

GAMA I/II 610

HORIZONTAL, CENTRIFUGAL, VOLUTE-TYPE PROCESS PUMPS ACC. TO API 610



GAMA I / II 610

APPLICATION

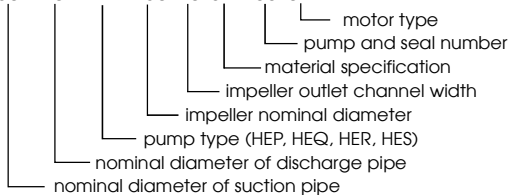
- pure or slightly polluted, active and neutral chemical liquids and liquid gases
- heavy chemical, petrochemical and liquid gas processing industries, heavy process applications, power engineering design:
 - A) standard - for general use
 - B) acc. to API 610 for applications with increased safety demands of class OH2 (range of tests and certifications)

WORKING CONDITIONS

- medium temperature range from - 40°C to +200°C (HEP, HEQ) from + 200°C to 450°C (HER, HES)
- working pressure of 50 bars
- medium density range from 500 kg.m⁻³ to 1600 kg.m⁻³
- kinematic viscosity up to 75 mm².s⁻¹
- pH 0 - 14
- contents of solid particles up to 1% of weight
- particle size up to 0,5 mm
- other variants consult with the manufacturer

TYPE IDENTIFICATION

80 - 40 - HEP-250-10-S1-133-09



CONSTRUCTION

- 42 sizes of hydrodynamic pumps (series 25 and 30 not included)
- full compliance with API 610 latest edition (HEP, HER)
- pumps comply with the code designation of class OH2 PN50
- horizontal, centrifugal, single-stage, volute-type construction with an axial intake and a radial outlet
- radial-split pressure body; body feet placed horizontally
- impeller supported on oil-lubricated roller bearings in the bearing bracket bath and spray lubrication
- shaft sealing in the bearing bracket is performed with labyrinth discs
- pump body and the lantern bracket forming a compact unit
- closed impeller with double-ended seal rings and relief openings fixed on a protruding end of the shaft
- the lantern bracket with a casing forms a chamber enabling cooling or heating of the area before the packing
- packings acc. to API 682 (HEP, HER)
- flanges upon request; standard: rough seal bar; welding neck-flanges included
- other versions optional, consult with the manufacturer

MATERIAL SPECIFICATION (to API 610)

Part name	S1	S4	S5	S6	S8	C6	A7	A8
volute	1.0619	1.0619	1.0619	1.0619	1.0619	1.4312	1.4308	1.4408
pump casing	1.0619	1.0619	1.0619	1.0619	1.0619	1.4312	1.4308	1.4408
impeller	EN-GJL-200	1.0619	1.0619	1.4308	1.4408	1.4312	1.4308	1.4408
seal rings*	EN-GJL-200	EN-GJL-200	1.4308	1.4308	1.4408	1.4308	1.4308	1.4408
shaft	1.0503	1.0503	1.0503	1.7225	1.4404	1.4306	1.4306	1.4404
impeller nut	1.0503	1.0503	1.7225	1.7225	1.4404	1.4306	1.4306	1.4404
bearing body	1.0619	1.0619	1.0619	1.0619	1.0619	1.0619	1.0619	1.0619
base plate	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570

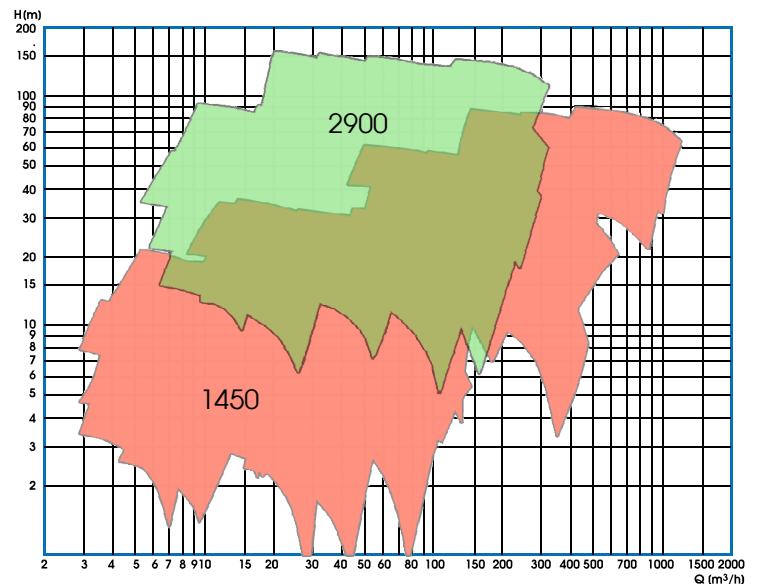
The above table states the basic material specifications; if applicable, other material combinations optional depending on pumped medium.

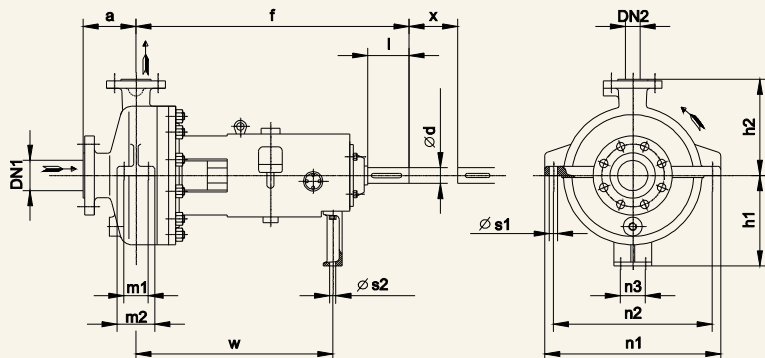
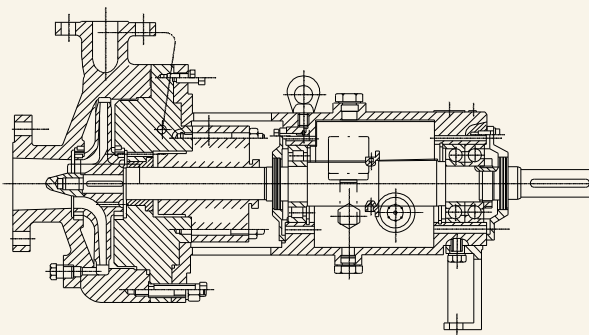
*bronze CuSn10Zn2 (if necessary) optional



WORKING AREA

PUMP SIZE	SHAFT SPEED (r.p.m.)	FLOW Q (l/s)	DELIVERY HEAD H (m)	TEMPERATURE MAX. (°C)
from 50-40-HEP-125 to 300-250-HEP-500	1450 2900	from 0,5 to 280	from 2,5 to 160	200
from 50-40-HER-125 to 300-250-HER-500	1450 2900	from 0,5 to 280	from 2,5 to 160	450



BASIC DIMENSIONS

CROSS-SECTION DRAWING


Pos.	DN1	DN2	Ø im- peller	Pump				Feet					Shaft			kg			
				a	f	h1	h2	m1	m2	n1	n2	n3	w	Ø s1	Ø s2		d	l	
1	50	40	125	120	700	150	180	110	70	330	280	95	515	18	18	32	80	140	65
2	50	40	160	120	700	150	210	110	70	365	315	95	515	18	18	32	80	140	82
3	50	40	200	120	700	225	210	110	70	395	345	95	515	18	18	32	80	140	91
4	50	40	250	140	747.5	225	250	110	70	490	445	95	540	18	18	42	110	140	144
5	80	50	125	140	700	225	180	110	70	340	290	95	515	18	18	32	80	140	79
6	80	50	160	140	700	150	210	110	70	370	320	95	515	18	18	32	80	140	84
7	80	40	200	140	700	225	230	110	70	410	360	95	515	18	18	32	80	140	97
8	80	40	250	140	747.5	225	250	110	70	490	445	95	540	18	18	42	110	140	163
9	80	40	315	150	747.5	250	300	110	70	520	470	95	540	18	18	42	110	140	218
10	100	80	125	150	700	225	210	110	70	365	315	95	515	18	18	32	80	140	86
11	100	80	160	160	700	225	210	110	70	395	345	95	515	18	18	32	80	140	91
12	80	50	200	150	700	250	250	110	70	420	370	95	515	18	18	32	80	140	119
13	80	50	250	150	747.5	250	275	110	70	470	420	95	540	18	18	42	110	140	169
14	80	50	315	160	747.5	250	350	110	70	525	475	95	540	18	18	42	110	140	216
15	100	80	125	150	700	225	250	110	70	395	345	95	515	18	18	32	80	140	98
16	100	80	160	140	747.5	225	250	110	70	425	375	95	540	18	18	42	110	140	142
17	100	80	200	150	747.5	225	275	110	70	445	395	95	540	18	18	42	110	140	148
18	100	80	250	150	747.5	225	290	110	70	510	465	95	540	18	18	42	110	140	197
19	100	80	315	160	890	280	300	110	70	545	495	95	670	22	18	48	110	140	287
20	150	80	160	150	747.5	250	350	110	70	425	375	95	540	18	18	42	110	140	158
21	150	80	200	170	747.5	250	275	110	70	470	420	95	540	18	18	42	110	140	168
22	150	80	250	170	747.5	250	310	110	70	500	450	95	540	18	18	42	110	140	253
23	150	80	315	160	890	280	350	110	70	550	500	95	670	22	18	48	110	140	300
24	150	80	400	170	890	310	420	110	70	630	580	95	670	22	18	48	110	140	432
26	150	100	200	160	747.5	250	350	110	70	480	430	95	540	18	18	42	110	140	207
27	150	100	250	170	890	280	340	110	70	525	475	95	670	22	18	48	110	140	303
28	150	100	315	170	890	310	360	110	70	580	530	95	670	22	18	48	110	140	363
29	150	100	400	180	890	330	420	110	70	650	600	95	670	22	18	48	110	140	500
31	200	150	250	190	890	330	440	110	70	535	485	95	670	22	18	48	110	140	307
32	200	150	315	190	890	330	440	110	70	650	600	95	670	22	18	48	110	140	365
33	200	150	400	200	890	350	480	110	70	690	640	95	670	22	18	48	110	140	478
34	200	150	250	200	890	330	460	110	70	610	560	95	670	22	18	48	110	180	362
35	200	150	315	230	990	330	450	110	70	650	580	95	770	26	22	60	140	180	515
36	200	150	400	230	990	360	500	110	70	730	660	95	770	26	22	60	140	180	614
37	200	150	500	240	990	400	550	110	70	800	730	95	770	26	22	60	140	180	788
38	250	200	315	260	990	330	500	110	70	670	600	95	770	26	22	60	140	180	630
39	250	200	400	240	990	350	550	110	70	800	730	95	770	26	22	60	140	180	700
40	250	200	500	250	1040	440	610	110	70	880	810	95	870	26	22	70	140	180	953
41	300	250	400	290	1040	420	650	110	70	850	780	95	870	26	22	70	140	180	890
42	300	250	500	290	1040	450	720	110	70	910	840	95	870	26	22	70	140	180	1060

SEAL DESIGN

- packings acc. to API 682 (HEP, HER)
- single mechanical seal, cartridge type
- double mechanical seal, cartridge type

MOTORS

- foot-mounted electric motor drive
- driving force transmitted using a flexible coupling with a spacer
- common base subframe assembly, welded type, with levelling screws