Side Channel pumps
Self-priming, segmental type

AOH 1101 … 3603

Technical data

Capacity:	from 0,2 up to 7,5 m³/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.

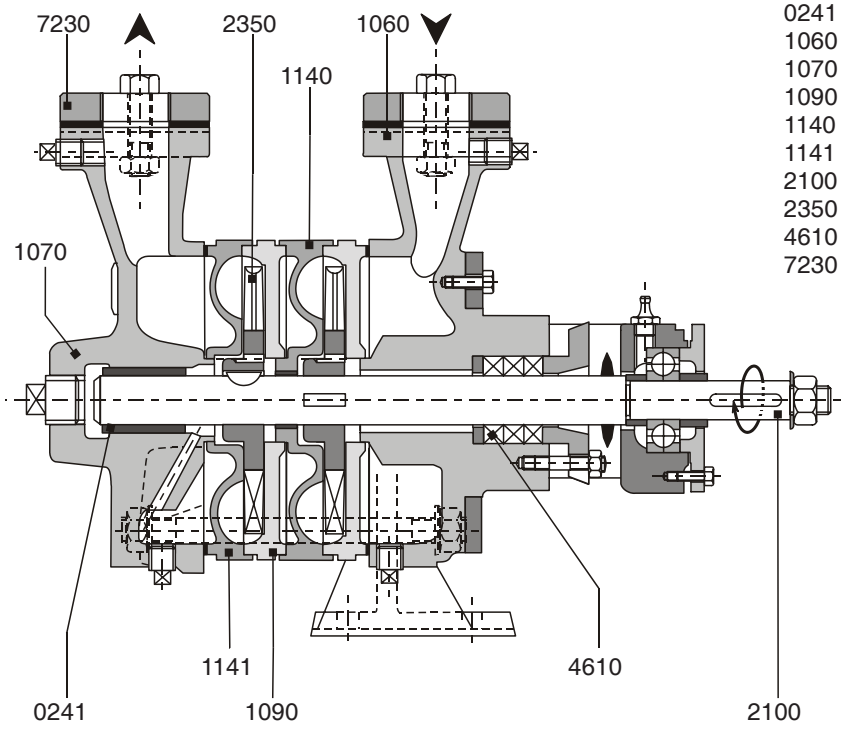
General comments

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

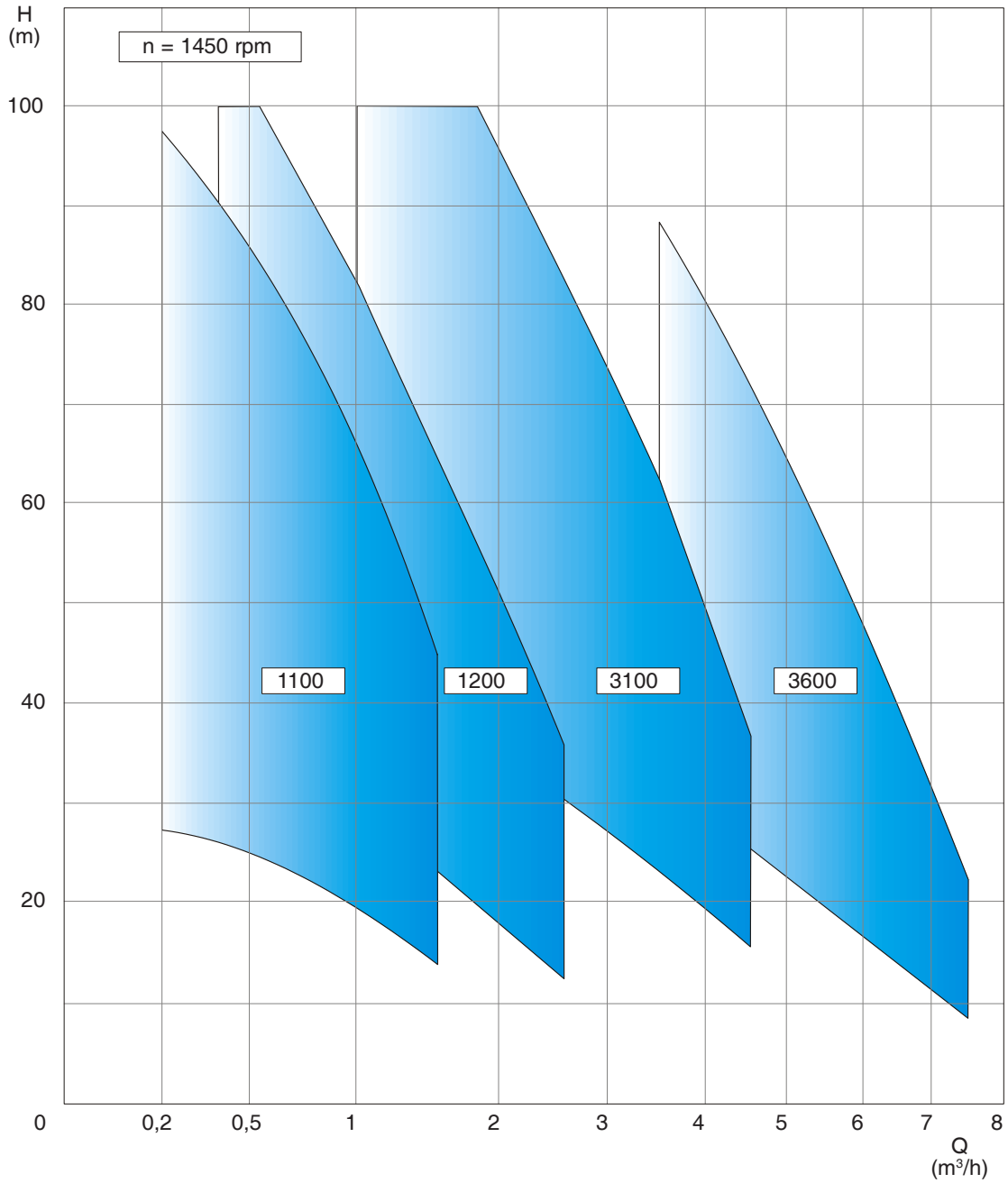
Liquid:	Water
Density:	1 kg/dm³
Viscosity:	1 cSt
Temperature:	20 °C
Atmospheric pressure:	1013 mbar

Characteristic tolerances

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

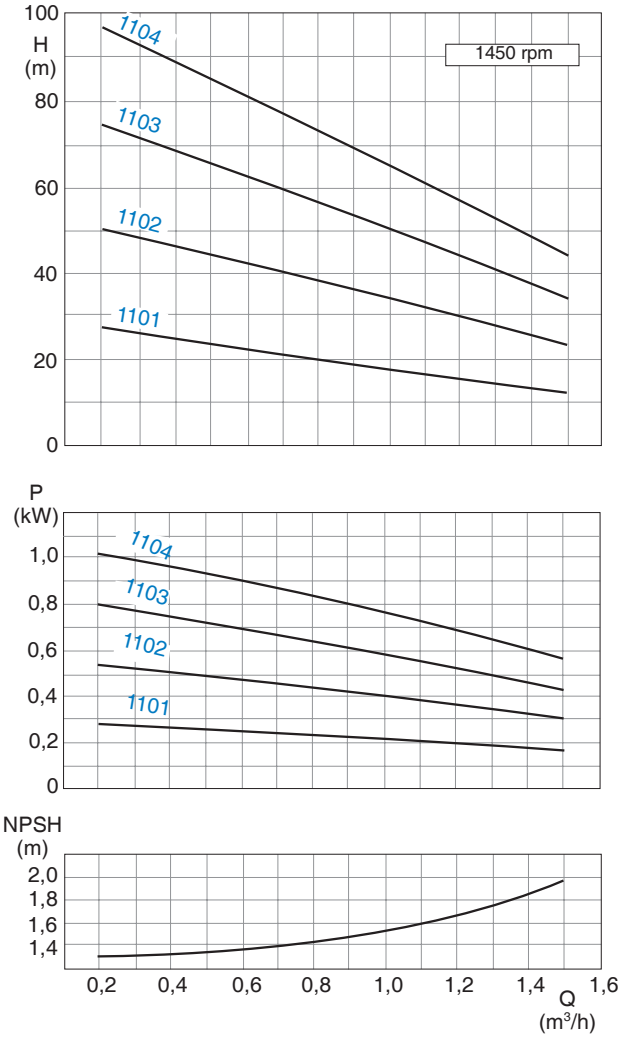
Measuring standard

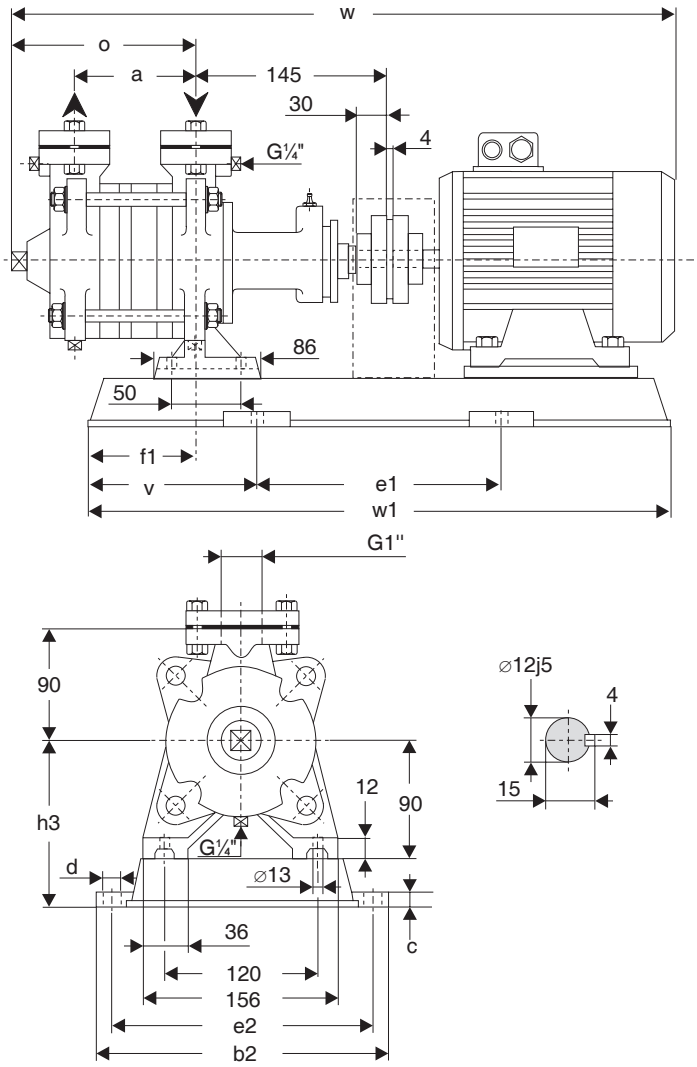
According to ISO 5198



Dimension chart, Pump set drawing and Performance curves

AOH 1100





General: Values are valid for water ρ = 1 kg/dm³ and ν = 1 cSt.

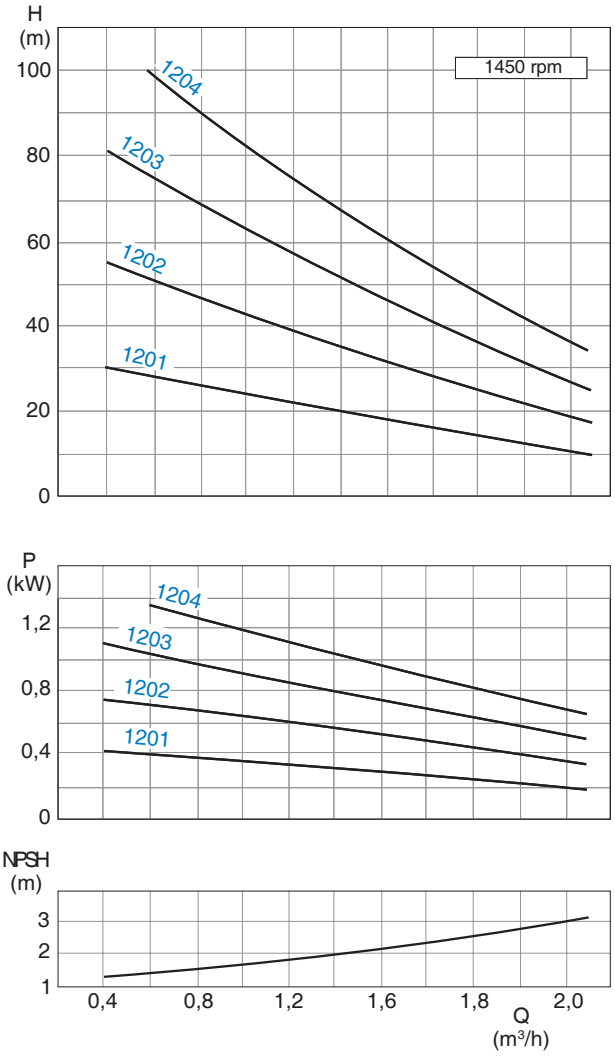
Characteristic tolerance: Capacity ± 10% - Delivery head ± 10% - Power + 10%.
For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

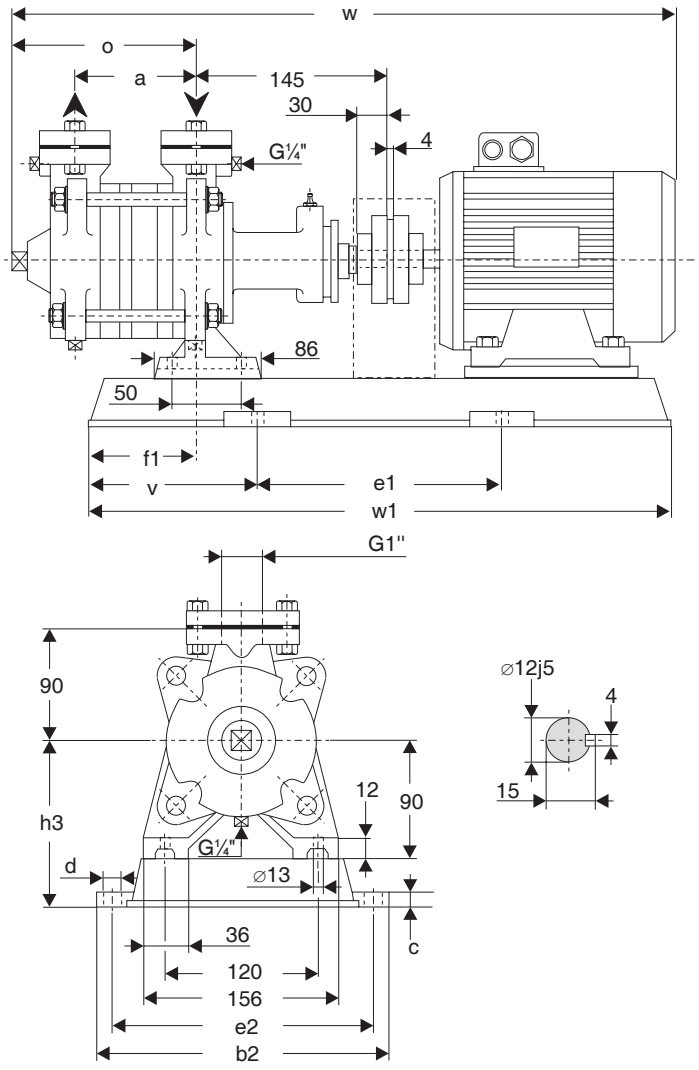
Pump size	Motor kW	Motor size	Base plate	Coupling	Weight pump	Weight set	a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
1101	0.37	71	P003	B68	9	26	78	262	20	15	270	230	100	108	125	118	506	470
1102	0.37	71	P003	B68	10	27	112	262	20	15	270	230	100	108	125	152	540	470
	0.55	80				30											574	
1103	0.55	80	P003	B68	12	32	146	262	20	15	270	230	100	108	125	186	608	470
	0.75	80				33												
	1.1	90S	P006			39		312			320	280					666	520
	1.5	90L				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			41		312			320	280					700	520
	1.5	90L				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 ρ = 1 kg/dm³ and ν = 1 cSt.

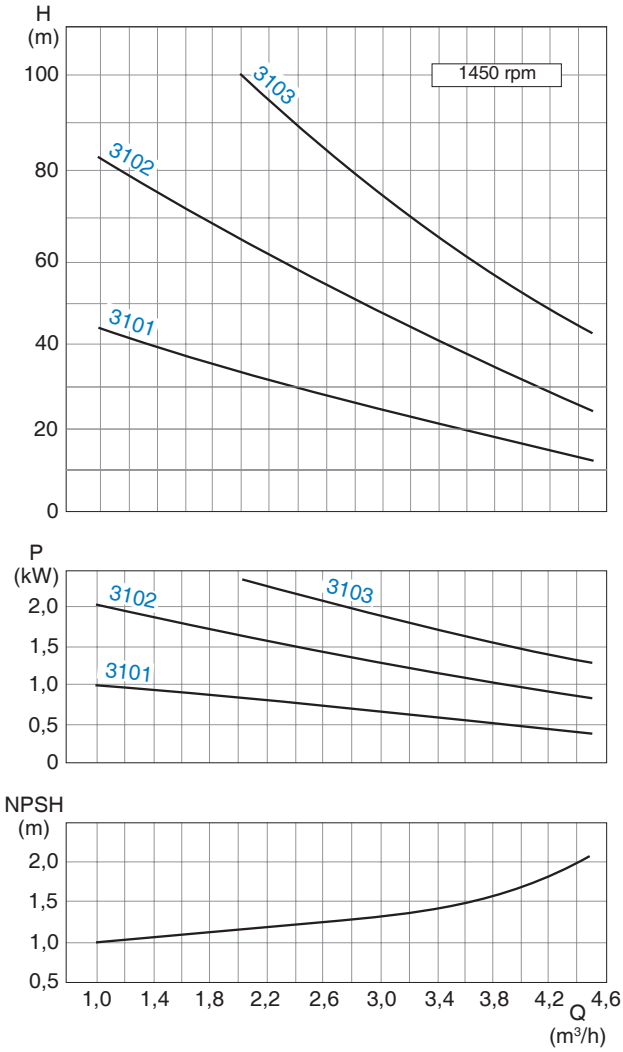
Characteristic tolerance: Capacity ± 10% - Delivery head ± 10% - Power + 10%.
For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

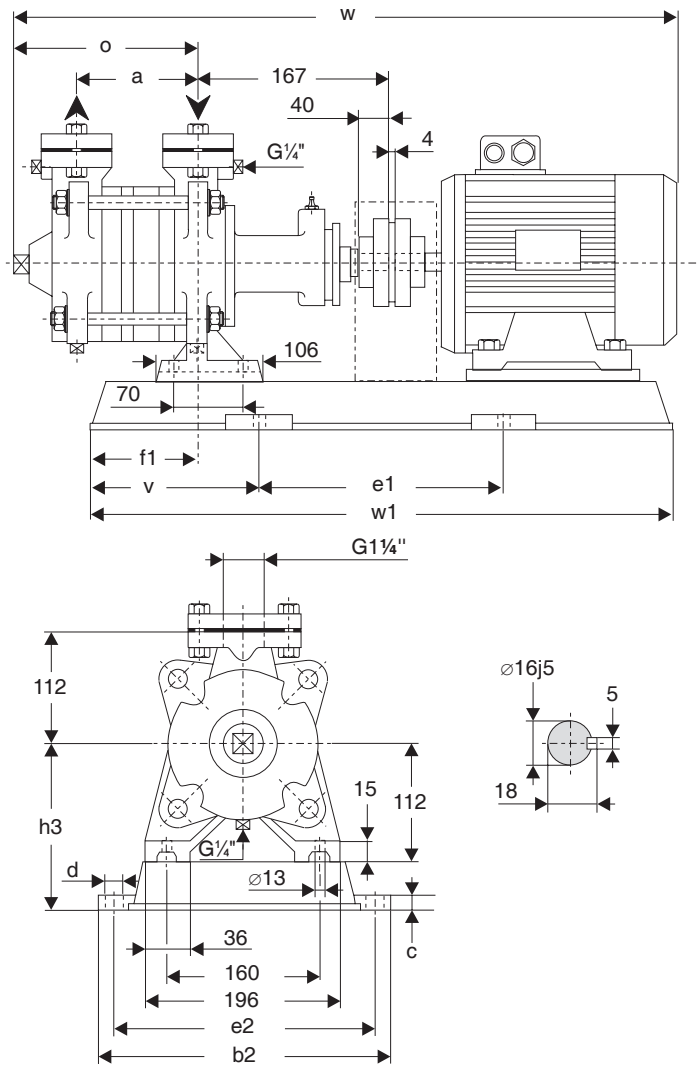
Pump size	Motor kW	Motor size	Base plate	Coupling	Weight pump	Weight set	a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
1201	0.37	71	P003	B68	9	26	78	262	20	15	230	270	100	108	125	118	506	470
	0.55	80				29											540	
1202	0.55	80	P003	B68	10	30	112	262	20	15	230	270	100	108	125	152	574	470
	0.75	80				31												
1203	0.75	80	P003	B68	12	33	146	262	20	15	230	270	100	108	125	186	608	470
	1.1	90S	P006			39		312			280	320					666	520
1204	1.1	90S	P006	B68	14	41	180	312	20	15	280	320	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 ρ = 1 kg/dm³ and ν = 1 cSt.

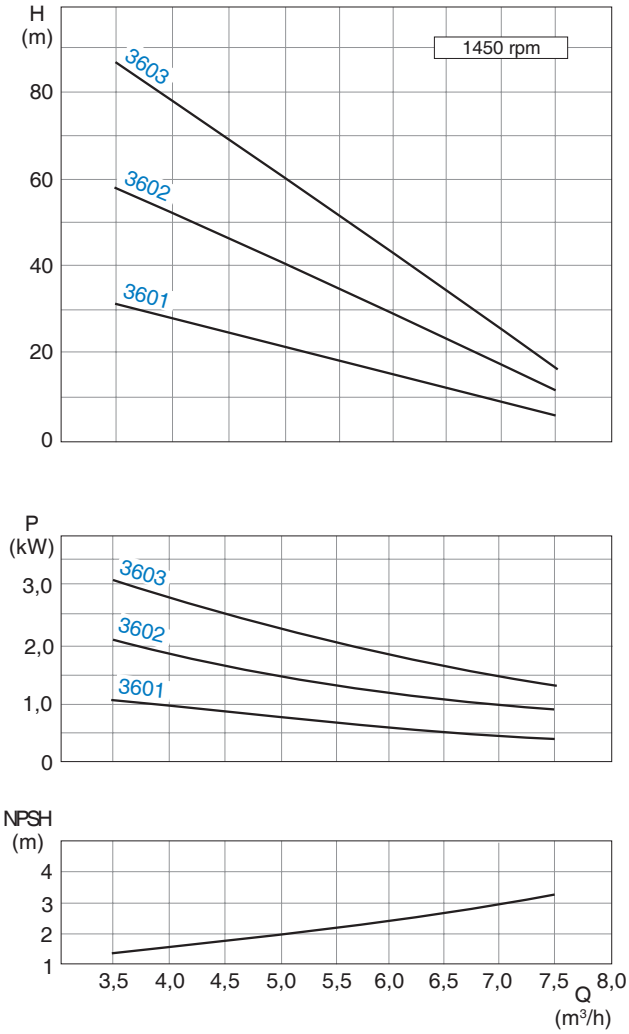
Characteristic tolerance: Capacity ± 10% - Delivery head ± 10% - Power + 10%.
For designs with a casing seal of soft Teflon, the tolerance for the delivery head is extended by 2%.

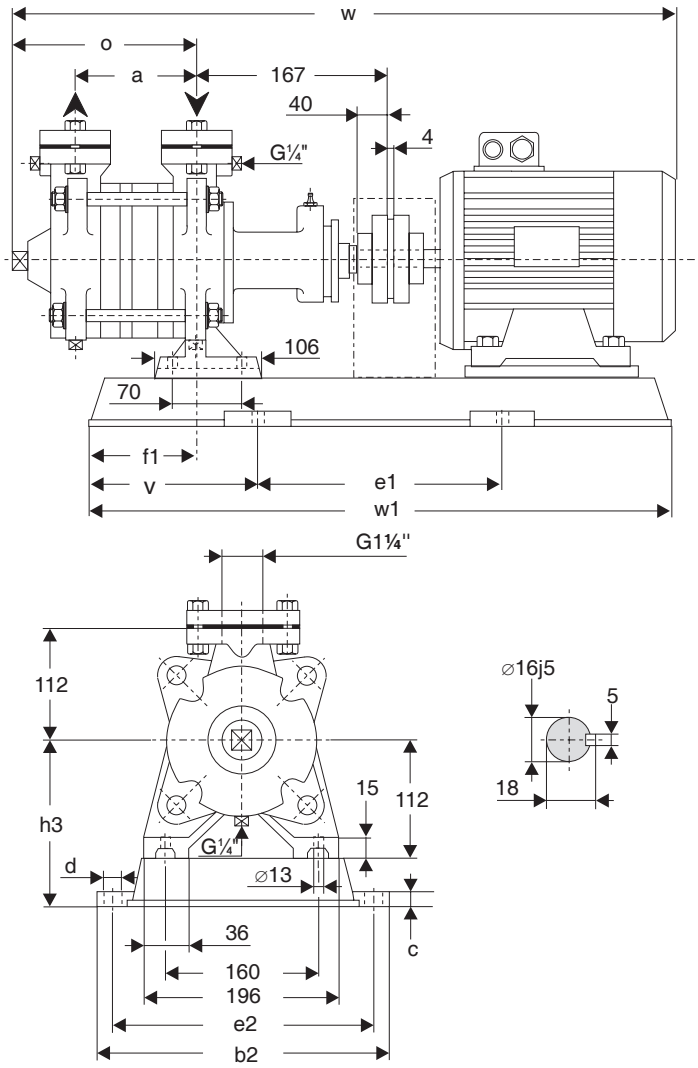
Pump size	Motor kW	Motor size	Base plate	Coupling	Weight pump	Weight set	a	b2	c	d	e1	e2	v	f1	h3	o	w*	w1
3101	0.75	80	P005	B68	13	34	83	282	20	15	270	250	100	60	147	140	584	470
	1.1	90S	P006			41		312			320	280					642	520
3102	1.1	90S	P006	B68	16	44	123	312	20	15	320	280	100	60	147	180	682	520
	1.5	90L				47												
	2.2	100L	P007	B80		56		317			350	285	110				723	570
3103	2.2	100L	P007	B80	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 ρ = 1 kg/dm³ and ν = 1 cSt.

Characteristic tolerance: Capacity ± 10% - Delivery head ± 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	B80		56		317			350	285	100				723	570
3603	2.2	100L	P007	B80	19	59	163	317	20	15	350	285	100	60	147	220	763	570
	3	100L				60												
	4	112M				78											784	

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

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