

# V-META-PLUS

## VERTICAL, CENTRIFUGAL, VOLUTE - TYPE PUMPS



### APPLICATION

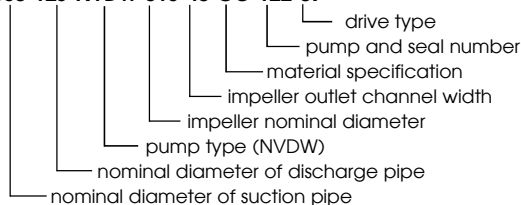
- pure and slightly polluted, active and neutral chemical liquids, combustibles
- chemical, petrochemical and pharmaceutical industry, food-processing and processing industry, power engineering and water supply systems
- design:
  - A) standard - for general use
  - B) explosive conditions – for pumping incombustible liquids in potentially explosive gas atmospheres
  - C) combustibles – for pumping combustible liquids in potentially explosive gas atmospheres

### WORKING CONDITIONS

- medium temperature from -40 °C do + 80 °C (150 °C at pump intake min. 20 °C below the boiling point at given pressure)
- working pressure of 16 bars (PN 16)
- medium density from 600 kg.m<sup>-3</sup> to 1900 kg.m<sup>-3</sup>
- kinematic viscosity up to 75 mm<sup>2</sup>.s<sup>-1</sup>
- pH 0-14
- content of solid particles up to 2% of weight
- particle size up to 0,5 mm

### TYPE IDENTIFICATION

150-125-NVDW-315-40-OC-122-09



### CONSTRUCTION

- nominal parameters value acc. to □SN EN 22858 up to size 34 (200-150-NVDW-400)
- full compliance with □SN ISO 5199 on performance reserve
- 43 sizes of normalized, hydrodynamic, medium-pressure pumps
- vertical, centrifugal, single-stage, volute-type pumps with an axial intake and outlet of pumped liquid above the base plate
- two sealing rings design
- closed impeller placed briefly on the shaft
- "dry shaft" no contact with pumped liquid
- shafts of cells in bearing housing are placed acc. to design in roller bearing lubricated by grease or in slide bearings lubricated by pumped liquid
- dimensions of packing area acc. to ISO 3069
- discharge pipe ending above base plate by short direct extension or 90° elbow with flange PN 16 acc. to □SN EN 1092-1 and 2 / ISO 7005-1 and 2
- other options upon request (cooling, heating, nozzle flanges, coating, etc.)

### MATERIAL SPECIFICATION

Part name	OC	ON	YC	YN	ZC	ZN
volute	1.0619	1.0619	1.4308	1.4308	1.4408	1.4408
pump cover	1.0570	1.0570	stainless steel	stainless steel	stainless steel	stainless steel
impeller	1.0619	1.0619	1.4308	1.4308	1.4408	1.4408
sealing ring	1.0619	CuSn10Zn2	1.4308	CuSn10Zn2	1.4408	CuSn10Zn2
drive cell	1.0570	1.0570	stainless steel	stainless steel	stainless steel	stainless steel
shaft	1.0570	1.0570	stainless steel	stainless steel	stainless steel	stainless steel
Impeller nut	1.0570	1.0570	stainless steel	stainless steel	stainless steel	stainless steel
el. motor lantern	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570
base plate*	1.0570	1.0570	1.0570	1.0570	1.0570	1.0570

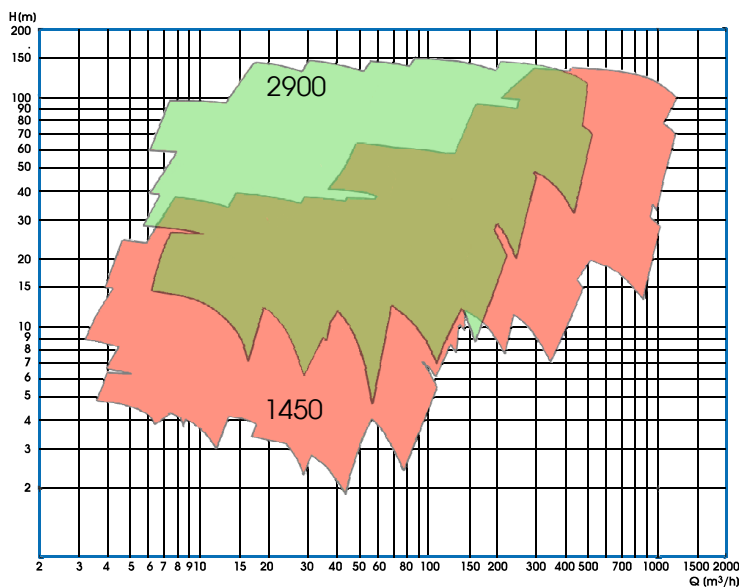
\* may be stainless steel if working conditions require



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### WORKING AREA

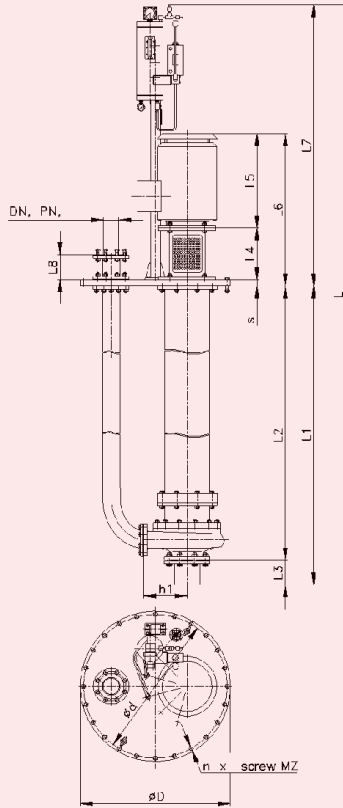
Pump size	Shaft speed (min <sup>-1</sup> )	Flow Q (l/s)	Delivery head H (m)	Temperature max (°C)
from 50-32-NVDW-125 to 300-250-NVDW-500	1450 2900	from 0,5 to 266	from 2,5 to 150	80 (150)



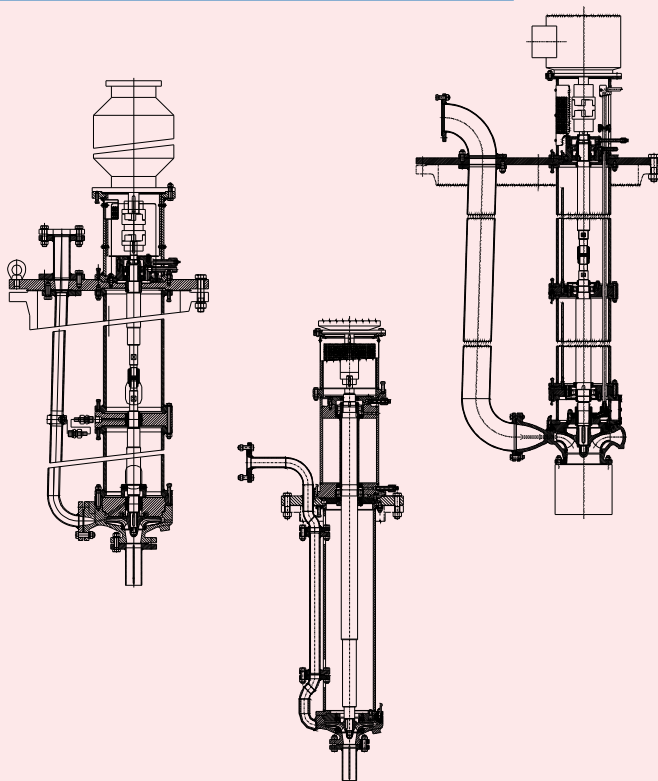
# V-META

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### BASIC DIMENSIONS



### CROSS-SECTION DRAWING



Area	DN1	Dn2	Ø Impeller	Pump								
				a	h1	Ø D	Ø d	s	L1	L8	-L9	
1	50	32	125	80	112							
2	50	32	160	80	132							
3	50	32	200	80	160							
4	50	32	250	100	180							
5	65	50	125	80	112							
6	65	50	160	80	132							
7	65	40	200	100	160							
8	65	40	250	100	180							
9	65	40	315	125	200							
10	80	65	125	100	132							
11	80	65	160	100	160							
12	80	50	200	100	160							
13	80	50	250	125	180							
14	80	50	315	125	225							
15	100	80	125	100	160							
16	100	80	160	100	160							
17	100	65	200	100	180							
18	100	65	250	125	200							
19	100	65	315	125	225							
20	125	80	160	125	180							
21	125	80	200	125	180							
22	125	80	250	125	225							
23	125	80	315	125	250							
24	125	80	400	125	280							
25	125	100	200	125	200							
26	125	100	250	140	225							
27	125	100	315	140	250							
28	125	100	400	140	280							
29	150	125	250	140	250							
30	150	125	315	140	280							
31	150	125	400	140	315							
32	200	150	250	160	280							
33	200	150	315	160	315							
34	200	150	400	160	315							
35	200	150	500	180	375							
36	250	200	315	200	355							
37	250	200	400	180	355							
38	250	200	500	200	425							
39	250	200	630	300	500							
40	300	250	315	250	400							
41	300	250	400	250	425							
42	300	250	500	250	475							
43	300	250	630	300	500							

More accurate and detailed data will be provided for each specific offer or after previous technical clarification and acc. to building layout of the site.

### SEAL DESIGN

- ▮ no seal design
- ▮ soft cord packing
- ▮ single mechanical seal
- ▮ single mechanical seal, cartridge type
- ▮ double mechanical seal
- ▮ double mechanical seal, cartridge type
- ▮ gas seal with power supply block (constant supply of nitrogen necessary)

### MOTORS

- ▮ flange-type el. motor drive
- ▮ driving force is transmitted using flexible coupling on shafts of cells
  - flexible coupling with a spacer
- ▮ base plate
  - circular
  - rectangular
  - square
  - acc. to the customer