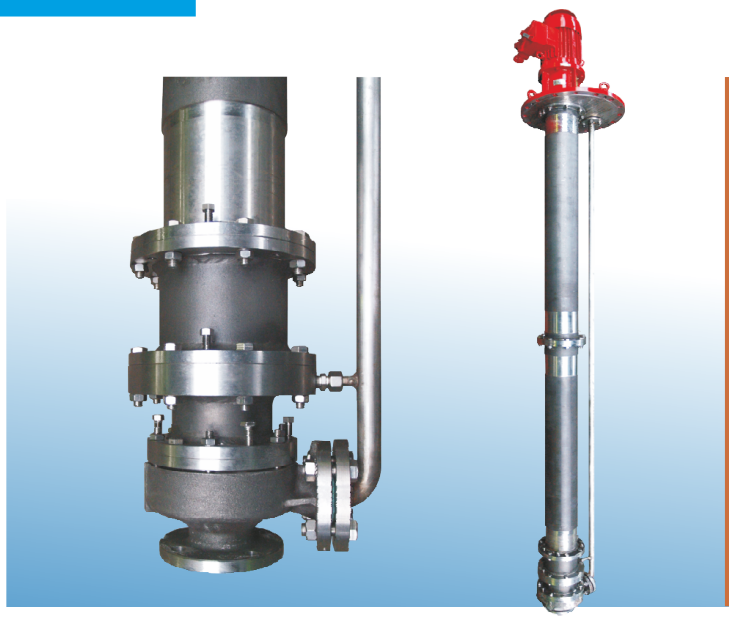
V-META-MAK

VERTICAL, CENTRIFUGAL, VOLUTE-TYPE PUMPS
PACKING - FREE DESIGN

ISH PUMPS OLOMOUC

APLICATION

- pure(see working conditions), active and neutral chemical liquids, combustibles – dangerous for staff and environment
- pumped liquid must be ferromagnetic particles-free!
- chemical, petrochemical , pharmaceutical and processing industry
- design:
  A) standard - for general use
  B) explosive conditions – for pumping incombustible liquids in dangerous explosive conditions
  C) combustibles – for pumping combustible liquids



WORKING CONDITIONS

- medium temperature from -40 °C do +80 °C (150 °C)
- working pressure of 16 bars (PN 16)
- medium density from 600 kg.m^{-3} to 1600 kg.m^{-3}
- kinematic viscosity from 0,3 to 75 mm^2.s^{-1}
- pH 0-14
- content of solid particles up to 2% of weight
- particle size up to 0,1 mm, max. hardness of 700 HV

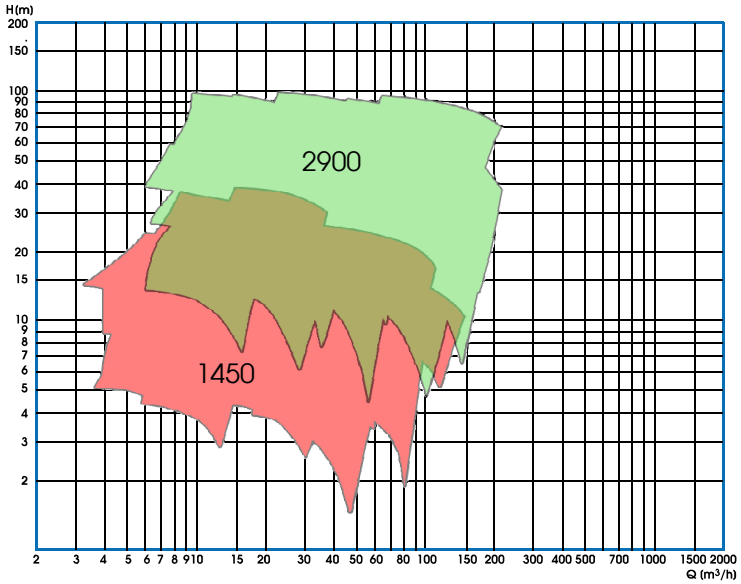
TYPE IDENTIFICATION

65 -40- NCBV-250-10-YC-000-09

- 09 — drive type
- 000 — pump number
- YC — material specification
- 10 — impeller outlet channel width
- 250 — impeller nominal diameter
- NCBV — pump type
- 40 — nominal diameter of discharge pipe
- 65 — nominal diameter of suction pipe

WORKING AREA

Pump size	Shaft speed (min^{-1})	Flow Q (l/s)	Delivery head H (m)	Temperature max (°C)
from 50-32-NCBV-125 to 125-100-NCBV-200	1450 2900	from 0,5 to 55,5	from 2,5 to 90	80 (150)



CONSTRUCTION

- hydraulic parameters acc. to ČSN EN 22858
- 30 sizes of normalized, hydrodynamic, medium-pressure pumps, other sizes consult with the manufacturer
- developed from META series - vertical, centrifugal, single-stage, volute-type pumps with an axial intake and radial outlet
- pressure chamber consisting of a volute, cover and magnetic coupling cover – hermetically separates medium from drive shaft and bearings
- volute is firmly connected to the base plate by split spacer tube, in which is located drive shaft
- closed impeller with one or two sealing rings design placed briefly on a protruding end of inner shaft
- outer split shaft seated in spacer tube in single row roller bearings lubricated with grease, no contact with medium
- inner shaft in sliding sleeve lubricated and cooled with pumped medium, in special cases in ceramic roller bearings
- torque transmission with permanent magnets of magnetic coupling from outer to inner shaft and impeller
- flanges PN16 acc. to ČSN EN 1092-1 and 2/ISO 70005-1 and 2
- other options consult with the manufacturer (cooling, heating, nozzle flanges)

MATERIAL SPECIFICATION

Part name	LC	LN	LB	LY	OC	ON	OL	YC	YN	ZC	ZN
volute	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	1.0619	1.0619	1.0619	1.4308	1.4308	1.4408	1.4408
pump cover	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	1.0619	1.0619	1.0619	1.4308	1.4308	1.4408	1.4408
impeller	EN-GJL-200	EN-GJL-200	CuSn10Zn2	1.4308	1.0619	1.0619	EN-GJL-200	1.4308	1.4308	1.4408	1.4408
sealing ring/rings	EN-GJL-200	CuSn10Zn2	EN-GJL-200	EN-GJL-200	EN-GJL-200	CuSn10Zn2	EN-GJL-200	1.4308	CuSn10Zn2	1.4408	CuSn10Zn2
outer shaft/ driving wheel	1.0503	1.0503	1.0503	1.0503	1.0503	1.0503	1.0503	1.0503	1.0503	1.0503	1.0503
inner shaft	1.0503	1.0503	1.0503	stainless steel	1.0503	1.0503	1.0503	stainless steel	stainless steel	stainless steel	stainless steel
impeller nut	1.0503	1.0503	1.0503	stainless steel	1.0503	1.0503	1.0503	stainless steel	stainless steel	stainless steel	stainless steel
lantern	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200
bearing body	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200	EN-GJL-200
magnetic coupling	material is chosen by manufacturer of coupling based on pumped medium										

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

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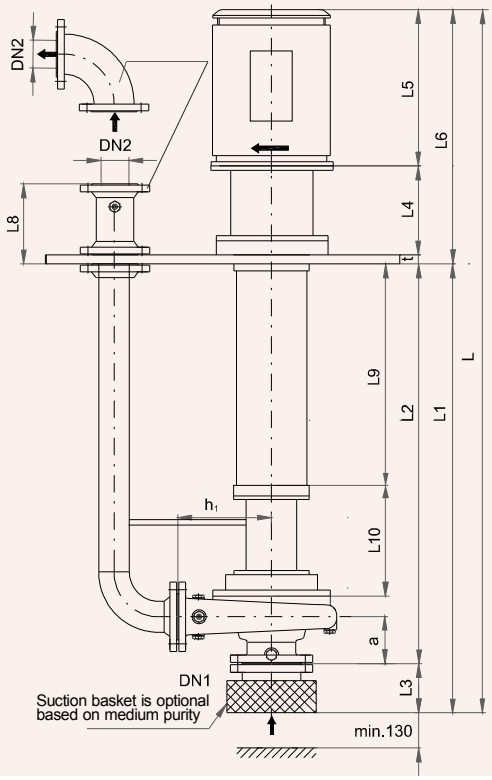
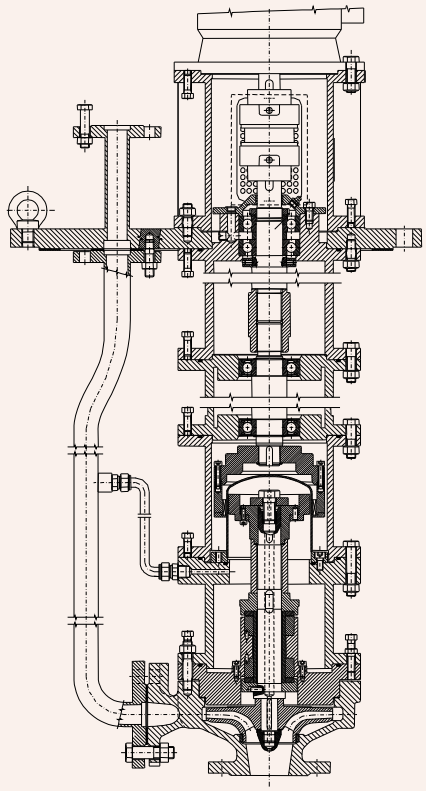
BASIC DIMENSIONS



Area	DN1	DN2 1450	DN2 2900	∅ impeller	Pump a	h1	t	L (L1,2)	L6 (4,5)	L3	L8
1	50	32	40	125	80	112	40	Length according to the situation	Length according to the motor a flexible coupling design	length according to the suction basket	dimension according to the situation
2	50	32	40	160	80	132	40				
3	50	32	40	200	80	160	40				
4	50	32	40	250	100	180	40				
5	65	50	65	125	80	112	40				
6	65	50	65	160	80	132	40				
7	65	40	50	200	100	160	40				
8	65	40	50	250	100	180	40				
9	65	40	-	315	125	200	40				
10	80	65	80	125	100	132	40				
11	80	50	65	160	100	160	40				
12	80	50	65	200	100	160	40				
13	80	50	65	250	125	180	40				
14	80	50	-	315	125	225	40				
15	100	80	100	125	100	160	40				
16	100	80	100	160	100	160	40				
17	100	65	80	200	100	180	40				
18	100	65	80	250	125	200	40				
19	100	65	80	315	125	225	40				
20	125	80	100	160	125	180	40				
21	125	80	100	200	125	180	40				
22	125	80	100	250	125	225	40				
23	125	80	-	315	125	250	40				
24	125	80	-	400	125	280	40				
26	125	100	-	200	125	200	40				
27	125	100	-	250	140	225	40				
28	125	100	-	315	140	250	40				
29	125	100	-	400	140	280	40				
31	150	125	-	250	140	250	40				
32	150	125	-	315	140	280	40				

More accurate and detailed data will be provided for each specific offer or after previous technical clarification.
Other sizes after assessment of the manufacturer

CROSS-SECTION DRAWING



MAGNETIC COUPLING DESIGN

- magnetic coupling with roller assembly
- magnetic coupling with slide assembly
- heated magnetic coupling with slide assembly

MOTORS

- flange-type el. motor drive
- driving force is transmitted using flexible coupling
  - flexible coupling with a spacer
  - flexible coupling without spacer
- base plate
  - circular
  - rectangular
  - square
  - acc. to the customer

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