

BETA.O

HORIZONTAL, CENTRIFUGAL, VOLUTE-TYPE PUMPS



APPLICATION

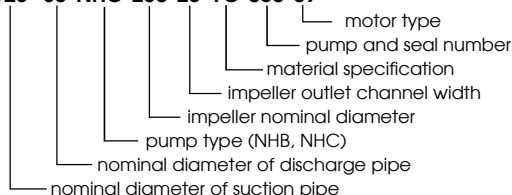
- pure or slightly polluted, active and neutral chemical liquids and combustibles, mixtures of high content of solids
- chemical, petrochemical, pharmaceutical, food-processing and processing industries, power engineering both conventional & nuclear, water supply systems
- design:
 - A) standard for general use
 - B) explosive conditions for pumping incombustibles in dangerous explosive conditions
 - C) for combustibles – for pumping combustible liquids
 - D) nuclear power engineering for both secondary and primary circuits

WORKING CONDITIONS

- medium temperature range from -40°C to +180°C (for oils and hydrocarbons up to 260°C)
- working pressure of 16 bars and 25 bars
- medium density range from 600 kg.m⁻³ to 1900 kg.m⁻³
- kinematic viscosity up to 75 mm².s⁻¹ (higher must be consulted with the manufacturer)
- pH 0 - 14
- contents of solid particles 5 – 15% of weight
- particle size 0,5 mm up to 5 mm
- rated for use in 50 and 60 Hz mains

TYPE IDENTIFICATION

125- 80-NHC-250-23-YC-050-09



CONSTRUCTION

- dimensions and parameters acc. to ČSN EN 22858/ISO 2858/DIN 24 256 up to size 34 (200-150-NHC-400)
- full compliance with ČSN ISO 5199
- 43 sizes of standardized, hydrodynamic, medium-pressure pumps
- horizontal, centrifugal, single-stage, volute-type construction with an axial intake and a radial outlet (upwards flow)
- open impeller with diffuser guide vanes set on a pump shaft
- "dry shaft" no contact with pumped medium
- metal-to-metal sealing of hydraulic area
- bearing housing connected to hydraulic unit by a lantern bracket, includes jacket for cooling or heating the area around the packing and behind the impeller
- close clearance between volute and impeller guide vanes by means of adjustable rear bearing housing
- 2 assembly arrangements: heavy (NHB) and heavy duty (NHC)
- rated also for 60 Hz mains
- dimensions of packing area acc. to ISO 3069
- flanges PN16 and PN 25 acc. to ČSN EN 1092-1 and 2/ISO 7005-1/-2
- other options consult with the manufacturer

MATERIAL SPECIFICATION

Part name	OC	OB	OL	YC	ZC
volute	1.0619	1.0619	1.0619	1.4308	1.4408
pump casing, packing flange	1.0619	1.0619	1.0619	1.4308	1.4408
impeller	1.0619	CuSn10Zn2	EN-GJL-200	1.4308	1.4408
lantern ring / follower	EN-GJL-200	EN-GJL-200	EN-GJL-200	stainless steel	stainless steel
shaft sleeve	1.0619*	1.0619*	1.0619*	stainless steel	stainless steel
pump shaft	1.0503	1.0503	1.0503	stainless steel	stainless steel
impeller nut	1.0503	1.0503	1.0503	stainless steel	stainless steel
lantern bracket	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200
bearing housing	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200

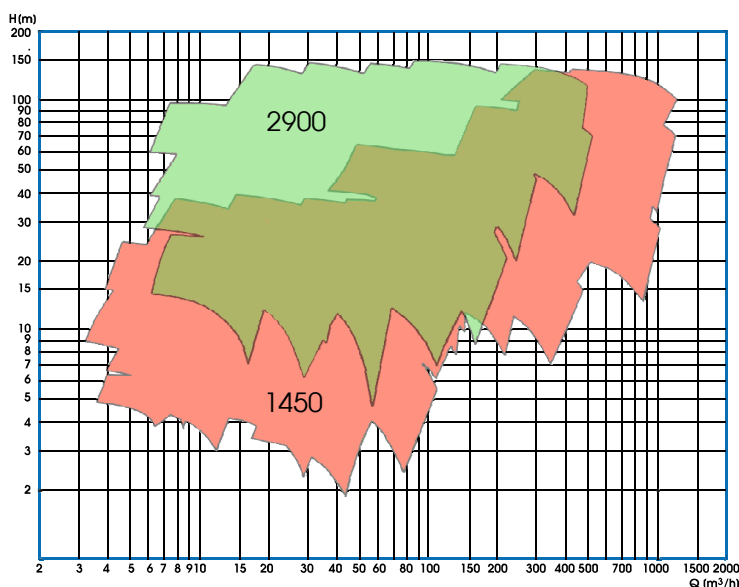
The above table states the basic material specifications: If applicable, other material combinations optional depending on pumped medium.

*for mechanical seal - stainless steel



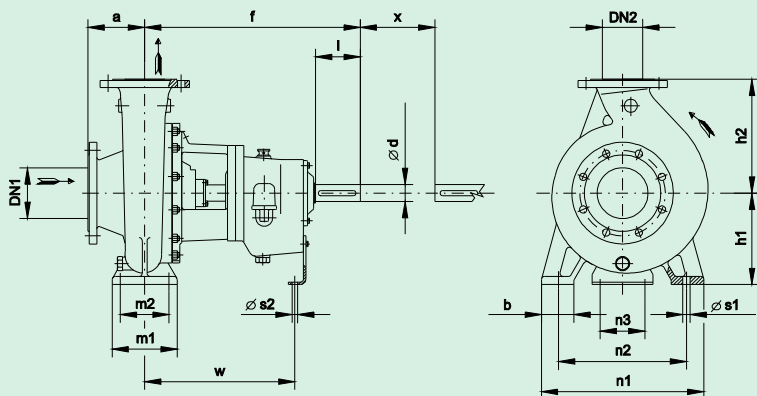
WORKING AREA

PUMP SIZE	SHAFT SPEED (r.p.m.)	FLOW Q (l/s)	DELIVERY HEAD H (m)	TEMPERATURE MAX. (°C)
from 50-32-NHC-125 to 300-250-NHC-630	1450 2900	from 0,5 to 300	from 2,5 to 160	180 (260)

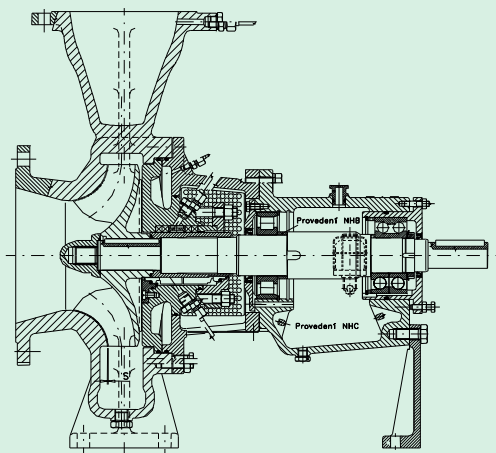


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BASIC DIMENSIONS



CROSS-SECTION DRAWING



Pos.	DN1	DN2	Ø im- peller	Pump				Feet										Shaft			kg
				a	f	h1	h2	b	m1	m2	n1	n2	n3	w	Ø s1	Ø s2	d	l	x ¹⁾		
1	50	32	125	80	385	112	140	50	100	70	190	140	110	285	14	14	24	50	100	46	
2	50	32	160	80	385	132	160	50	100	70	240	190	110	285	14	14	24	50	100	47	
3	50	32	200	80	385	160	180	50	100	70	240	190	110	285	14	14	24	50	100	54	
4	50	32	250	100	500	180	225	65	125	95	320	250	110	370	14	14	32	80	100	96	
5	65	50	125	80	385	112	140	50	100	70	210	160	110	285	14	14	24	50	100	47	
6	65	50	160	80	385	132	160	50	100	70	240	190	110	285	14	14	24	50	100	49	
7	65	40	200	100	385	160	180	50	100	70	265	212	110	285	14	14	24	50	100	64	
8	65	40	250	100	500	180	225	65	125	95	320	250	110	370	14	14	32	80	100	89	
9	65	40	315	125	500	200	250	65	125	95	345	280	110	370	14	14	32	80	100	112	
10	80	65	125	100	385	132	160	50	100	70	240	190	110	285	14	14	24	50	100	49	
11	80	65	160	100	385	160	180	50	100	70	265	212	110	285	14	14	24	50	100	55	
12	80	50	200	100	385	160	200	50	100	70	265	212	110	285	14	14	24	50	100	62	
13	80	50	250	125	500	180	225	65	125	95	320	250	110	370	14	14	32	80	100	92	
14	80	50	315	125	500	225	280	65	125	95	345	280	110	370	14	14	32	80	100	110	
15	100	80	125	100	385	160	180	65	125	95	280	212	110	285	14	14	24	50	100	52	
16	100	80	160	100	500	160	200	65	125	95	280	212	110	370	14	14	32	80	100	87	
17	100	65	200	100	500	180	225	65	125	95	320	250	110	370	14	14	32	80	140	84	
18	100	65	250	125	500	200	250	80	160	120	360	280	110	370	18	14	32	80	140	102	
19	100	65	315	125	530	225	280	80	160	120	400	315	110	370	18	14	42	110	140	168	
20	125	80	160	125	500	180	225	65	125	95	320	250	110	370	14	14	32	80	140	87	
21	125	80	200	125	500	180	250	65	125	95	345	280	110	370	14	14	32	80	140	91	
22	125	80	250	125	500	225	280	80	160	120	400	315	110	370	18	14	32	80	140	110	
23	125	80	315	125	530	250	315	80	160	120	400	315	110	370	18	14	42	110	140	157	
24	125	80	400	125	530	280	355	80	160	120	435	355	110	370	18	14	42	110	140	185	
25	125	100	200	125	500	200	280	80	160	120	360	280	110	370	18	14	32	80	140	105	
26	125	100	250	140	530	225	280	80	160	120	400	315	110	370	18	14	42	110	140	134	
27	125	100	315	140	530	250	315	80	160	120	400	315	110	370	18	14	42	110	140	160	
28	125	100	400	140	530	280	355	100	200	150	500	400	110	370	23	14	42	110	140	221	
29	150	125	250	140	530	250	355	80	160	120	400	315	110	370	18	14	42	110	140	153	
30	150	125	315	140	530	280	355	100	200	150	500	400	110	370	23	14	42	110	140	185	
31	150	125	400	140	530	315	400	100	200	150	500	400	110	370	23	14	42	110	140	221	
32	200	150	250	160	530	280	375	100	200	150	500	400	110	370	23	14	42	110	180	162	
33	200	150	315	160	670	315	400	100	200	150	550	450	140	500	23	18	48	110	180	216	
34	200	150	400	160	670	315	450	100	200	150	550	450	140	500	23	18	48	110	180	260	
35	200	150	500	180	670	375	500	100	200	150	550	450	140	500	23	18	48	110	180	364	
36	250	200	315	200	670	355	450	110	200	150	550	450	140	500	23	18	48	110	180	205	
37	250	200	400	180	670	355	500	100	200	150	550	450	140	500	23	18	48	110	180	256	
38	250	200	500	200	770	425	560	100	200	150	660	560	140	565	23	18	60	140	180	403	
39	250	200	630	300	1000	500	700	225	400	300	1000	900	250	735	26	18	90	170	250	580	
40	300	250	315	250	770	400	500	130	260	190	690	560	140	565	26	18	60	140	180	240	
41	300	250	400	250	770	425	600	130	260	190	800	670	140	565	26	18	60	140	180	263	
42	300	250	500	250	770	475	670	130	260	190	800	670	140	565	26	18	60	140	180	416	
43	300	250	630	300	1000	500	700	225	400	300	1000	900	250	735	26	18	90	170	250	630	

SEAL DESIGN

- soft cord packing
- single mechanical seal
- double mechanical seal
- single mechanical seal, cartridge type
- double mechanical seal, cartridge type

MOTORS

- foot-mounted electric motor drive
- driving force is transmitted using a flexible coupling
 - flexible coupling without a spacer
 - flexible coupling with a spacer
- common base plate assembly, cast iron
 - common subframe assembly, welded type