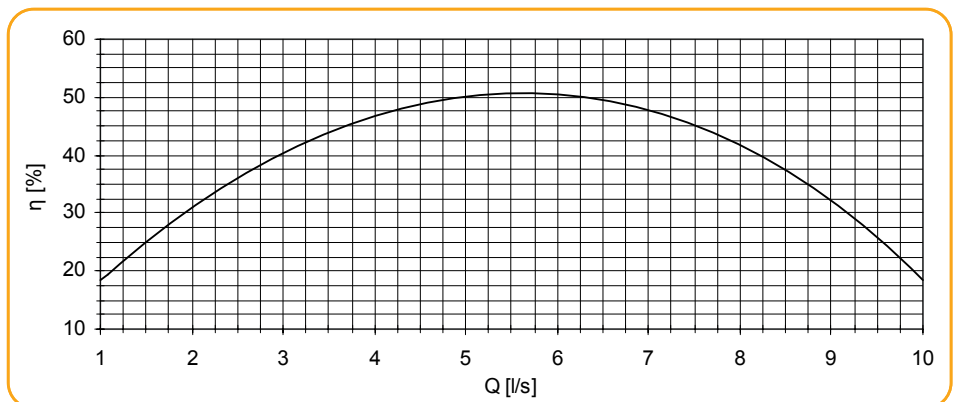
Total
Differential
Head



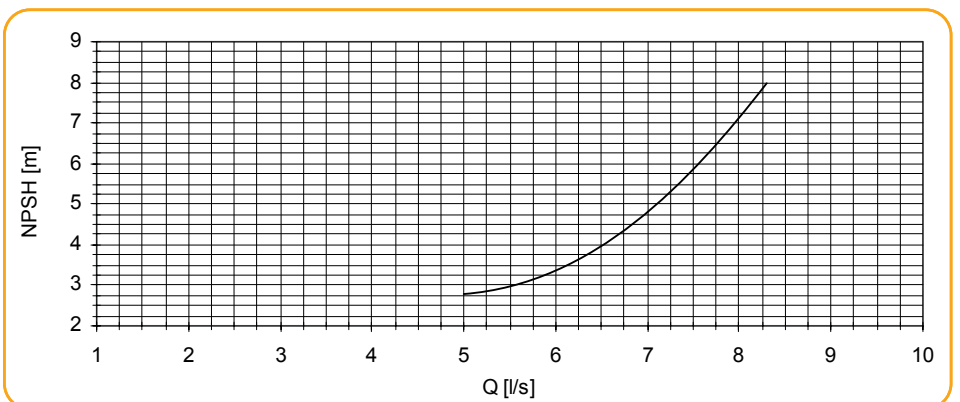
Power Input



Efficiency

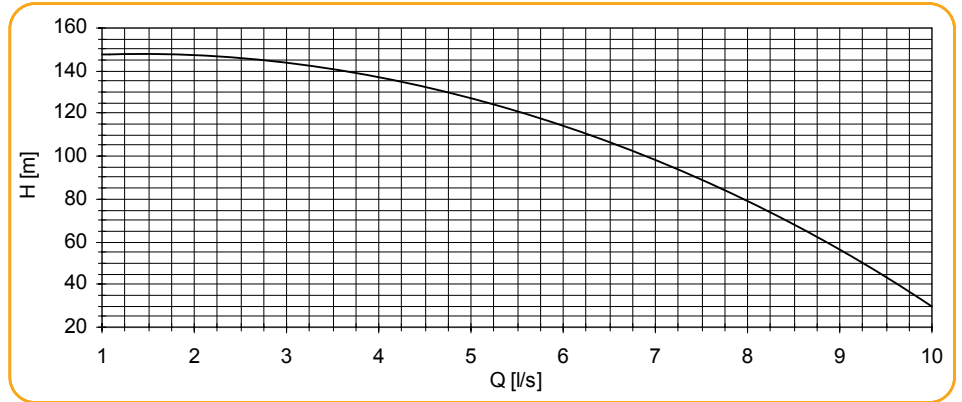


Net Positive
Suction Head

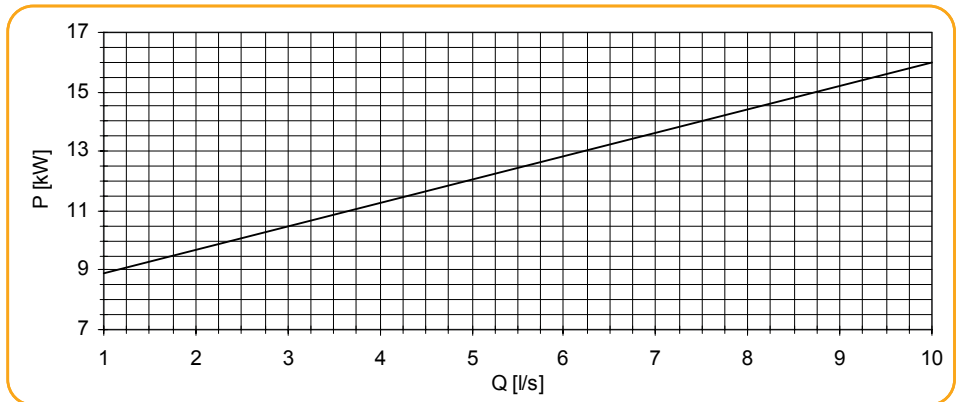


Pump performance curves

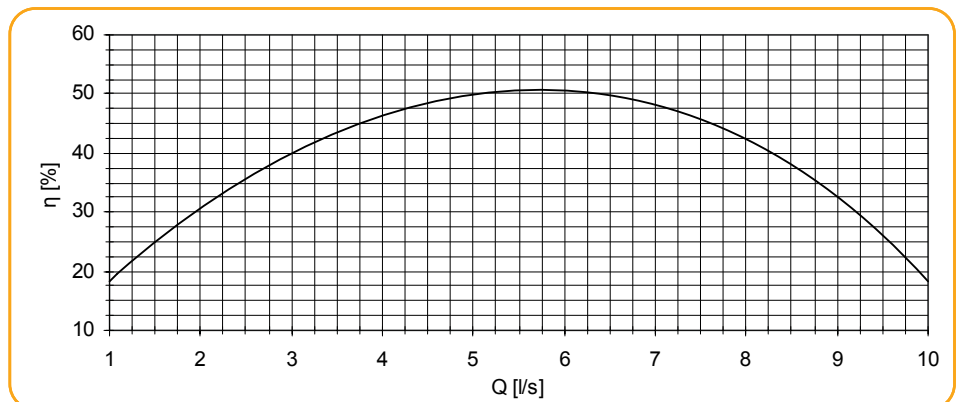
Total Differential Head



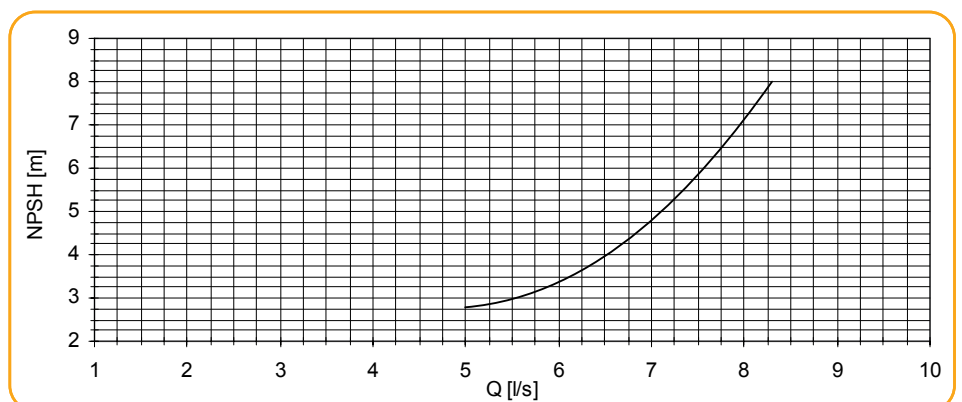
Power Input



Efficiency

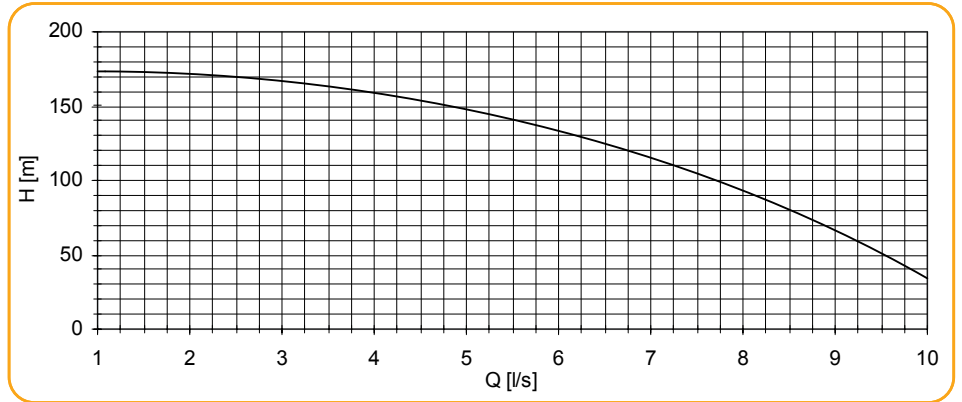


Net Positive Suction Head

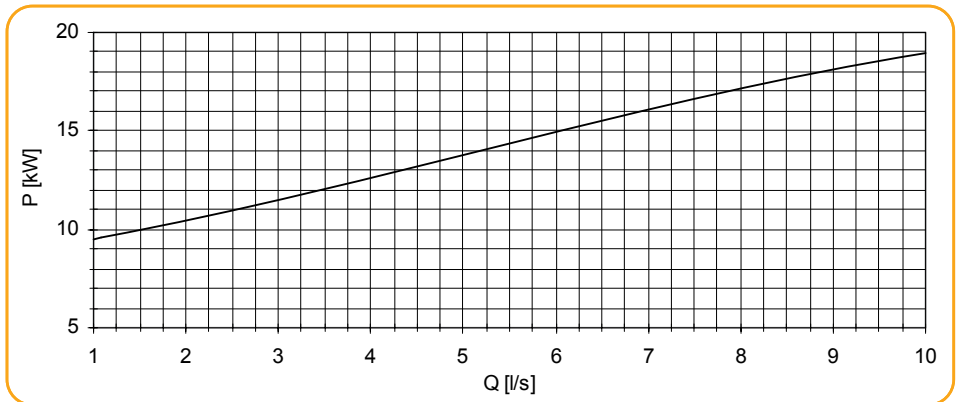


Pump performance curves

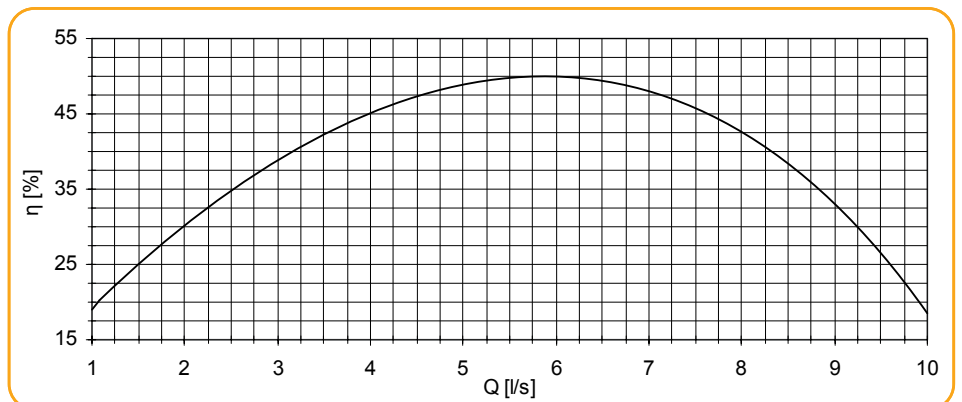
Total
Differential
Head



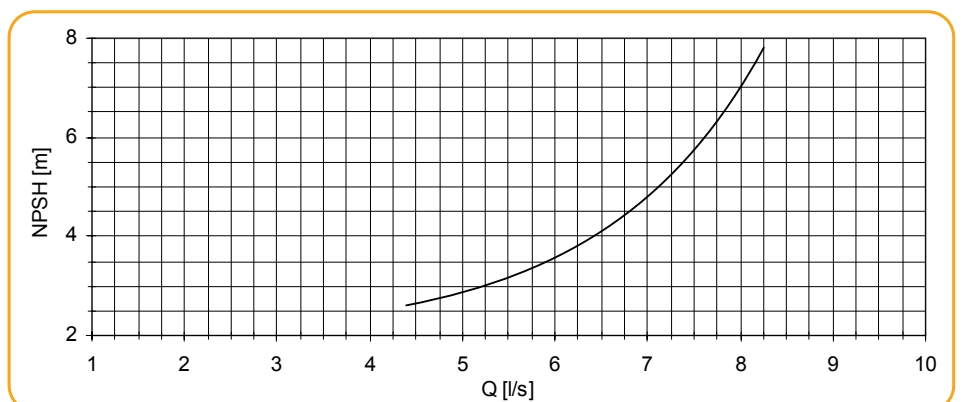
Power Input



Efficiency

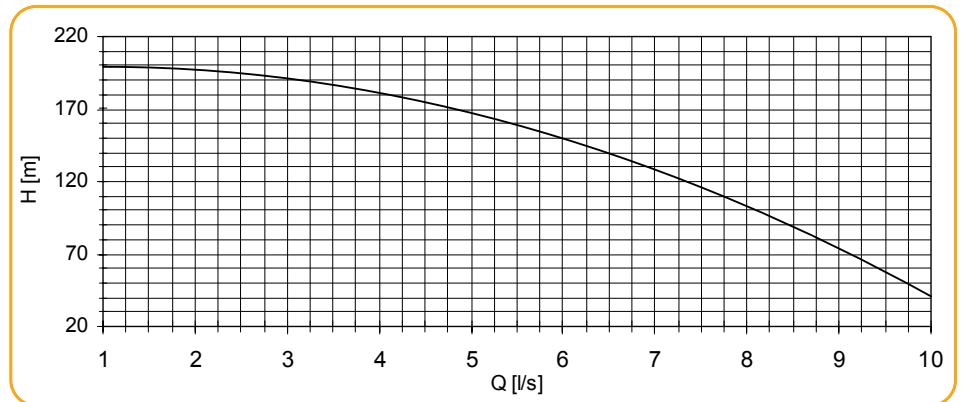


Net Positive
Suction Head

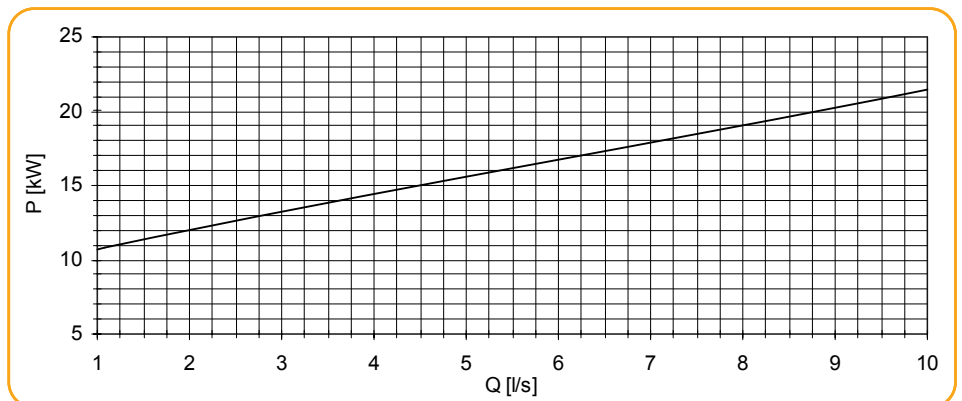


Pump performance curves

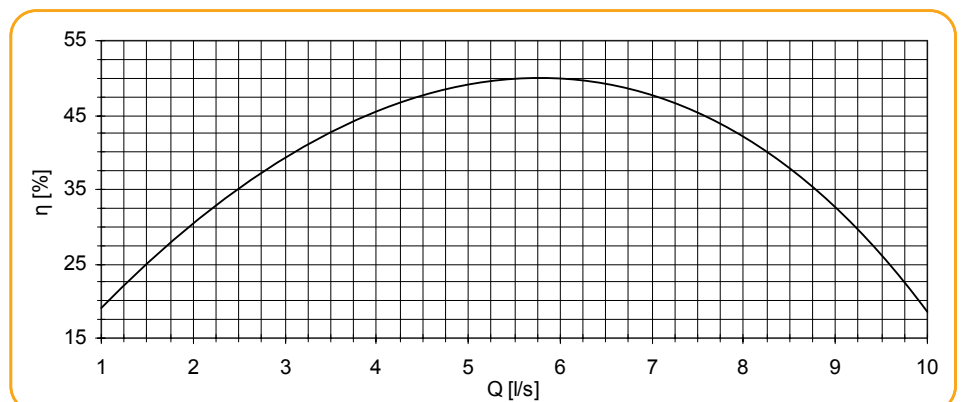
Total
Differential
Head



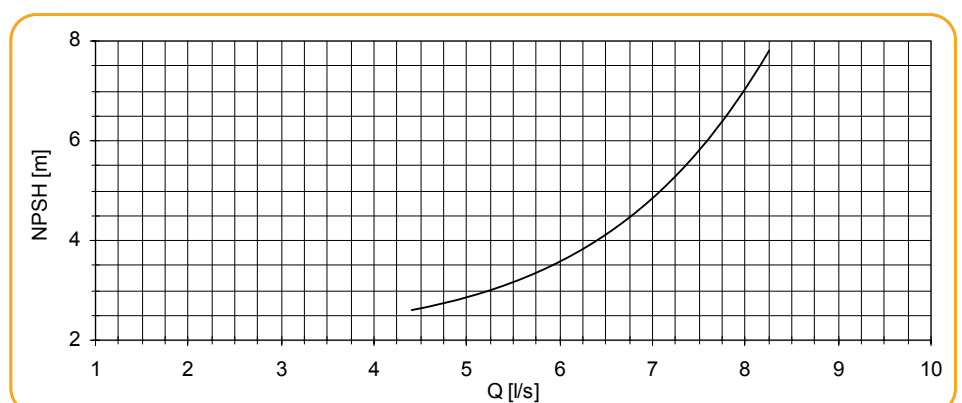
Power Input



Efficiency

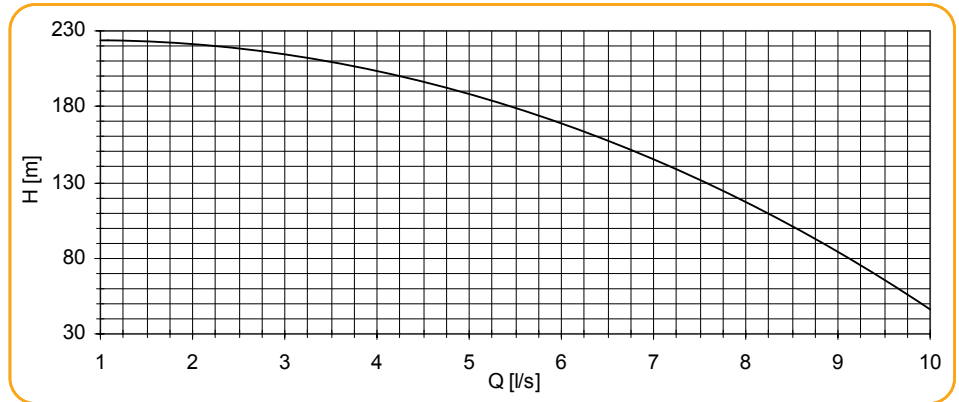


Net Positive
Suction Head

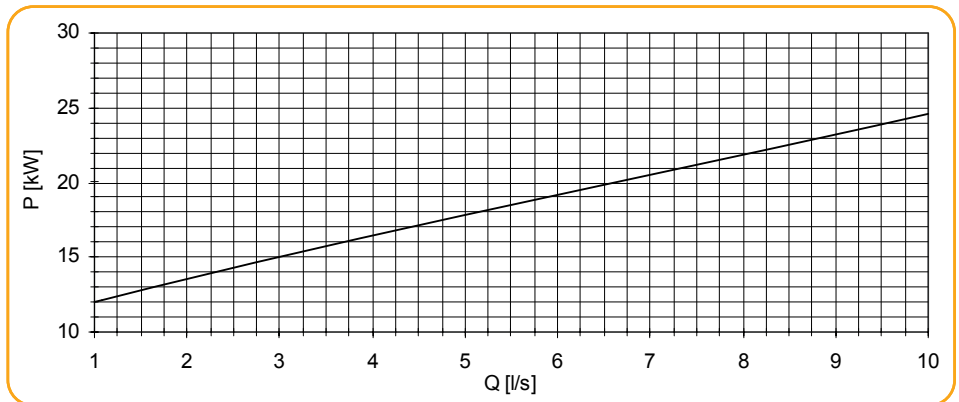


Pump performance curves

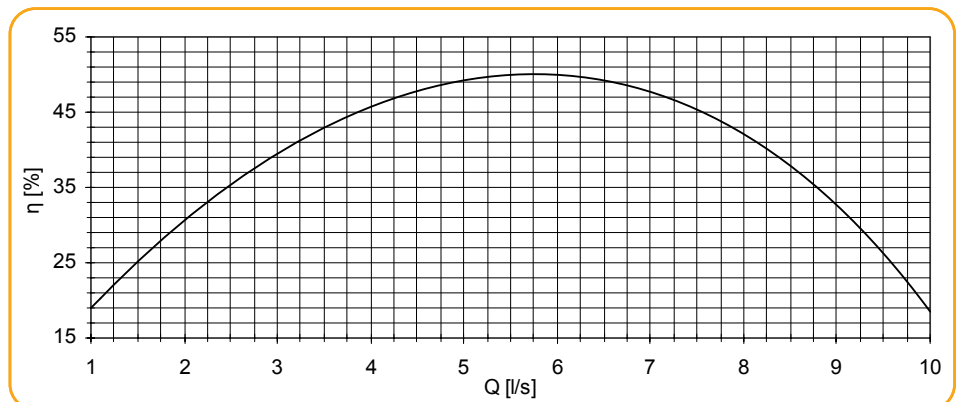
Total
Differential
Head



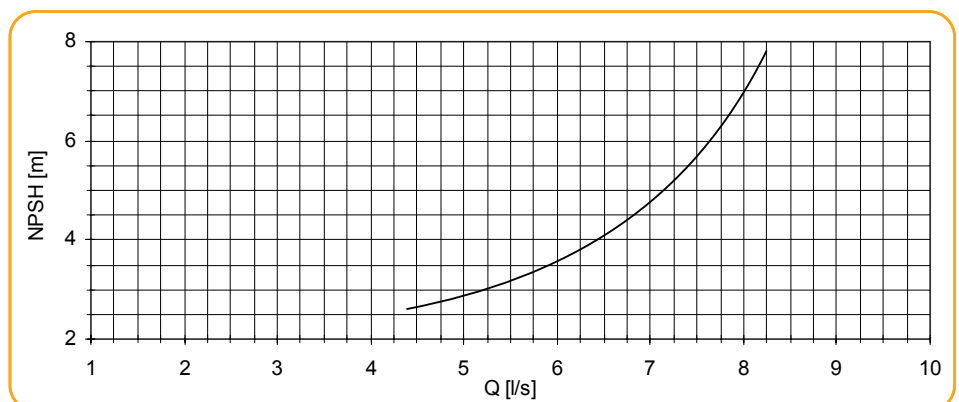
Power Input



Efficiency

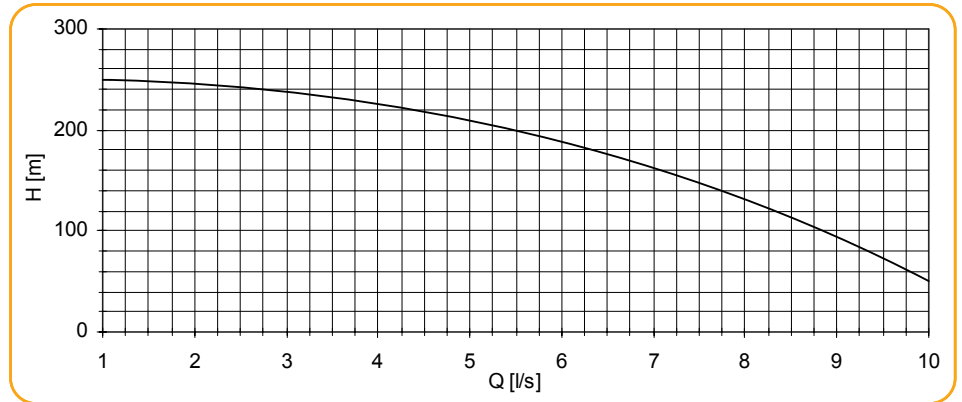


Net Positive
Suction Head

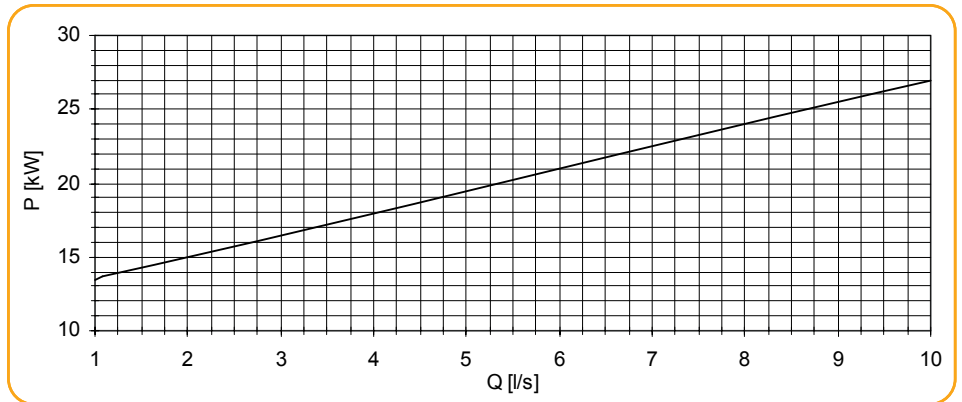


Pump performance curves

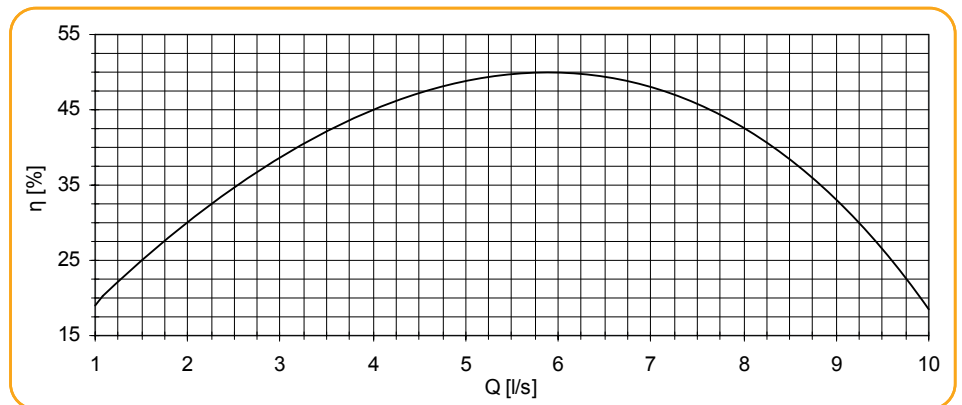
Total
Differential
Head



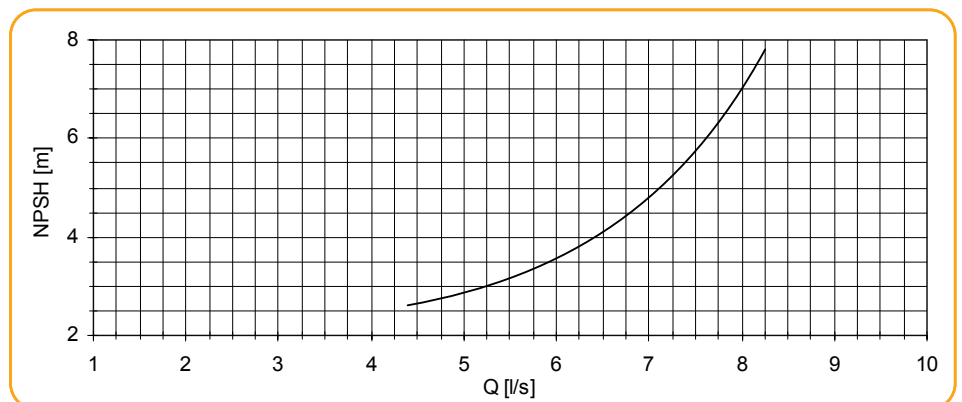
Power Input



Efficiency

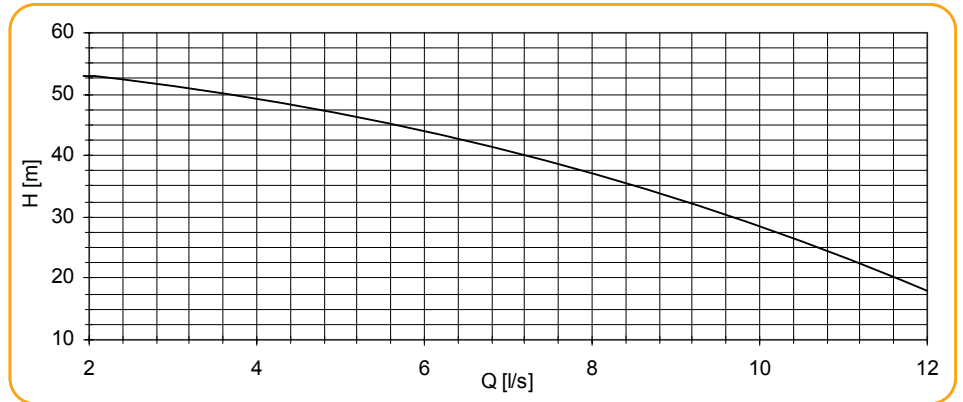


Net Positive
Suction Head

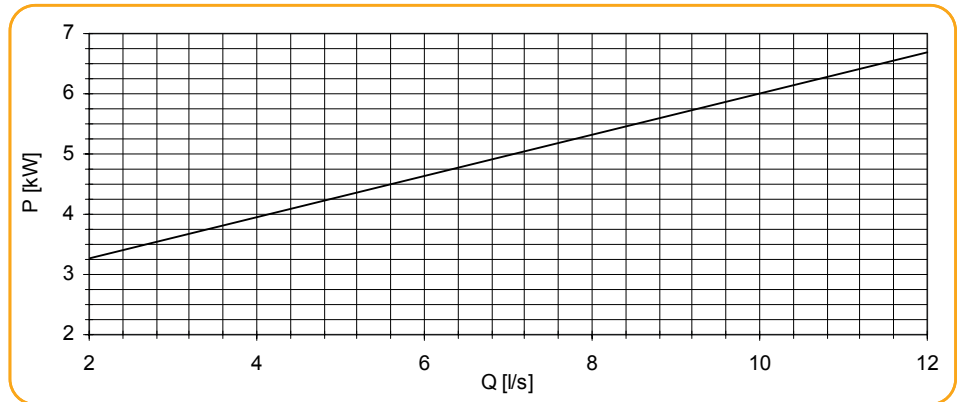


Pump performance curves

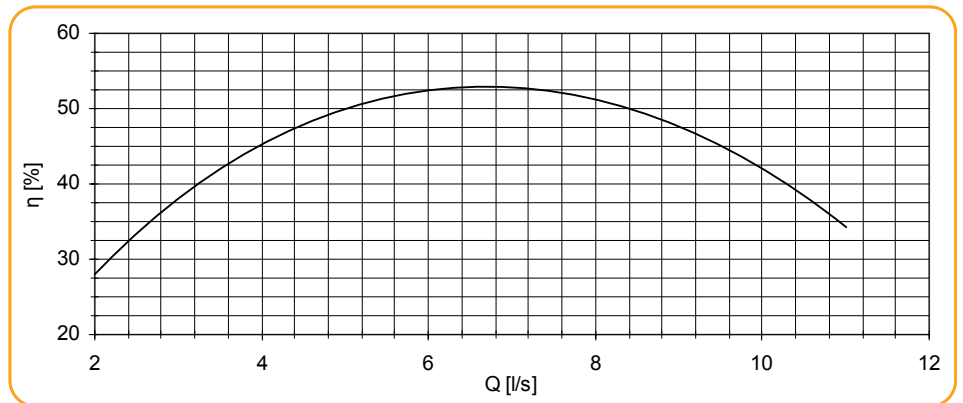
Total
Differential
Head



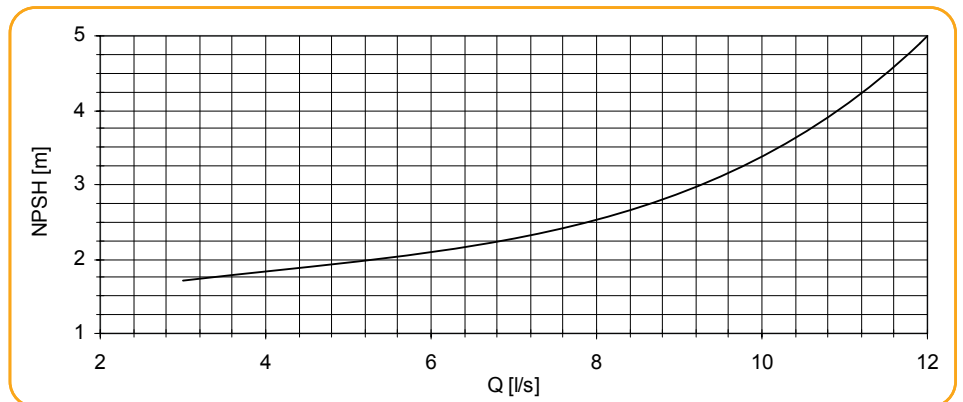
Power Input



Efficiency

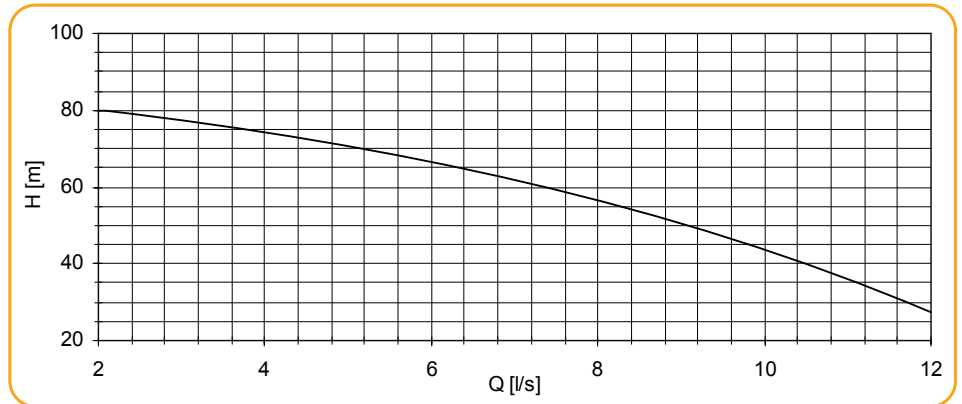


Net Positive
Suction Head

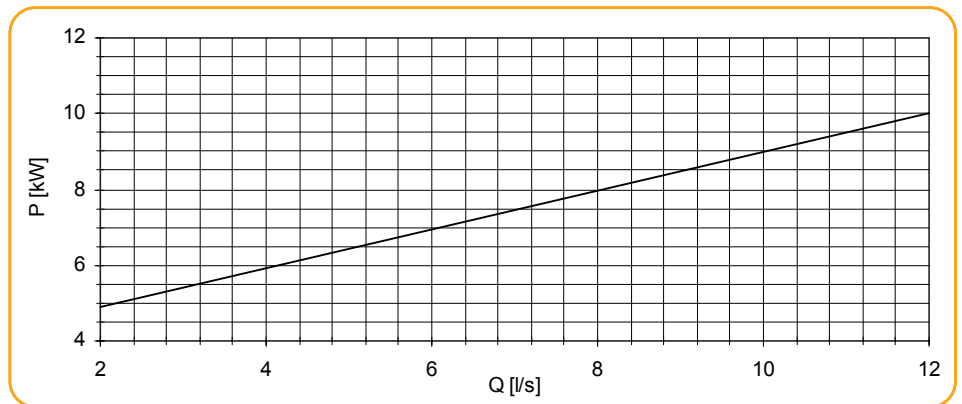


Pump performance curves

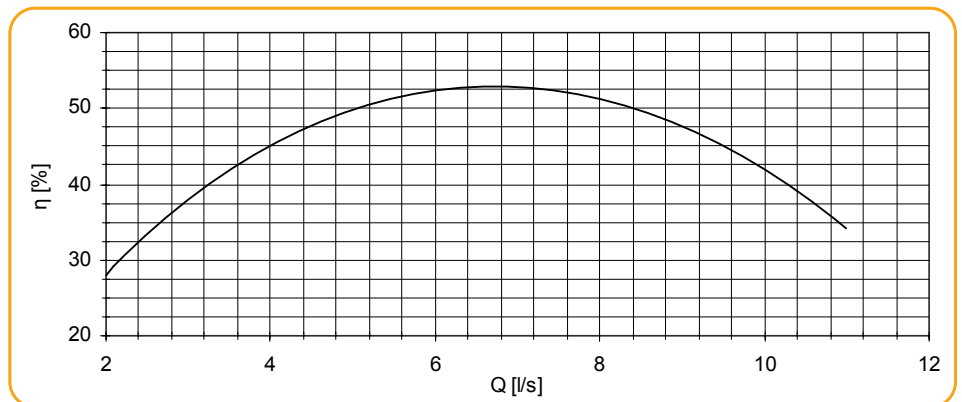
Total
Differential
Head



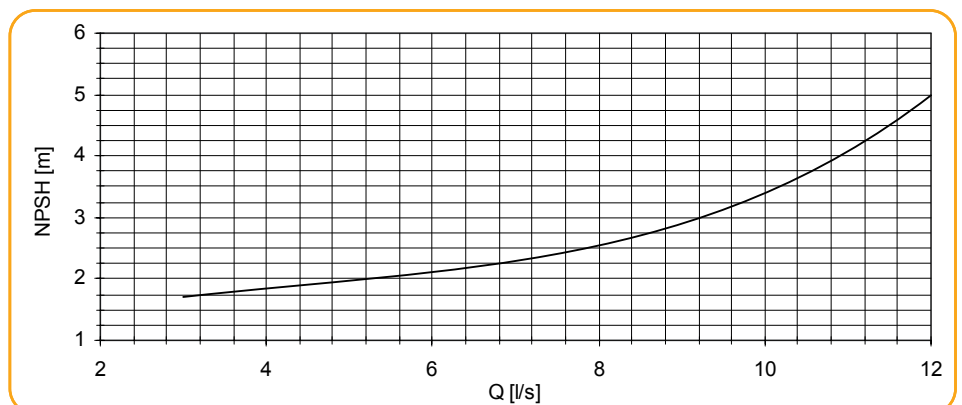
Power Input



Efficiency

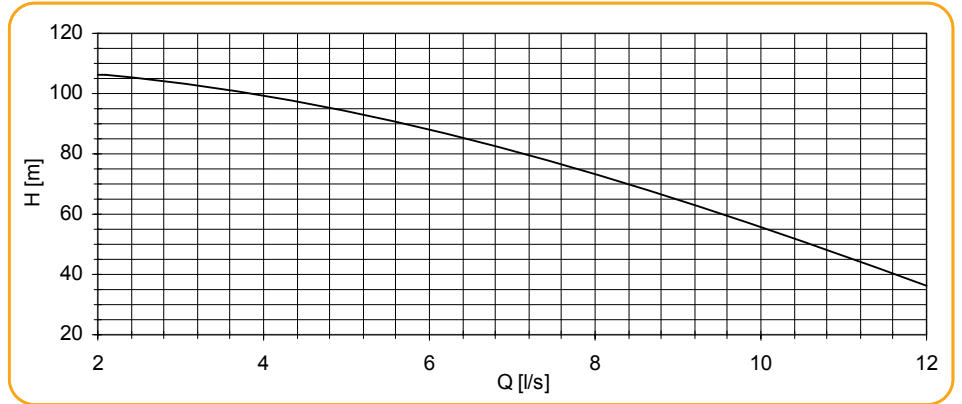


Net Positive
Suction Head

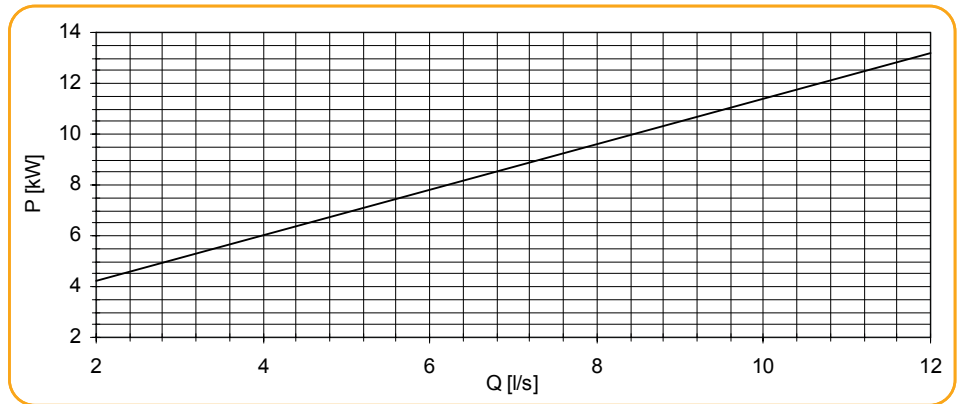


Pump performance curves

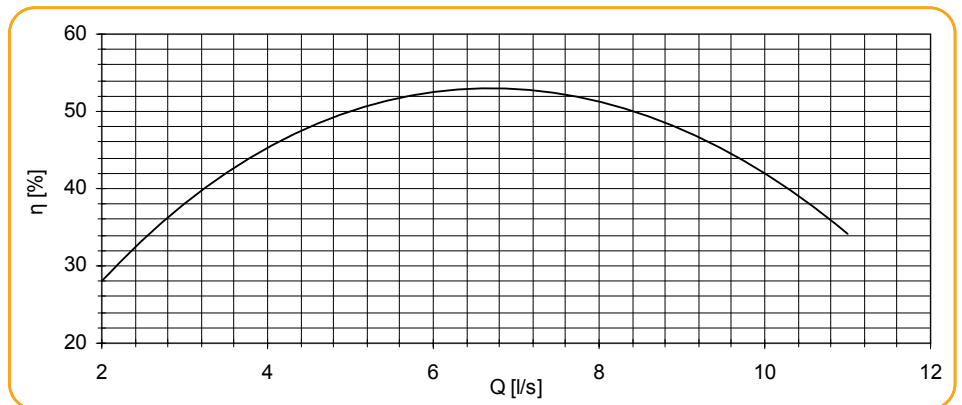
Total
Differential
Head



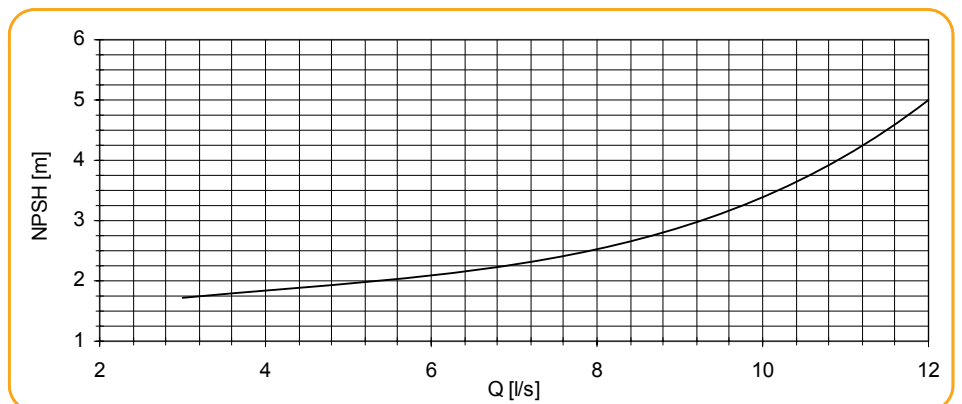
Power Input



Efficiency

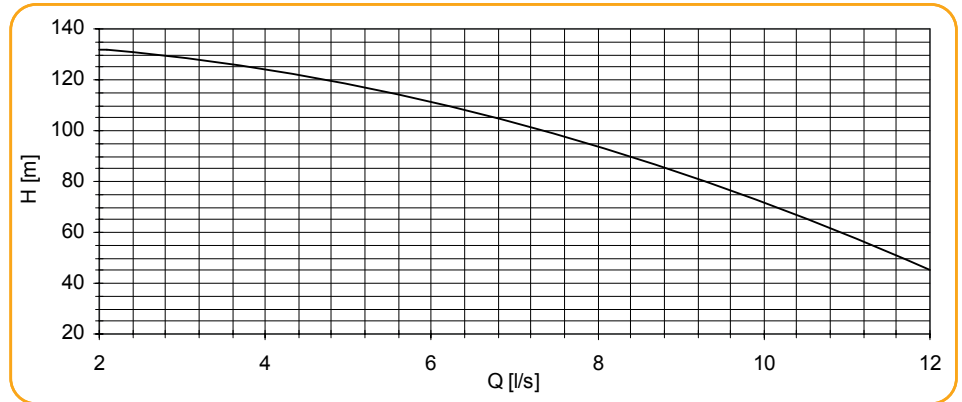


Net Positive
Suction Head

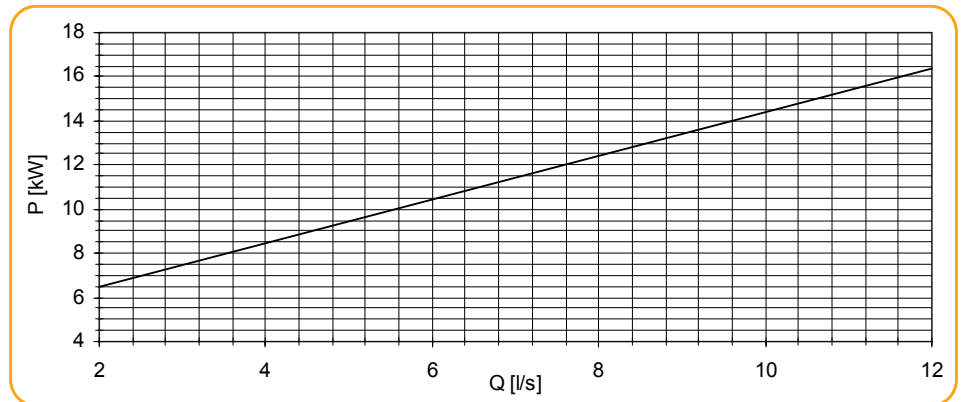


Pump performance curves

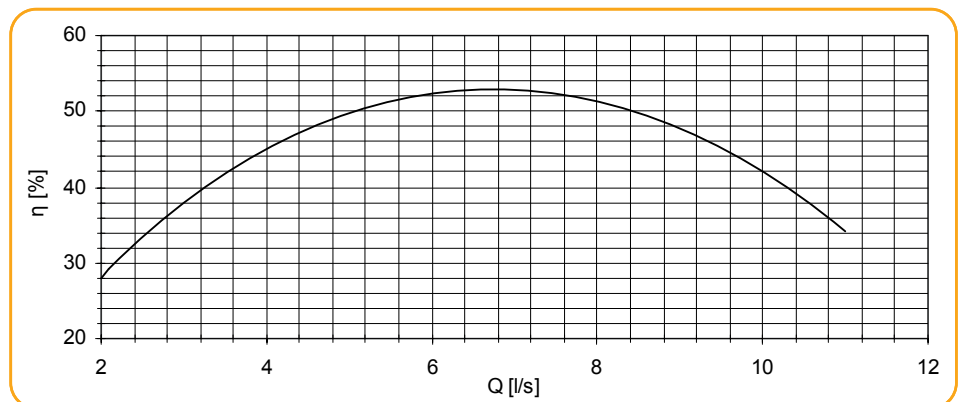
Total
Differential
Head



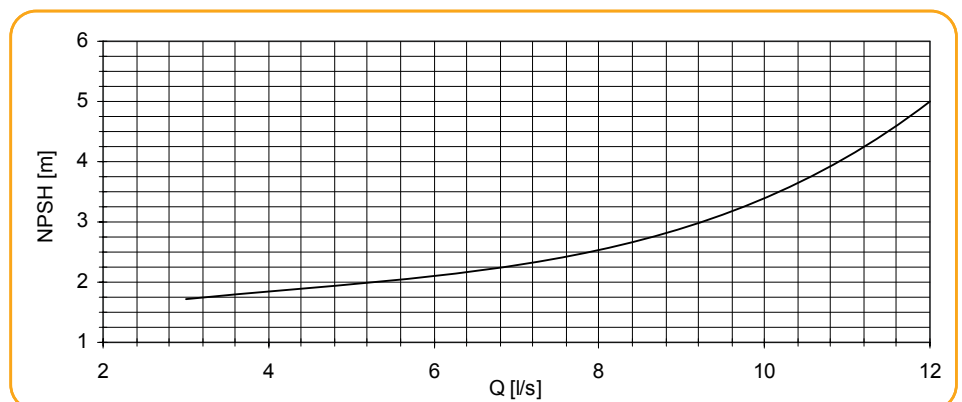
Power Input



Efficiency

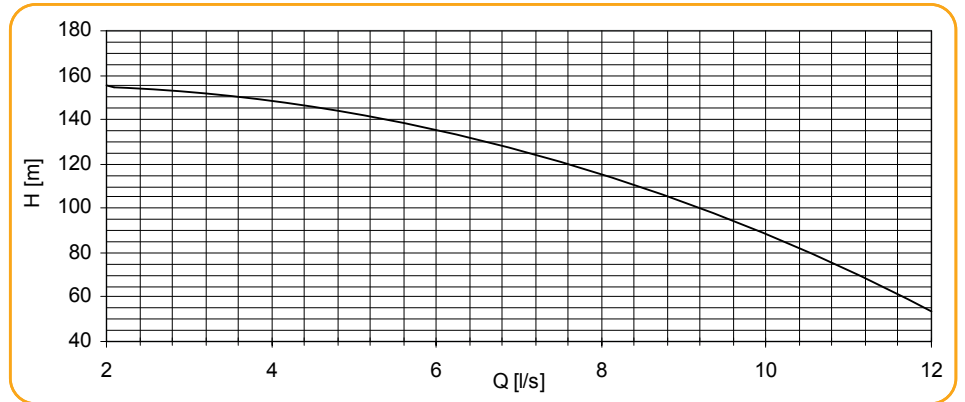


Net Positive
Suction Head

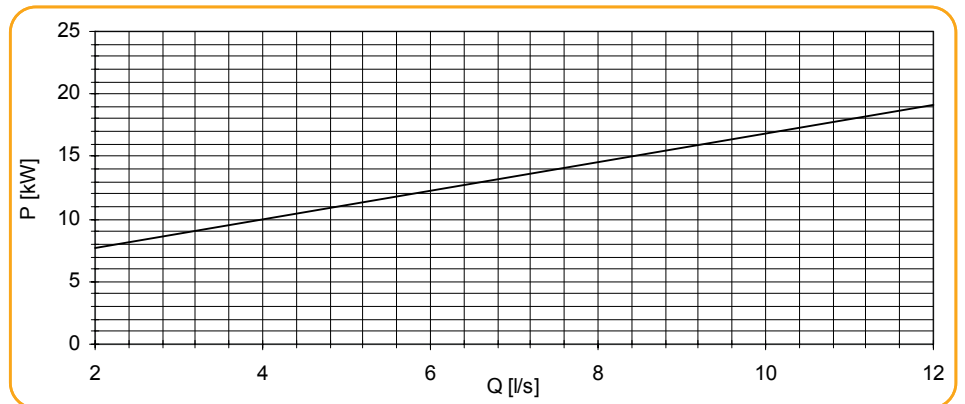


Pump performance curves

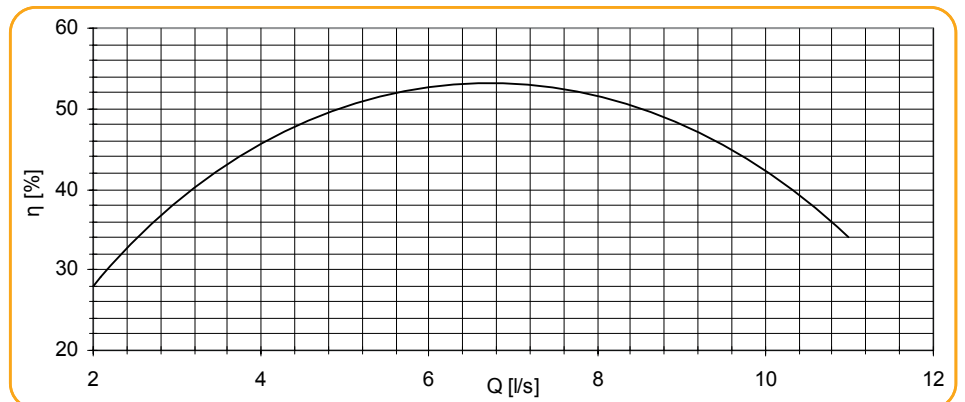
Total
Differential
Head



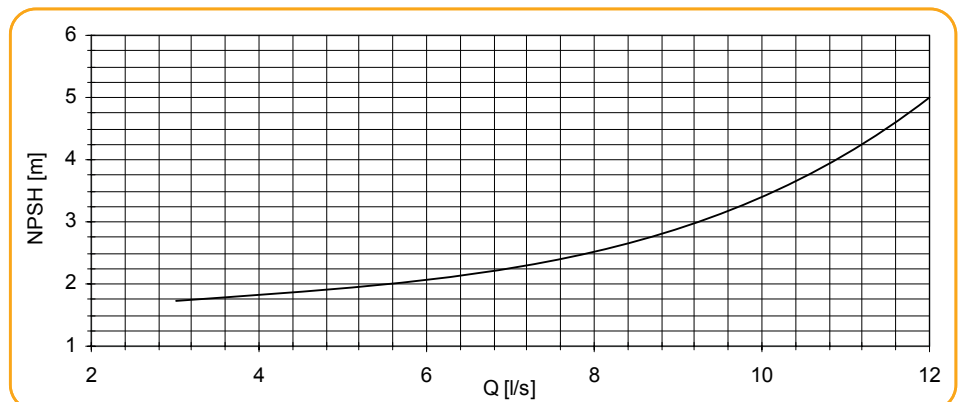
Power Input



Efficiency

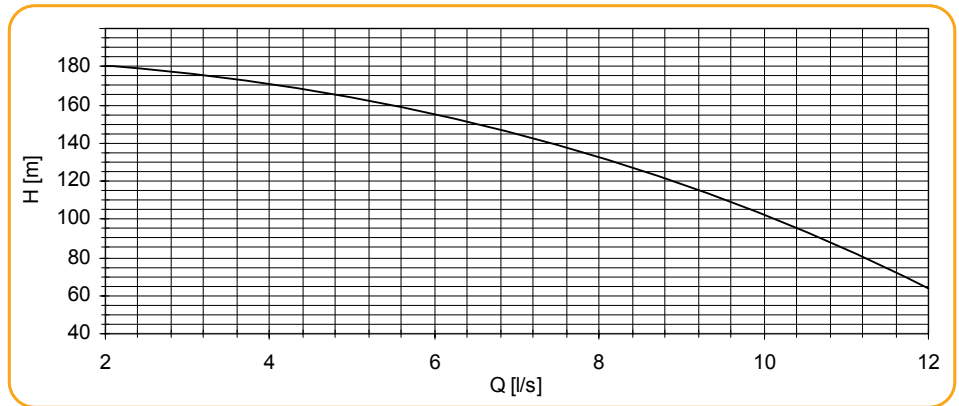


Net Positive
Suction Head

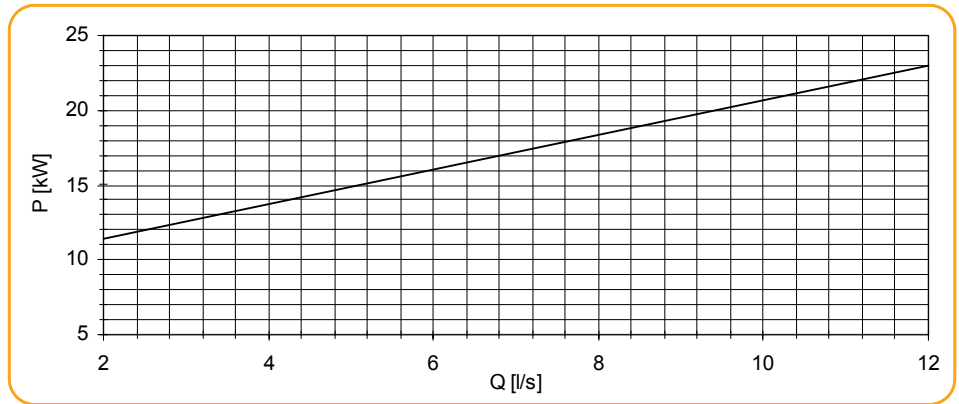


Pump performance curves

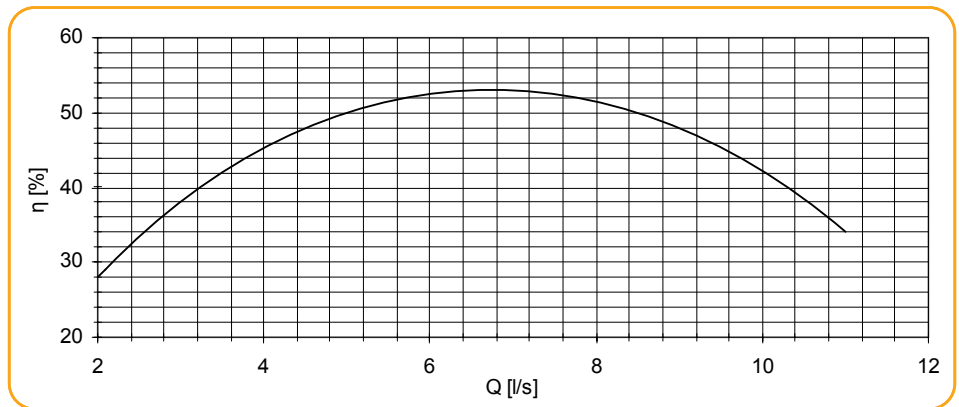
Total
Differential
Head



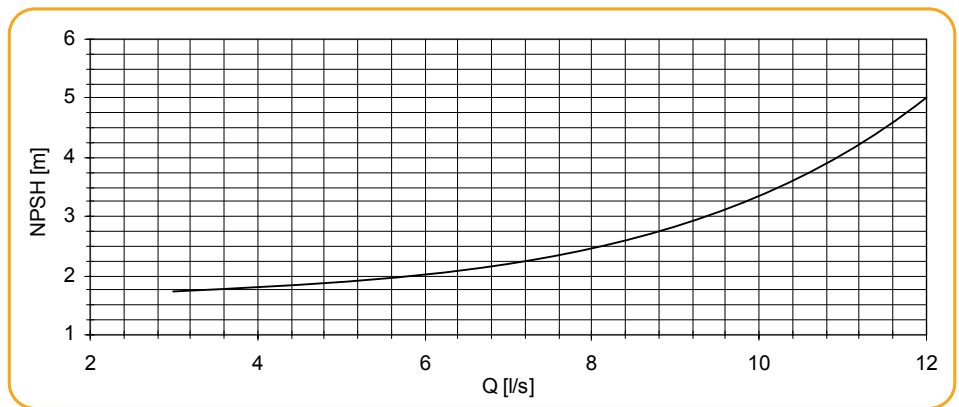
Power Input



Efficiency

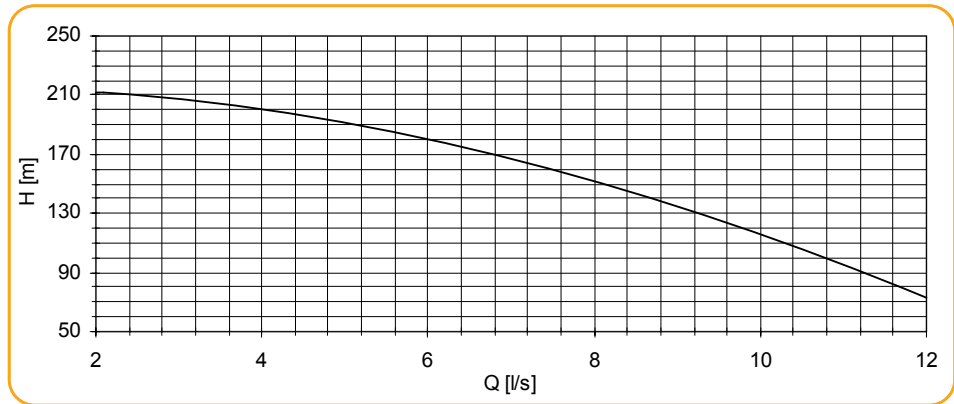


Net Positive
Suction Head

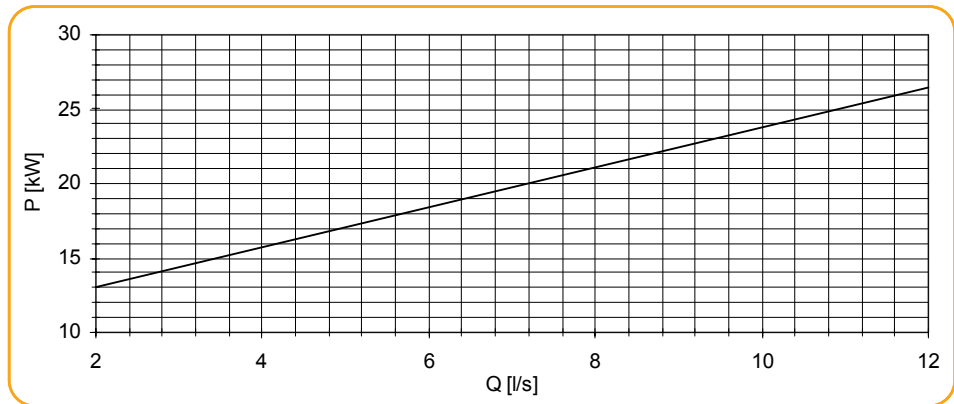


Pump performance curves

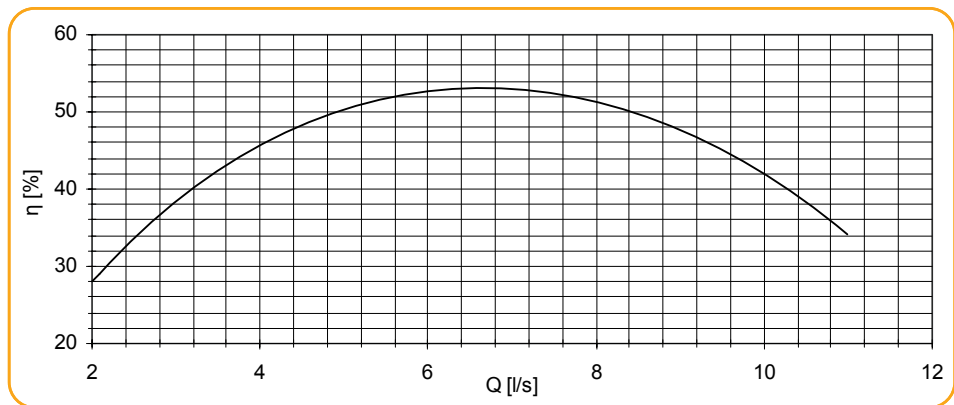
Total
Differential
Head



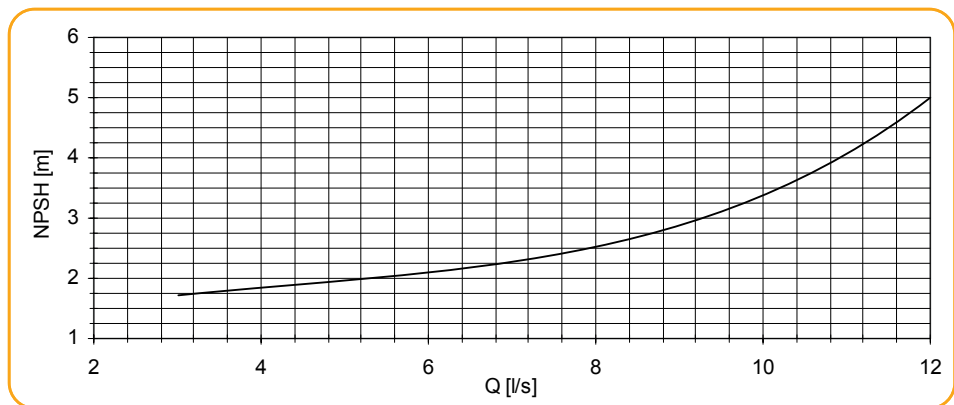
Power Input



Efficiency

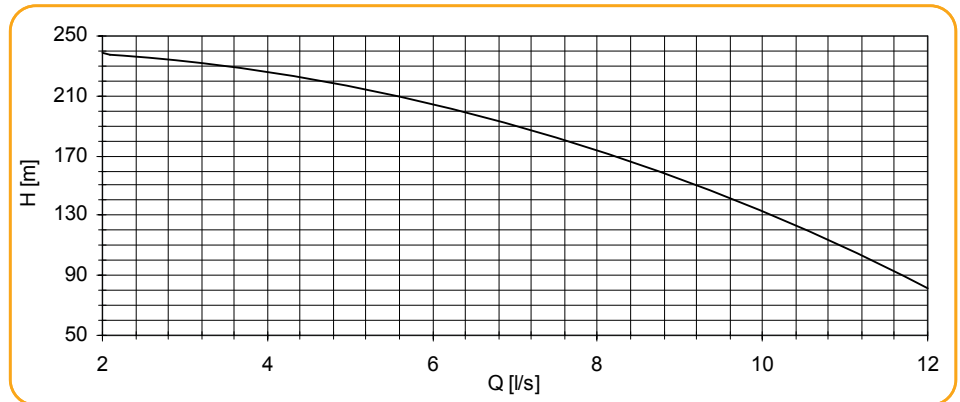


Net Positive
Suction Head

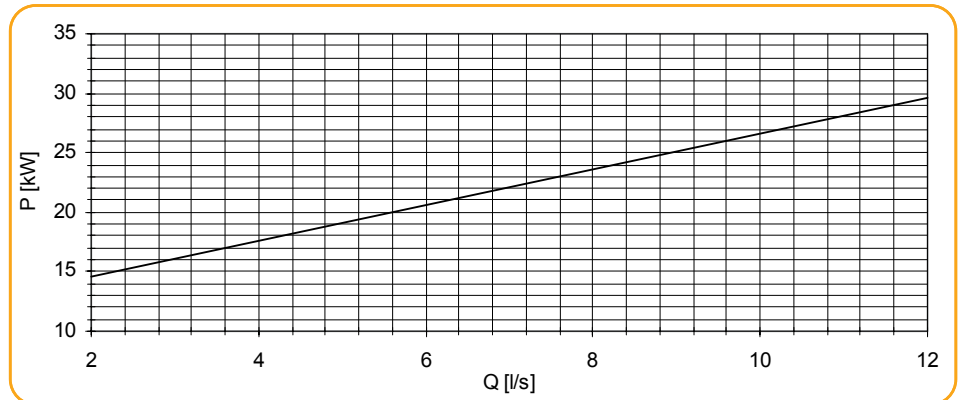


Pump performance curves

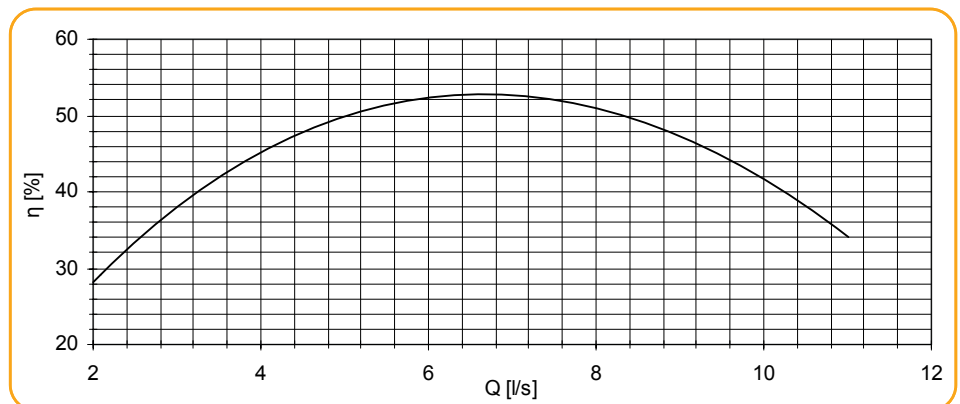
Total
Differential
Head



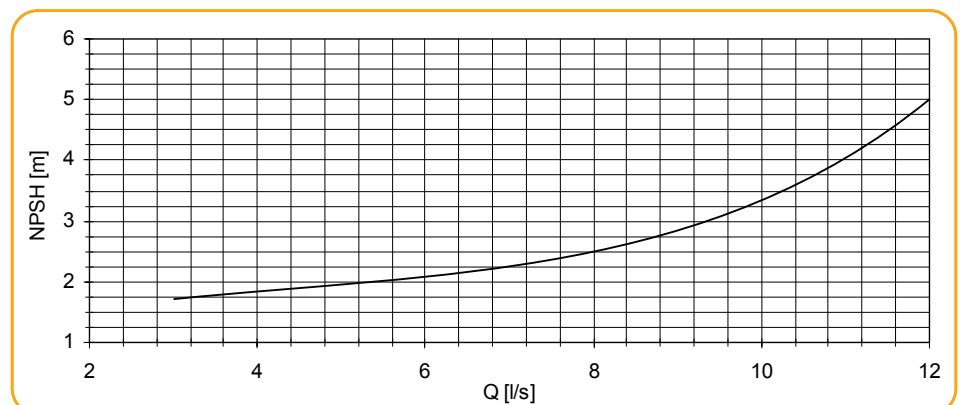
Power Input



Efficiency

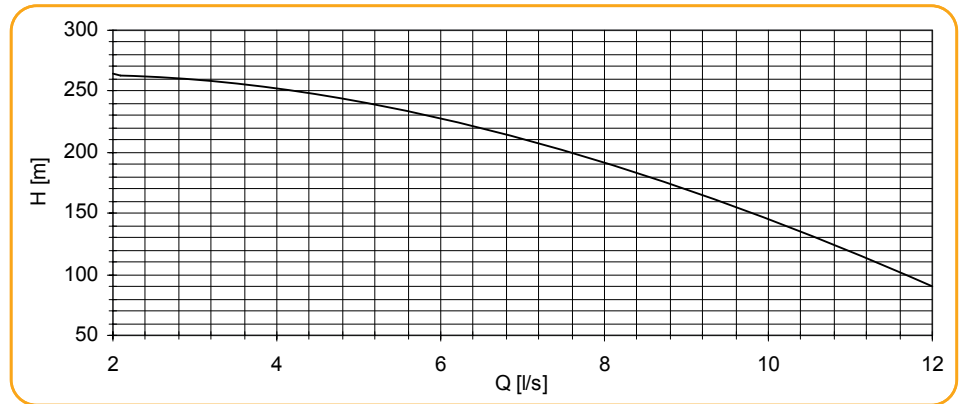


Net Positive
Suction Head

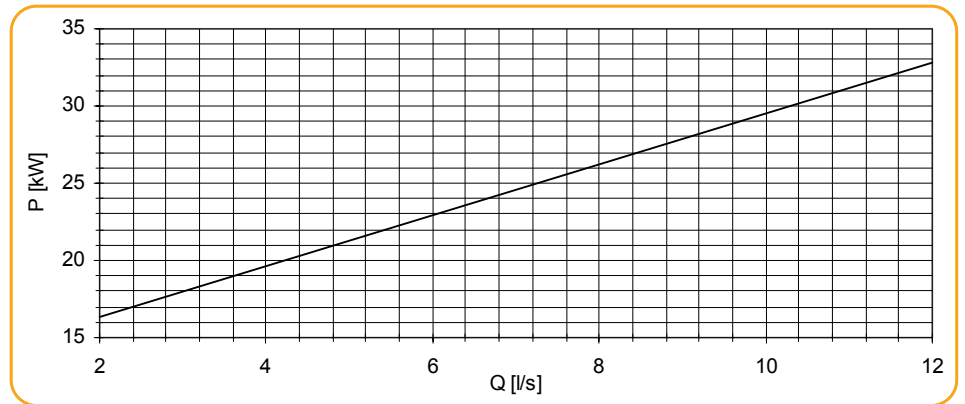


Pump performance curves

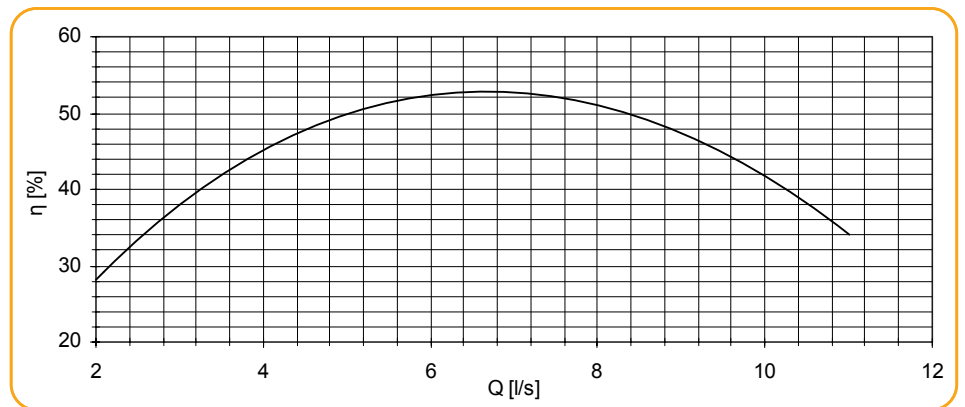
Total
Differential
Head



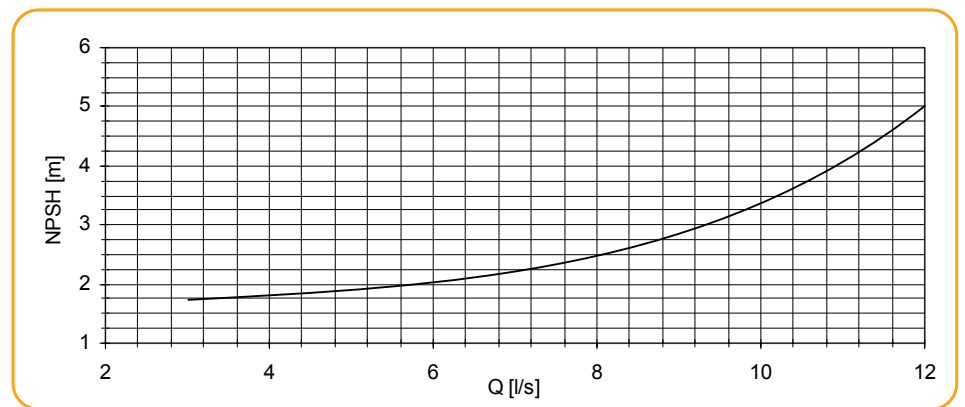
Power Input



Efficiency

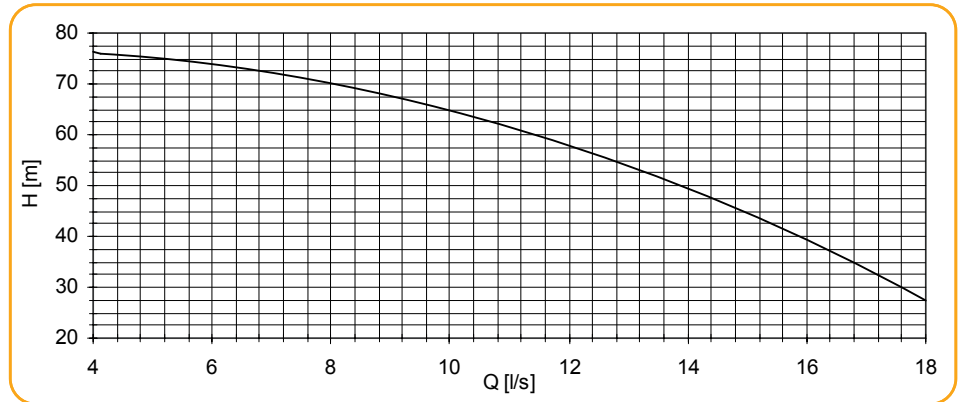


Net Positive
Suction Head

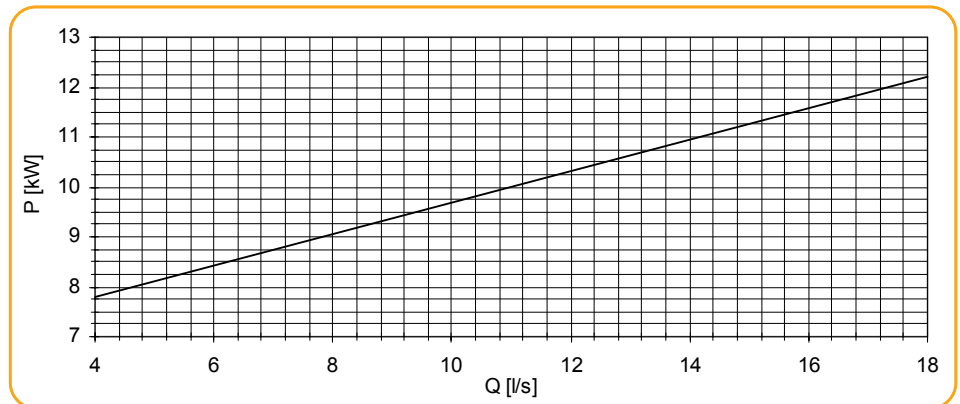


Pump performance curves

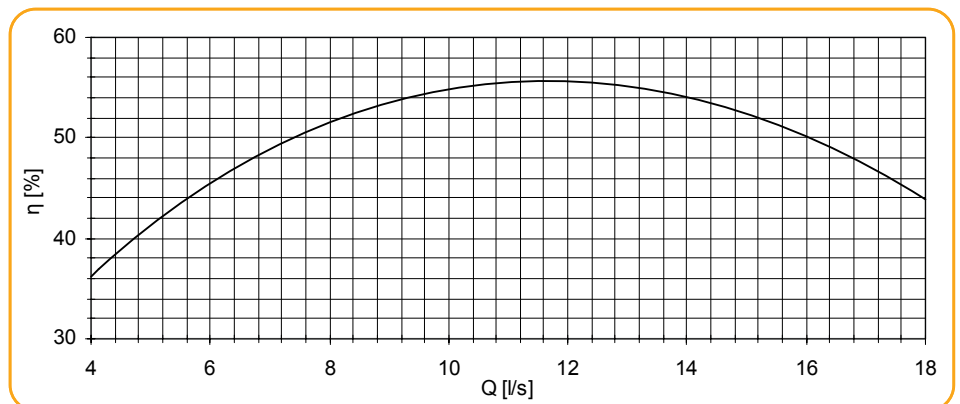
Total
Differential
Head



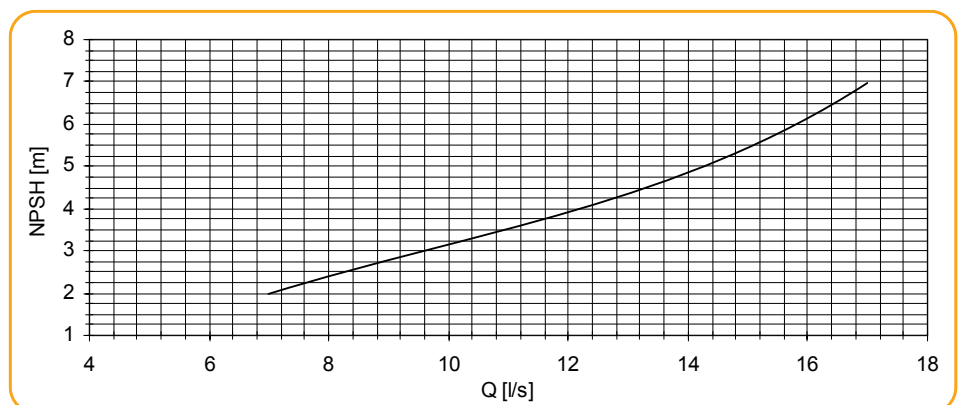
Power Input



Efficiency

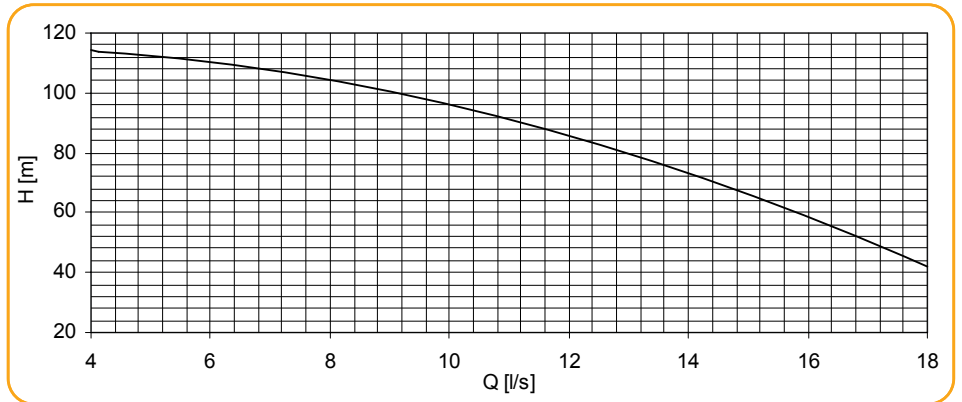


Net Positive
Suction Head

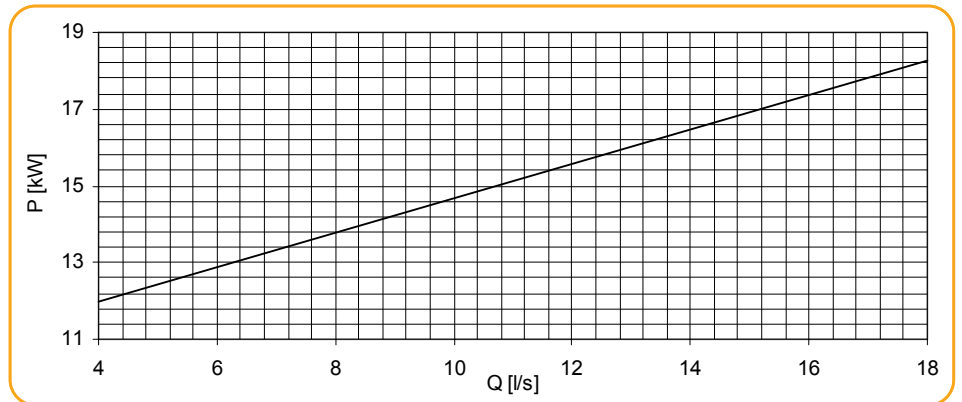


Pump performance curves

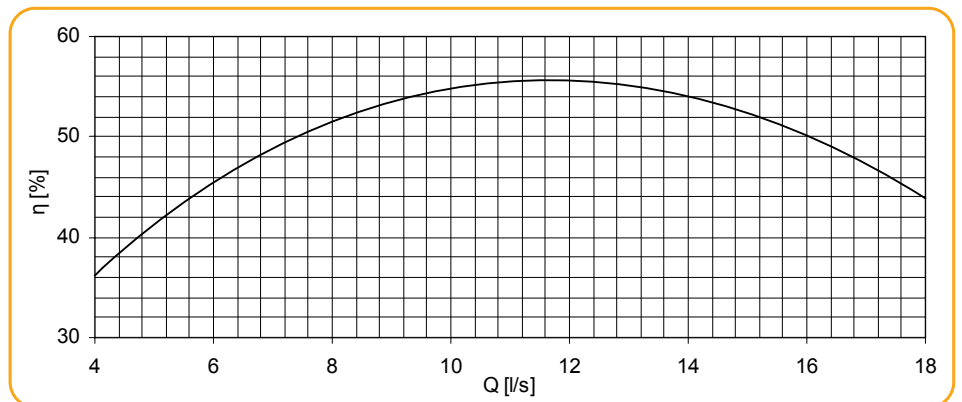
Total
Differential
Head



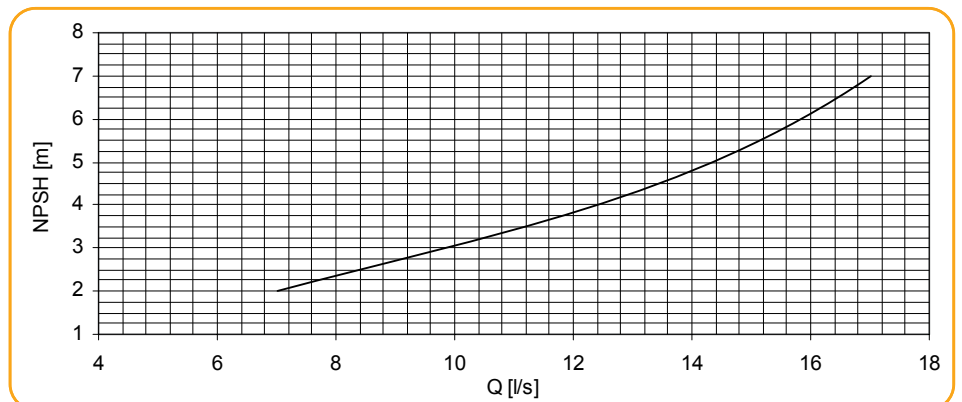
Power Input



Efficiency

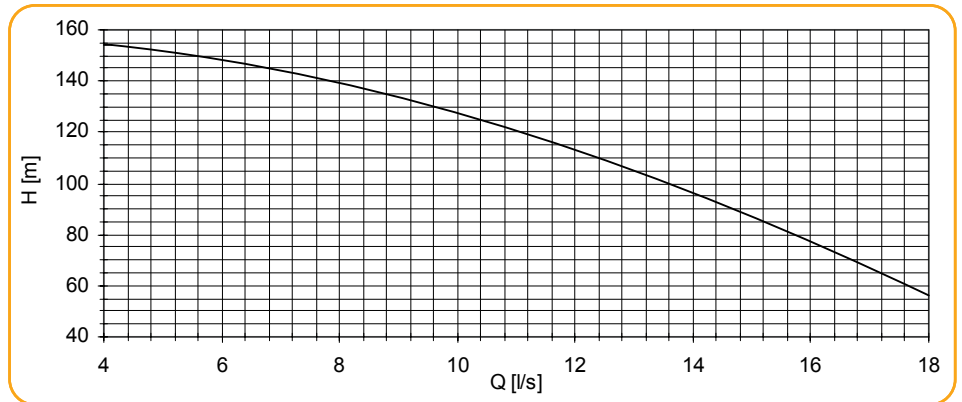


Net Positive
Suction Head

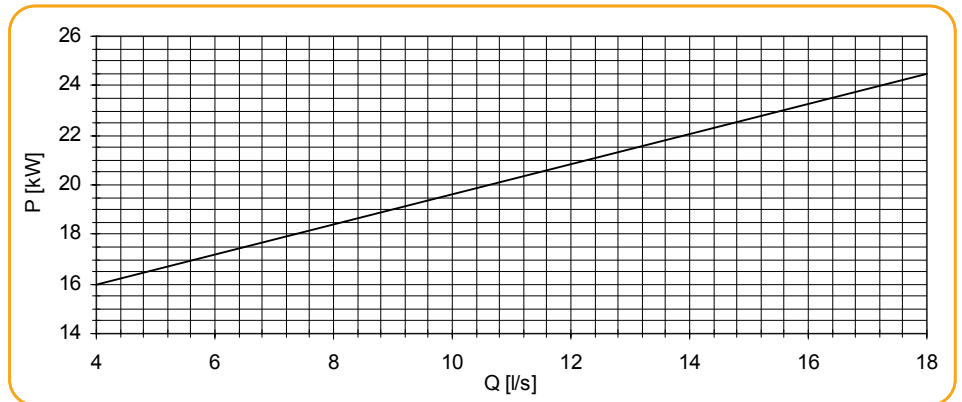


Pump performance curves

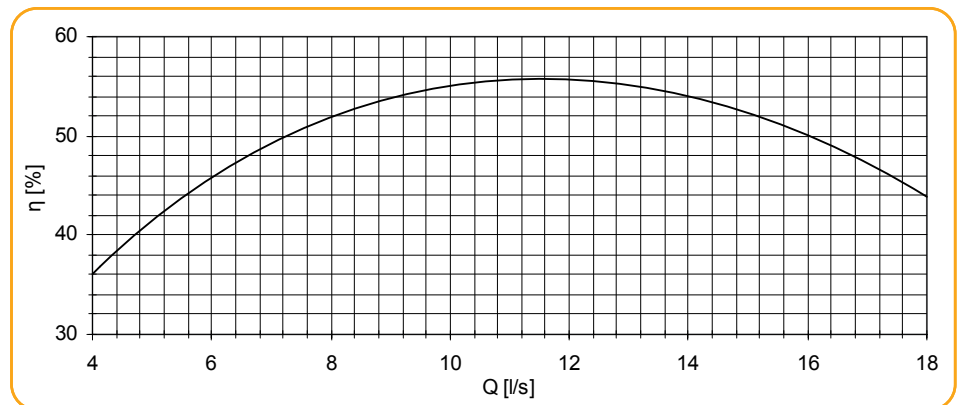
Total
Differential
Head



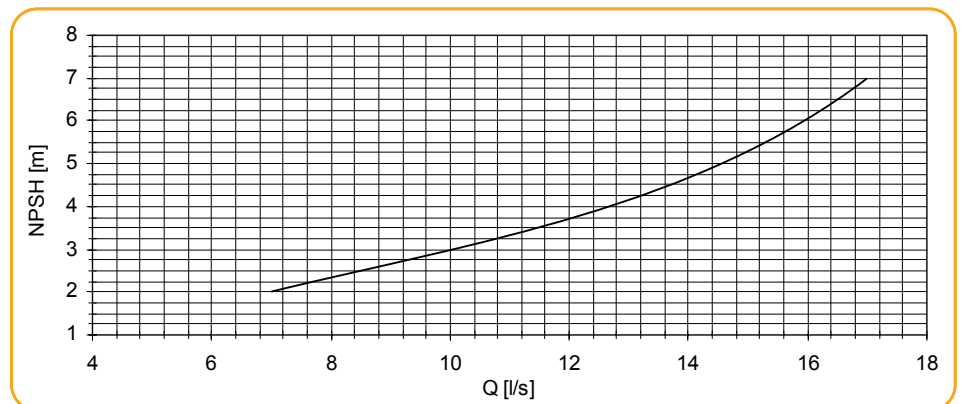
Power Input



Efficiency

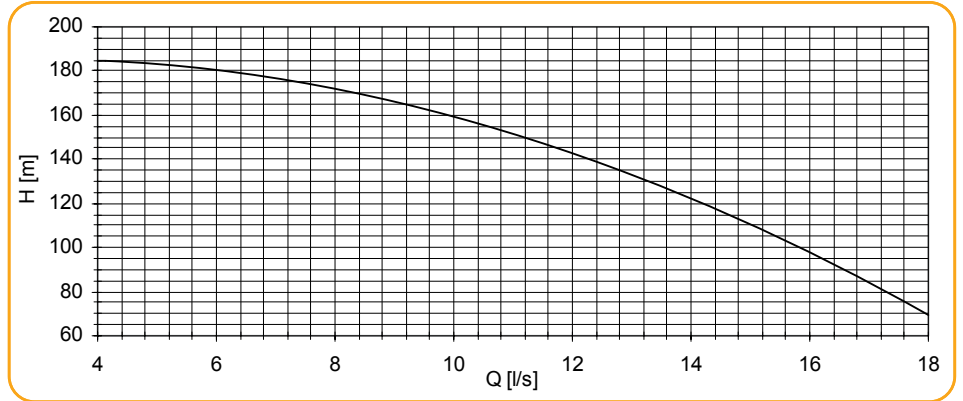


Net Positive
Suction Head

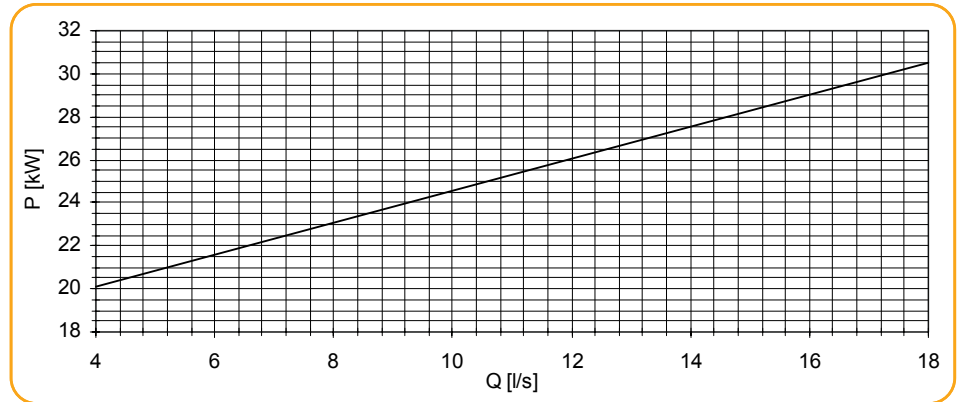


Pump performance curves

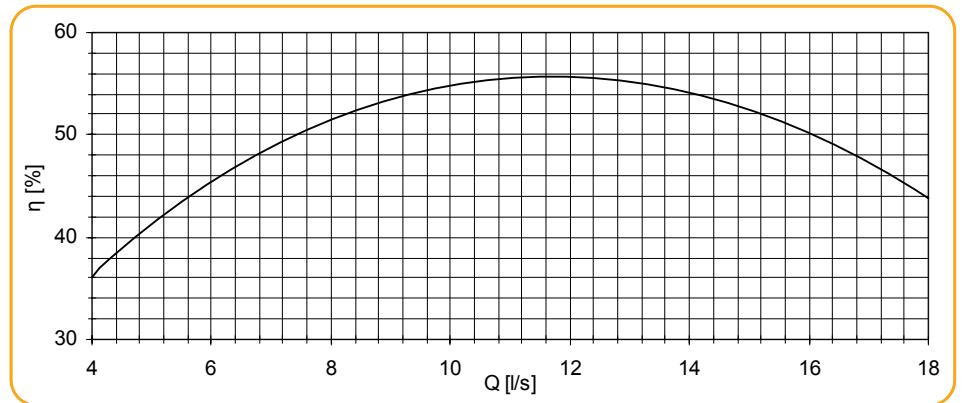
Total
Differential
Head



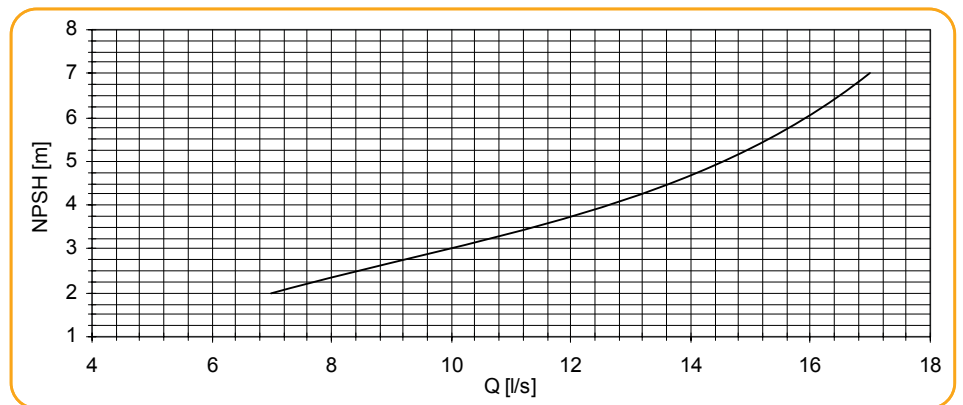
Power Input



Efficiency

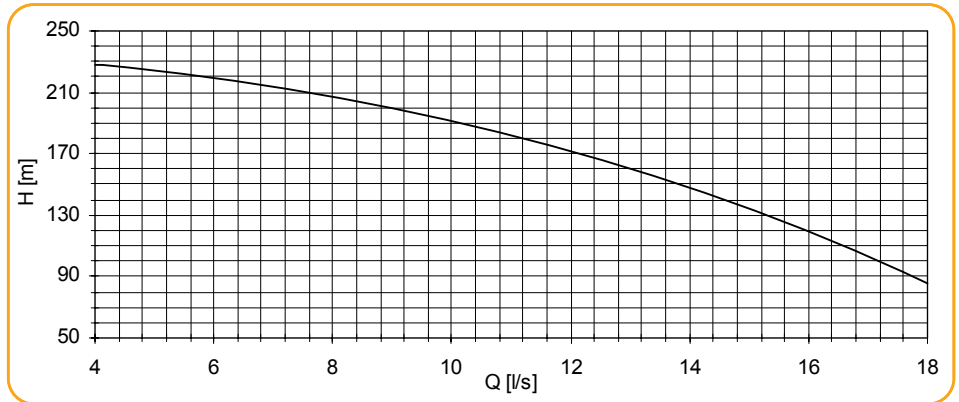


Net Positive
Suction Head

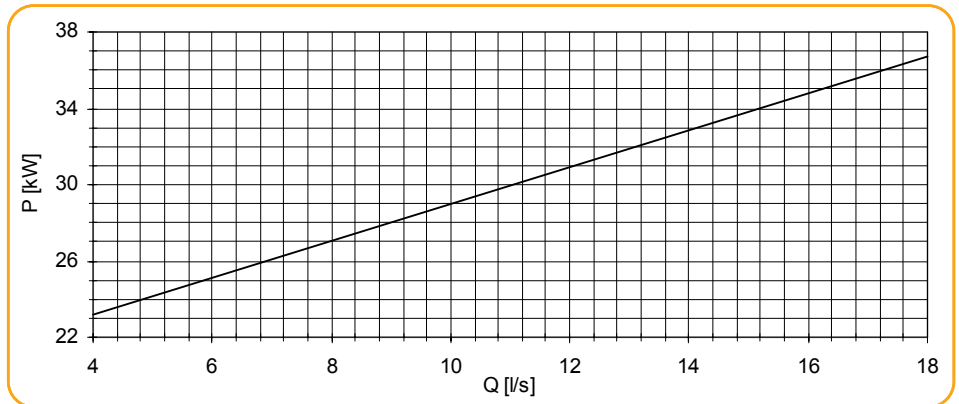


Pump performance curves

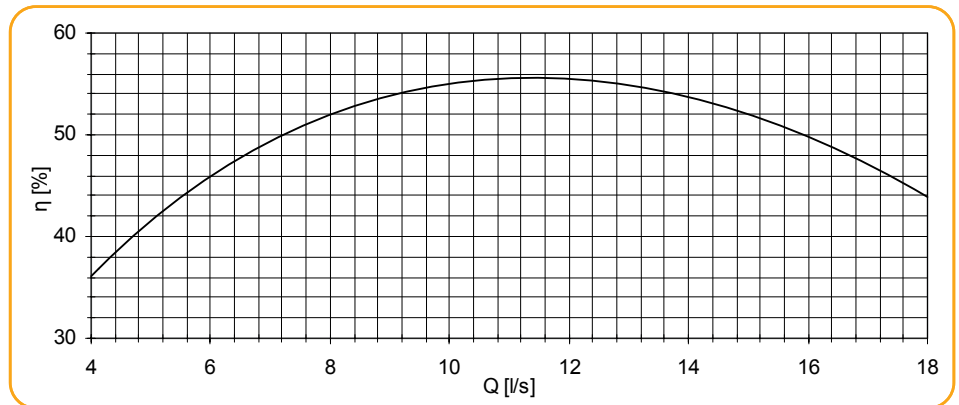
Total
Differential
Head



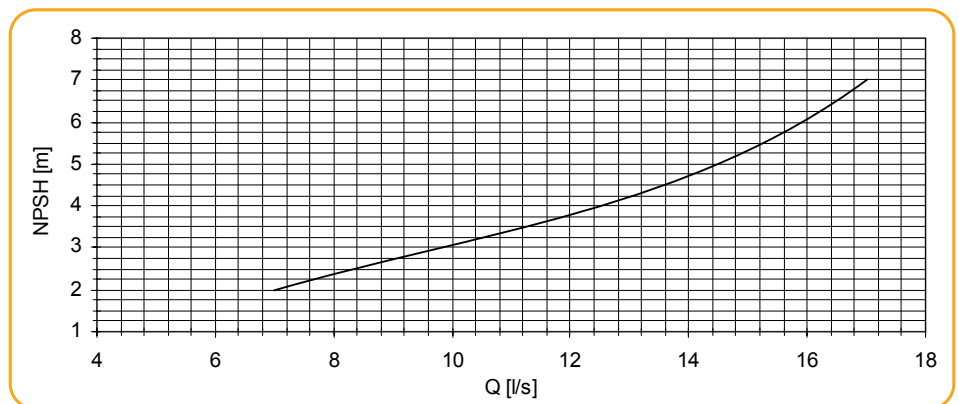
Power Input



Efficiency

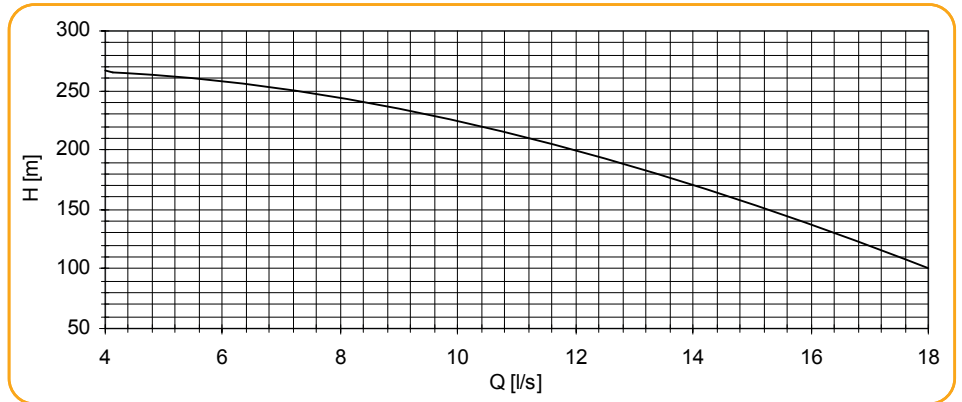


Net Positive
Suction Head

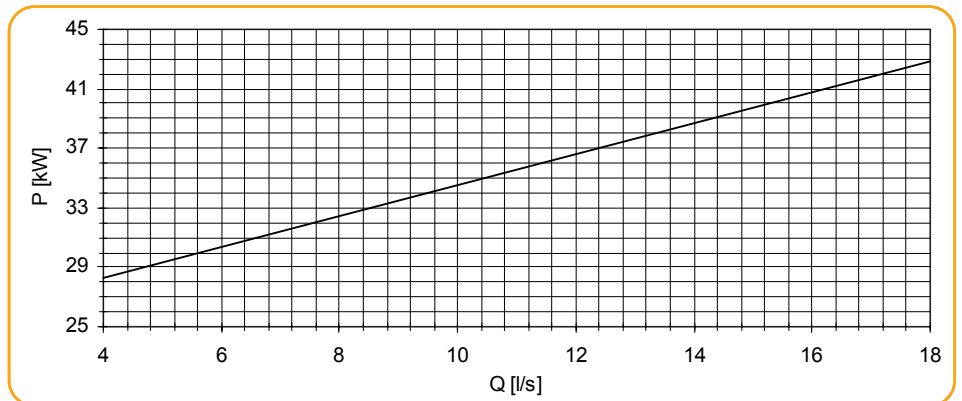


Pump performance curves

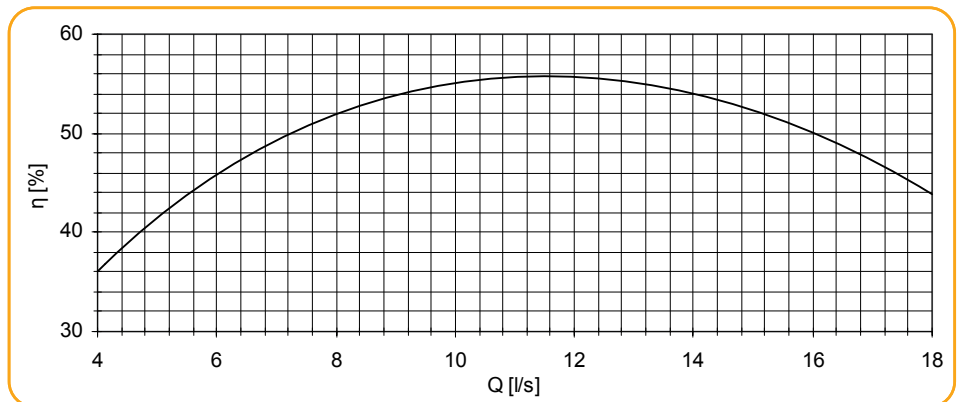
Total
Differential
Head



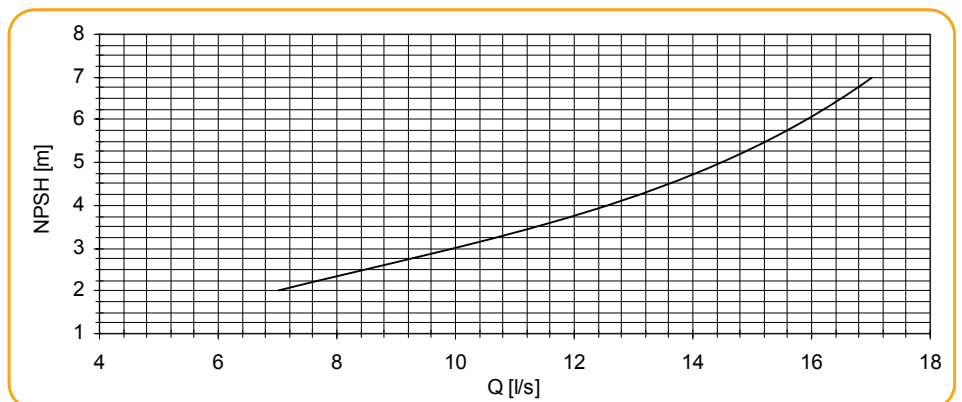
Power Input



Efficiency

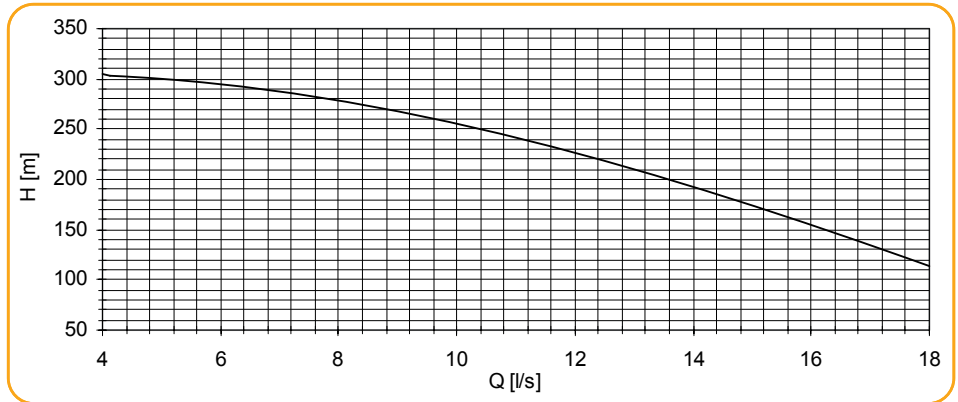


Net Positive
Suction Head

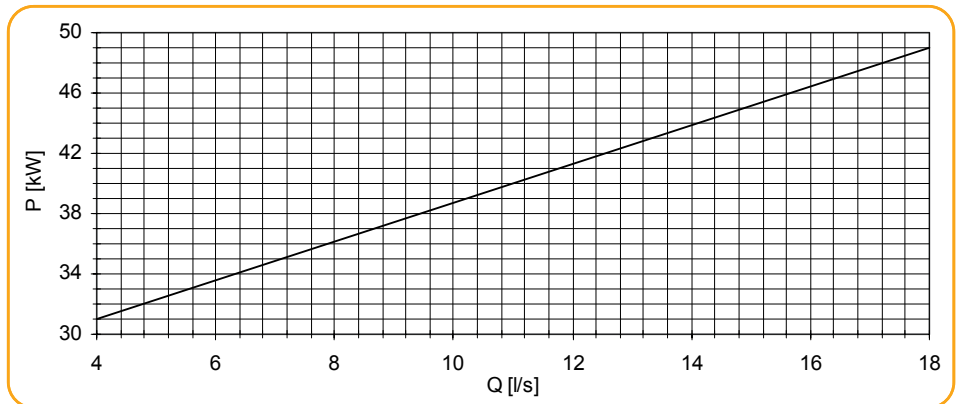


Pump performance curves

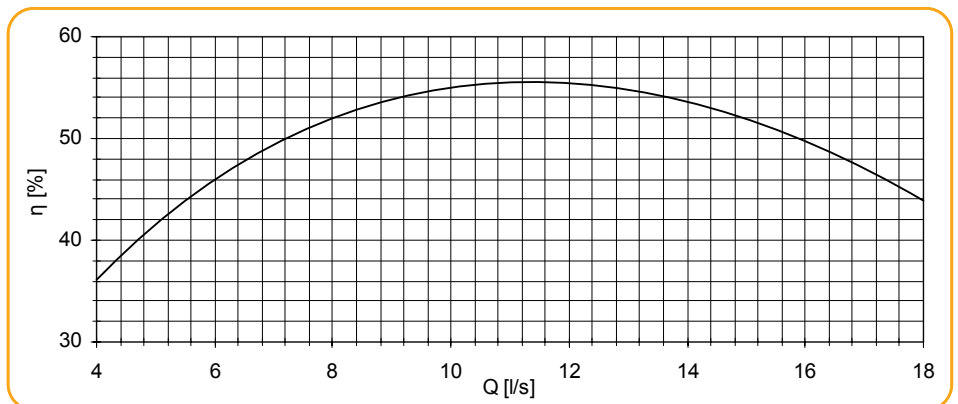
Total
Differential
Head



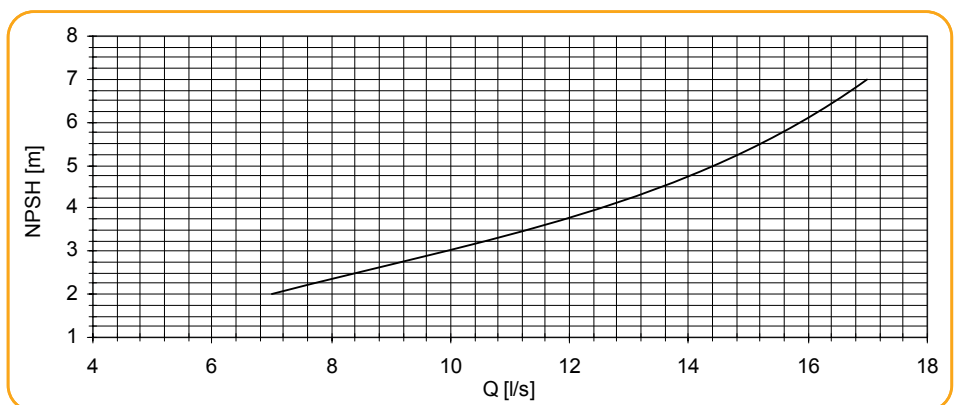
Power Input



Efficiency

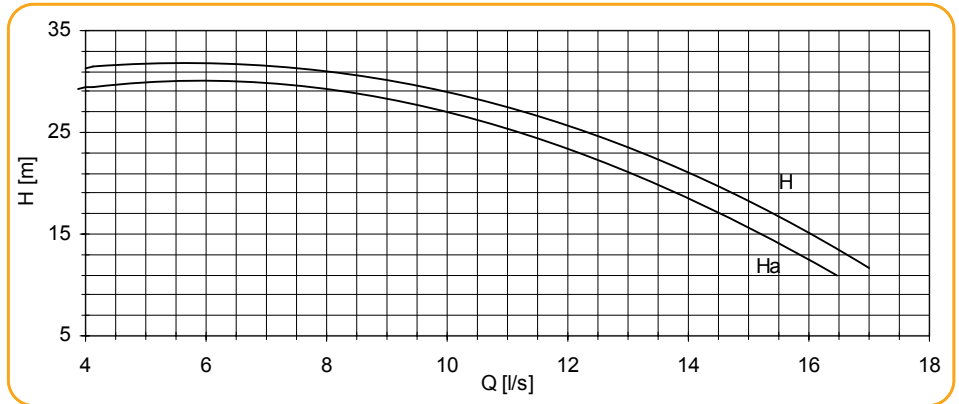


Net Positive
Suction Head

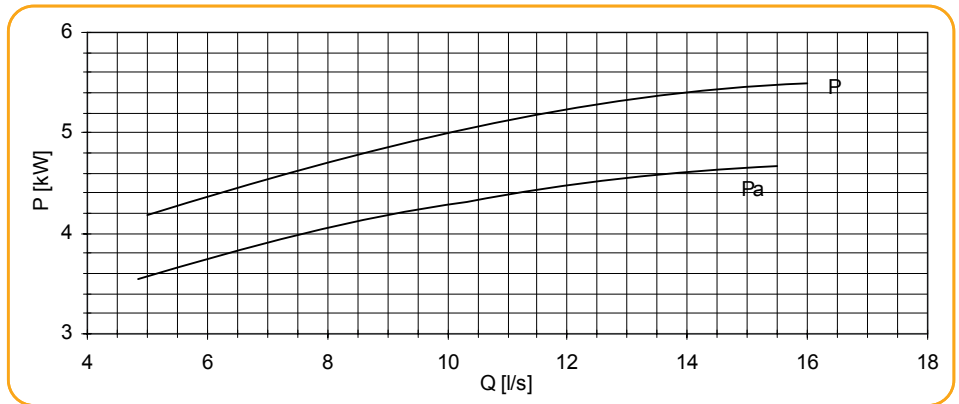


Pump performance curves

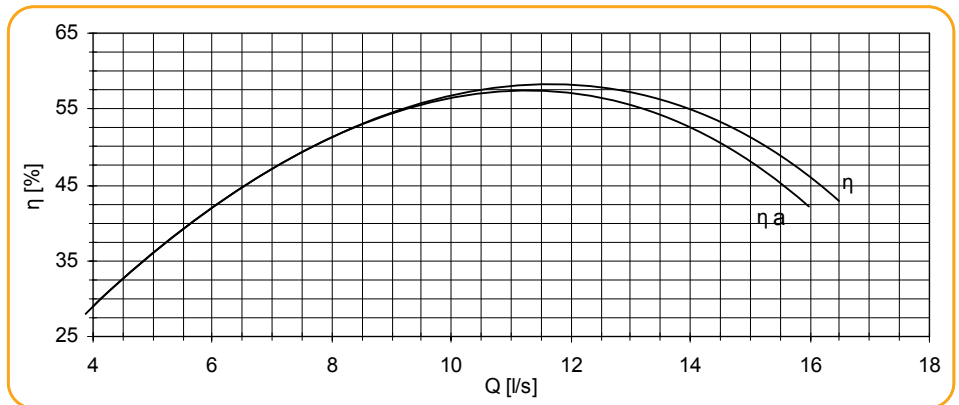
Total Differential Head



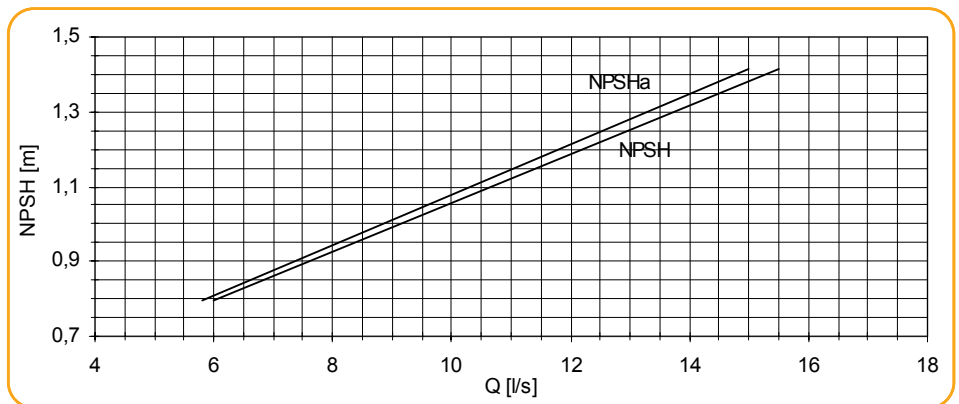
Power Input



Efficiency

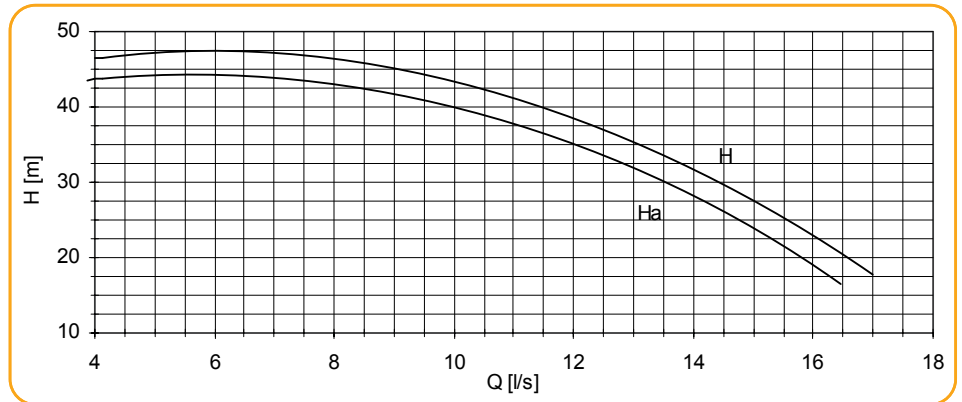


Net Positive Suction Head

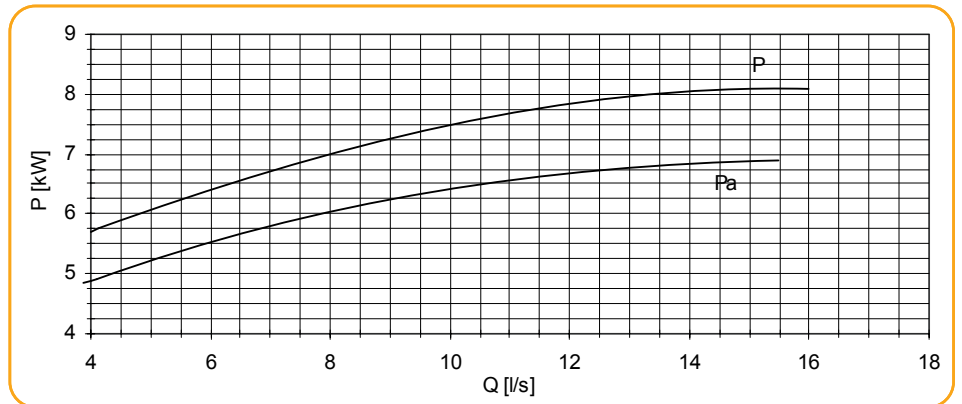


Pump performance curves

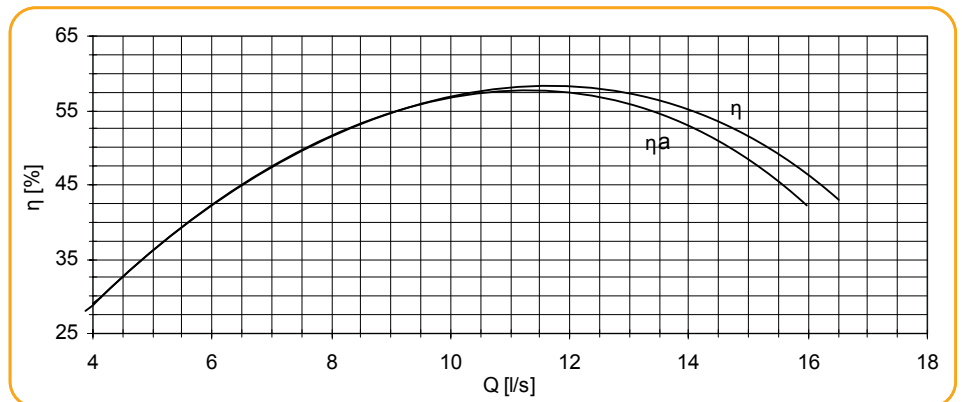
Total
Differential
Head



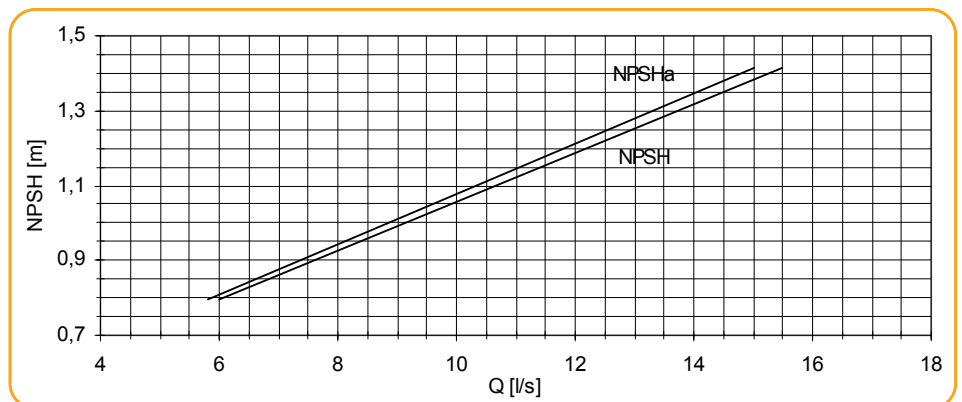
Power Input



Efficiency

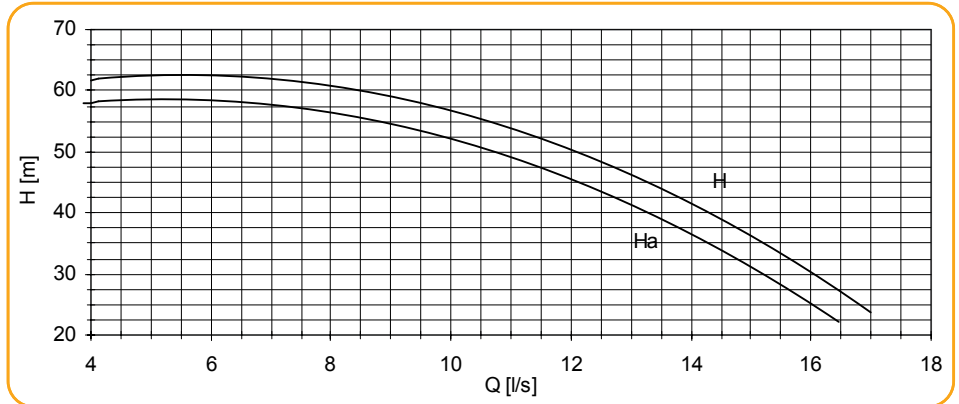


Net Positive
Suction Head

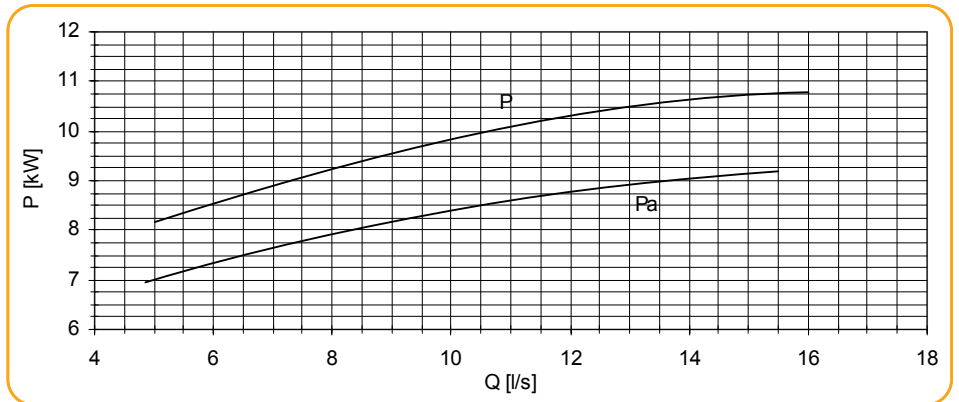


Pump performance curves

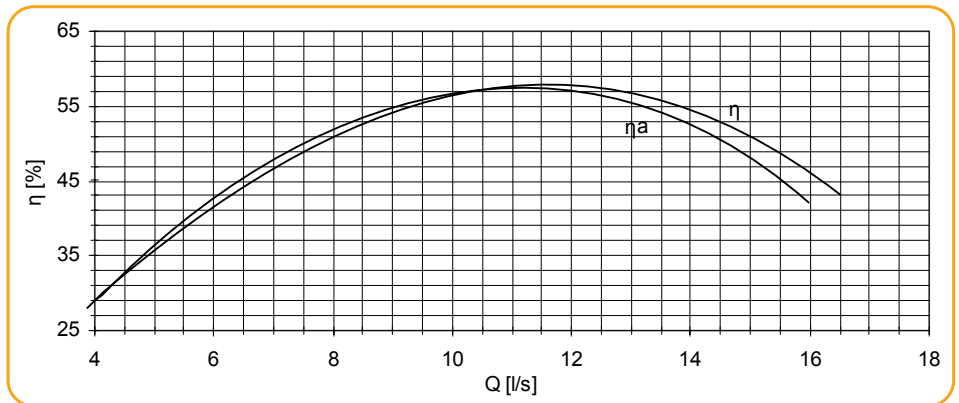
Total Differential Head



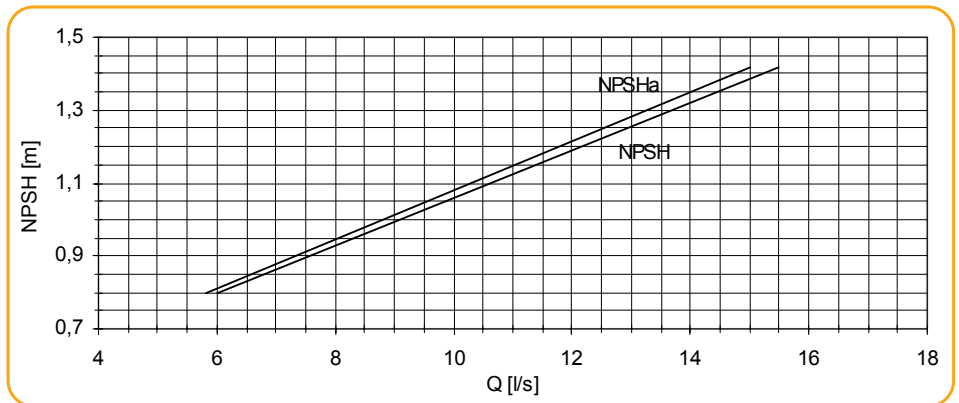
Power Input



Efficiency

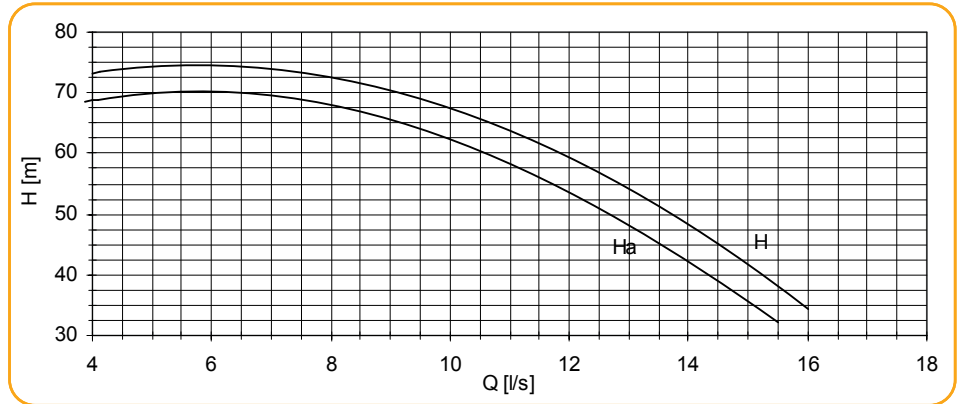


Net Positive Suction Head

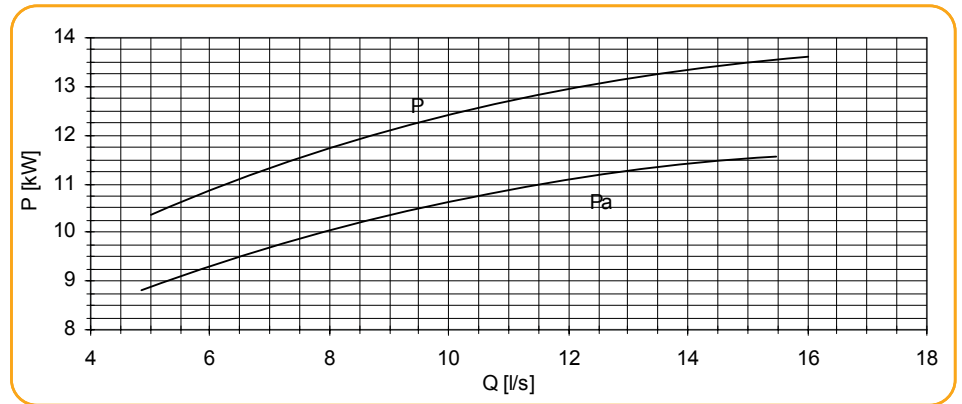


Pump performance curves

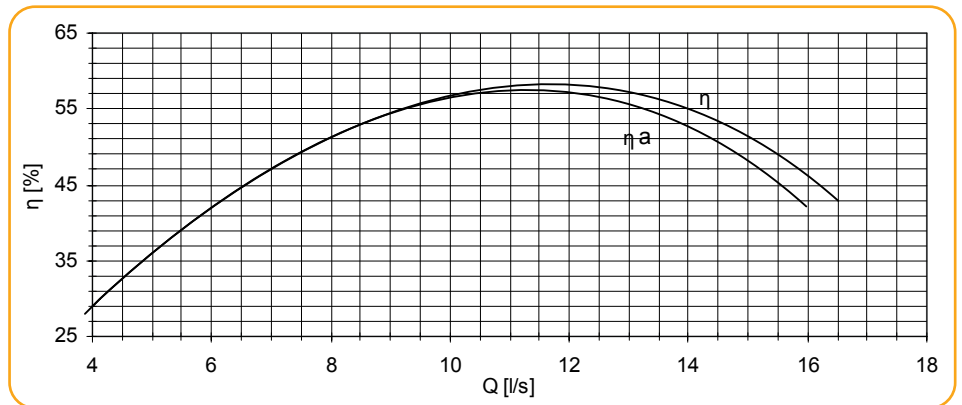
Total
Differential
Head



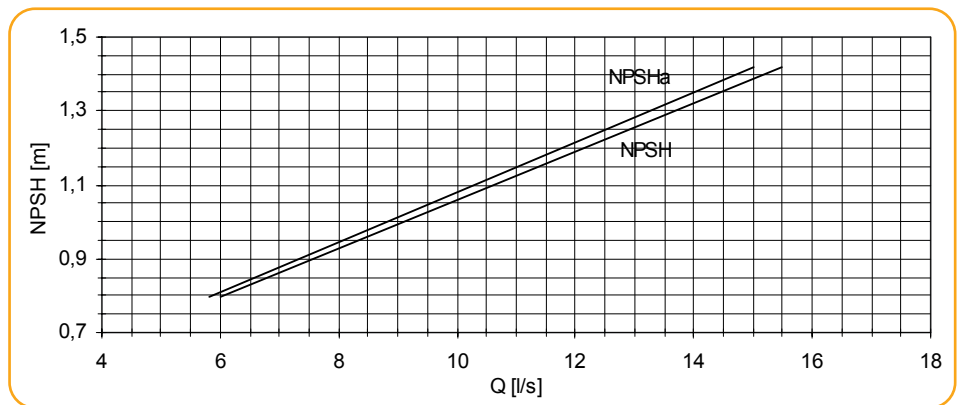
Power Input



Efficiency

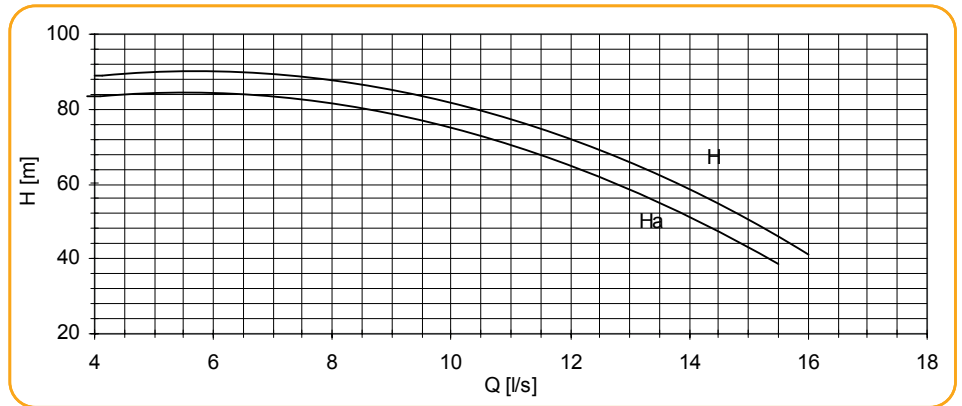


Net Positive
Suction Head

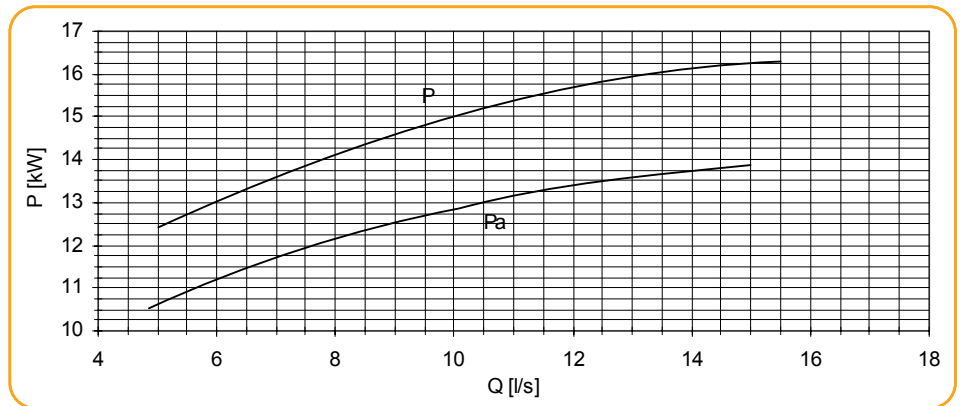


Pump performance curves

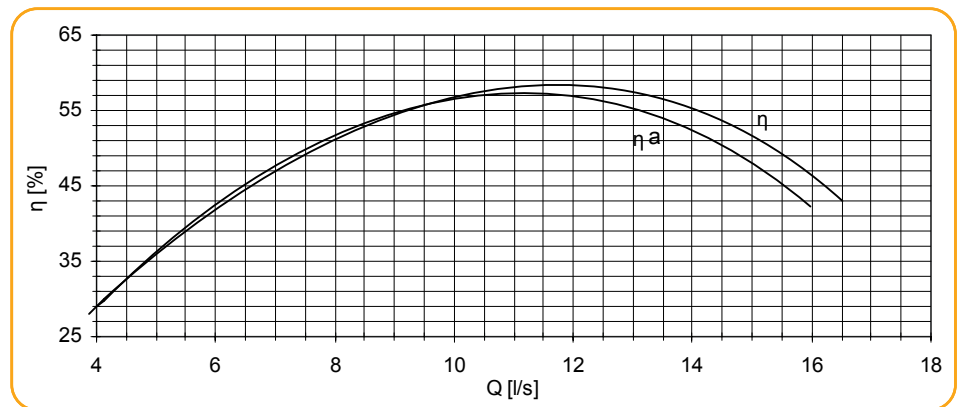
Total Differential Head



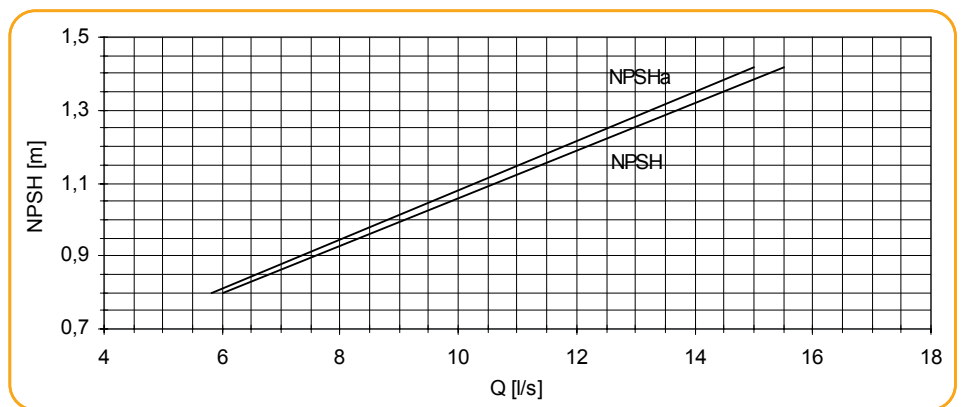
Power Input



Efficiency

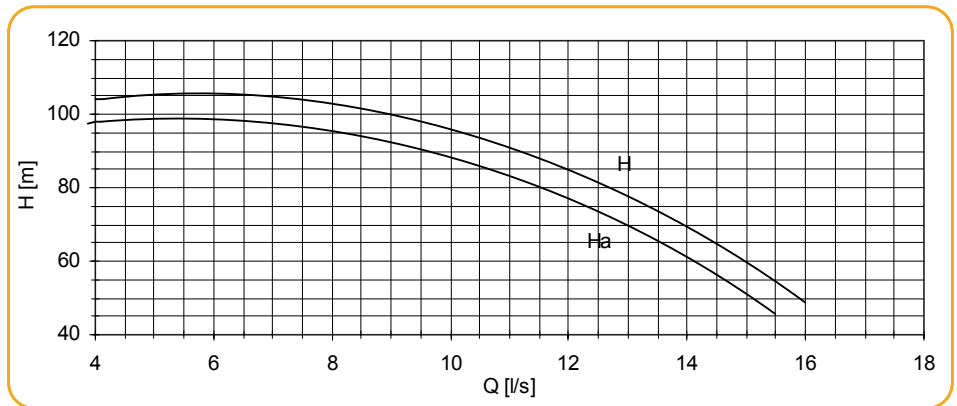


Net Positive Suction Head

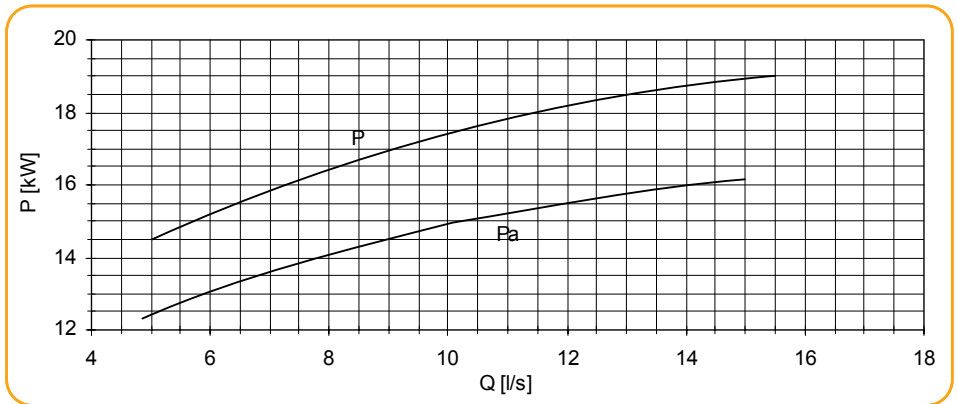


Pump performance curves

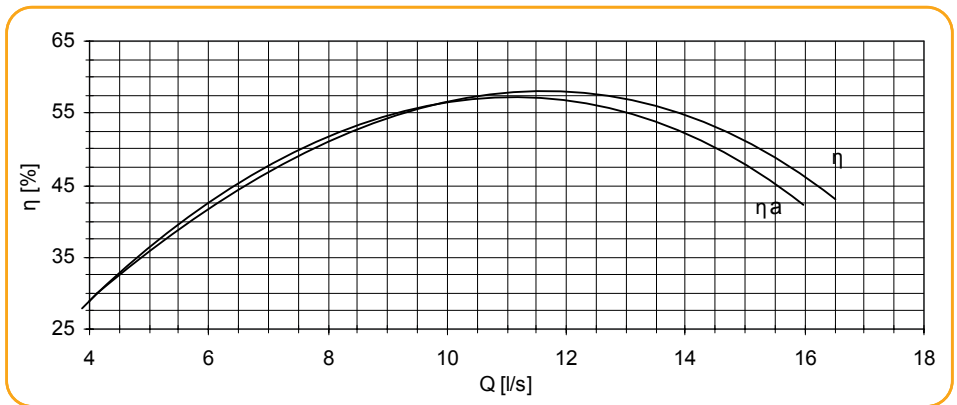
Total
Differential
Head



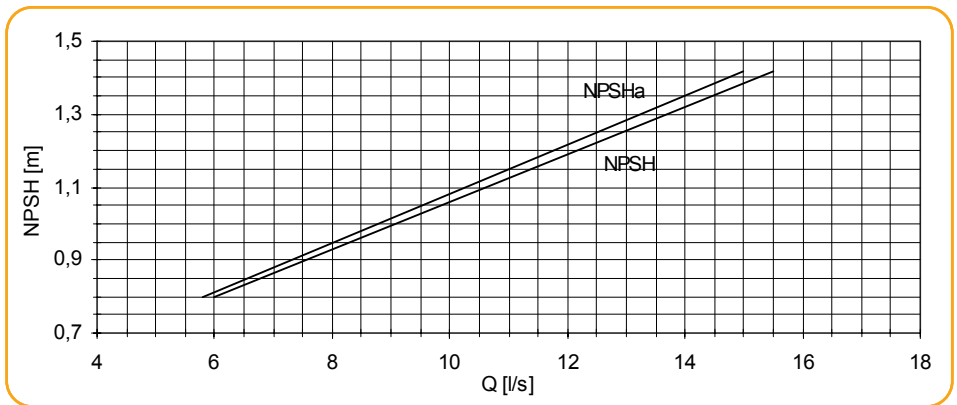
Power Input



Efficiency

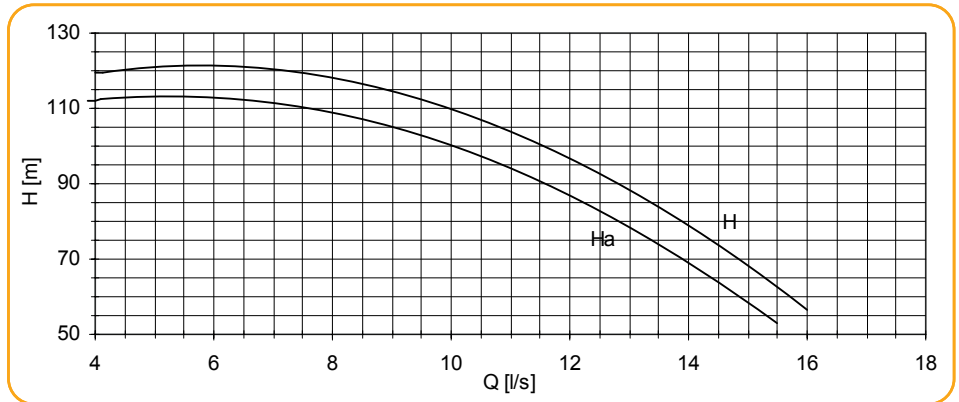


Net Positive
Suction Head

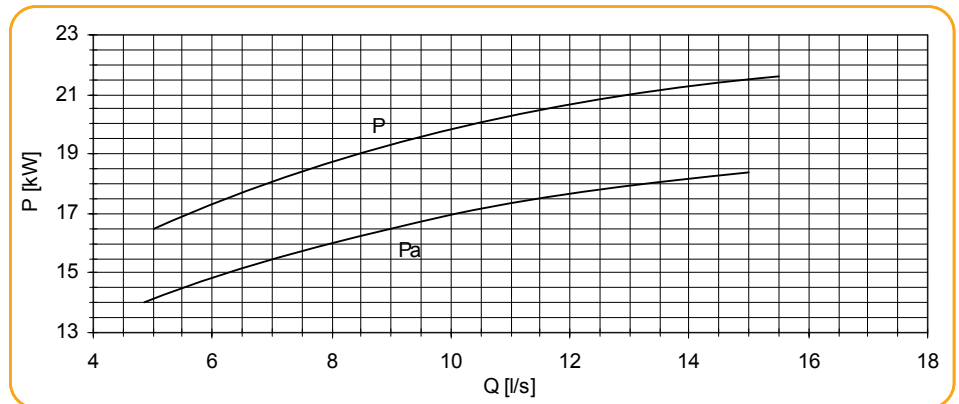


Pump performance curves

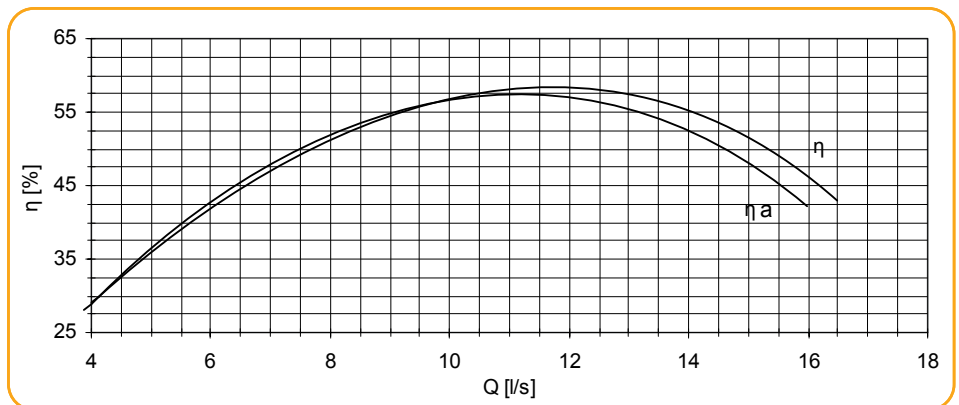
Total
Differential
Head



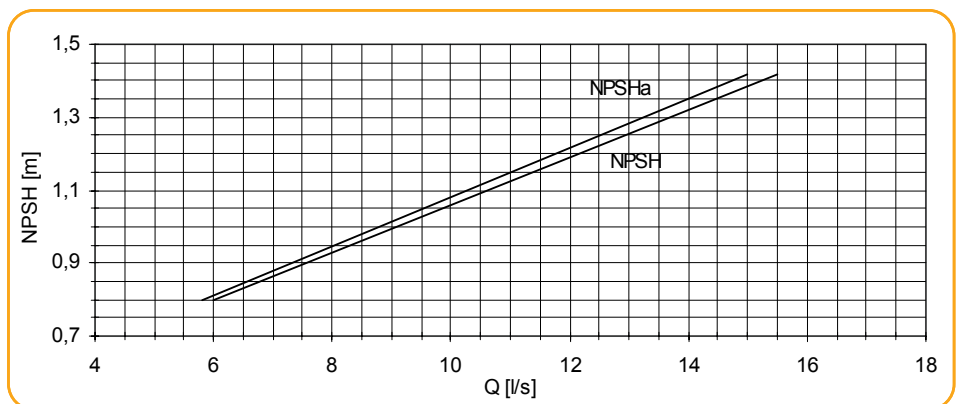
Power Input



Efficiency

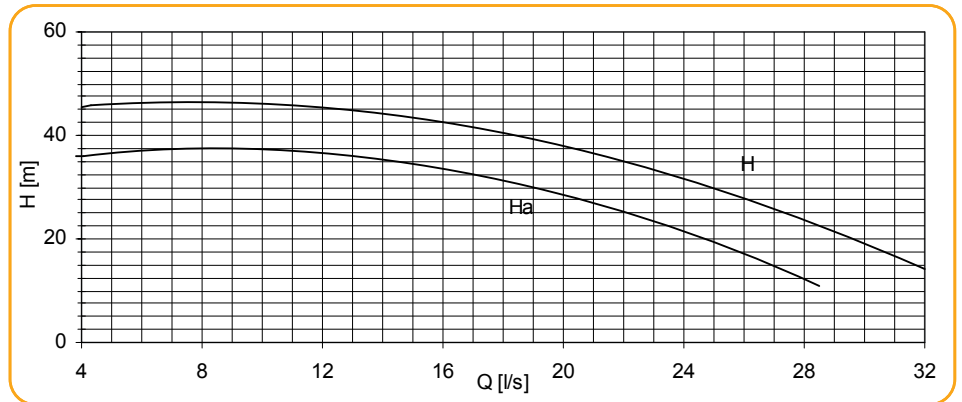


Net Positive
Suction Head

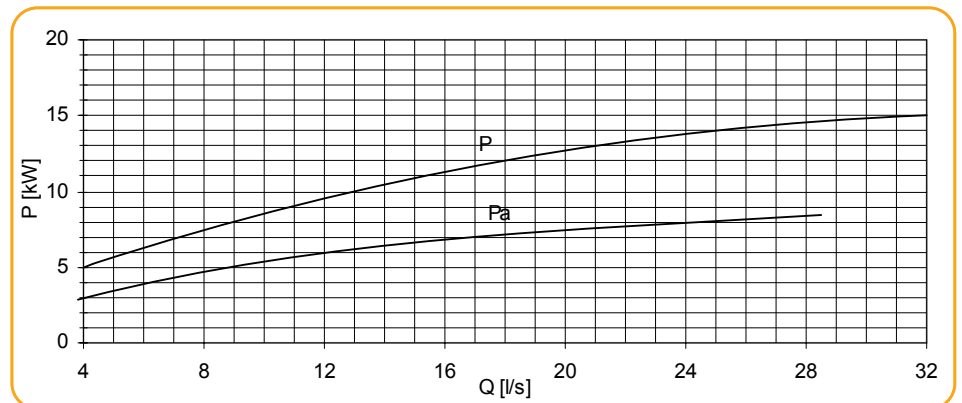


Pump performance curves

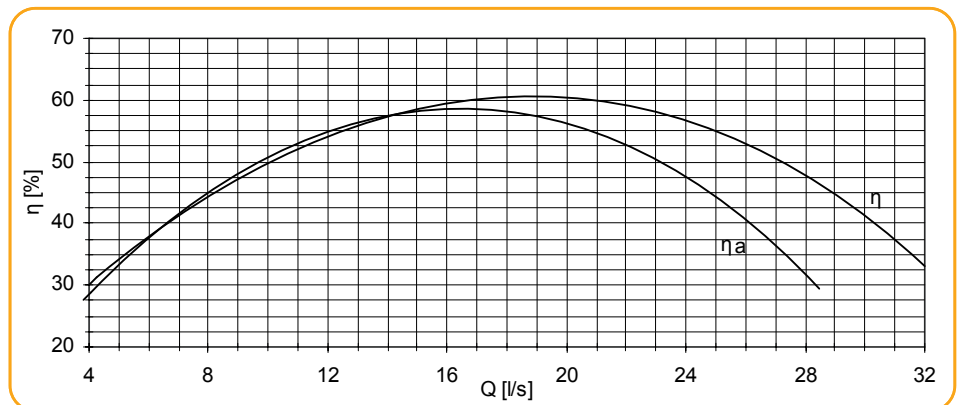
Total
Differential
Head



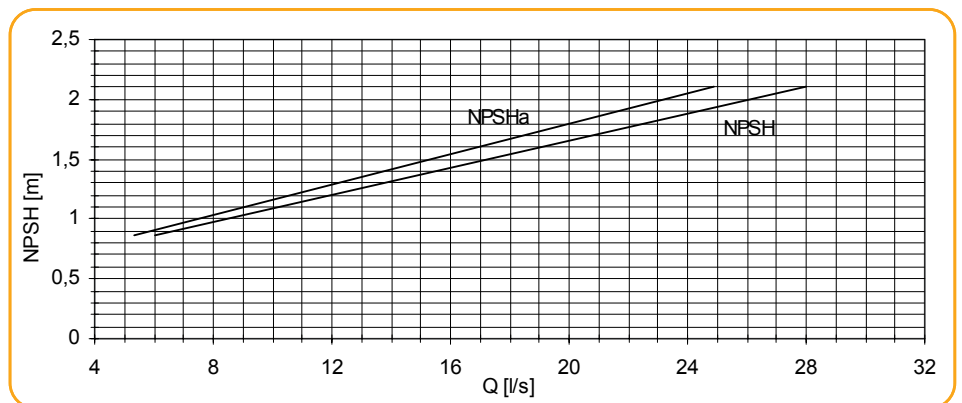
Power Input



Efficiency

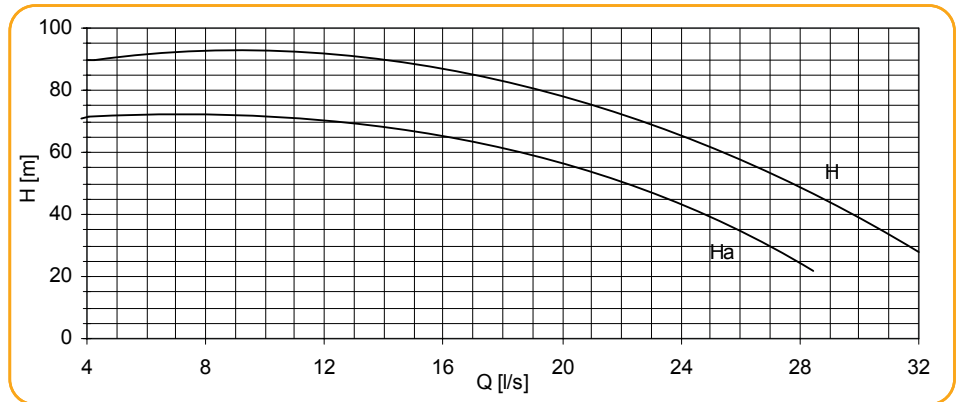


Net Positive
Suction Head

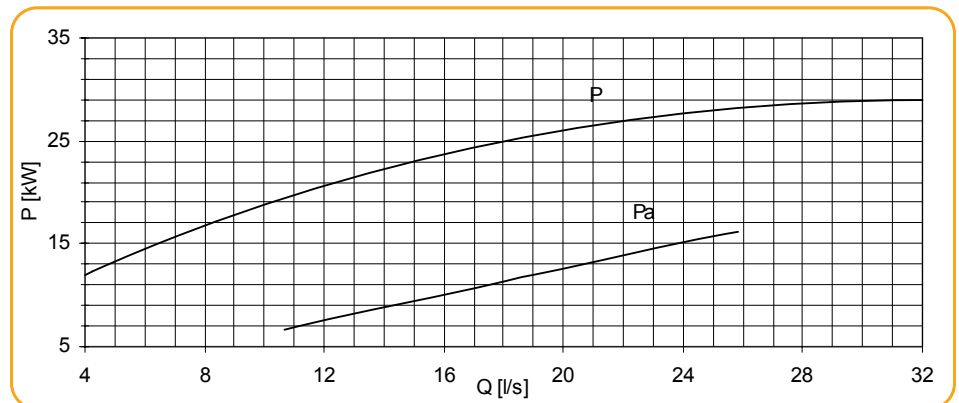


Pump performance curves

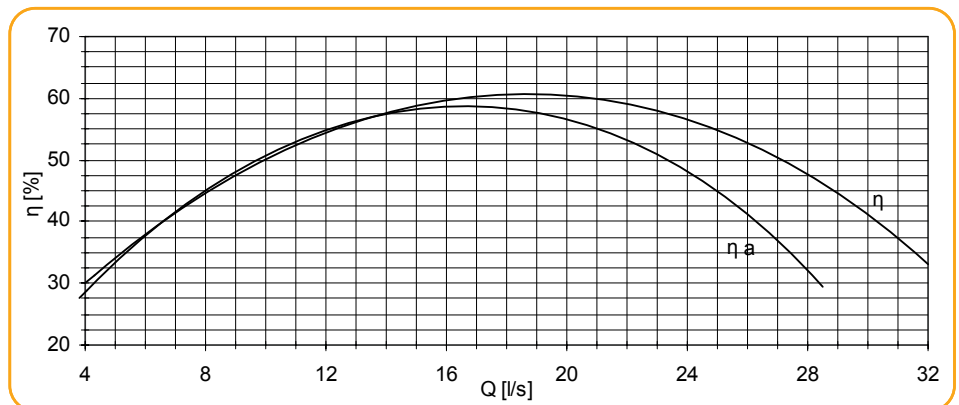
Total Differential Head



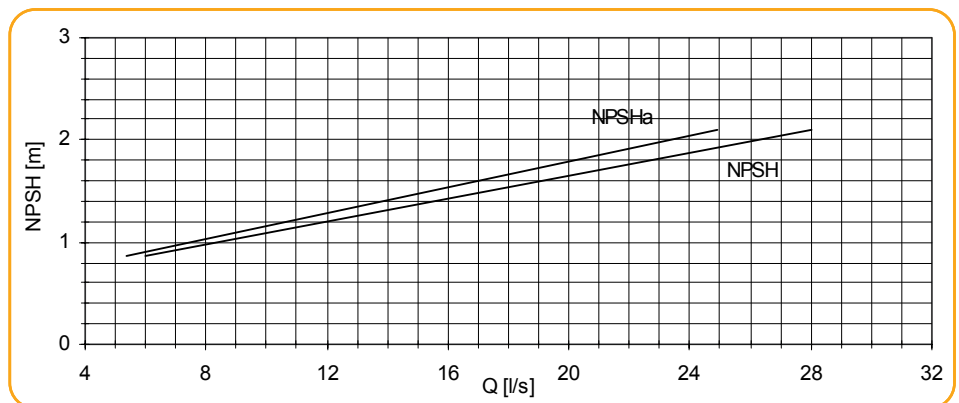
Power Input



Efficiency

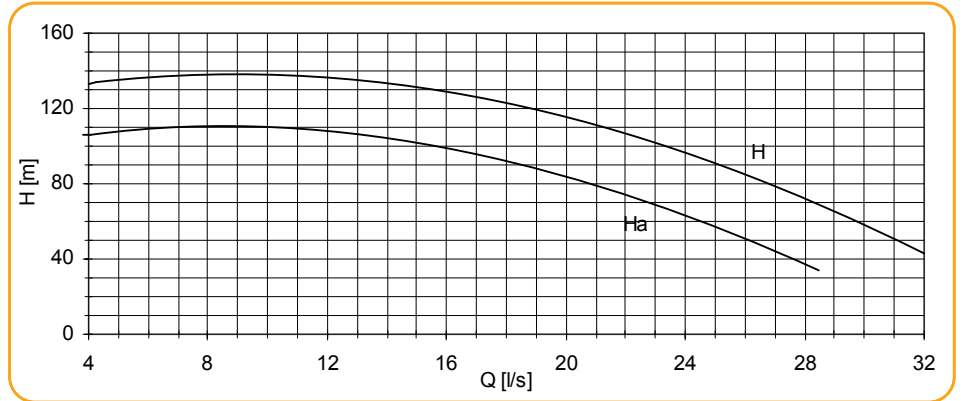


Net Positive Suction Head

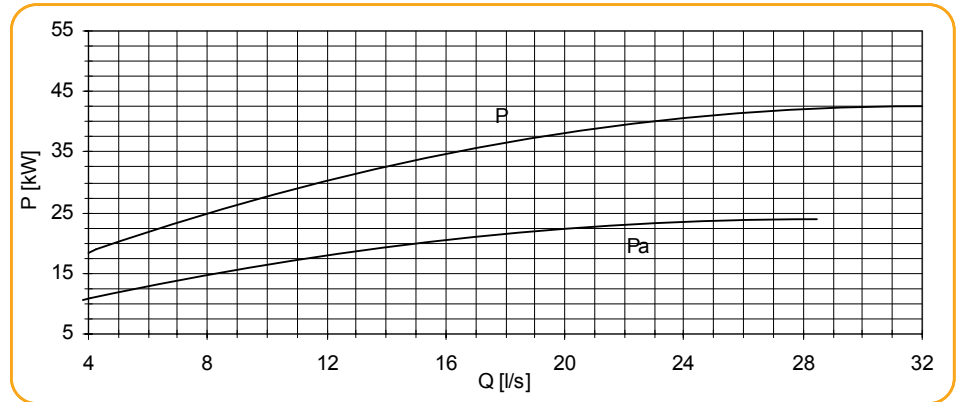


Pump performance curves

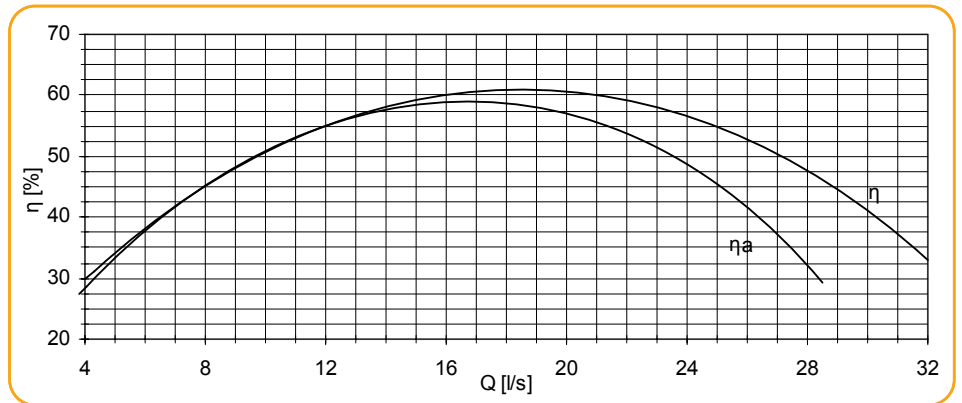
Total Differential Head



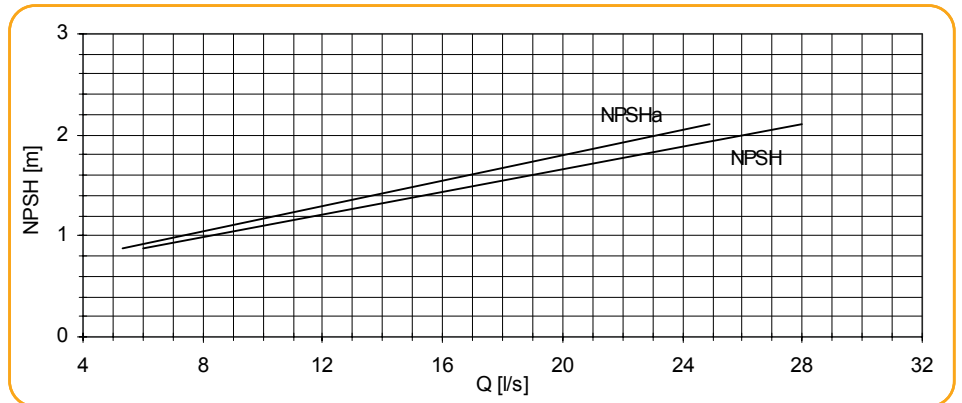
Power Input



Efficiency

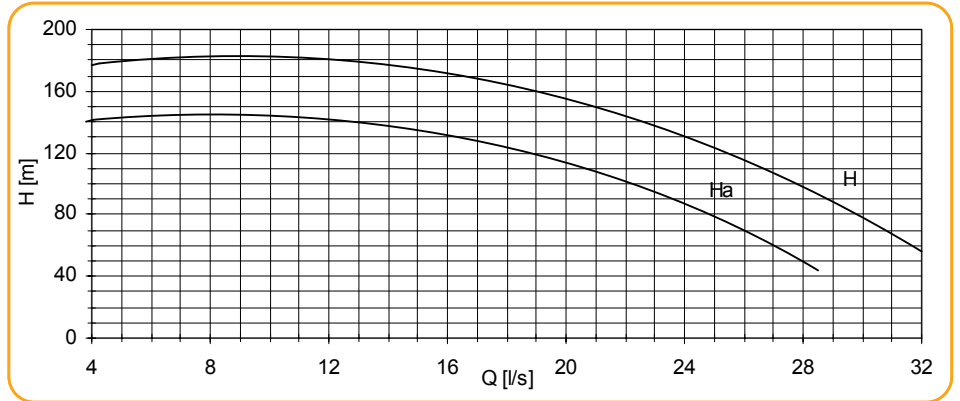


Net Positive Suction Head

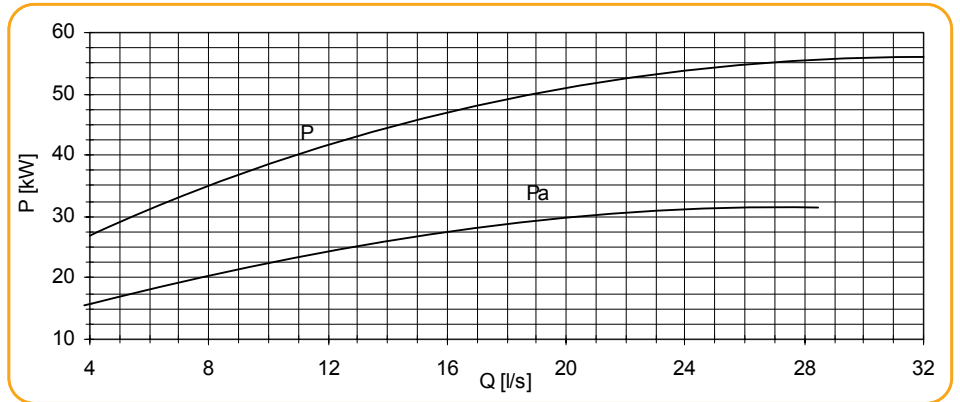


Pump performance curves

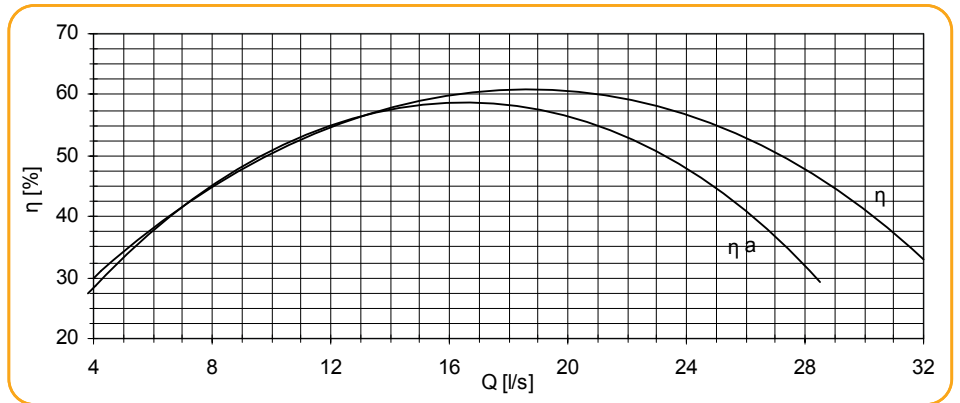
Total
Differential
Head



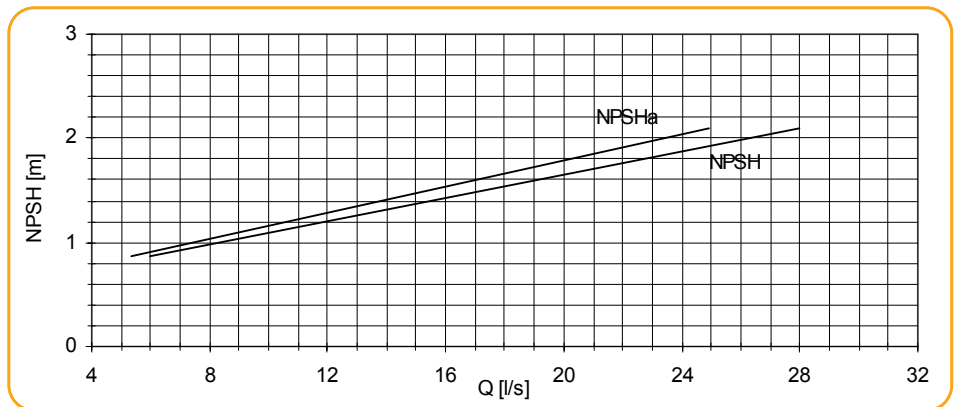
Power Input



Efficiency

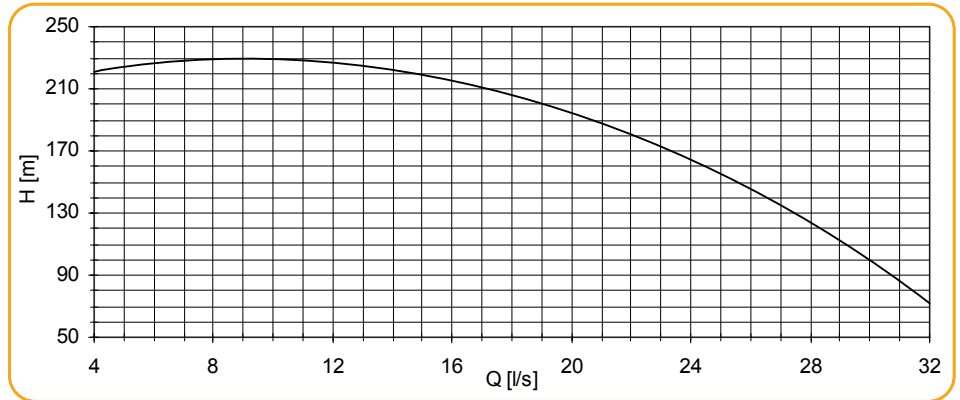


Net Positive
Suction Head

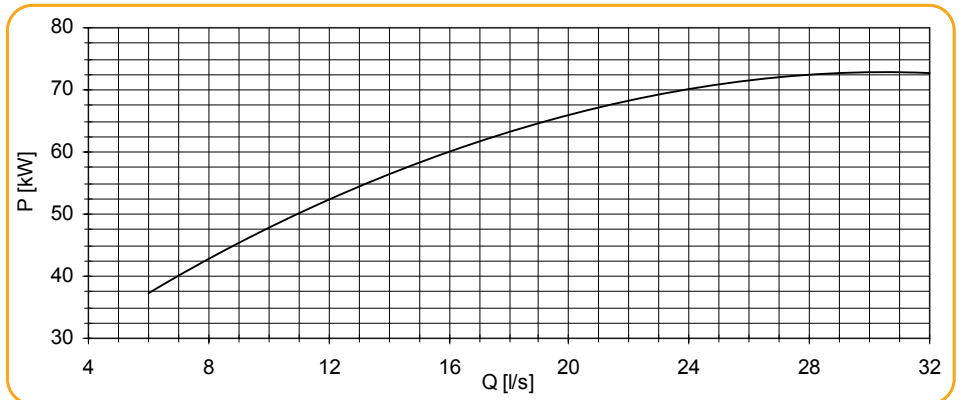


Pump performance curves

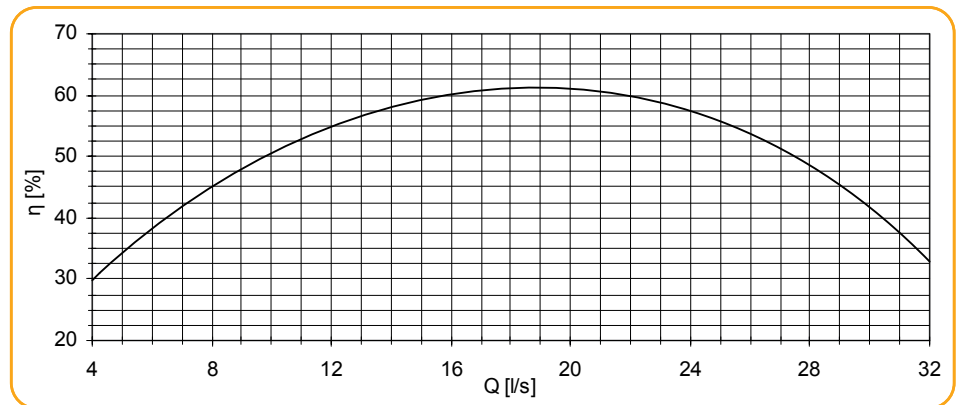
Total
Differential
Head



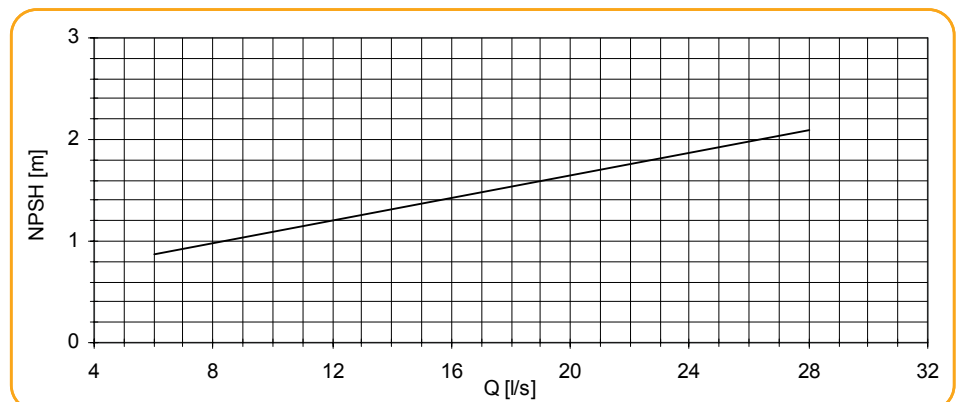
Power Input



Efficiency

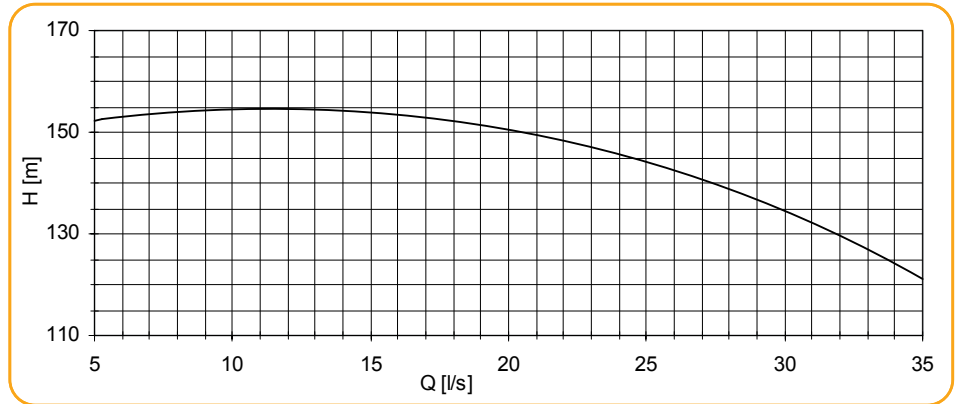


Net Positive
Suction Head

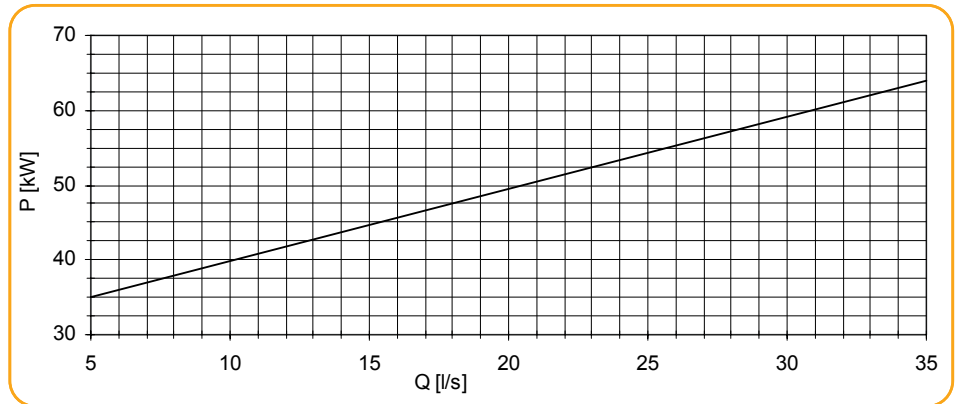


Pump performance curves

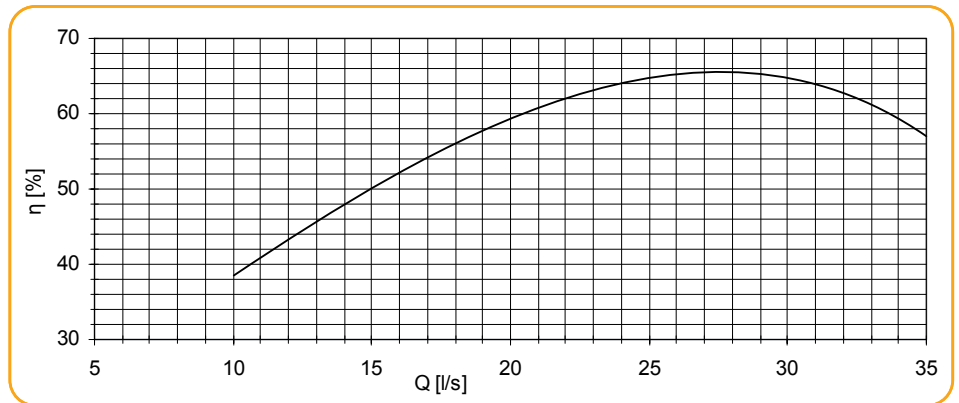
Total
Differential
Head



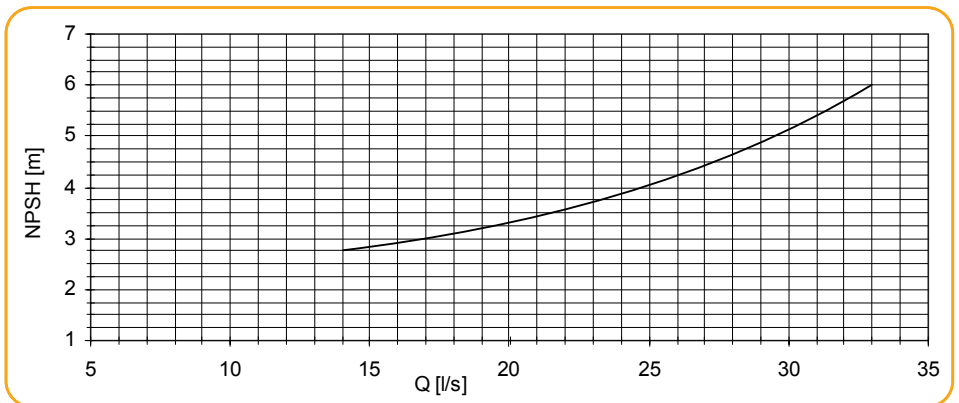
Power Input



Efficiency

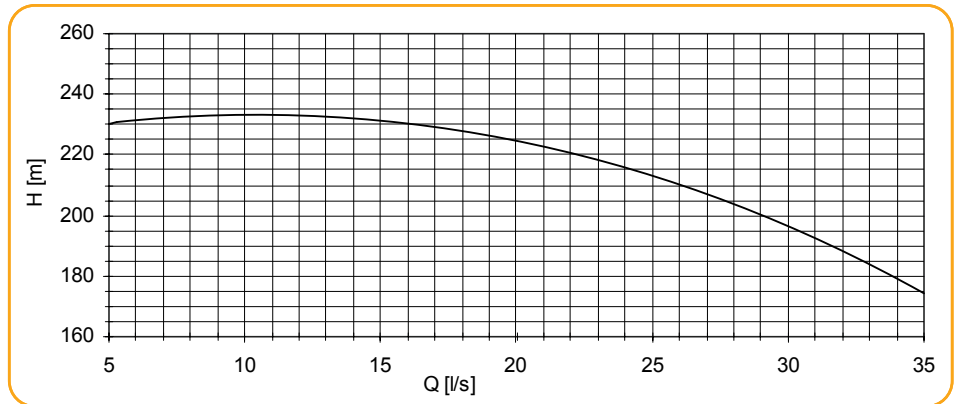


Net Positive
Suction Head

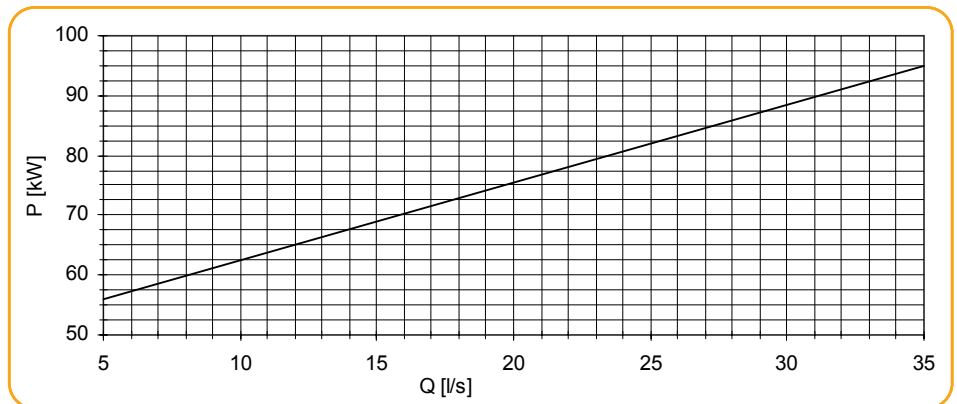


Pump performance curves

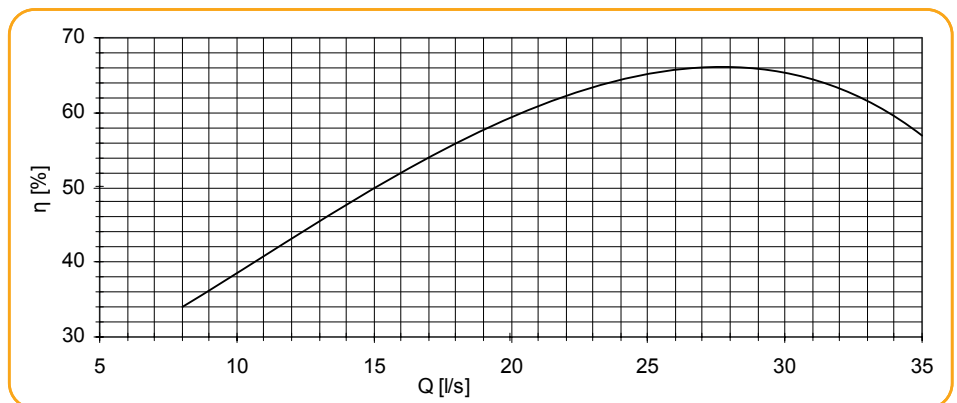
Total
Differential
Head



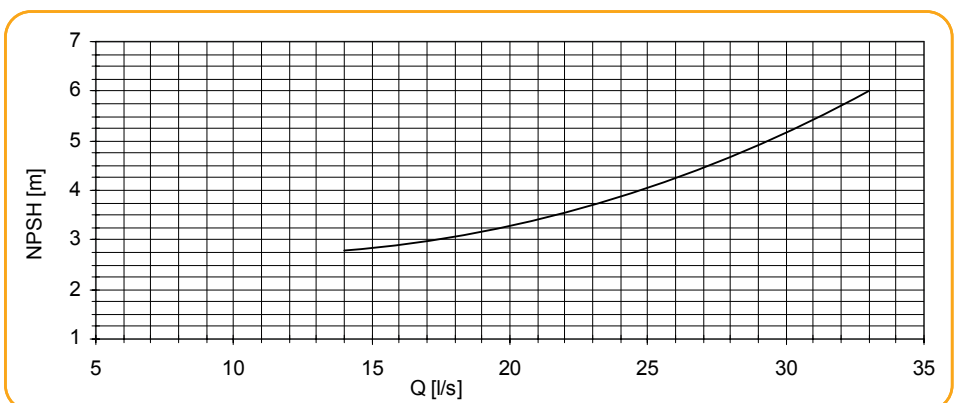
Power Input



Efficiency

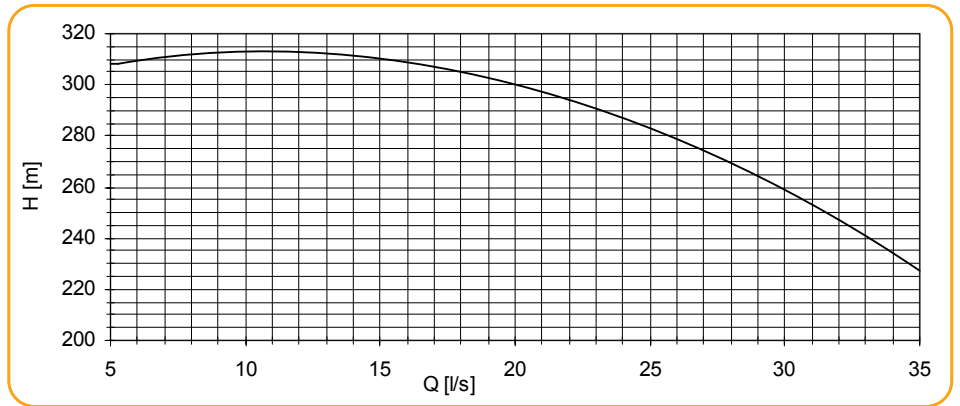


Net Positive
Suction Head

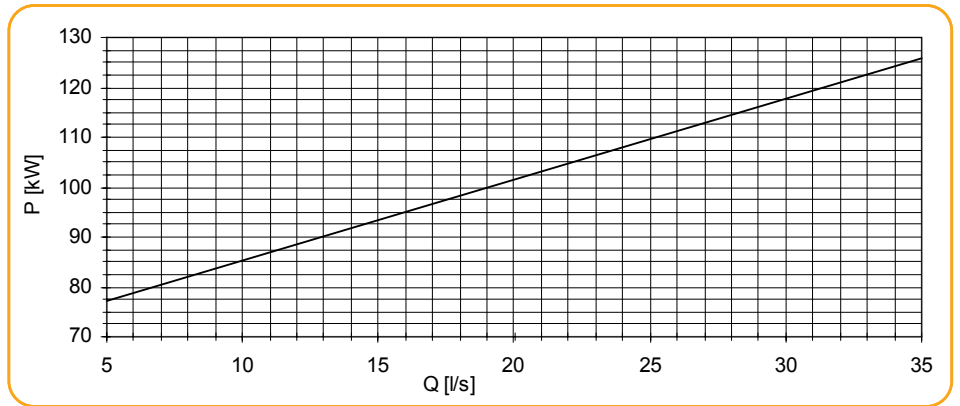


Pump performance curves

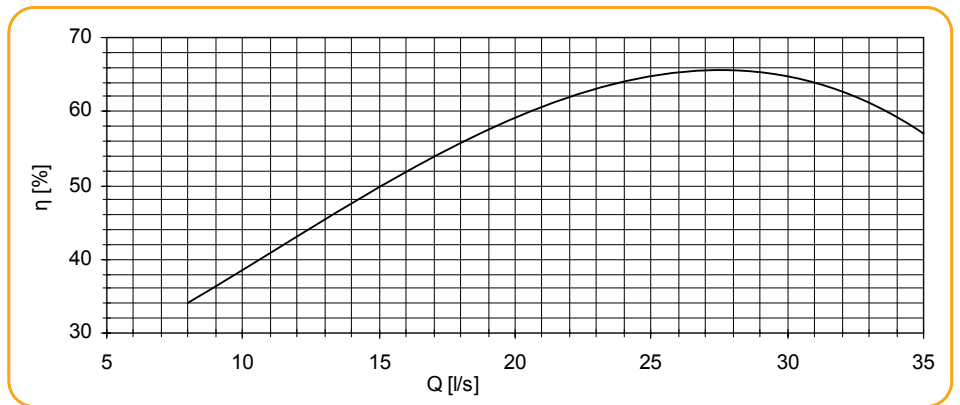
Total
Differential
Head



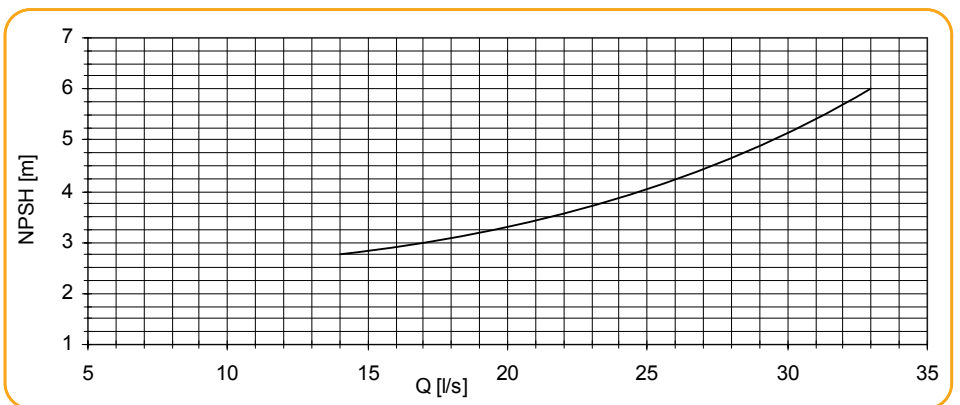
Power Input



Efficiency

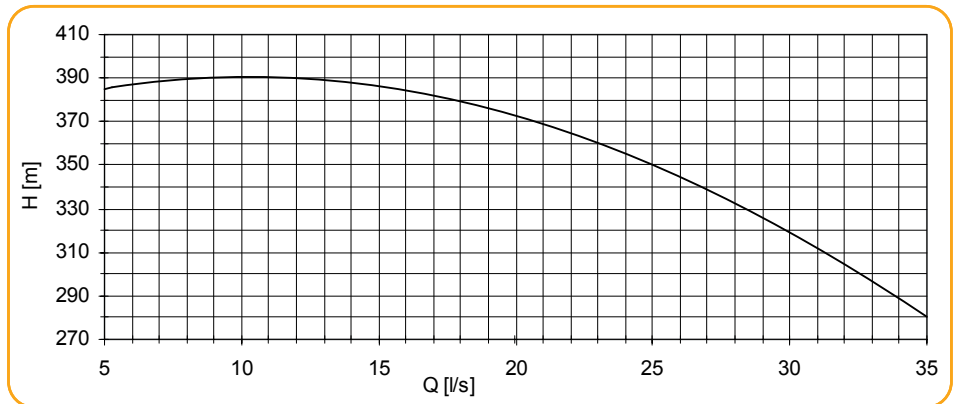


Net Positive
Suction Head

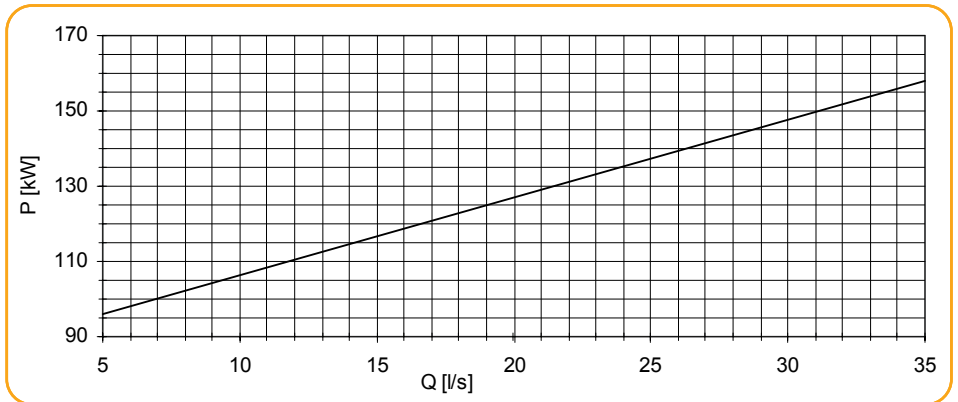


Pump performance curves

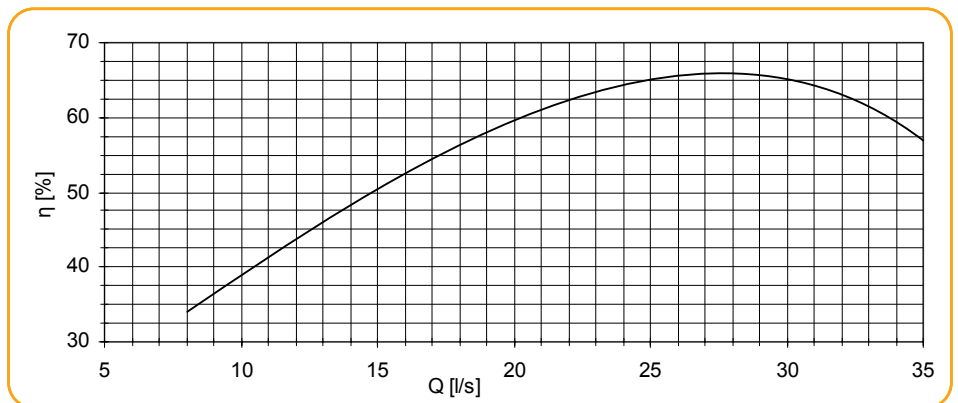
Total
Differential
Head



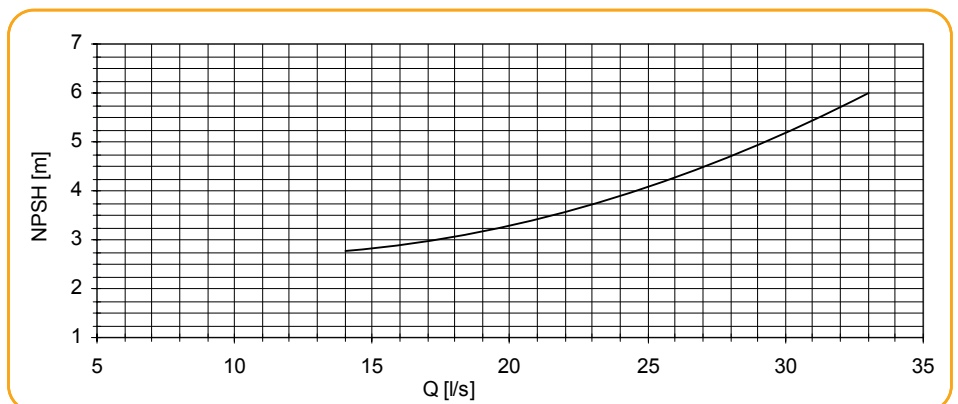
Power Input



Efficiency

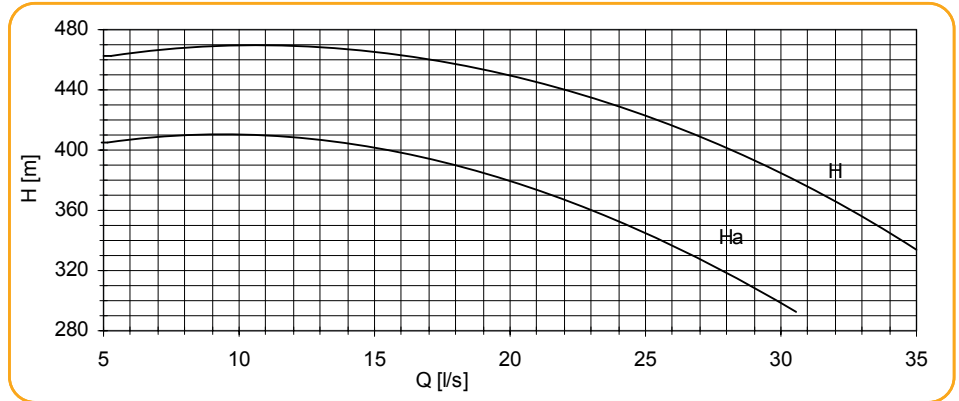


Net Positive
Suction Head

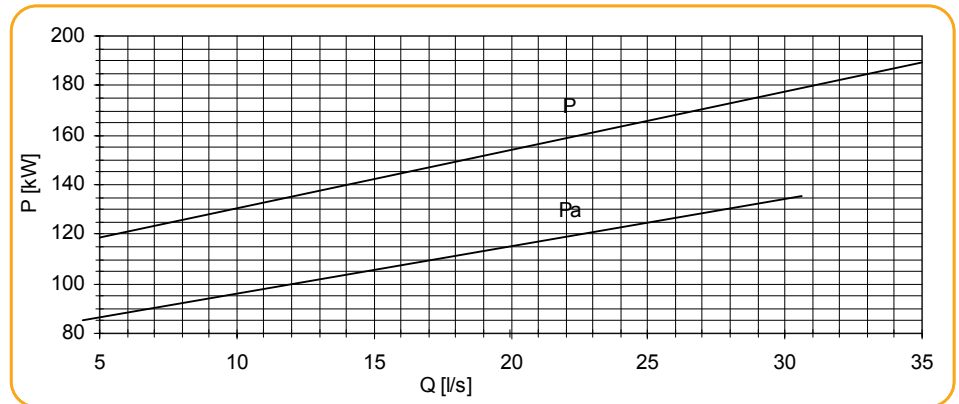


Pump performance curves

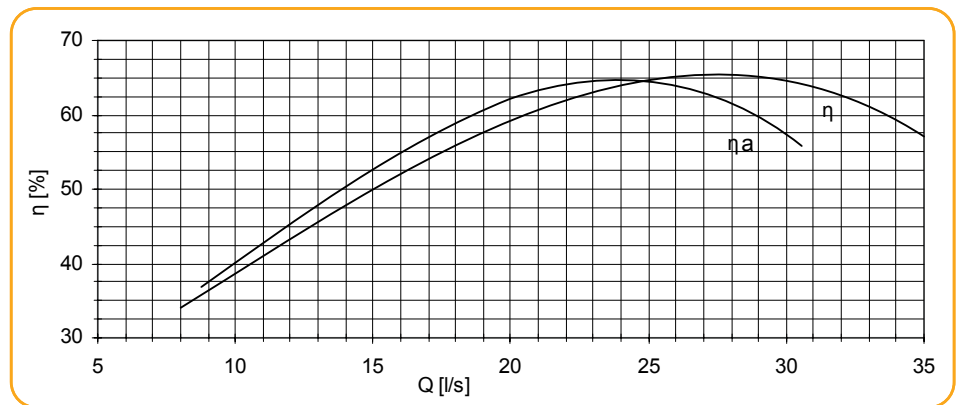
Total
Differential
Head



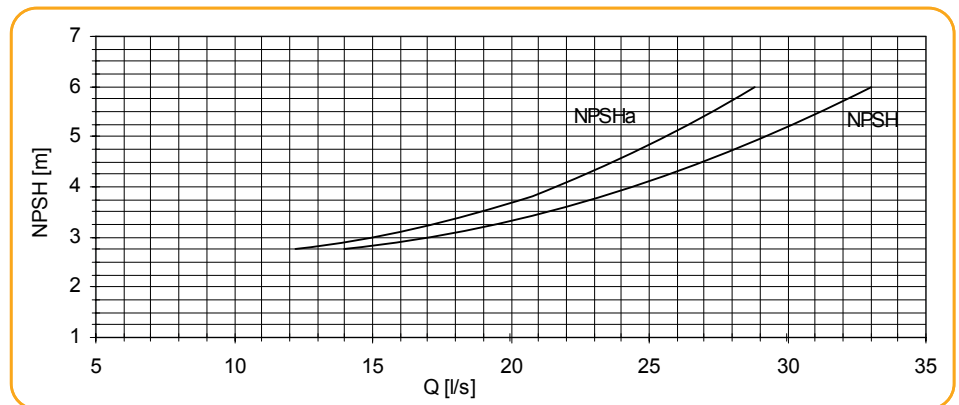
Power Input



Efficiency

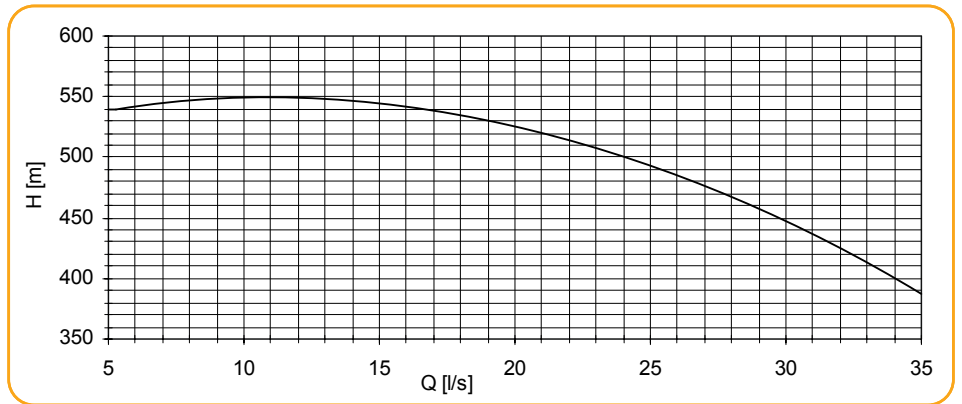


Net Positive
Suction Head

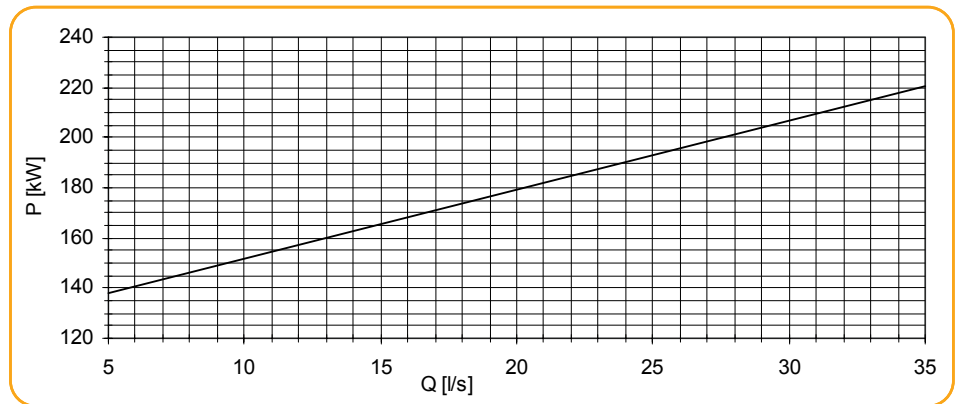


Pump performance curves

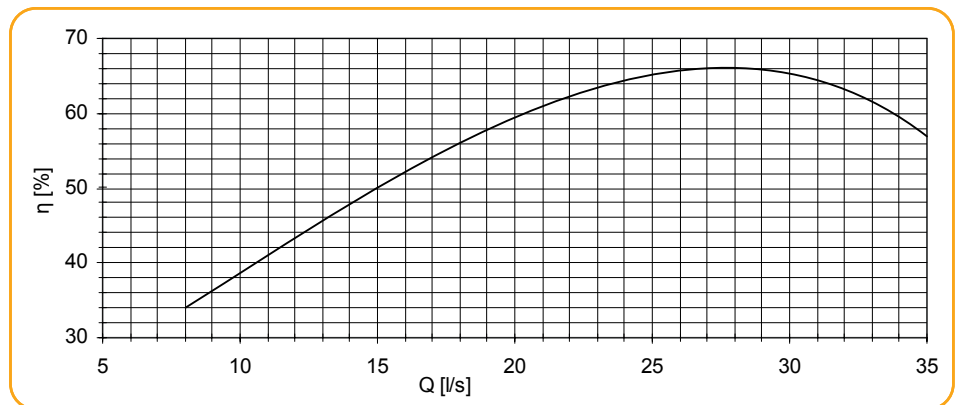
Total
Differential
Head



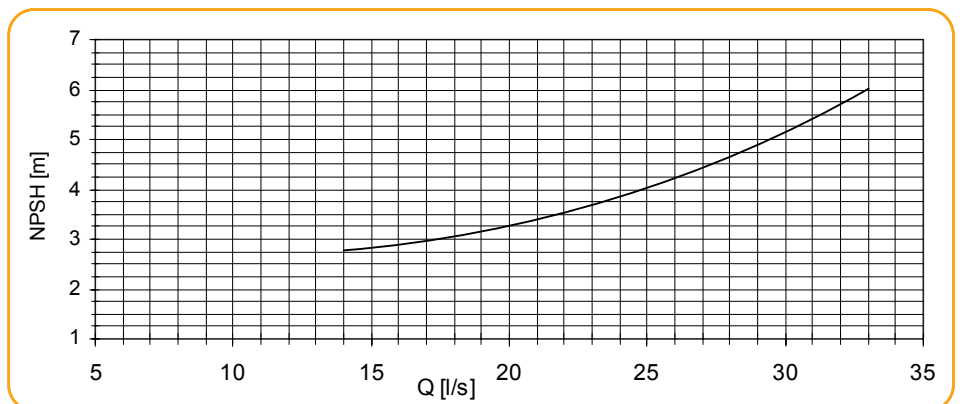
Power Input



Efficiency



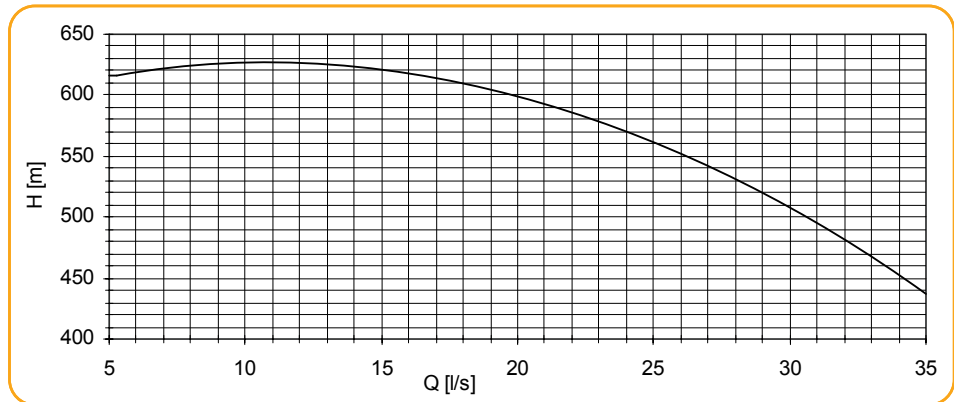
Net Positive
Suction Head



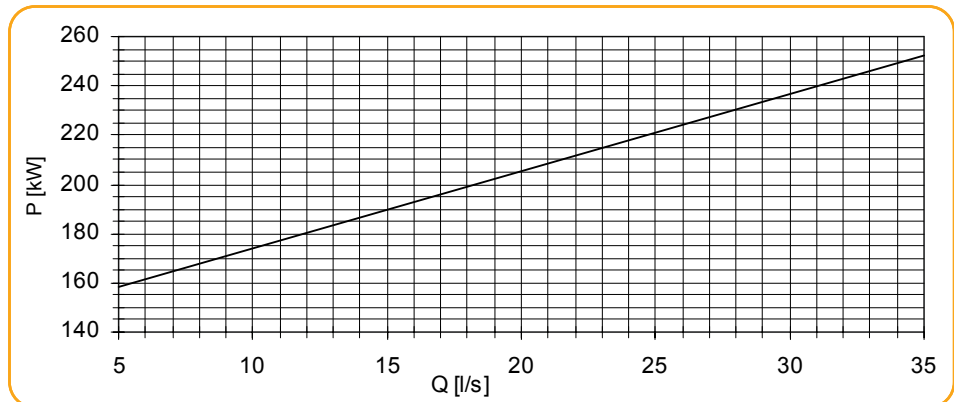
Pump performance curves

KCP 162-8
n = 2900 (rpm)

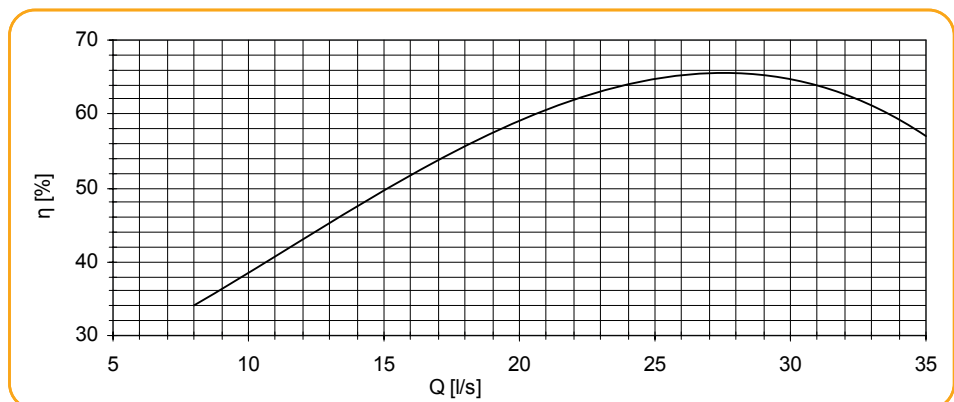
Total
Differential
Head



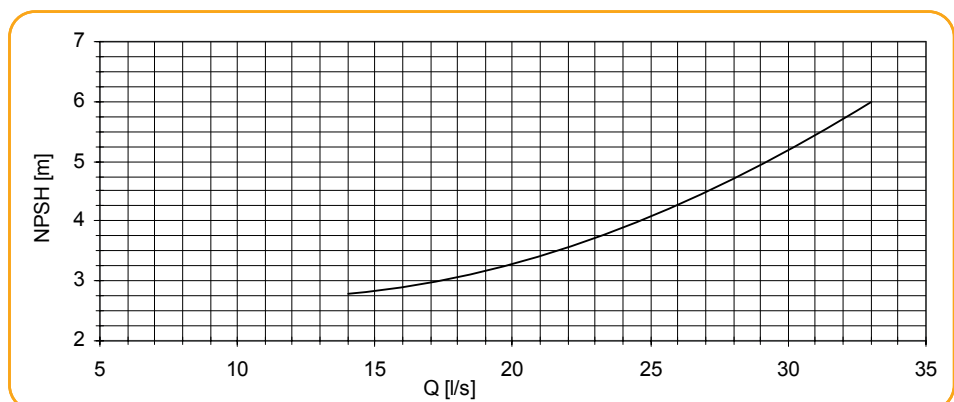
Power Input



Efficiency

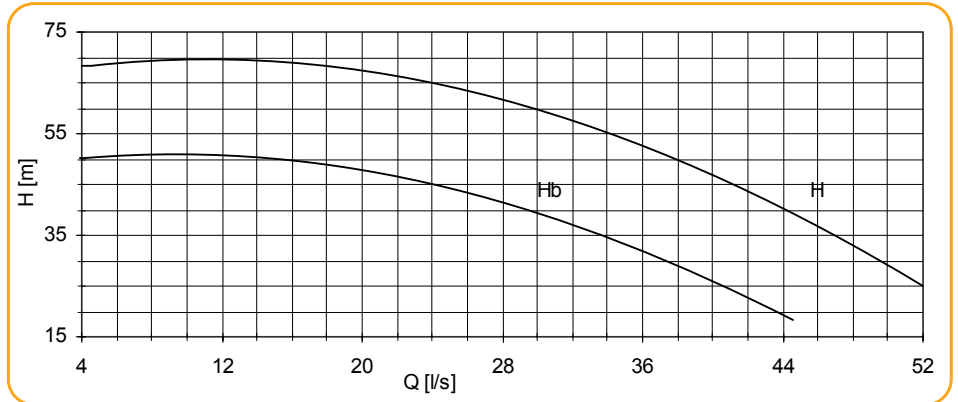


Net Positive
Suction Head

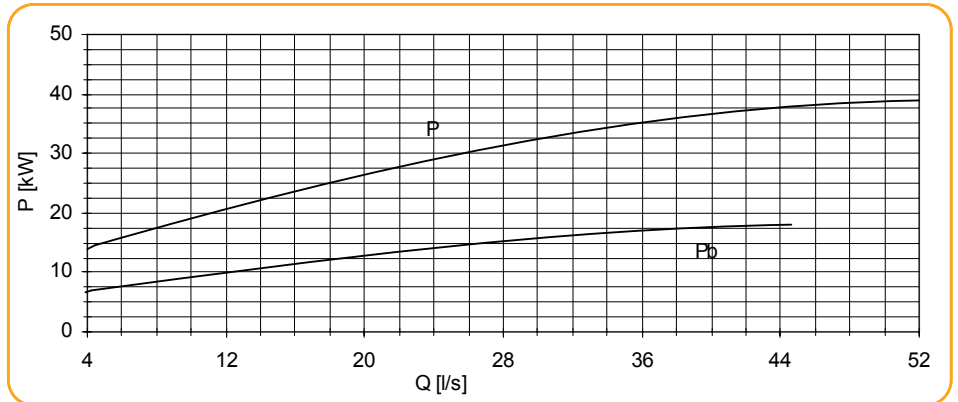


Pump performance curves

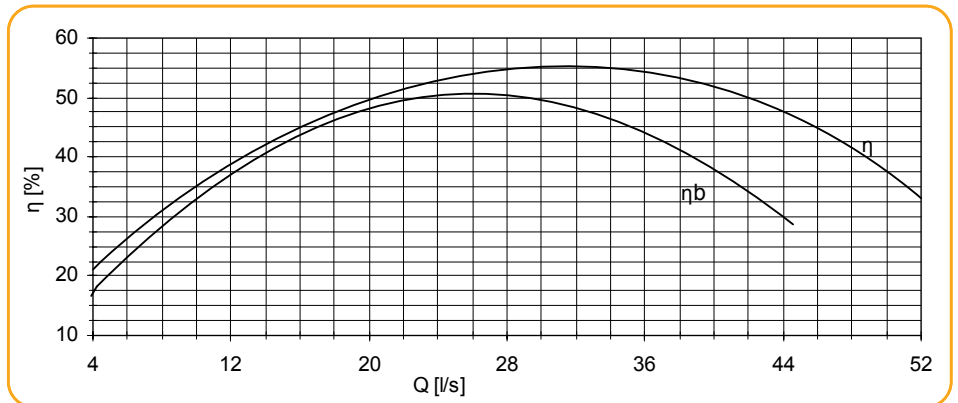
Total Differential Head



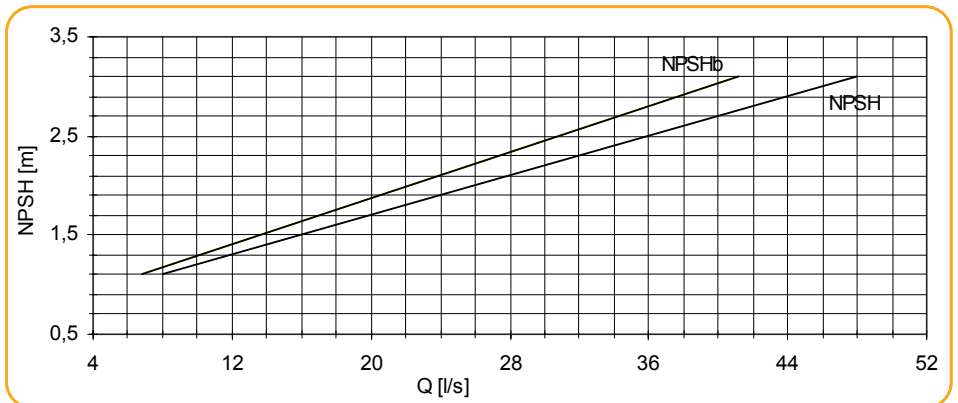
Power Input



Efficiency

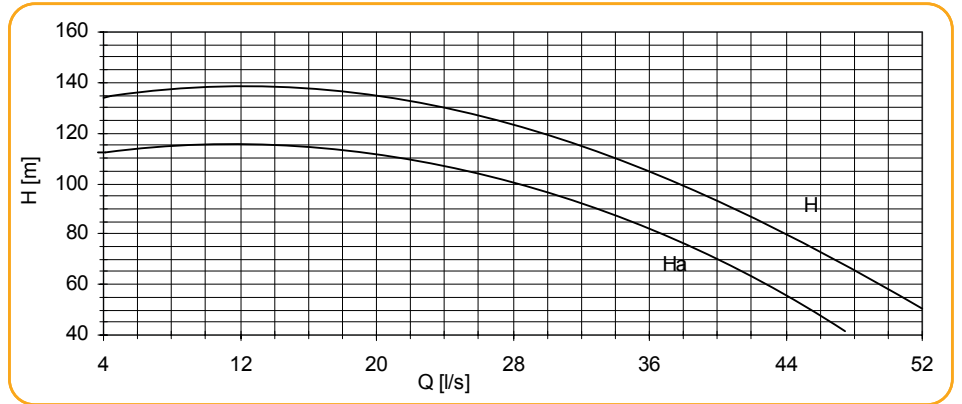


Net Positive Suction Head

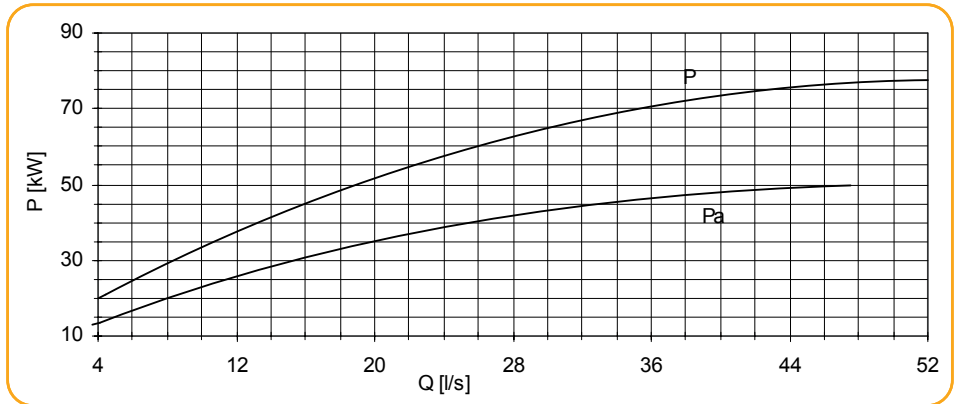


Pump performance curves

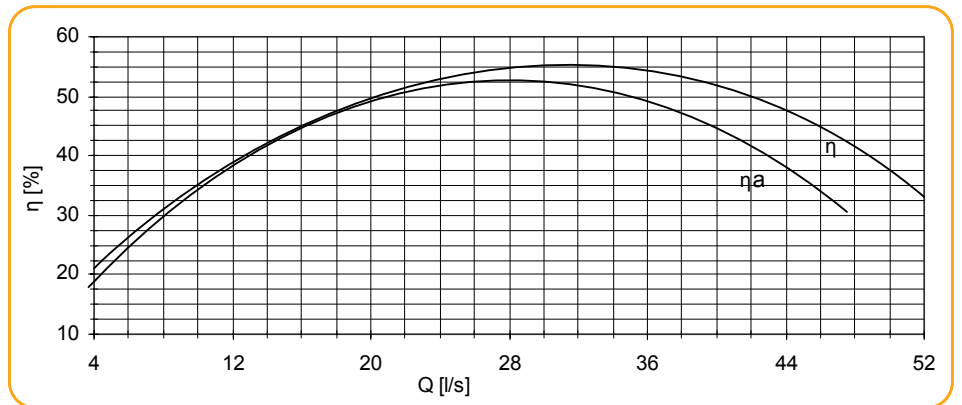
Total
Differential
Head



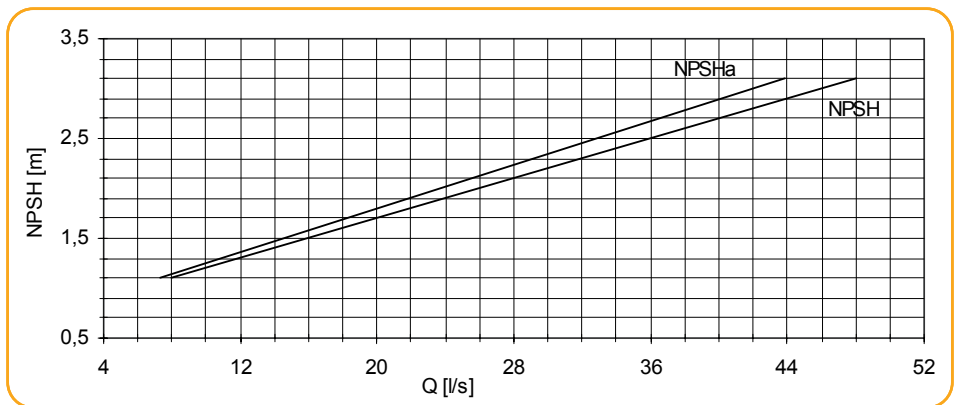
Power Input



Efficiency

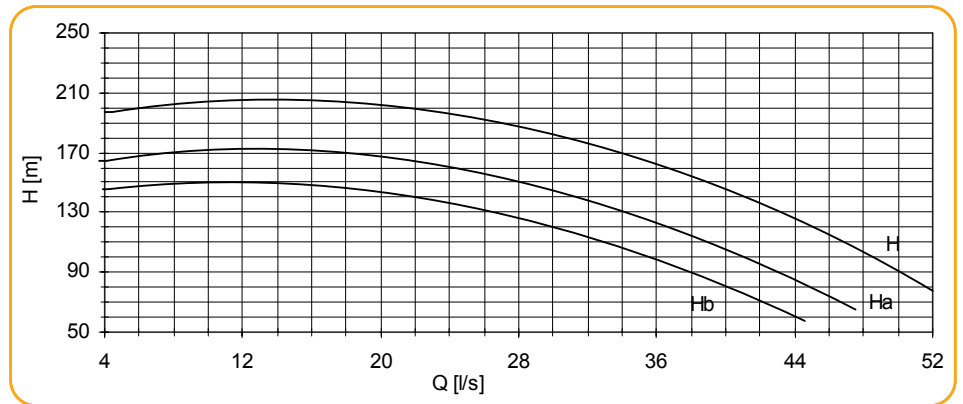


Net Positive
Suction Head

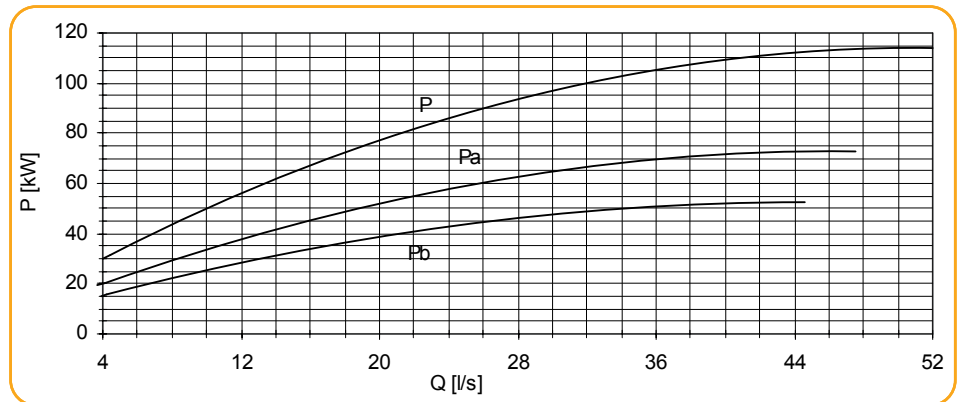


Pump performance curves

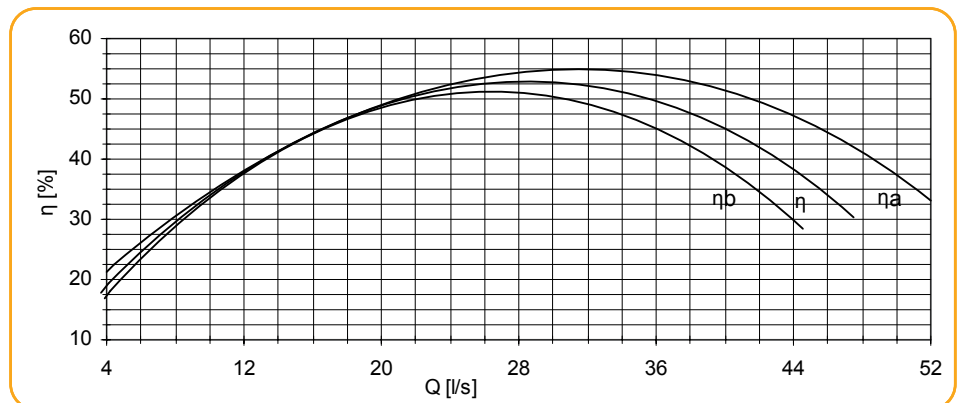
Total
Differential
Head



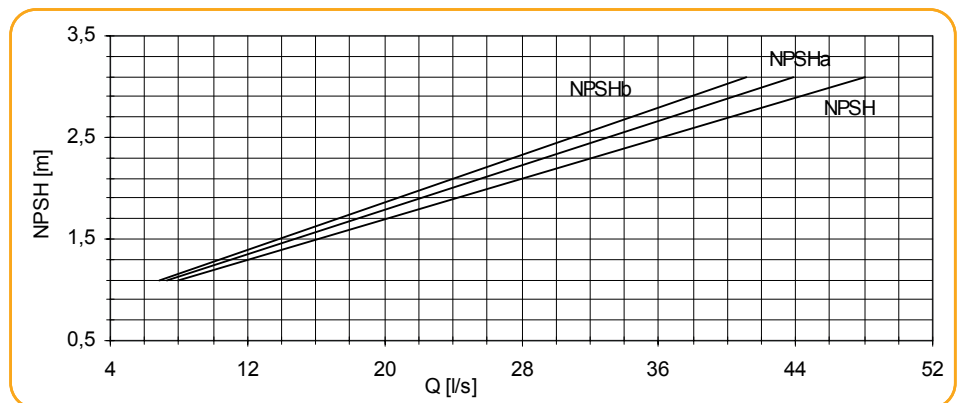
Power Input



Efficiency

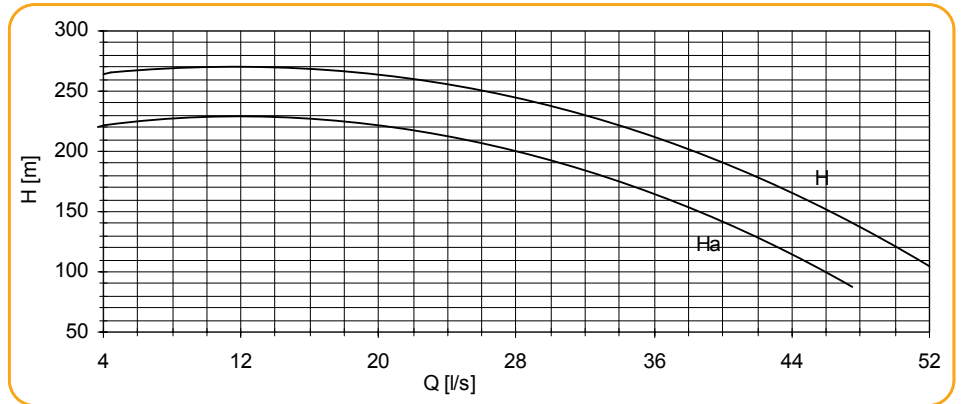


Net Positive
Suction Head

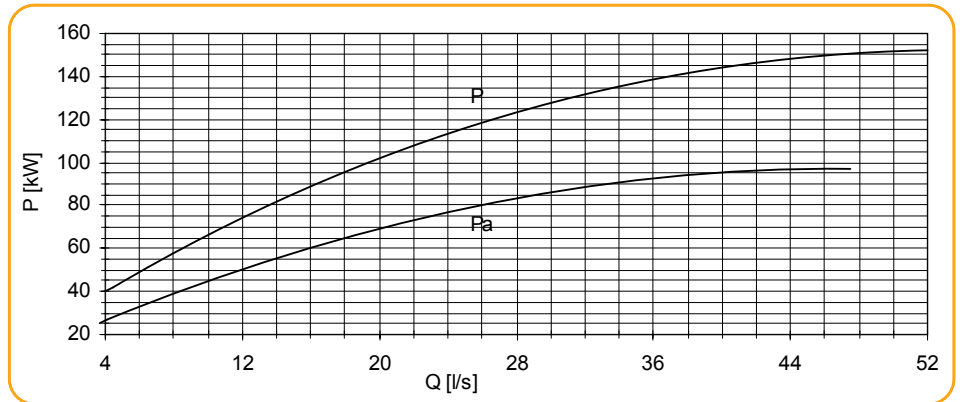


Pump performance curves

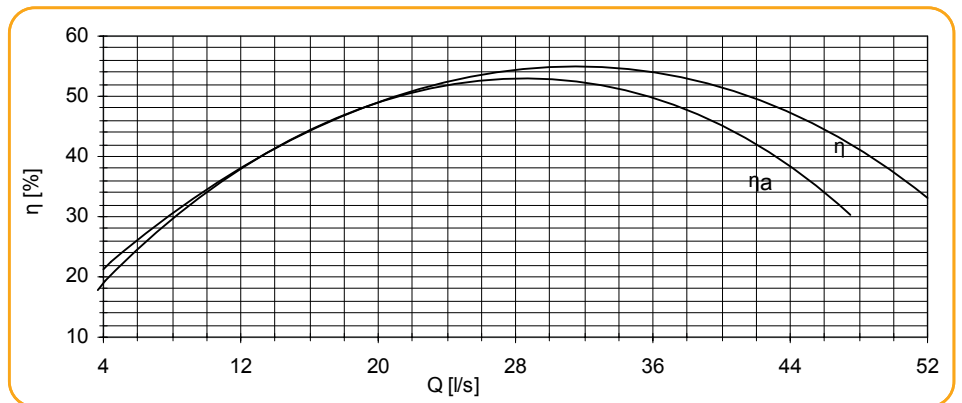
Total
Differential
Head



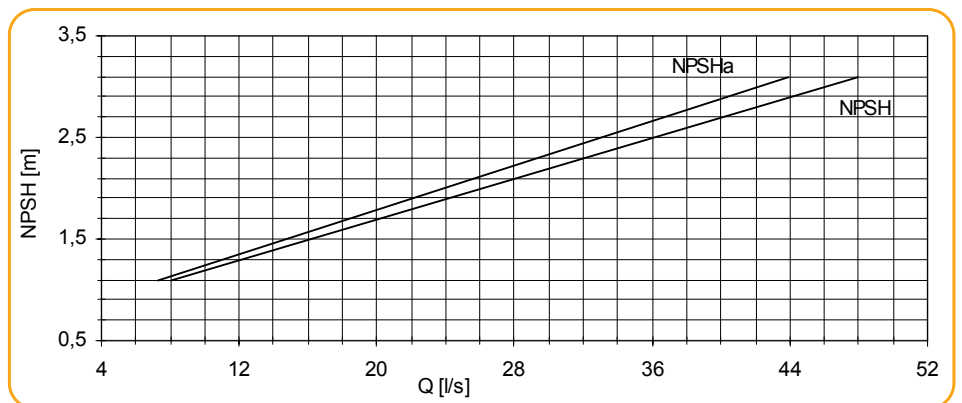
Power Input



Efficiency

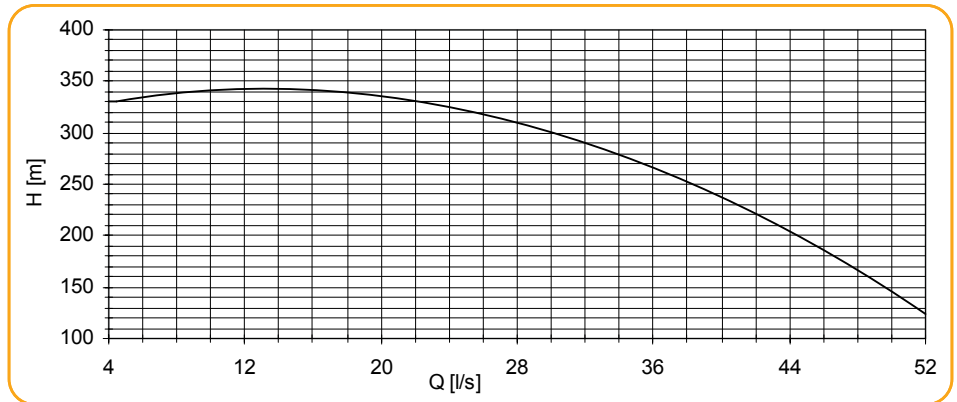


Net Positive
Suction Head

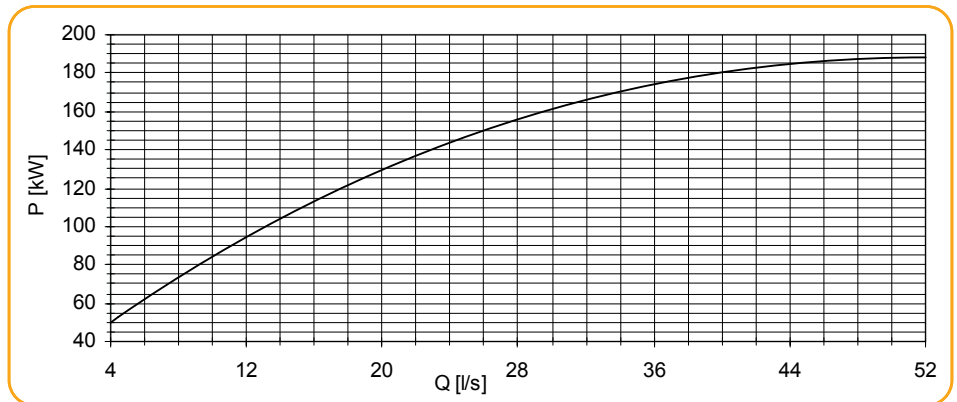


Pump performance curves

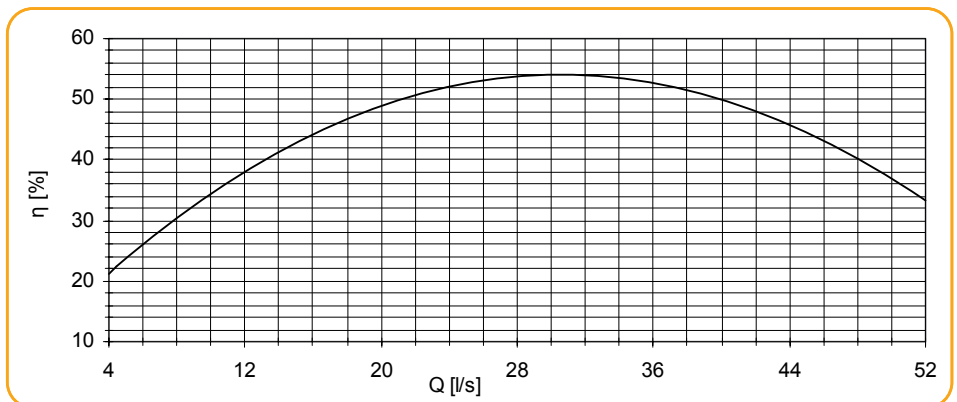
Total
Differential
Head



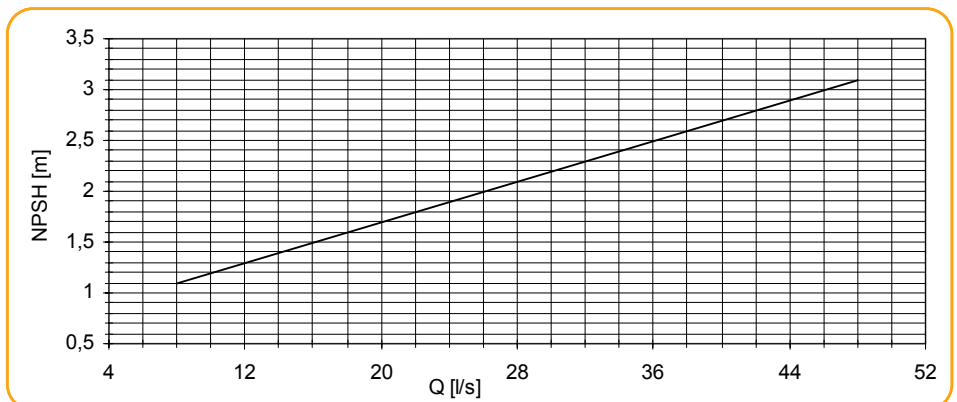
Power Input



Efficiency

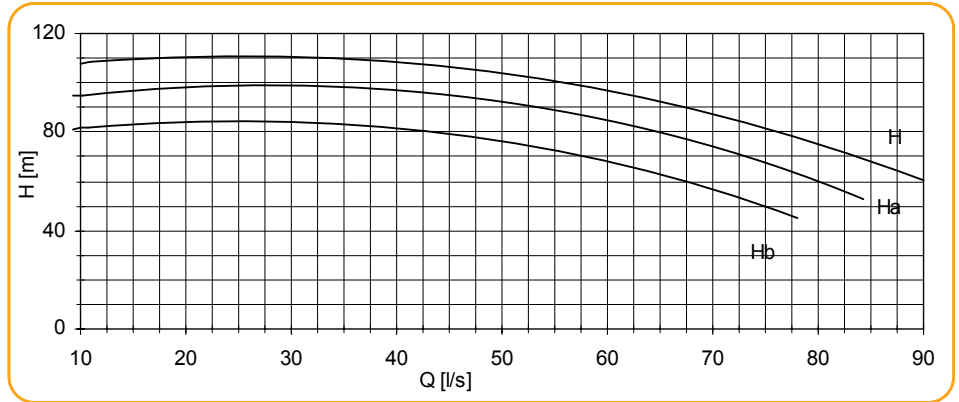


Net Positive
Suction Head

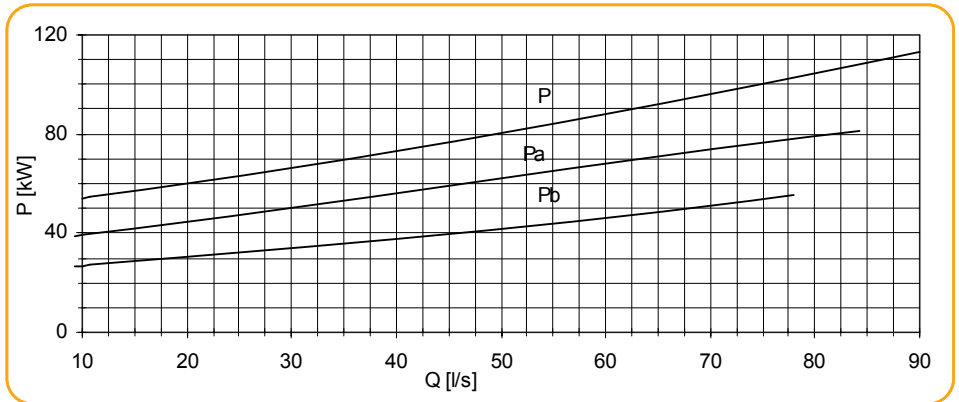


Pump performance curves

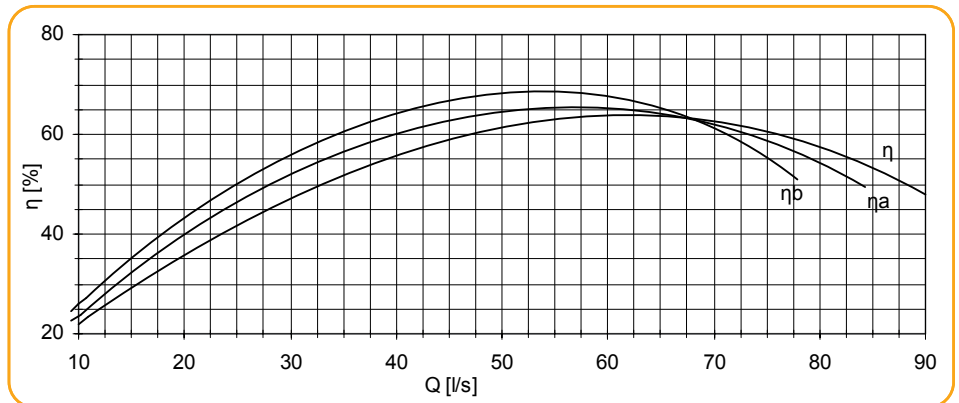
Total Differential Head



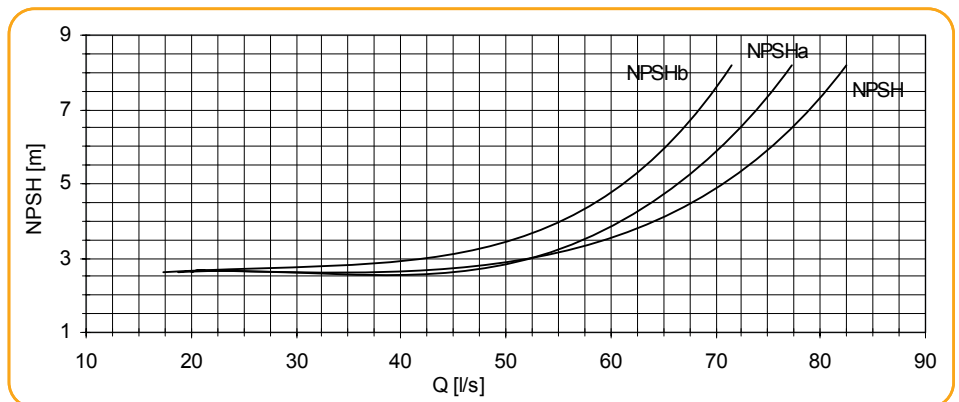
Power Input



Efficiency

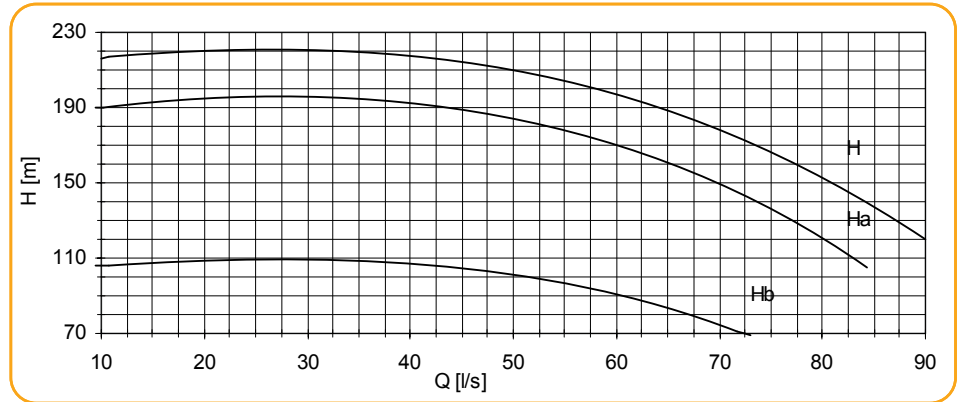


Net Positive Suction Head

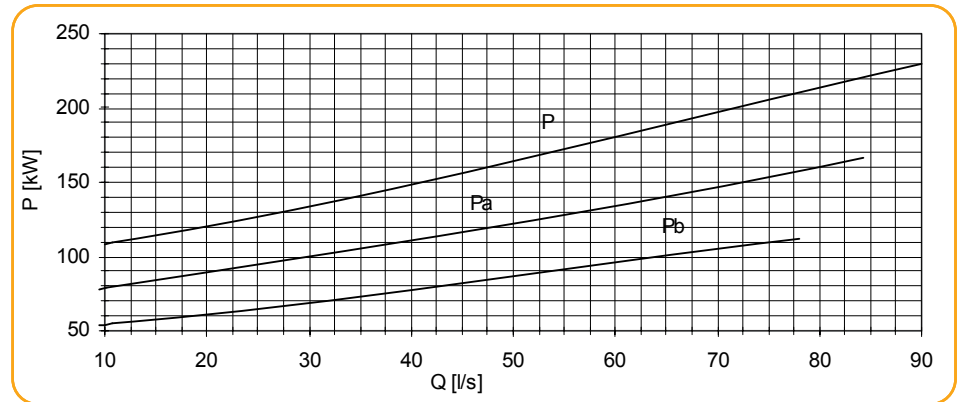


Pump performance curves

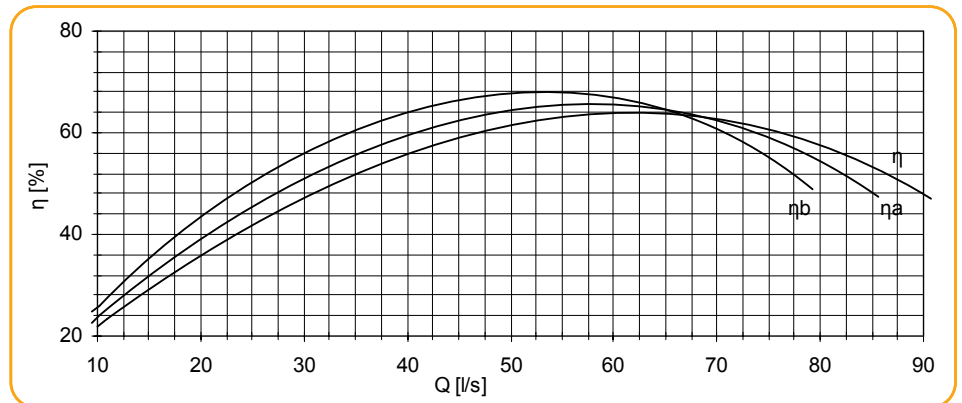
Total
Differential
Head



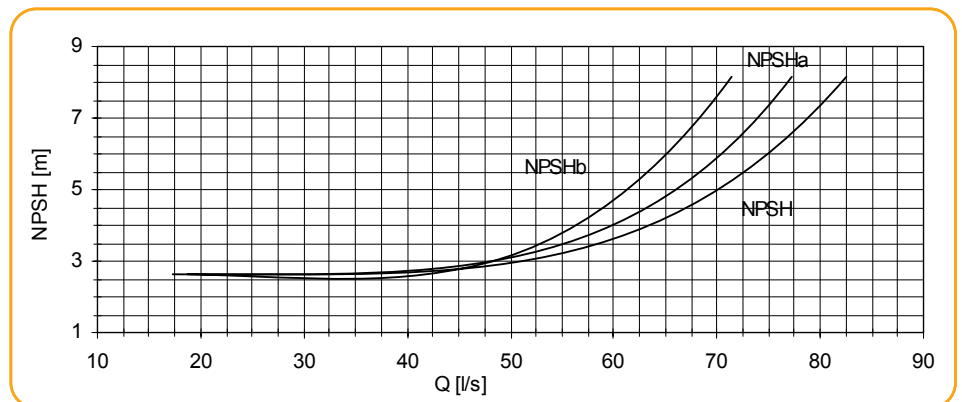
Power Input



Efficiency

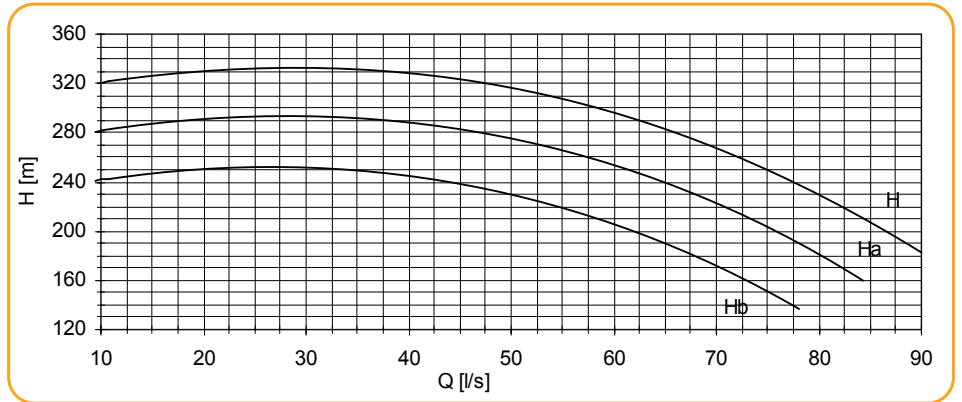


Net Positive
Suction Head

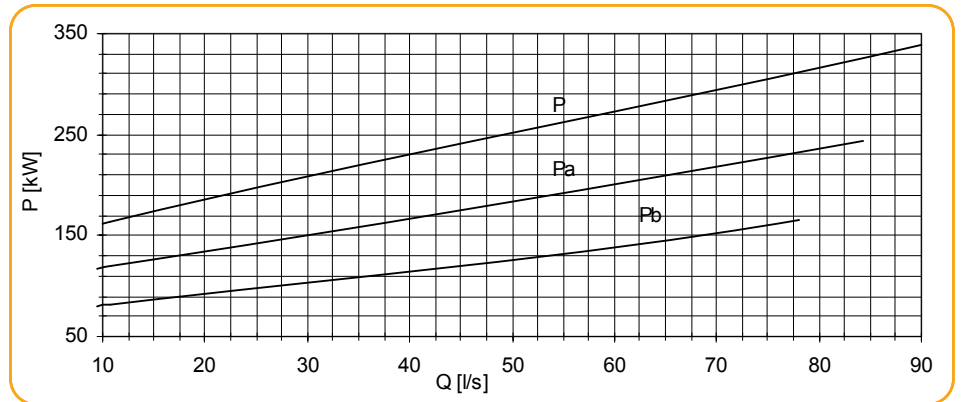


Pump performance curves

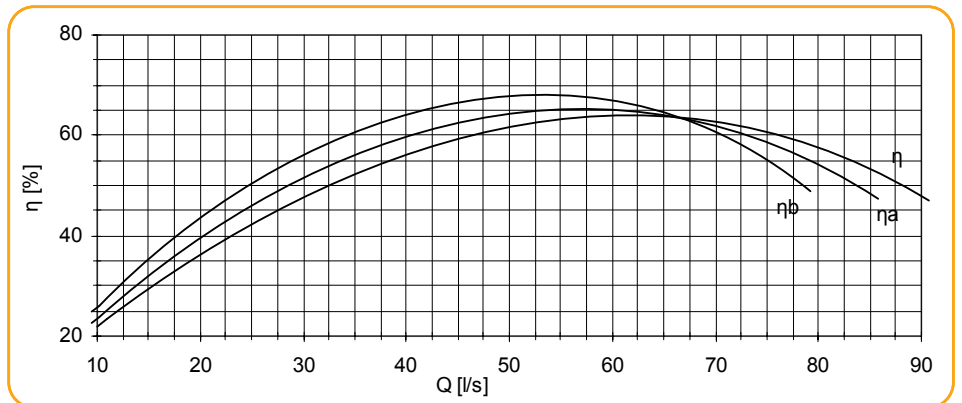
Total Differential Head



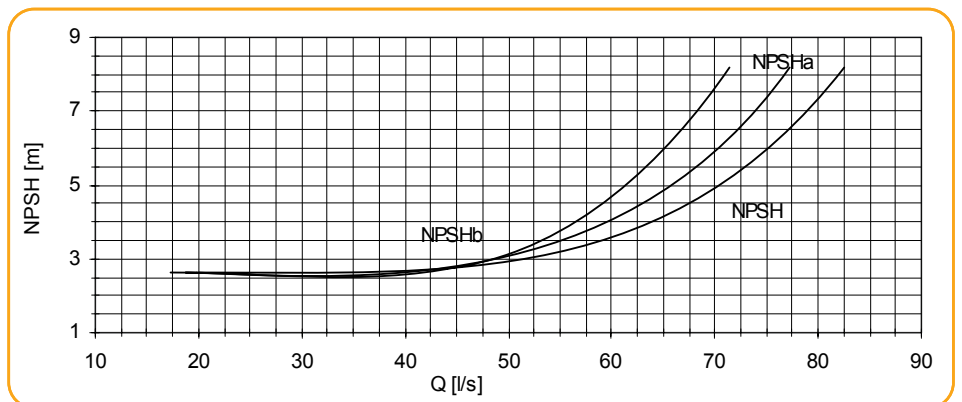
Power Input



Efficiency

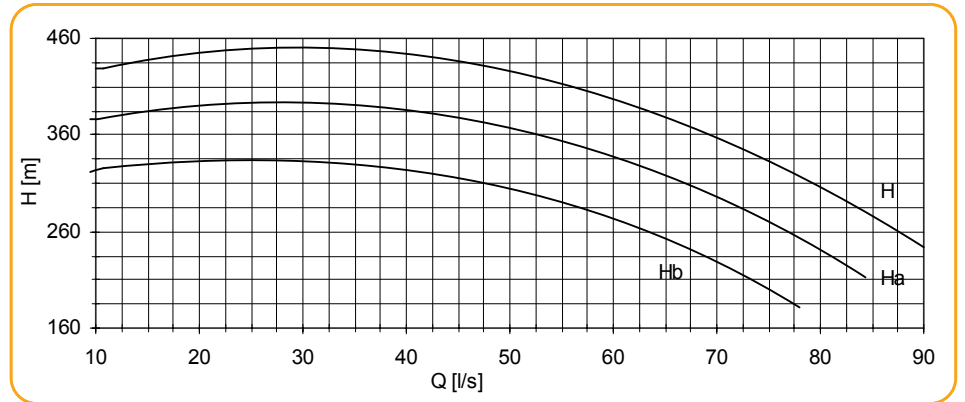


Net Positive Suction Head

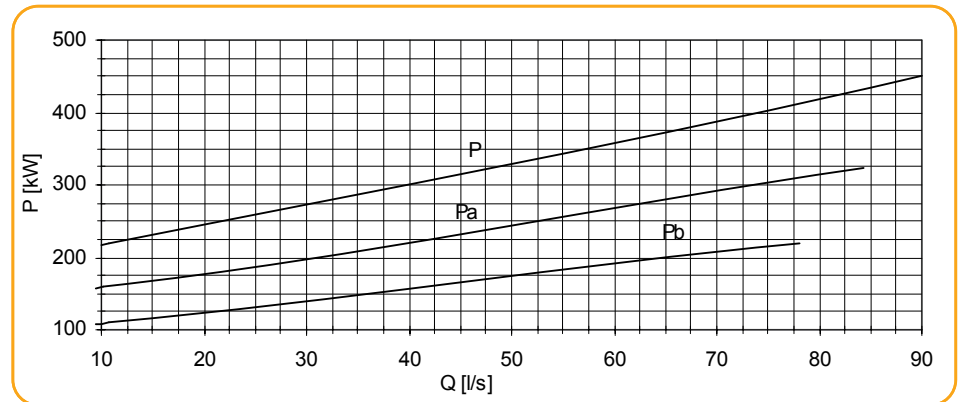


Pump performance curves

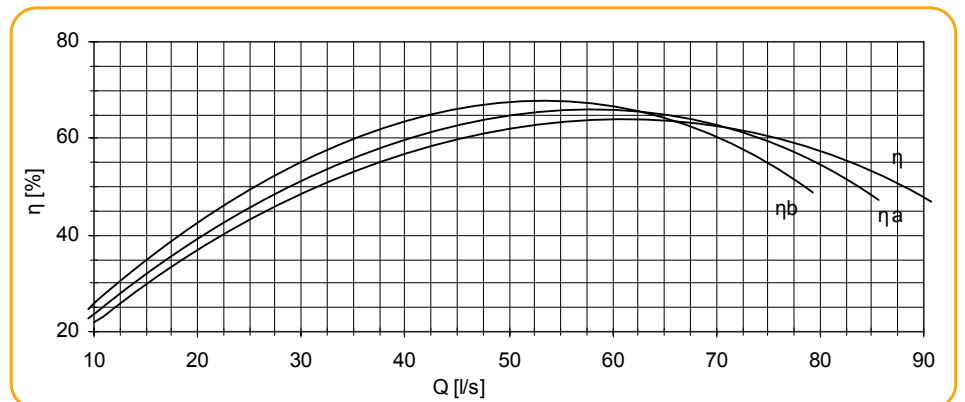
Total
Differential
Head



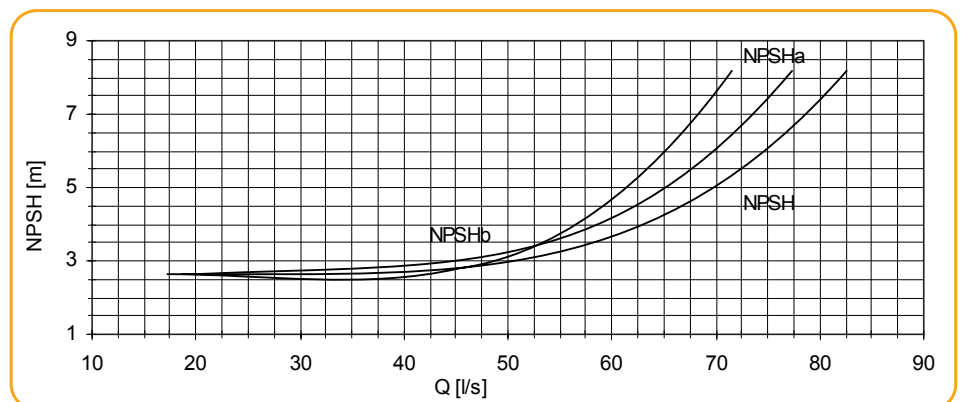
Power Input



Efficiency

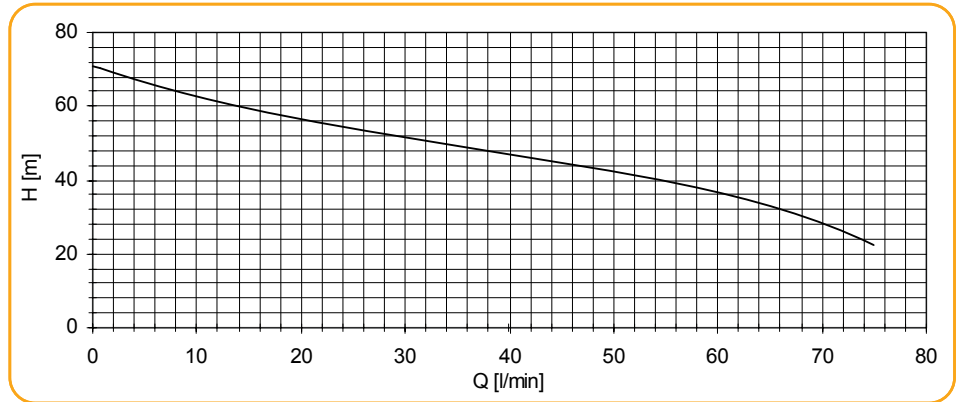


Net Positive
Suction Head

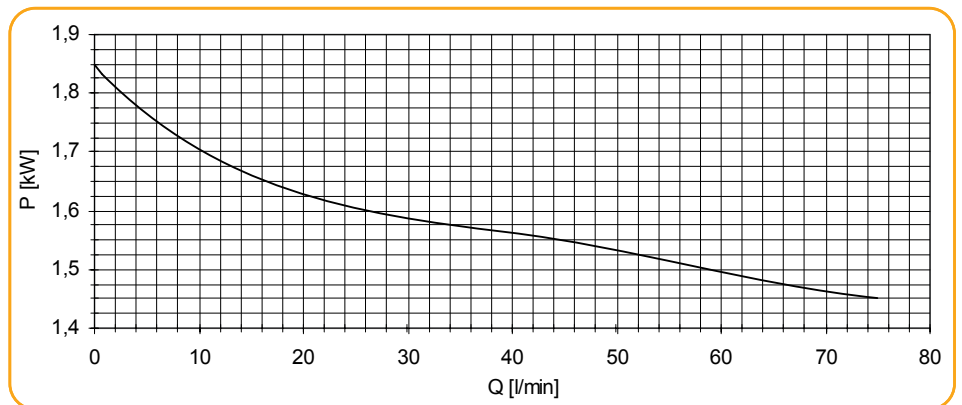


Pump performance curves

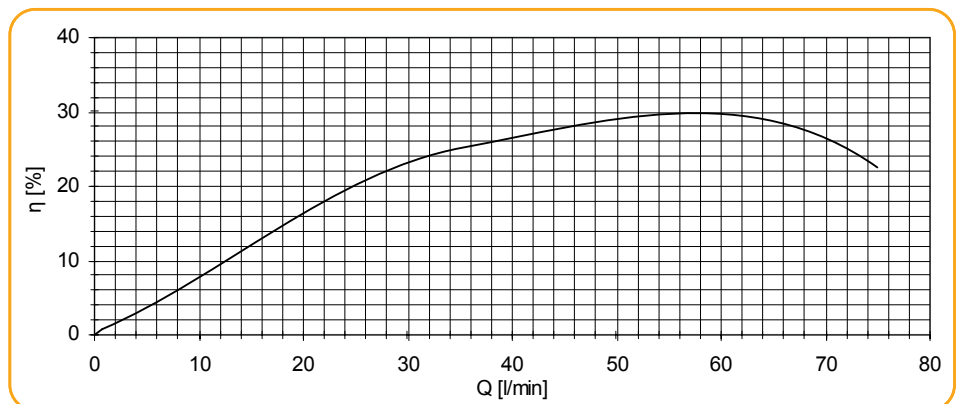
Total
Differential
Head



Power Input

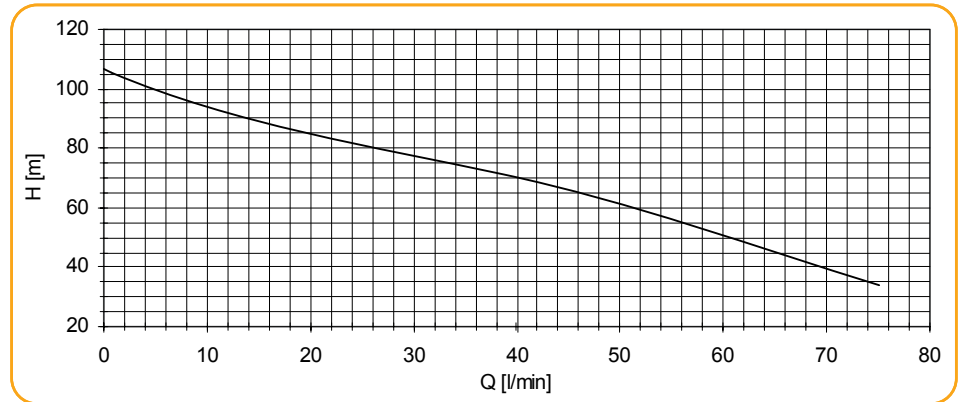


Efficiency

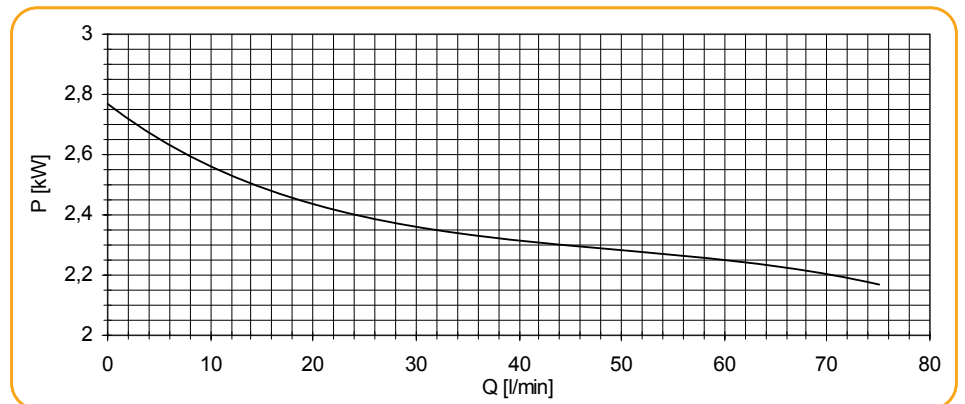


Pump performance curves

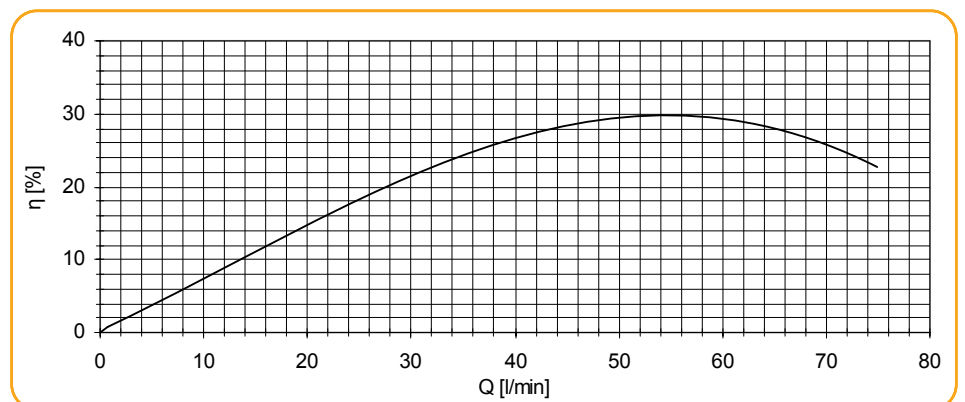
Total
Differential
Head



Power Input

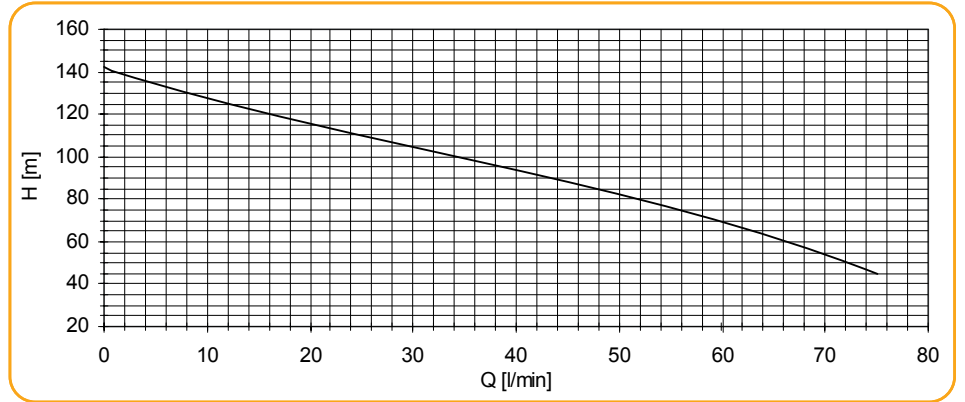


Efficiency

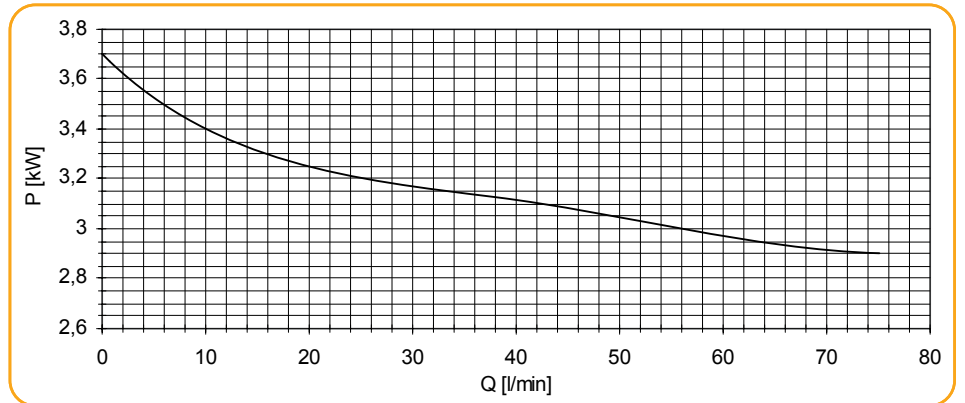


Pump performance curves

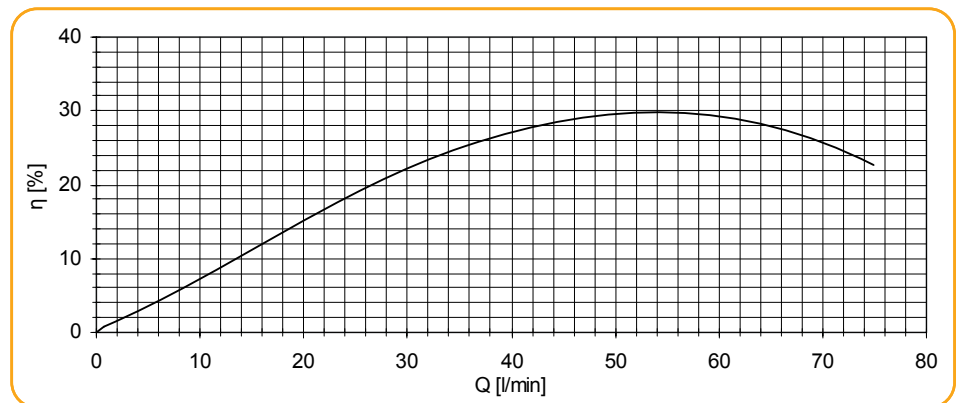
Total
Differential
Head



Power Input

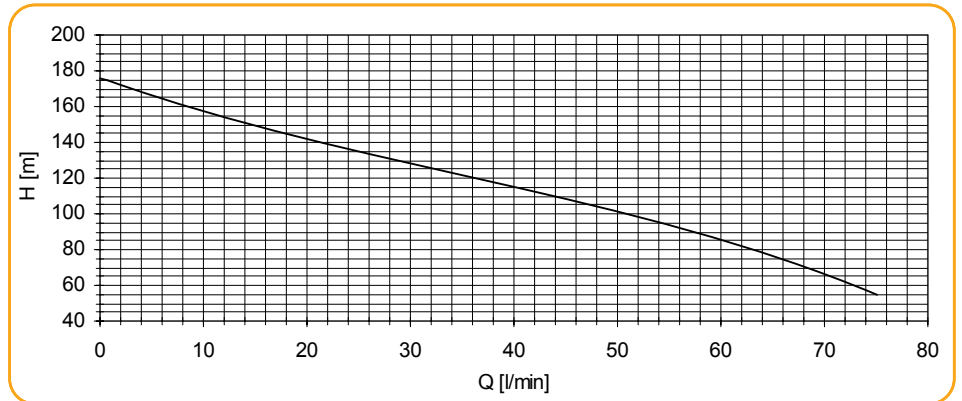


Efficiency

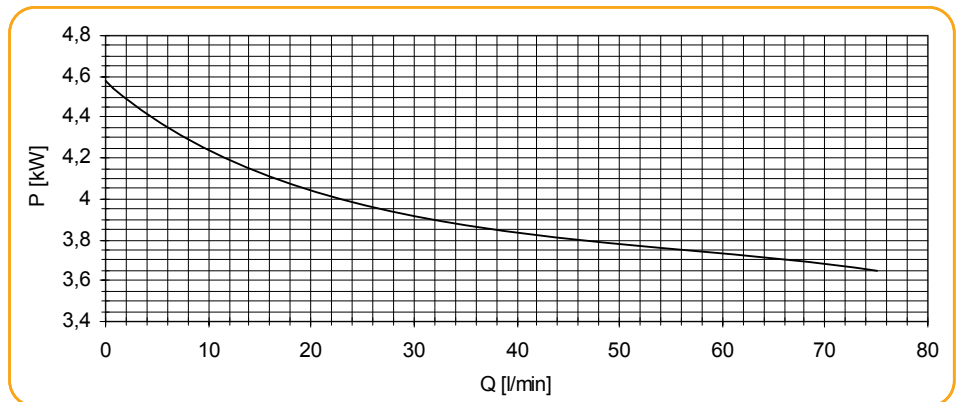


Pump performance curves

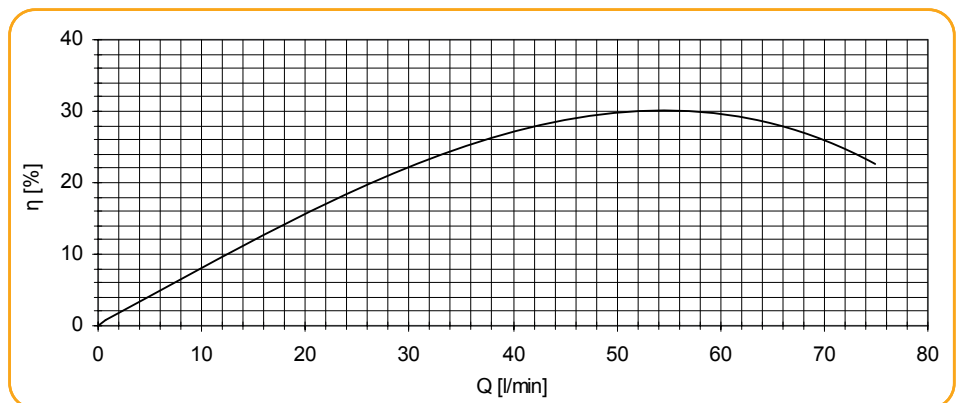
Total
Differential
Head



Power Input

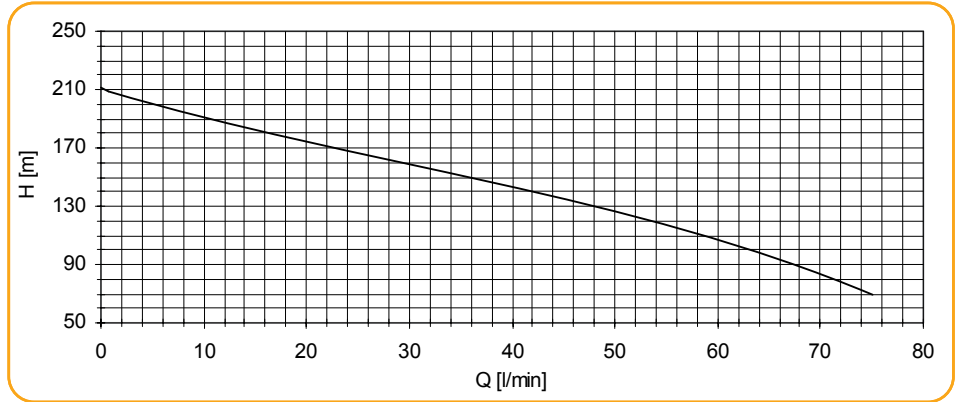


Efficiency

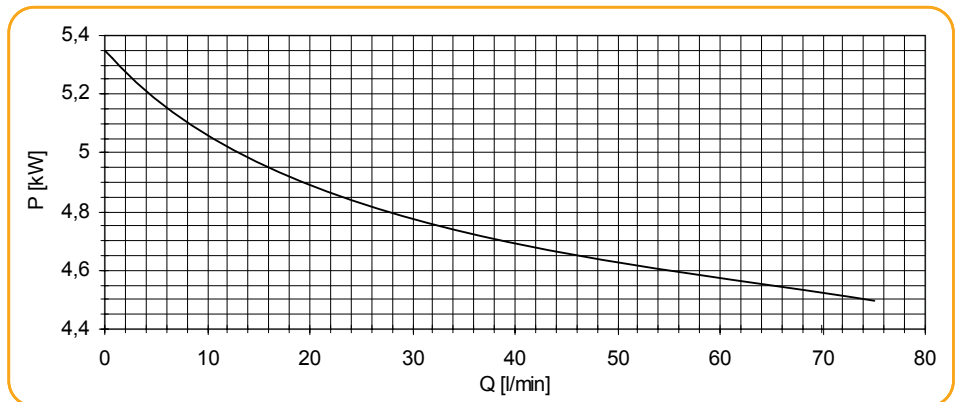


Pump performance curves

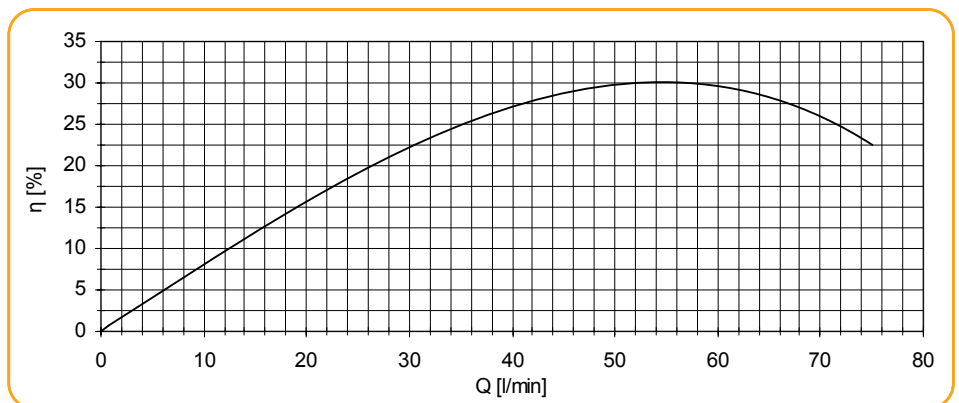
Total
Differential
Head



Power Input

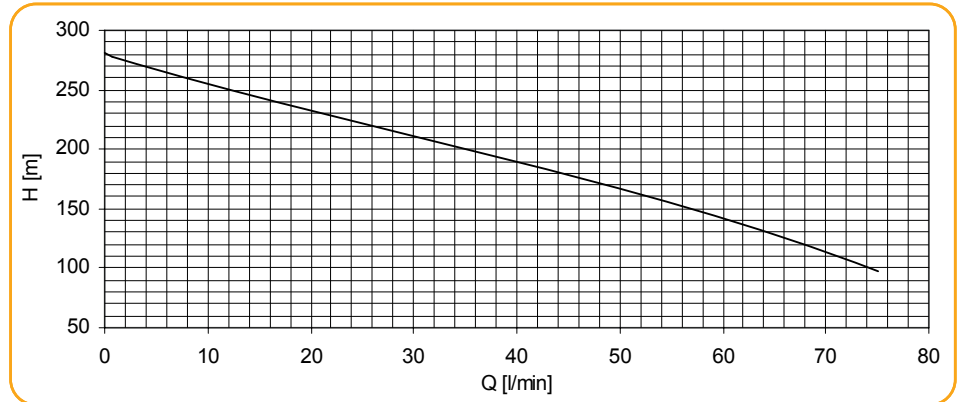


Efficiency

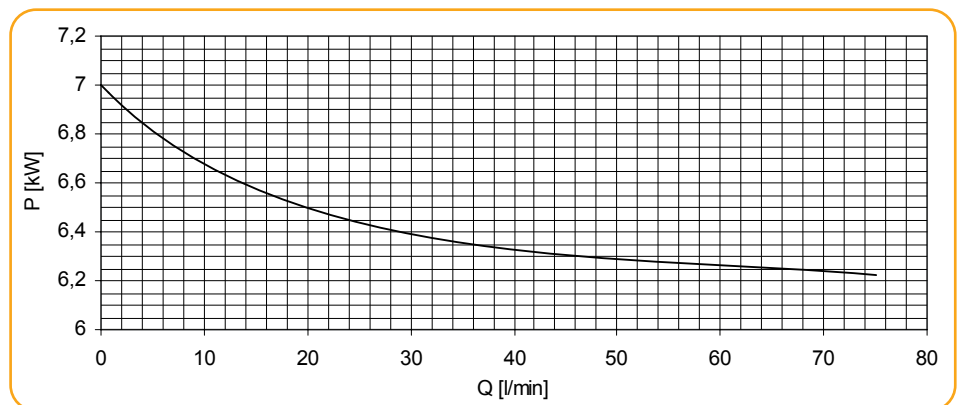


Pump performance curves

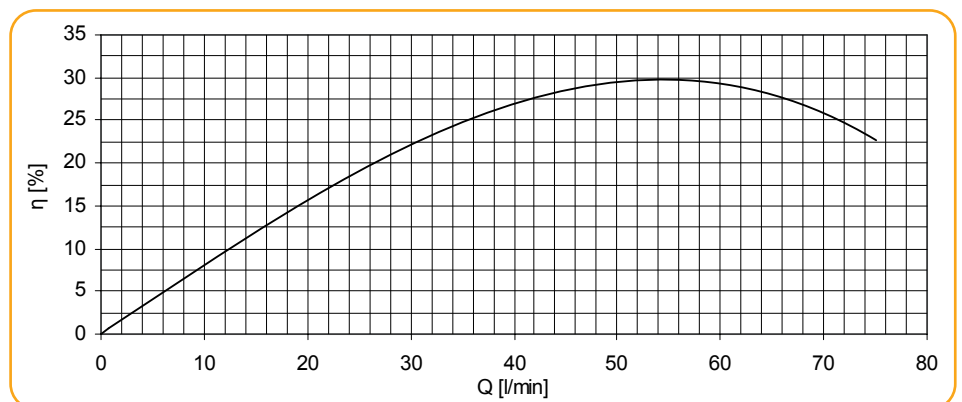
Total
Differential
Head



Power Input

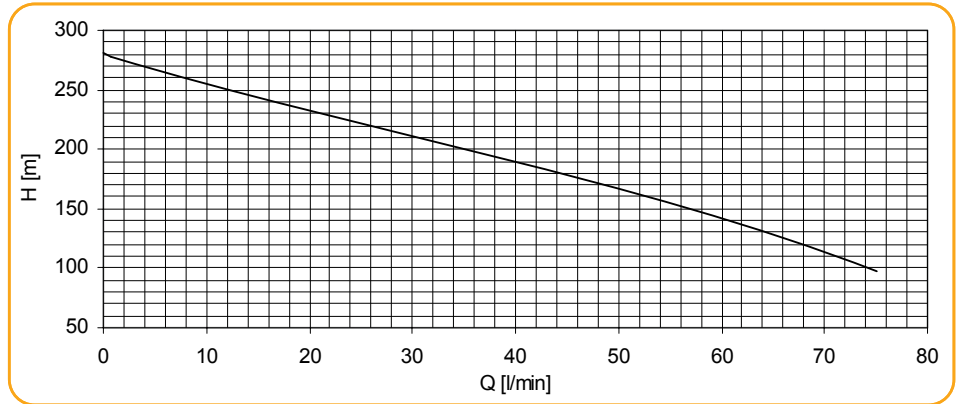


Efficiency

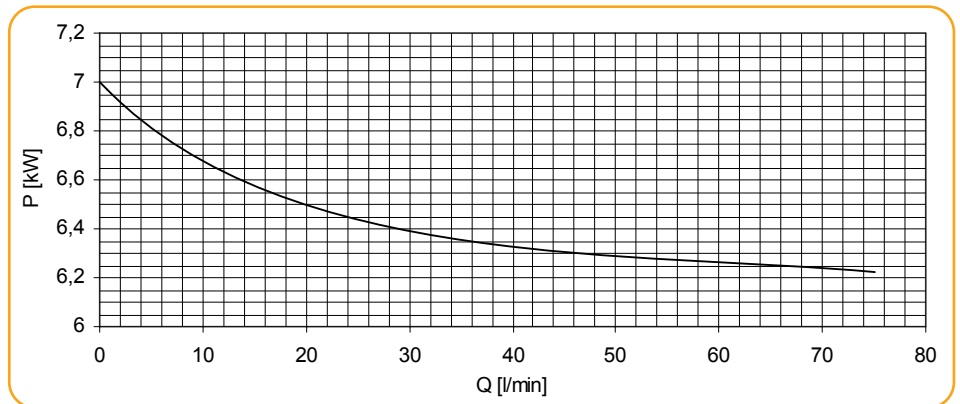


Pump performance curves

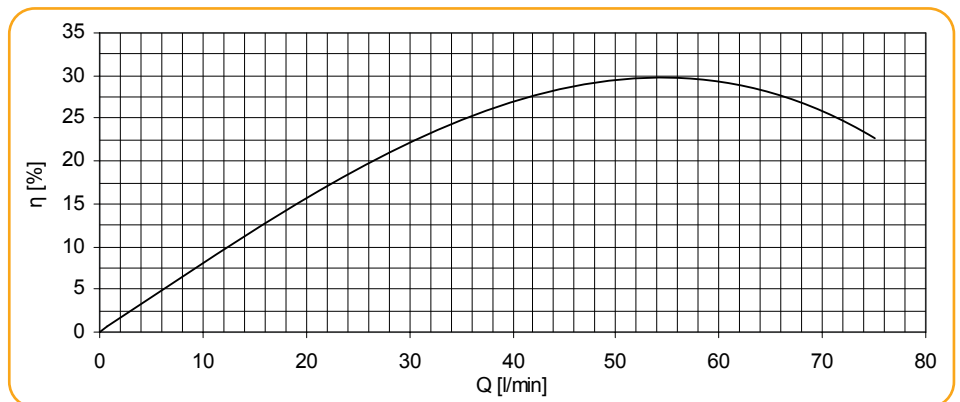
Total
Differential
Head

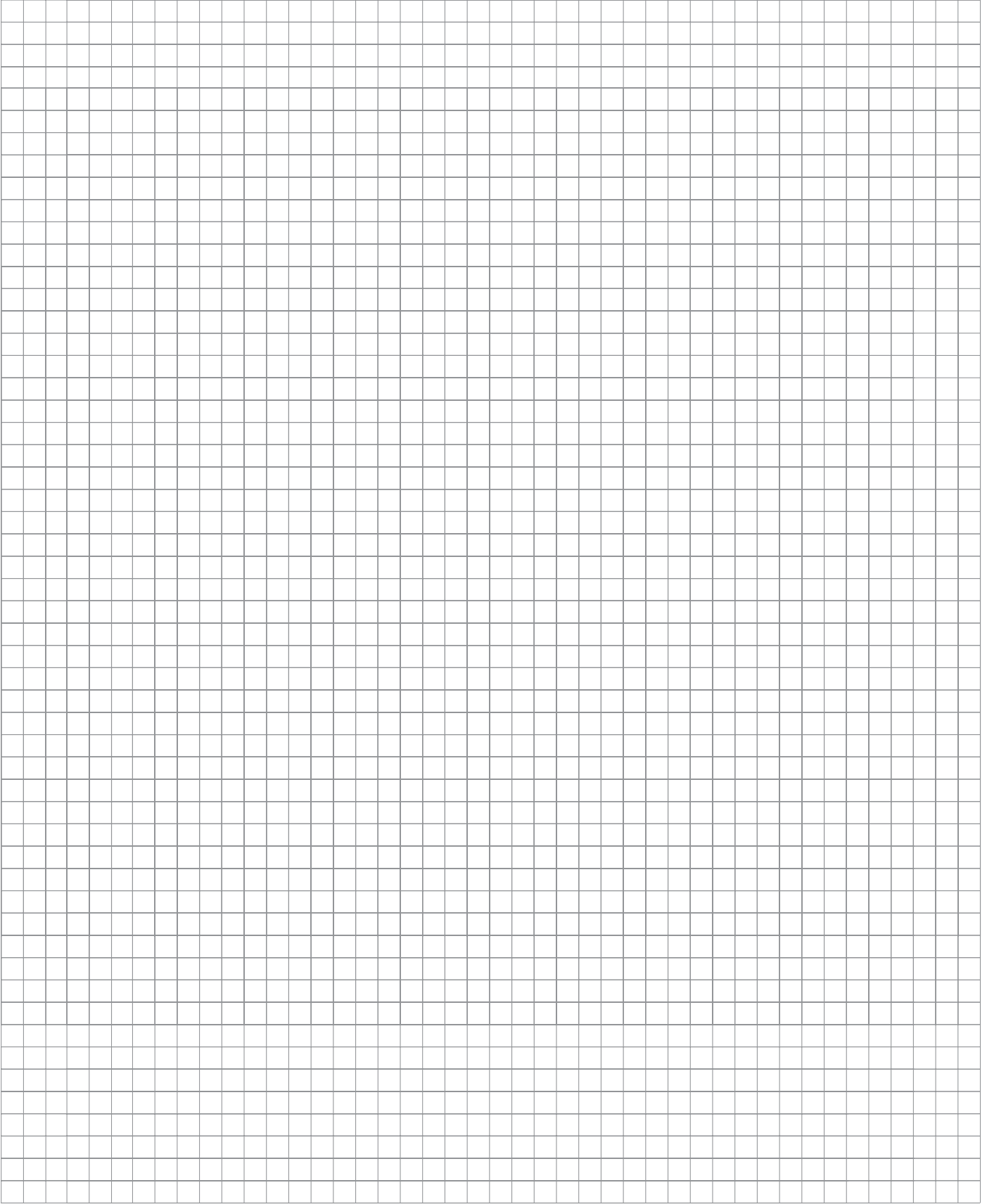


Power Input



Efficiency







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