

Side Channel pumps

Self-priming, segmental type



AOH 1101 ... 3603

Technical data

Capacity:	from 0,2 up to 7,5 m ³ /h
Delivery head:	from 6 up to 100 m
Speed:	1450 rpm (max. 1800 rpm)
Temperature:	max. 120 °C
Casing pressure:	PN 10
Shaft sealing:	stuffing box
Flange connections:	British standard pipe thread (BSP) in counter flanges
Direction of rotation:	clockwise (when seen from the drive end)



Application

The Sterling SIHI AOH pump is a self-priming side channel pump capable of handling gas along with the medium and operates at a low noise level. The AOH is used when clear or turbid liquids without any abrasive particles are to be handled reliably and trouble-free.

The performance curve steepness admits a precise regulation of the pressure with a small change in capacity.

The AOH is used in domestic plants and agriculture for;

- Irrigation,
- Drainage,
- Sprinkling.

The AOH is well known in all branches of trade or industry for;

- Boosting pressure,
- Cooling water,
- Water circulating,
- Boiler feeding,
- Condensate,
- Cleaning plants,
- Ship yards.

Design

Pumps of the series AOH have a segmental type construction with open vane wheel impellers.

The program comprises 4 sizes with up to 4 stages for the sizes 1100/1200 and up to 3 stages for the sizes 3100/3600. The performance curves of the AOH are identical for all material designs.

The applied hydraulic components are from our Modular Side Channel system (interchangeability of parts).

Construction

Casing pressure

Maximum 10 bar from 0 °C up to +120 °C.

Please observe

Technical rules and safety regulations:

Casing pressure = inlet pressure + delivery head at minimum pump capacity.

Position of branches

Suction and delivery branch point radially upwards.

Flanges

The oval flanges correspond to SIHI standard PN 10. Counter flanges are provided with female pipe thread. They are supplied together with the pump including joints, screws and nuts.

Bearing

One grease lubricated ball bearing according to DIN 625 and one liquid surrounded sleeve bearing (design A). The first grease filling is done in the factory.

Direction of rotation

Clockwise, when looking at the pump from the drive end.
Anti-clockwise is possible.

Shaft sealing

The shaft is sealed by a stuffing box.
Mechanical seal design upon request.

Material design AOH

Pos	Components	Material design			
		0A	0B	2H	3B
1060	Suction casing	EN-GJL-250		EN-GJL-250	GC-Cu Sn 12
1070	Discharge casing				
1090 1140 1141	Intermediate piece	EN-GJL-250		G-Sn Bz 16	
2100	Shaft	X 20 Cr 13		X 5 CrNiMo 17 12 2	
2350	Vane wheel impeller	CuZn 40 Al 2	G-X 3 CrNiMoCu 26 6 3 3	G-Cu Sn Chrome plated	
0241	Bearing bush	EK 2203			

Casing seal

The casing can be sealed with a liquid sealing compound or soft Teflon.

Drive

By electric motor, type of construction IM B3.
Up to 1,1 kW - according to requirements - three-phase A.C. or alternating current can be chosen.

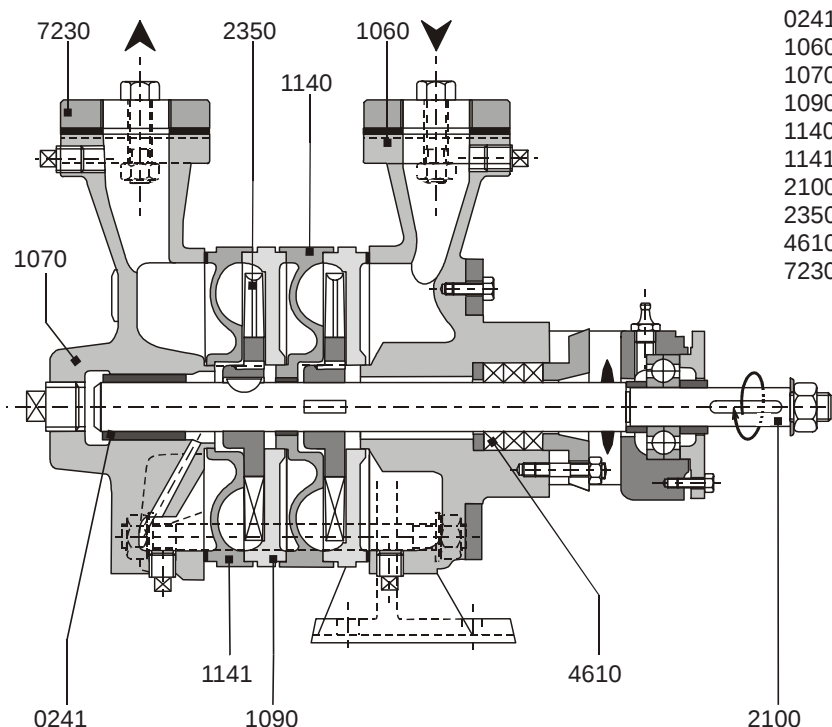
General comments

Side Channel pumps with the same hydraulic construction are manufactured in series as:

- AKH** Medium duty pump, PN 16
- CEH** High duty pump, PN 40
Also available with magnetic coupling
- CEB** Vertical tank mounted pump, PN 25 with magnetic coupling
- CEV** Vertical tank mounted pump, PN 25 with mechanical seal (replacement for CVGP)
- AEH** High duty pump, PN 40
Also available with magnetic coupling

Technical documentation about these pump series will be readily supplied on request.

Sectional drawing and parts list AOH (typical)



Pos. Components

- 0241 Bearing bush
- 1060 Suction casing
- 1070 Discharge casing
- 1090 Suction intermediate piece
- 1140 Discharge intermediate piece
- 1141 Discharge intermediate piece
- 2100 Shaft
- 2350 Vane wheel impeller
- 4610 Stuffing box
- 7230 Counter flange

All possible design combinations can be found in the delivery program

Performance range AOH

General conditions

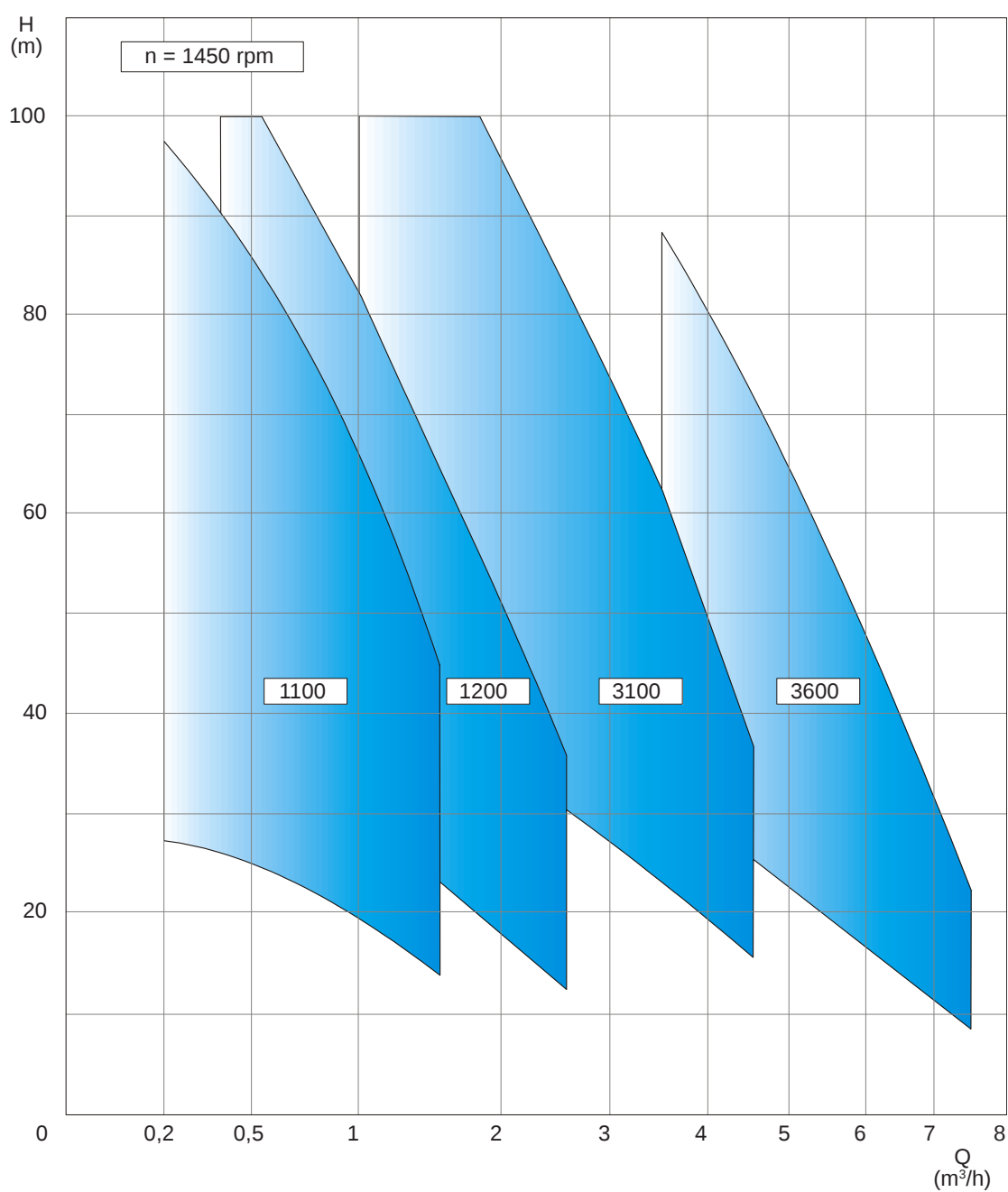
Liquid: Water
 Density: 1 kg/dm³
 Viscosity: 1 cSt
 Temperature: 20 °C
 Atmospheric pressure: 1013 mbar

Characteristic tolerances

Capacity $\pm 10\%$ - Delivery head $\pm 10\%$ - Power $+ 10\%$
 For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

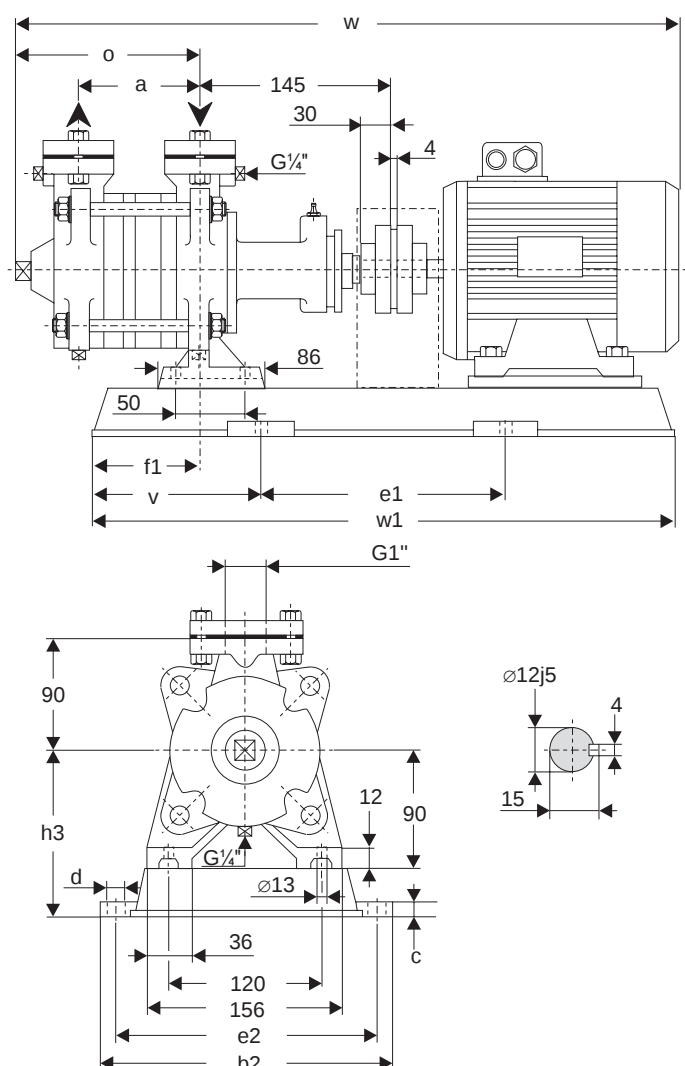
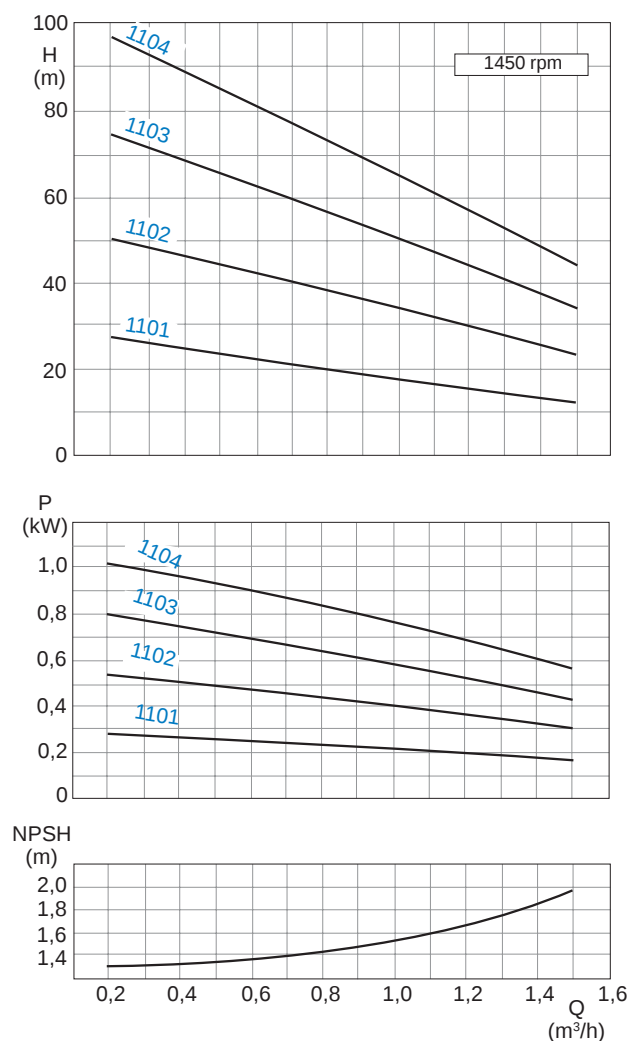
Measuring standard

According to ISO 5198



Dimension chart, Pump set drawing and Performance curves

AOH 1100



General:

Values are valid for water $\rho = 1 \text{ kg/dm}^3$ and $\nu = 1 \text{ cSt}$.

Characteristic tolerance:

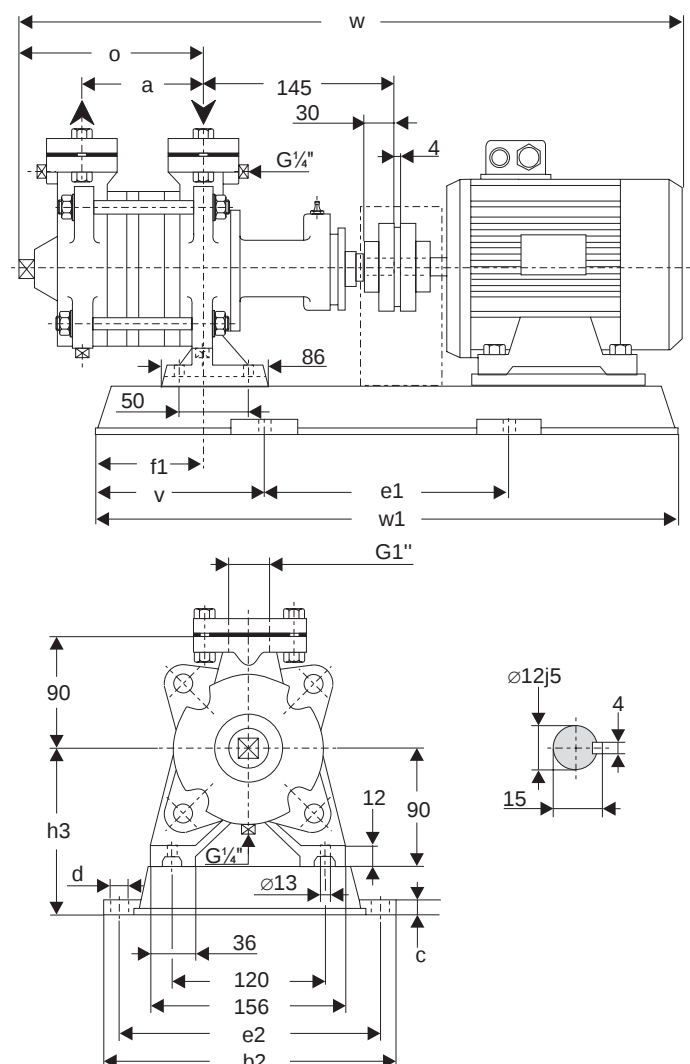
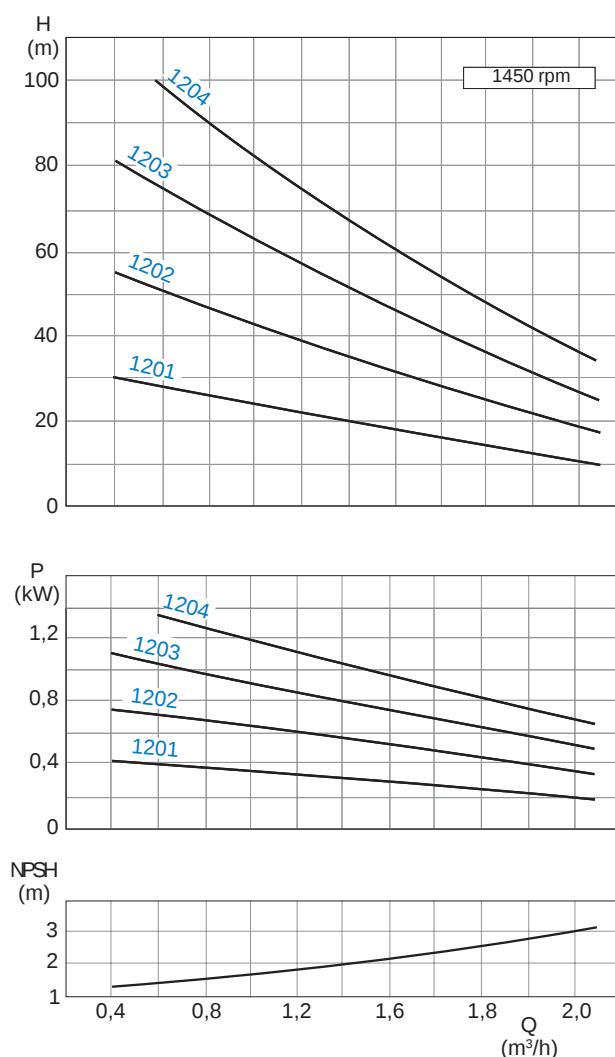
Capacity $\pm 10\%$ - Delivery head $\pm 10\%$ - Power $+ 10\%$.
For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

Pump size	Motor kW	Motor size	Base plate	Coupling	Weight		a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
1101	0.37	71	P003	B68	9	26	78	262	20	15	270	230	100	108	125	118	506	470
1102	0.37	71	P003	B68	10	27	112	262	20	15	270	230	100	108	125	152	540	470
	0.55	80				30											574	
1103	0.55	80	P003	B68	12	32	146	262	20	15	270	230	100	108	125	186	608	470
	0.75	80		B80		33												
	1.1	90S	P006	B80		39		312			320	280					666	520
	1.5	90L		B68		41												
1104	0.75	80	P003	B68	14	35	180	262	20	15	270	230	100	108	125	220	642	470
	1.1	90S	P006	B68		41		312										
	1.5	90L		B80		43												

* Dimensions depend upon the motor brand.
The weight of the pump will be approximately 13% higher when using Bronze.

Dimension chart, Pump set drawing and Performance curves

AOH 1200



General:

Values are valid for water $\rho = 1 \text{ kg/dm}^3$ and $\nu = 1 \text{ cSt}$.

Characteristic tolerance:

Capacity $\pm 10\%$ - Delivery head $\pm 10\%$ - Power $+ 10\%$.

For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

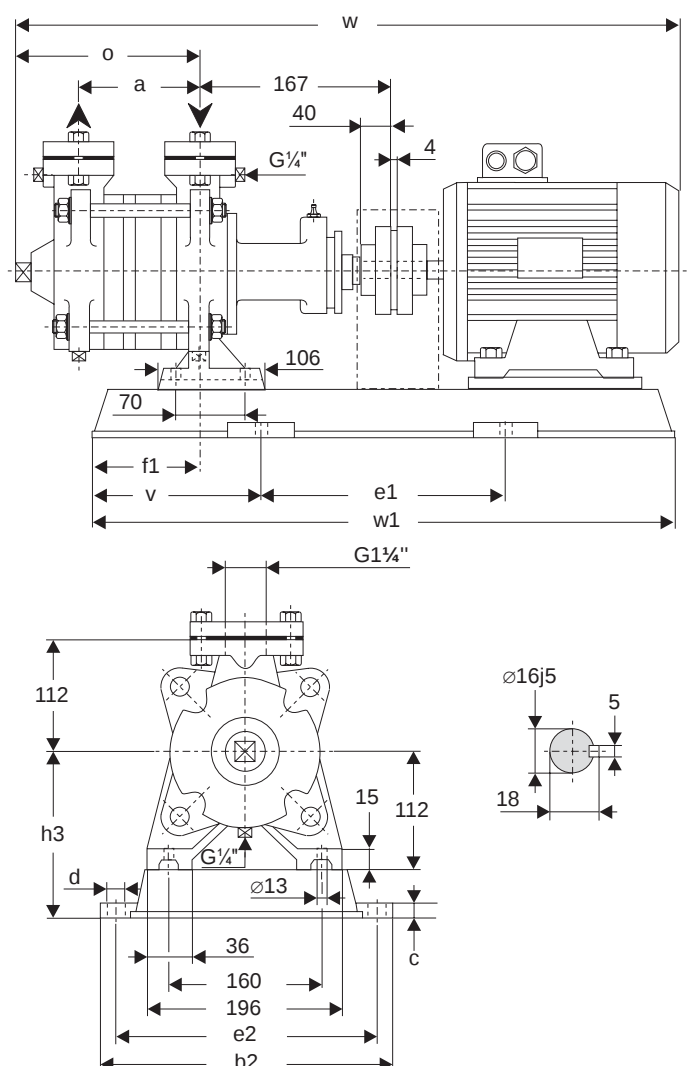
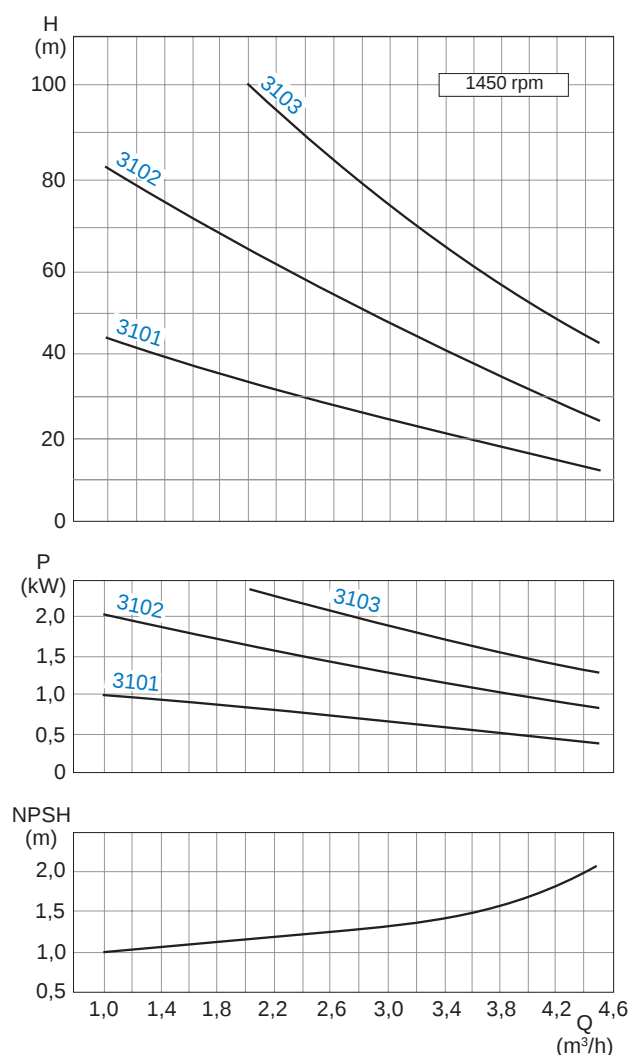
Pump size	Motor		Base plate	Coupling	Weight		a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
	kW	size			pump	set												
1201	0.37	71	P003	B80	9	26	78	262	20	15	270	230	100	108	125	118	506	470
	0.55	80				29											540	
1202	0.55	80	P003	B80	10	30	112	262	20	15	270	230	100	108	125	152	574	470
	0.75	80		B68		31												
1203	0.75	80	P003	B68	12	33	146	262	20	15	270	230	100	108	125	186	608	470
	1.1	90S	P006			39											666	
1204	1.1	90S	P006	B68	14	41	180	312	20	15	320	280	100	108	125	220	700	520
	1.5	90L				46												

* Dimensions depend upon the motor brand.

The weight of the pump will be approximately 13% higher when using Bronze.

Dimension chart, Pump set drawing and Performance curves

AOH 3100



General:

Values are valid for water $\rho = 1 \text{ kg/dm}^3$ and $\nu = 1 \text{ cSt}$.

Characteristic tolerance:

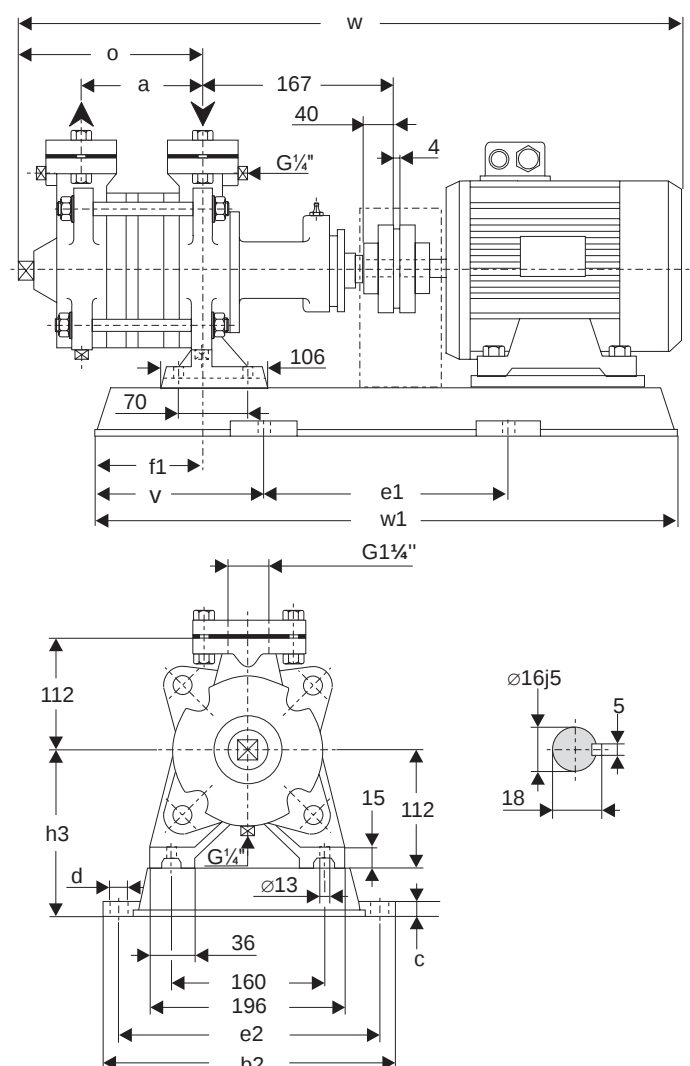
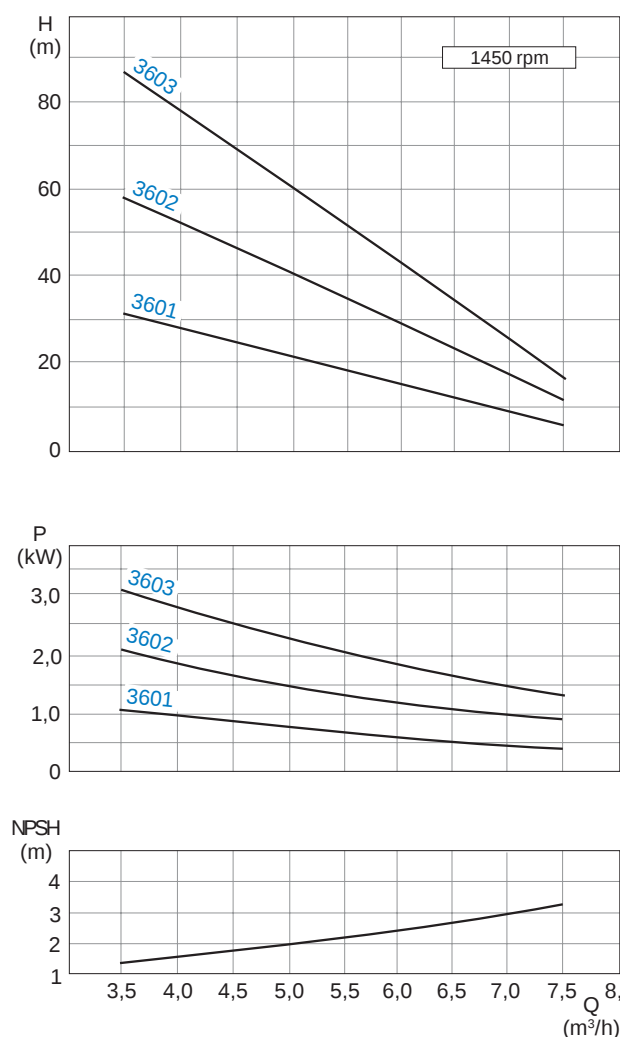
Capacity $\pm 10\%$ - Delivery head $\pm 10\%$ - Power $+ 10\%$.
For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

Pump size	Motor kW	Motor size	Base plate	Coupling	Weight pump	Weight set	a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
3101	0.75	80	P005	B68	13	34	83	282	20	15	270	250	100	60	147	140	584	470
	1.1	90S	P006			41		312			320	280					642	520
3102	1.1	90S	P006	B68	16	44	123	312	20	15	320	280	100	60	147	180	682	520
	1.5	90L		B68		47											723	570
	2.2	100L		B68		56		317			350	285						
3103	2.2	100L	P007	B68	19	59	163	317	20	15	350	285	110	60	147	220	763	570

* Dimensions depend upon the motor brand.
The weight of the pump will be approximately 13% higher when using Bronze.

Dimension chart, Pump set drawing and Performance curves

AOH 3600



General:

Values are valid for water $\rho = 1 \text{ kg/dm}^3$ and $\nu = 1 \text{ cSt}$.

Characteristic tolerance:

Capacity $\pm 10\%$ - Delivery head $\pm 10\%$ - Power $+ 10\%$.

For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

Pump size	Motor kW	Motor size	Base plate	Coupling	Weight pump	Weight set	a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
3601	0.75	80	P005	B68	13	34	83	282	20	15	270	250	100	60	147	140	584	470
	1.1	90S	P006			41		312			320	280					642	520
3602	1.5	90L	P006	B68	16	47	123	312	20	15	320	280	100	60	147	180	682	520
	2.2	100L	P007			56		317			350	285					723	570
3603	2.2	100L	P007	B68	19	59	163	317	20	15	350	285	110	60	147	220	763	570
	3	100L				60												
	4	112M		B80		78											784	

* Dimensions depend upon the motor brand.

The weight of the pump will be approximately 13% higher when using Bronze.

It is the policy of Sterling Fluid Systems to seek continually for ways to improve its products and the right is reserved to alter specifications at anytime without prior notice.

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