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## Catalog CM, 2CM series

### Industrial Sewage Pump

<https://bts.net.ua>

## Industrial Sewage Pump CM, 2CM Series

CM and 2CM series industrial sewage pumps – centrifugal, horizontal, single-stage pumps with a closed impeller – are designed for pumping dirty water, domestic and industrial wastewater (sewage), sewage and other contaminated liquids with a pH of 6–8.5, a density of up to 1100 kg/m<sup>3</sup>, a temperature of 0–+90°C, and a content of abrasive particles not exceeding 1% by volume, with a size of up to 5 mm and a microhardness of no more than 9000 MPa.

The difference between CM and 2CM pumps lies in the 2CM model having a pressure cap, which increases the pump's self-priming head.

### Specifications of the CM series pumps

CM-series industrial pumps are the ideal solution for pumping dirty or process water.

The pump shaft seal is a single seals.

The material of the flow path components is grey cast iron.

Example of the unit's designation:

CM 80-50-200a/2, where:

CM – pump type (for slurry media);

80 – inlet diameter, mm;

50 – outlet diameter, mm;

200 – nominal impeller diameter, mm;

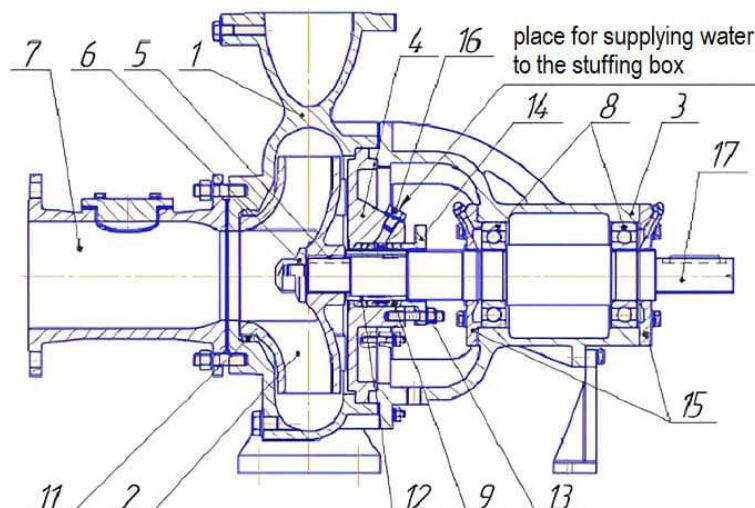
a – first impeller cut;

2 – code designation for the unit's rotor speed;

The maximum size of non-abrasive suspended particles in the pumped liquid, depending on the impeller passage diameter, is given in the table below:

Pump	Maximum size of non-abrasive suspended particles, mm	Impeller flow area, mm
CM 80-50-200	20	30
CM 100-65-200	30	40
CM 100-65-250	22	32
CM 125-80-315	35	45
CM 150-125-315	58	68
CM 200-150-540/4	50	55

Cross-section and part names of the CM type sewage pump:



Longitudinal section of the pump CM, 2CM

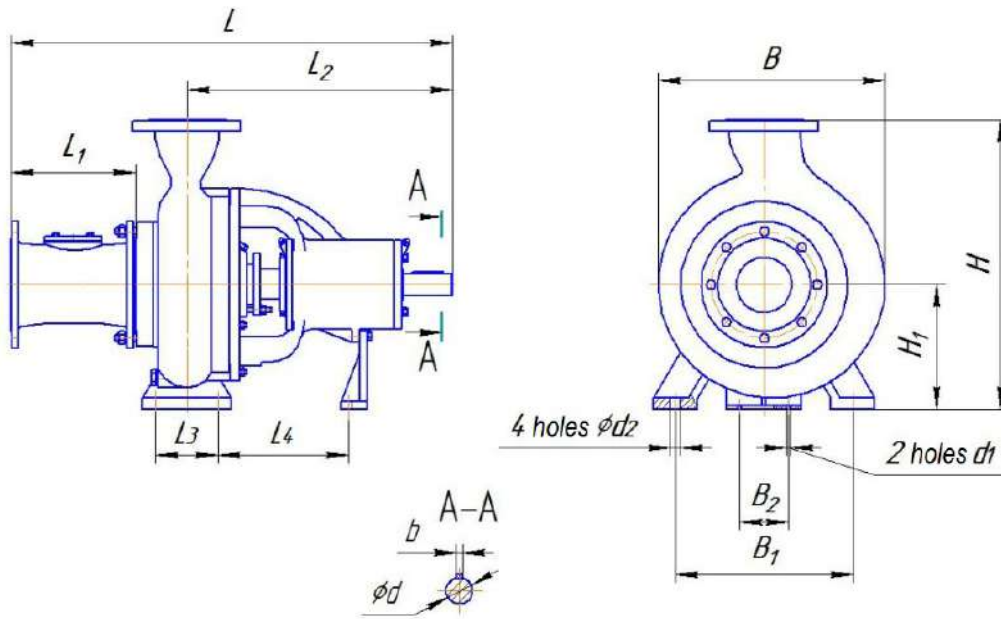
1 - pump housing	5 - key	9 - stuffing gland	14 - stuffing gland cover
2 - impeller	6 - impeller nut	11 - sealing ring (not installed in pumps CM 80-50-200, CM 100-65-200, CM 100-65-250, CM 125-80-315)	15 - bearing cover
3 - bracket	7 - pipe	12 - protective sleeve	16 - cork
4 - rear cover	8 - bearings	13 - nut	17 - shaft

Specification for the CM series pump:

PUMP	Flow rate, m <sup>3</sup> /h	Head, m	Motor power, kW	Speed, rpm	Efficiency, %	NPSH, m
CM 80-50-200/2	50	50	18,5	3000	58	6
CM 80-50-200a/2	45	42	15	3000	56	6
CM 80-50-2006/2	40	35	11	3000	56	6
CM 80-50-200/4	25	12,5	4	1500	58	5
CM 80-50-200a/4	22	10,5	3	1500	57	5
CM 80-50-2006/4	20	9	2,2	1500	59	5
CM 100-65-200/2	100	52	37	3000	61	5
CM 100-65-200a/2	86	42	30	3000	58	5
CM 100-65-2006/2	75	32	22	3000	60	5
CM 100-65-200/4	62.5	12	5,5	1500	55	3
CM 100-65-200a/4	55	9	4	1500	58	3
CM 100-65-2006/4	50	7,5	3	1500	57	3
CM 100-65-250/2	100	80	45	3000	60	3,5
CM 100-65-250a/2	95	62	37	3000	58	3,5
CM 100-65-2506/2	90	44	30	3000	56	3,5
CM 100-65-250/4	50	20	7,5	1500	60	5
CM 100-65-250a/4	47	16,5	5,5	1500	61	5
CM 100-65-2506/4	44	13,5	5,5	1500	58	5
CM 125-80-315/4	80	32	22	1500	58	4
CM 125-80-315a/4	72,5	26	18,5	1500	55	4
CM 125-80-3156/4	65	20	15	1500	55	4
CM 150-125-315/4	200	32	45	1500	64	4
CM 150-125-315a/4	175	26,5	37	1500	65	4
CM 150-125-3156/4	145	20,5	30	1500	65	4
CM 150-125-315/6	136	14	15	1000	64	4
CM 150-125-315a/6	120	10,5	11	1000	65	4
CM 150-125-3156/6	100	8,5	7,5	1000	65	4
CM 200-150-540/4	450	95	250	1450	70	7
CM 200-150-540/4 M	500	100	250	1450	71	7

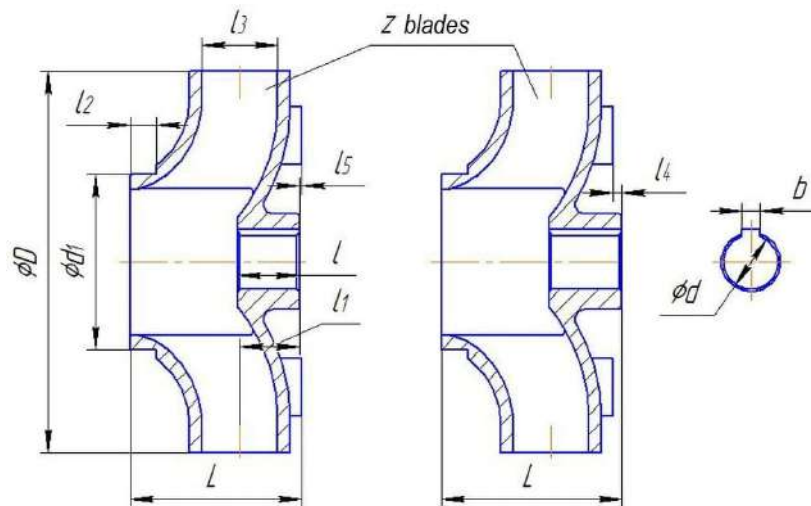
The performance curves for the CM series of sewage pumps can be found on page 6

Dimensions of the CM series pump:



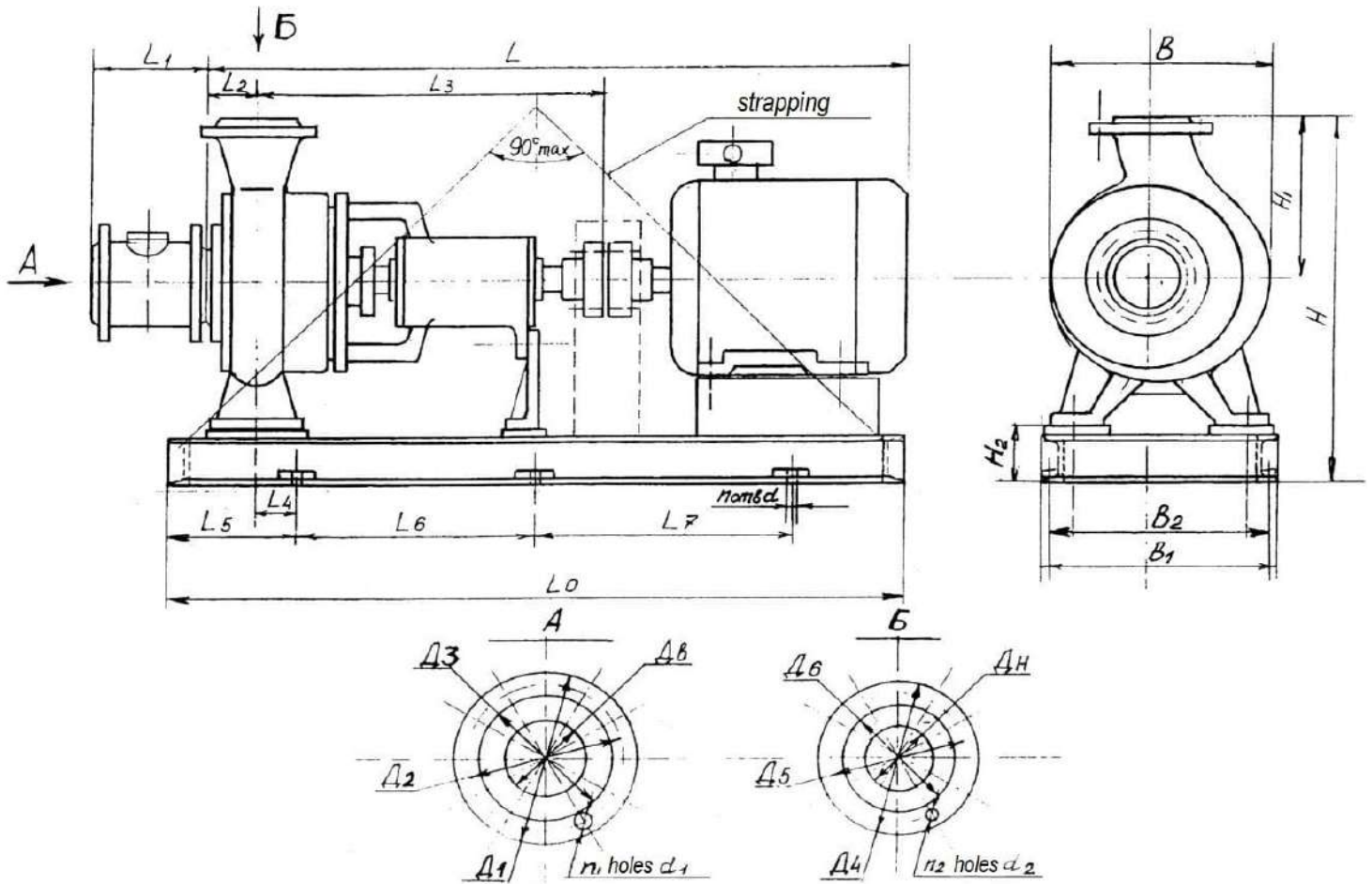
PUMP	H, mm	H1, mm	d, mm	d1, mm	d2, mm	b, mm	L, mm	L1, mm	L2, mm	L3, mm	L4, mm	B, mm	B1, mm	B2, mm	Weight, kg
CM 80-50-200	370	160	32	14	14	10	722	190	455	80	310	288.5	210	110	88
CM 100-65-200	405	180	38	14	14	10	740	195	465	90	315	309.5	260	110	96
CM 100-65-250	450	180	32	14	15	10	750	195	465	90	313.5	345	250	110	110
CM 125-80-315	540	225	38	14	19	10	801	220	476	120	310	404	320	120	157
CM 150-125-315	645	280	55	14	14	16	1044	280	648	140	332	510	400	110	285
CM 200-150-540 M	1000	400	80	18	24	22	1476	360	950	150	611	714	560	140	778
CM 200-150-540	1000	400	80	18	24	22	1476	360	950	150	611	714	560	140	778

Dimensions of pump impellers:



PUMP	D, mm	d, mm	d1, mm	L, mm	l, mm	l1, mm	l2, mm	l3, mm	l4, mm	l5, mm	b, mm	z, pcs
CM 80-50-200	195	28	105	82	28	32	19	30	-	2	8	4
CM 100-65-200	208	28	120	97	35	39	21	40	-	2	8	5
CM 100-65-250	250	28	120	100	34	34	18	33	-	2	8	4
CM 125-80-315	305	28	154	122	53	38	25	45	-	2	8	4
CM 150-125-315	335	48	180	165	63	75	22	68	24	-	16	3
CM 200-150-540 M	524	80	230*	204	82	77	30	64	19	-	22	4
CM 200-150-540	520	80	230*	204	82	77	30	64	19	-	22	4

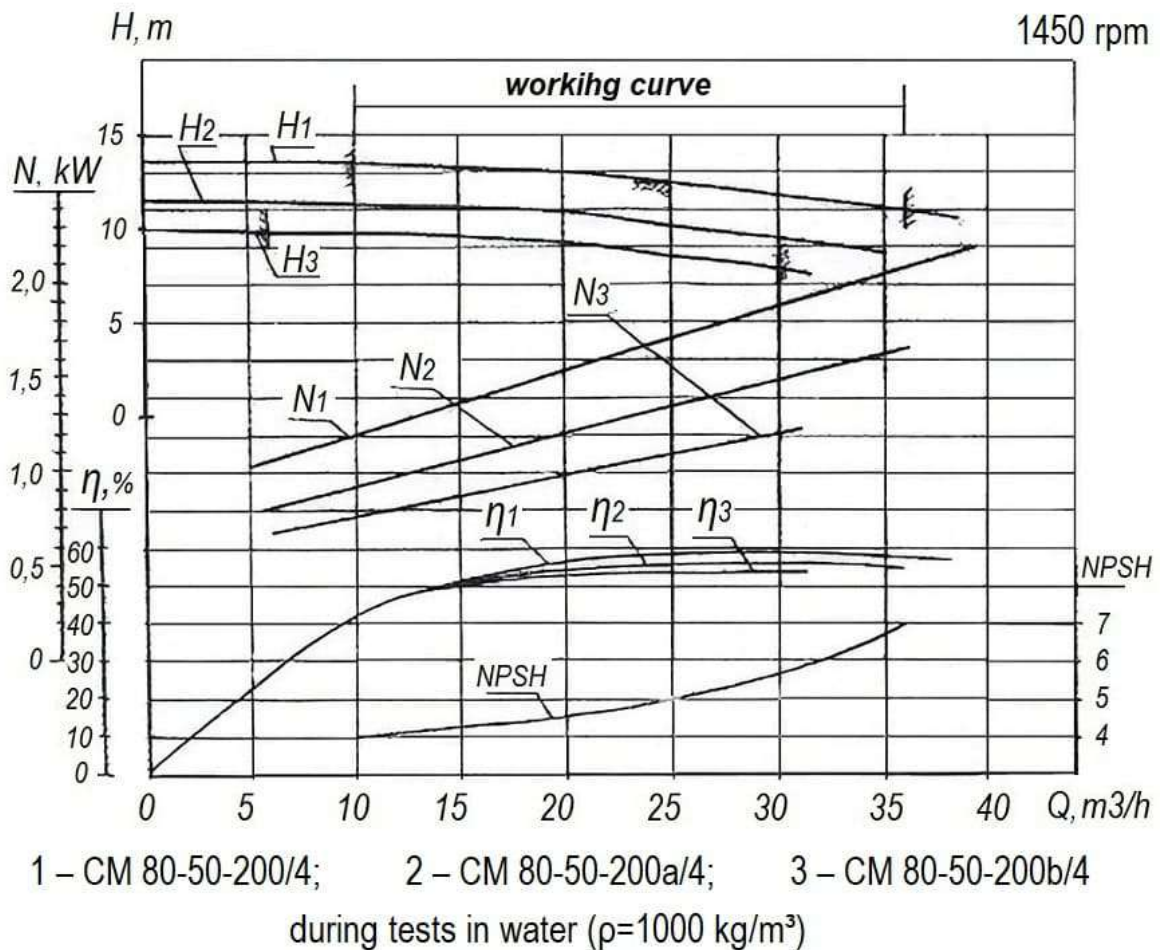
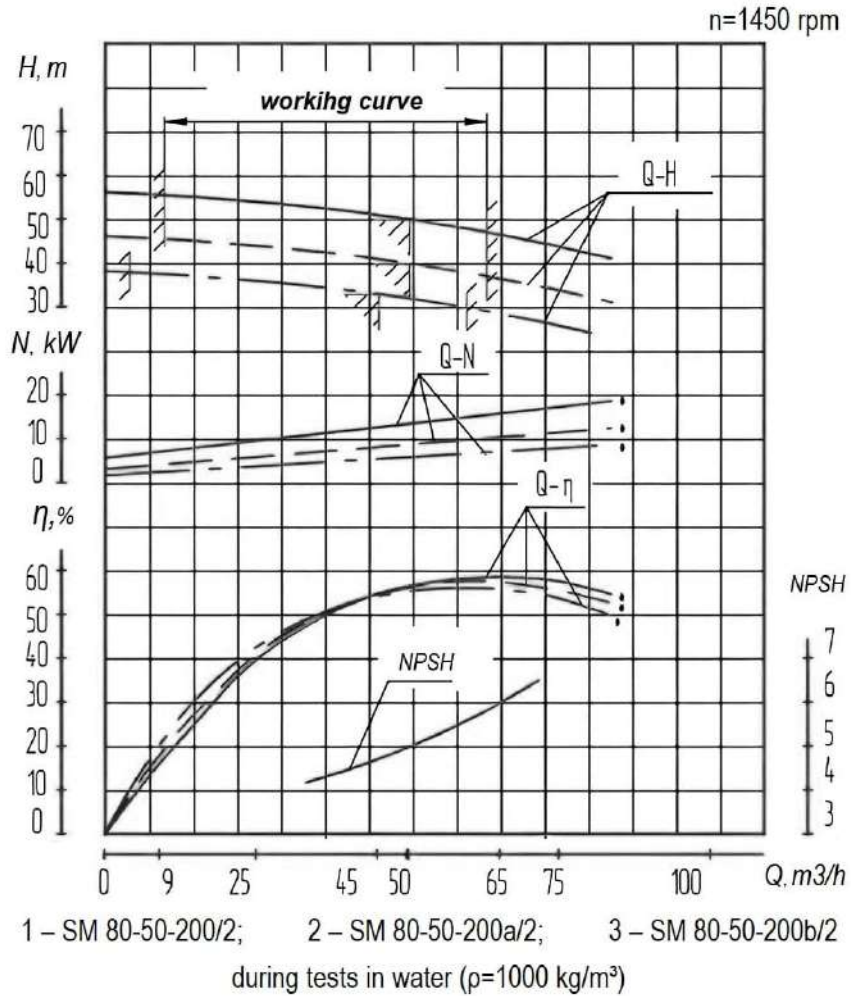
Dimensions of the pump unit CM series:

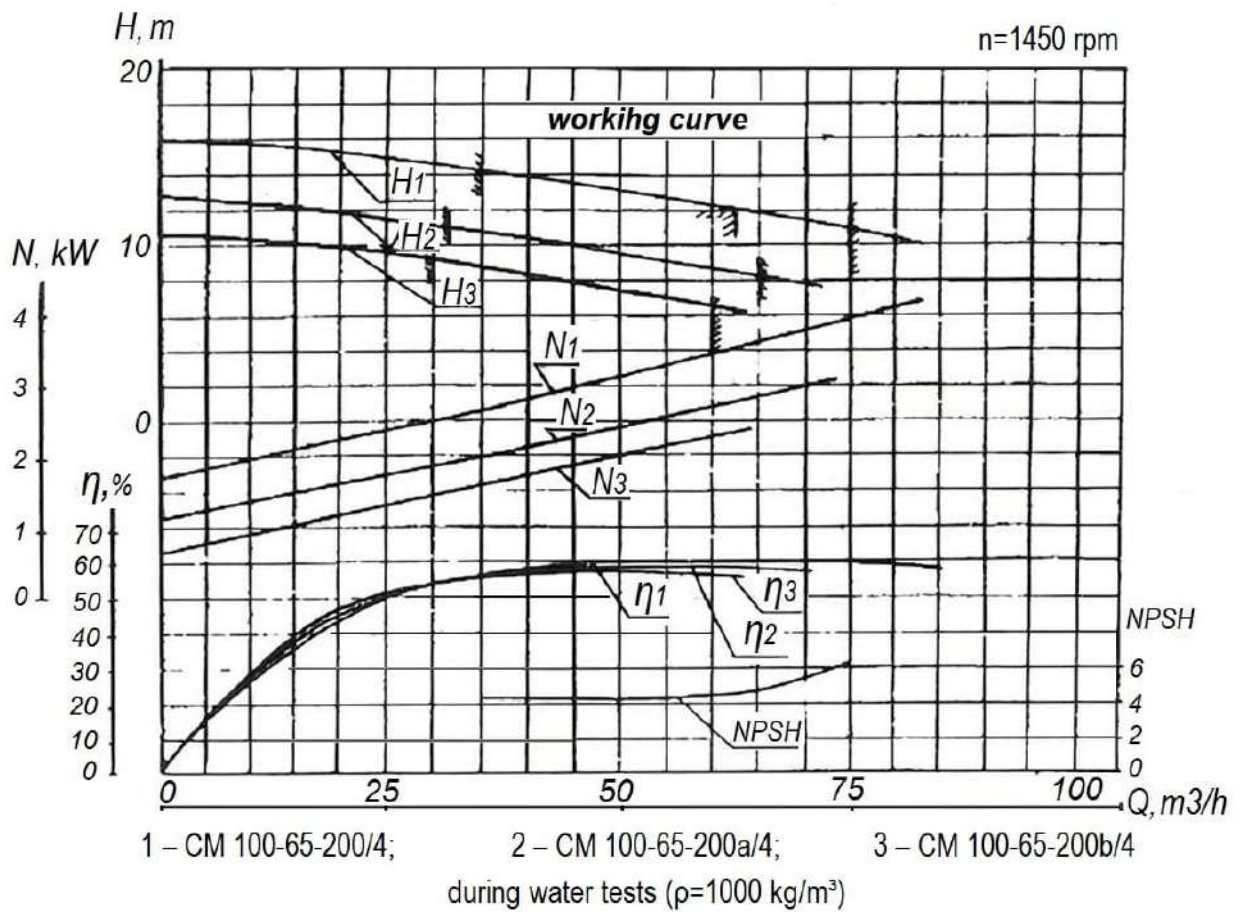
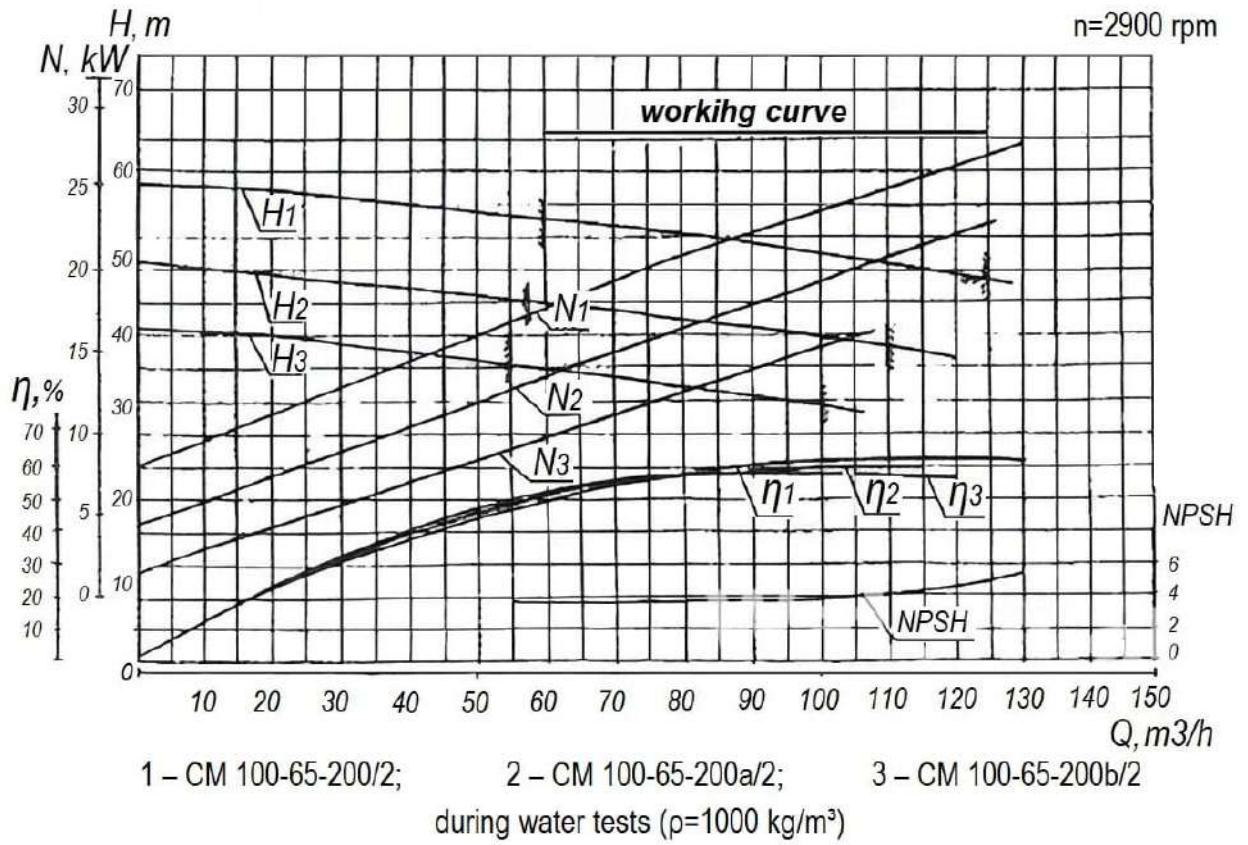


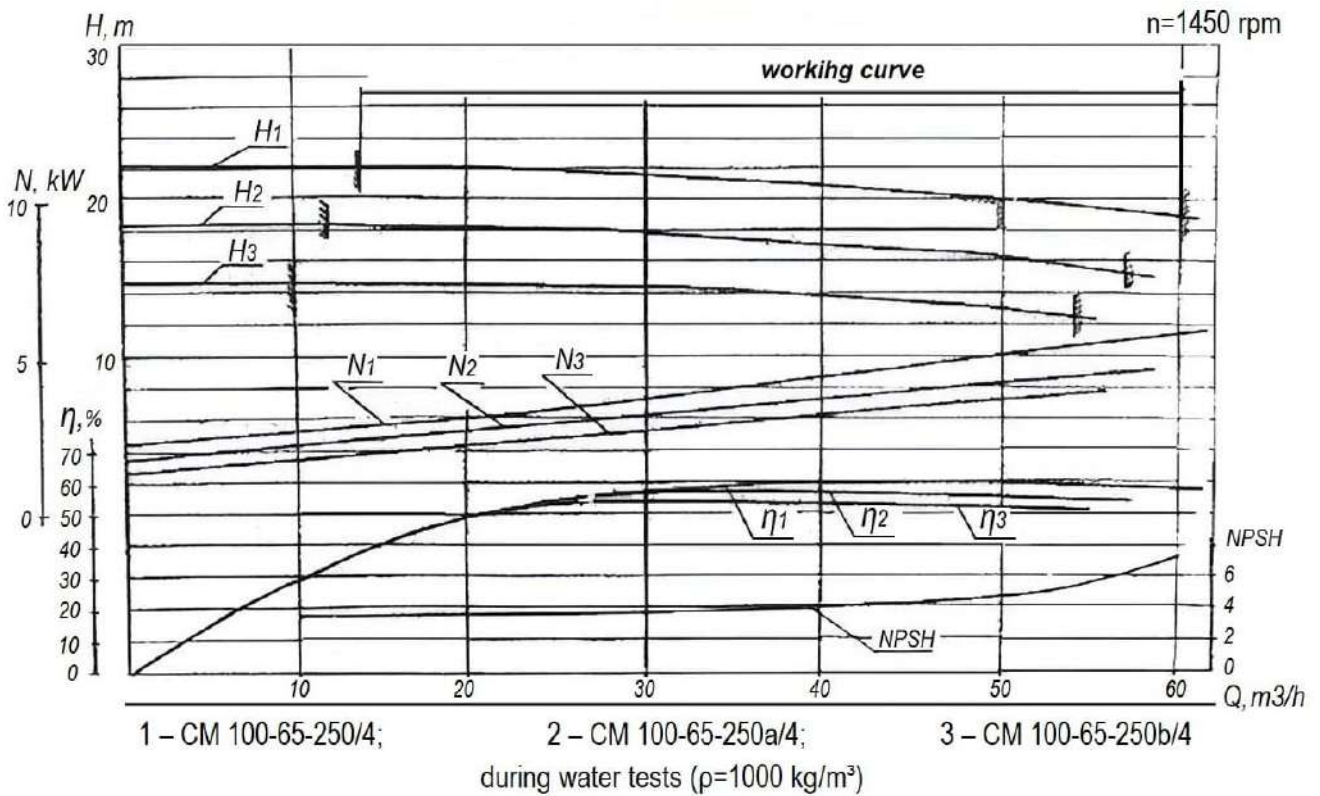
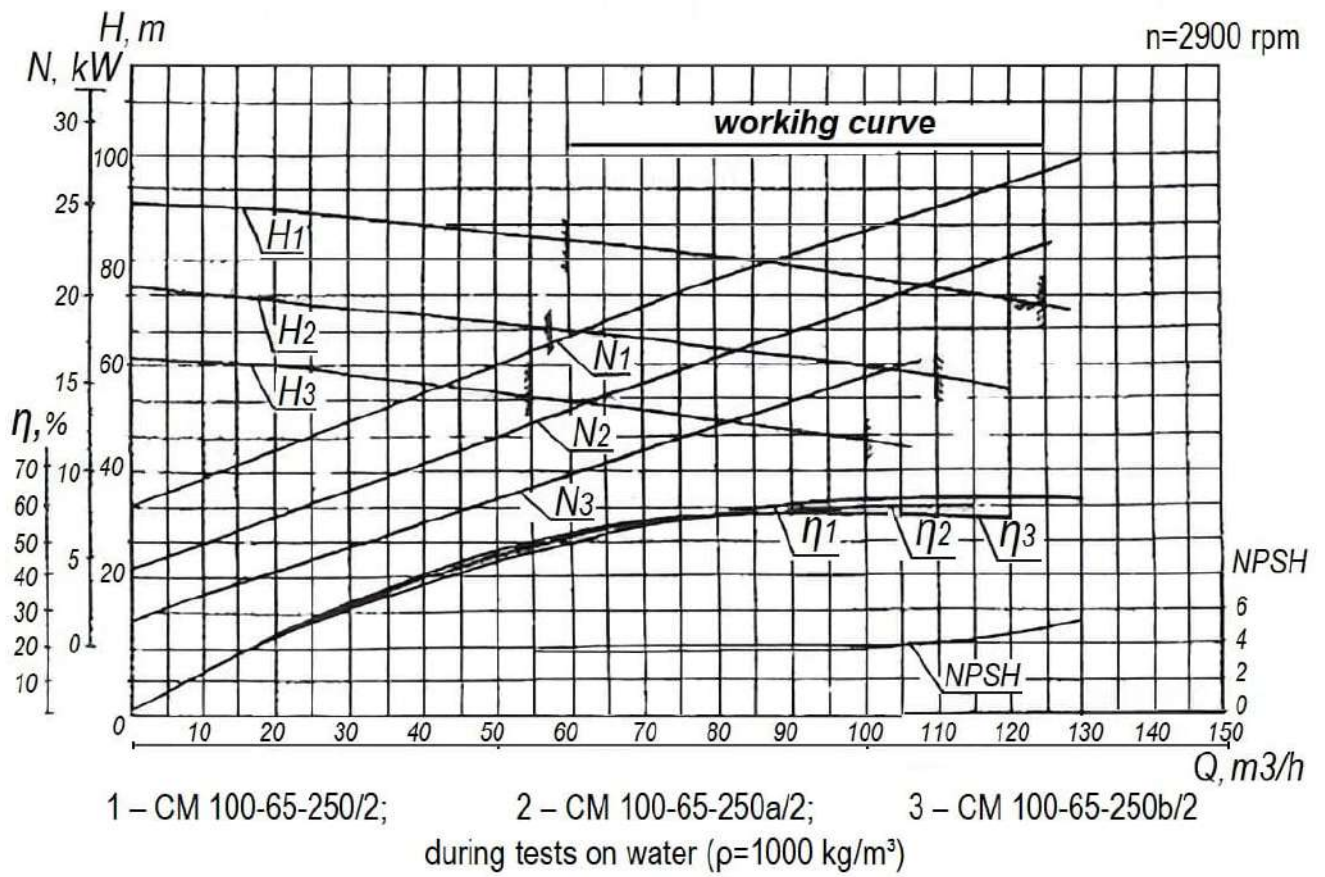
PUMP	Model electric motor	L	L1	L2	L3	L4	L5	L6	L7	L0	B	B1	B2	H	H1	H2	d	n
CM80-50-200/2	AIR160M2	1177	190	77	455	124	240	630	0.0	1010	290	256	210	480	210	110	20	4
CM80-50-200/4	AIR100L4	923	190	77	455	170	230	400	0.0	855	290	250	210	480	210	110	20	4
CM100-65-200/2	AIR200M2	1280	195	80	465	142	220	700	0.0	1120	310	374	318	535	225	130	20	4
CM100-65-200/4	AIR112M4	980	195	80	465	70	150	540	0.0	870	310	320	260	492	225	87	18	4
CM100-65-250/4	AIR132S4	1040	195	80	465	170	240	555	0.0	900	350	320	250	560	270	110	18	4
CM125-80-315/4	AIR180S4	1244	220	105	476	0.0	92	812	0.0	1070	410	400	320	650	315	110	20	4
CM150-125-315/4	AIR200L4	1660	280	115	730	0.0	120	645	535	1524	488	500	400	781	365	136	22	6
CM150-125-315/6	AIR160M6	1770	280	115	730	55	170	500	500	1310	496	500	400	785	365	140	22	6
CM 200-150-540/4	AIR 355 S4	3010	360	166	950	125	250	900	900	2300	775	644	560	1217	600	217	28	6

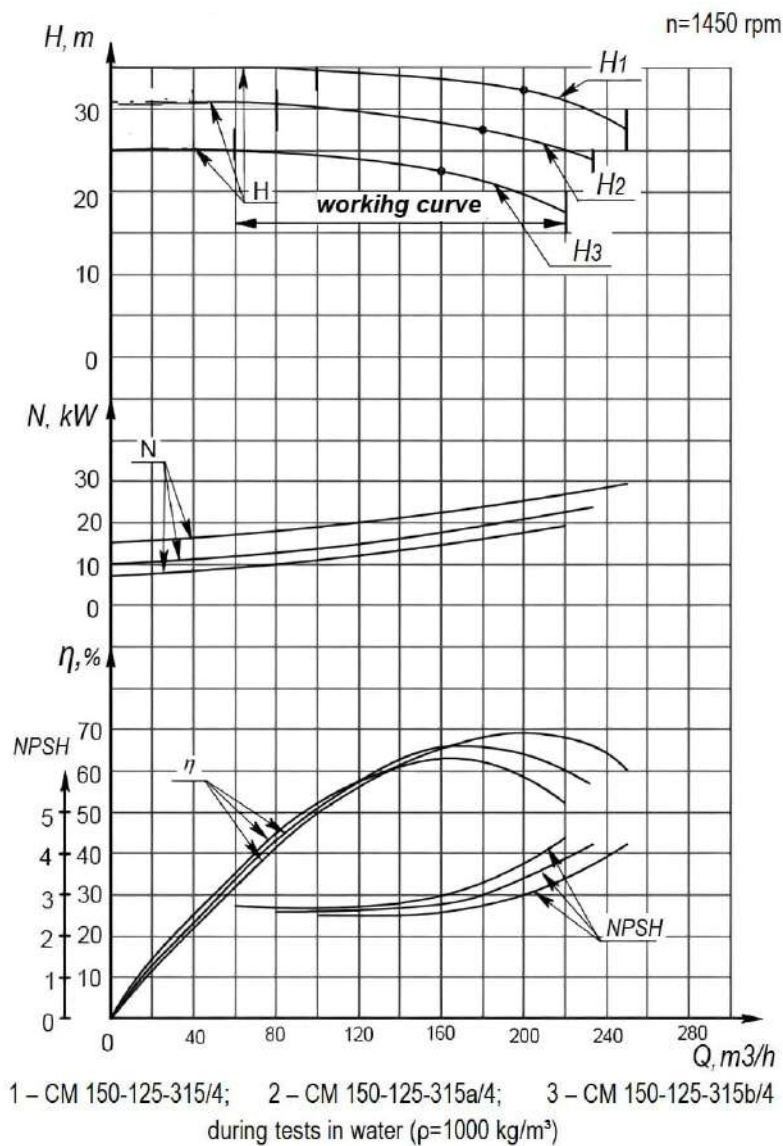
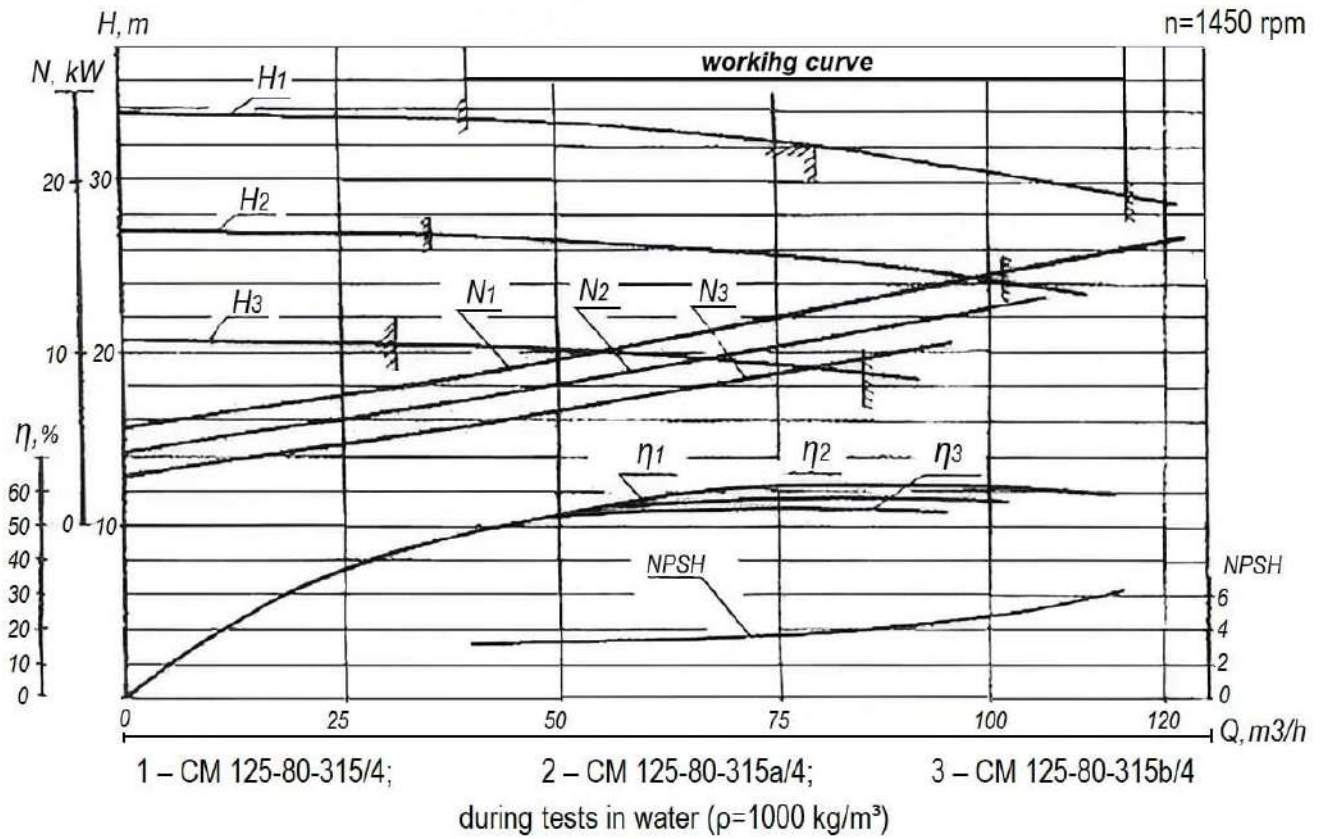
PUMP	DB	D1	D2	D3	d1	n1	DH	D4	D5	D6	d2	n2	Pump weight, kg	Pump unit weight, kg
CM80-50-200/2	80	195	160	133	18	4	50	160	125	102	18	4	88	258
CM80-50-200/4	80	195	160	133	18	4	50	160	125	102	18	4	88	138
CM100-65-200/2	100	205	170	148	18	4	65	180	145	122	18	4	96	382
CM100-65-200/4	100	205	170	148	18	4	65	180	145	122	18	4	96	213
CM100-65-250/2	100	205	170	148	18	4	65	180	145	122	18	4	110	402
CM100-65-250/4	100	205	170	148	18	4	65	180	145	122	18	4	110	210
CM125-80-315/4	125	245	210	184	18	8	80	195	160	133	18	4	157	379
CM150-125-315/4	150	280	240	212	18	8	125	245	210	184	18	8	285	910
CM150-125-315/6	150	280	240	212	18	8	125	245	210	184	18	8	285	479
CM 200-150-540/4	200	335	295	268	22	12	150	280	240	212	22	8	752	2508

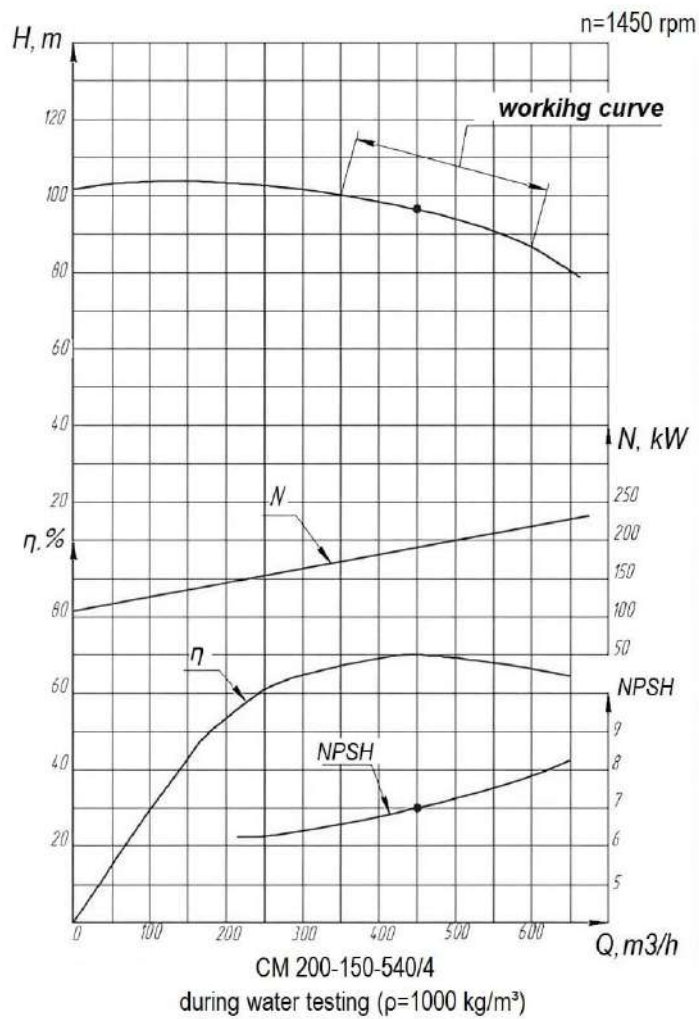
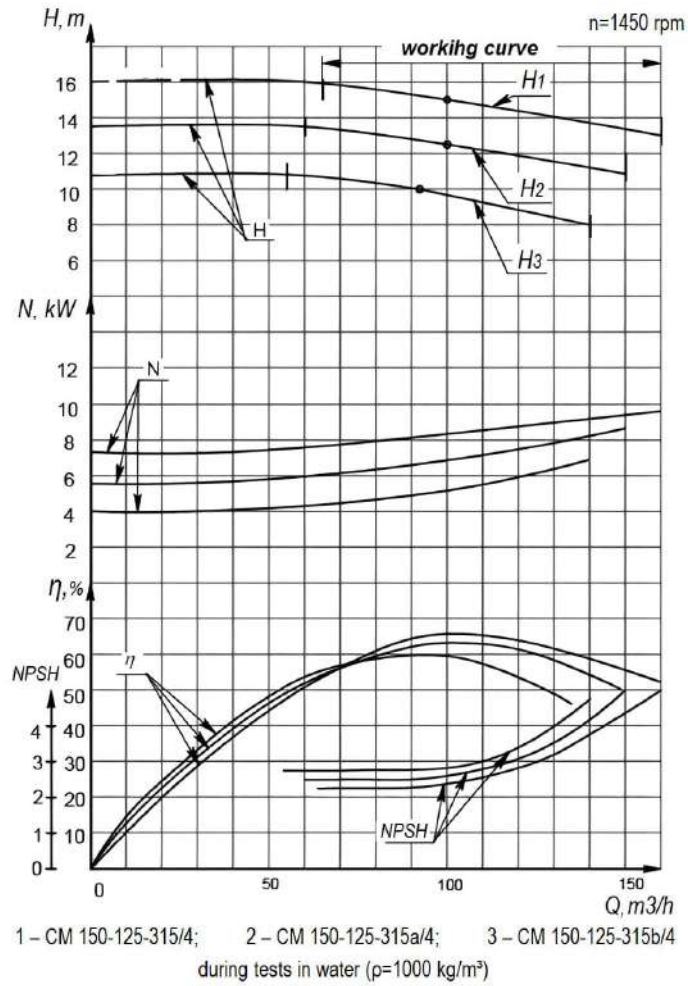
Performance curves for the CM series of sewage pumps:

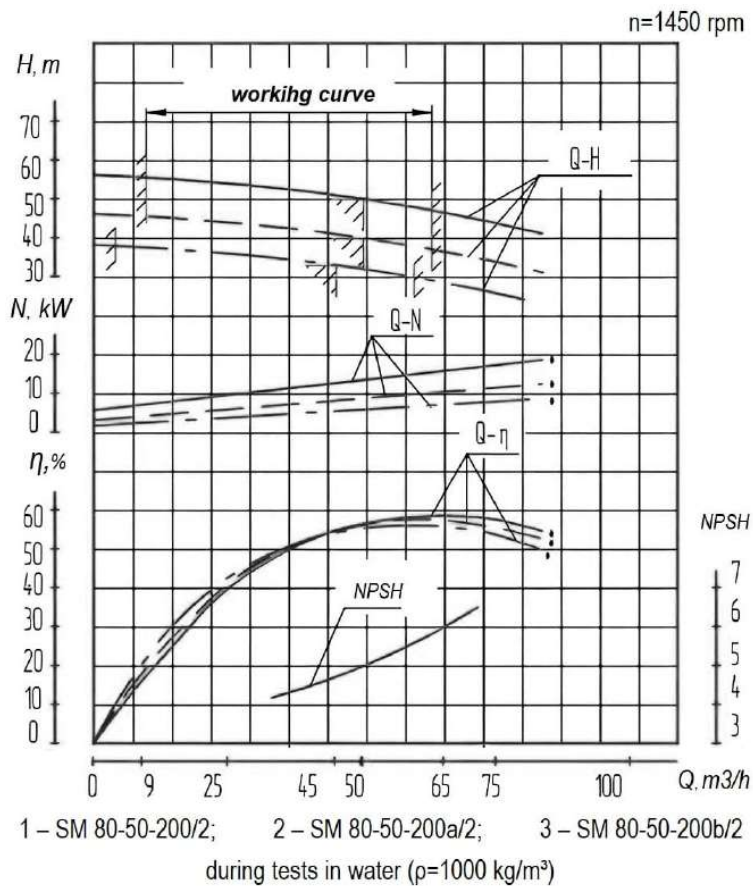
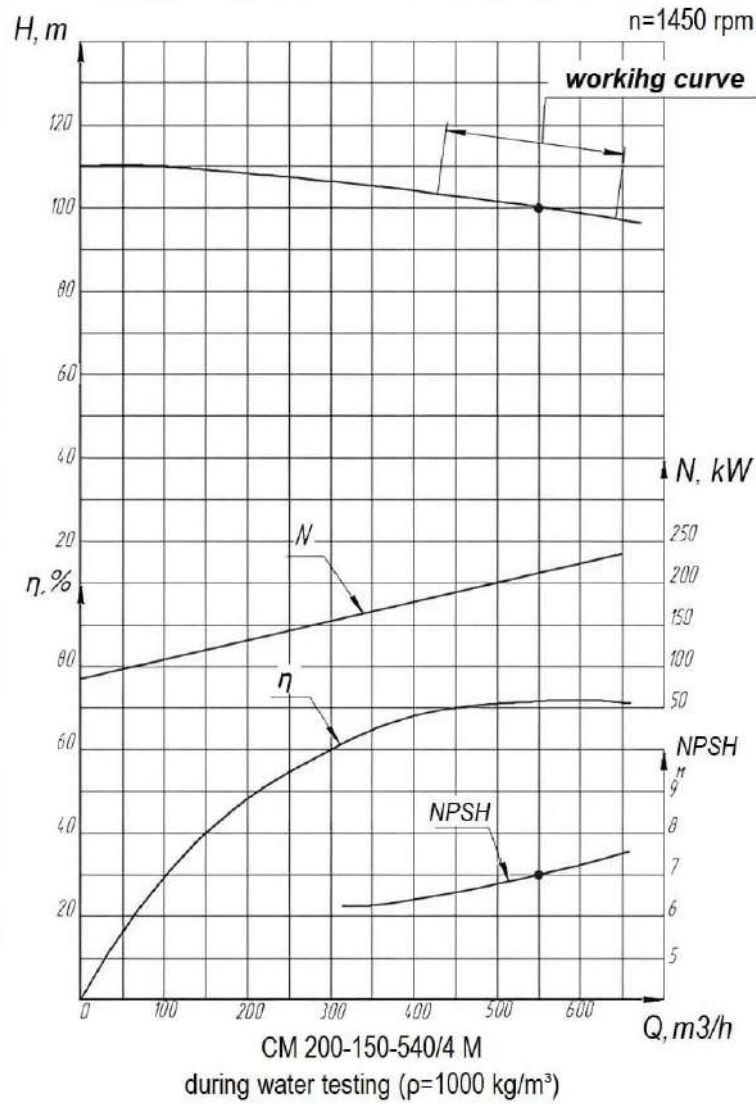












## Specifications of the 2CM series pumps

The 2SM industrial sewage pumps are an advanced version of the well-proven CM series industrial pumps designed for pumping sewage.

The pump shaft seal is a single seals.

The material of the flow path components is grey cast iron.

Example of the unit's designation:

2CM 80-50-200a/2, where:

2CM – pump type (for slurry media);

80 – inlet diameter, mm;

50 – outlet diameter, mm;

200 – nominal impeller diameter, mm;

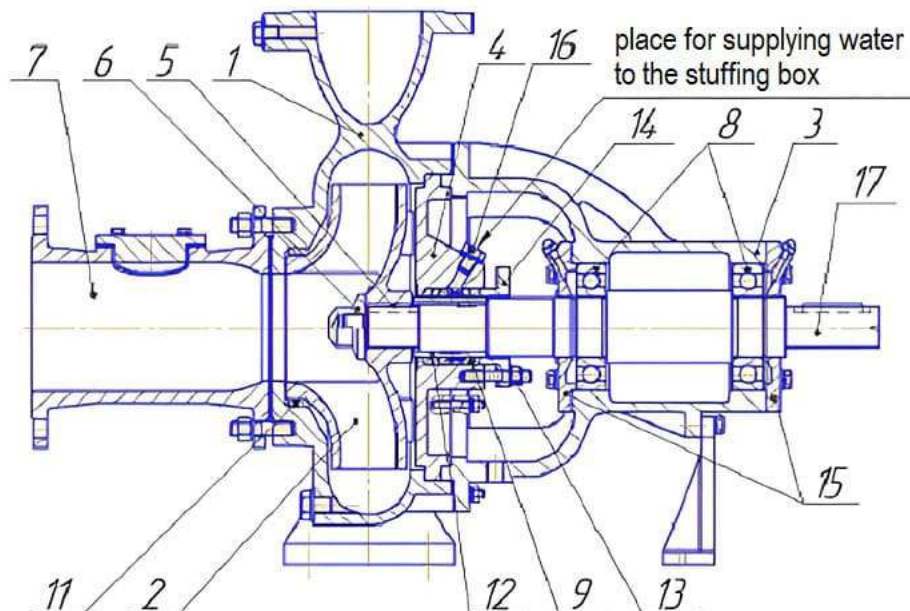
a – first impeller cut;

2 – code designation for the unit's rotor speed;

The maximum size of non-abrasive suspended particles in the pumped liquid, depending on the impeller passage diameter, is given in the table below:

Pump	Maximum size of non-abrasive suspended particles, mm	Impeller flow area, mm
2CM 80-50-200	20	30
2CM 100-65-200	30	40
2CM 150-125-315	58	68
2CM 200-150-500	55	65
2CM 250-200-400	73	83

Cross-section and part names of the 2CM type sewage pump:



### Longitudinal section of the pump CM, 2CM

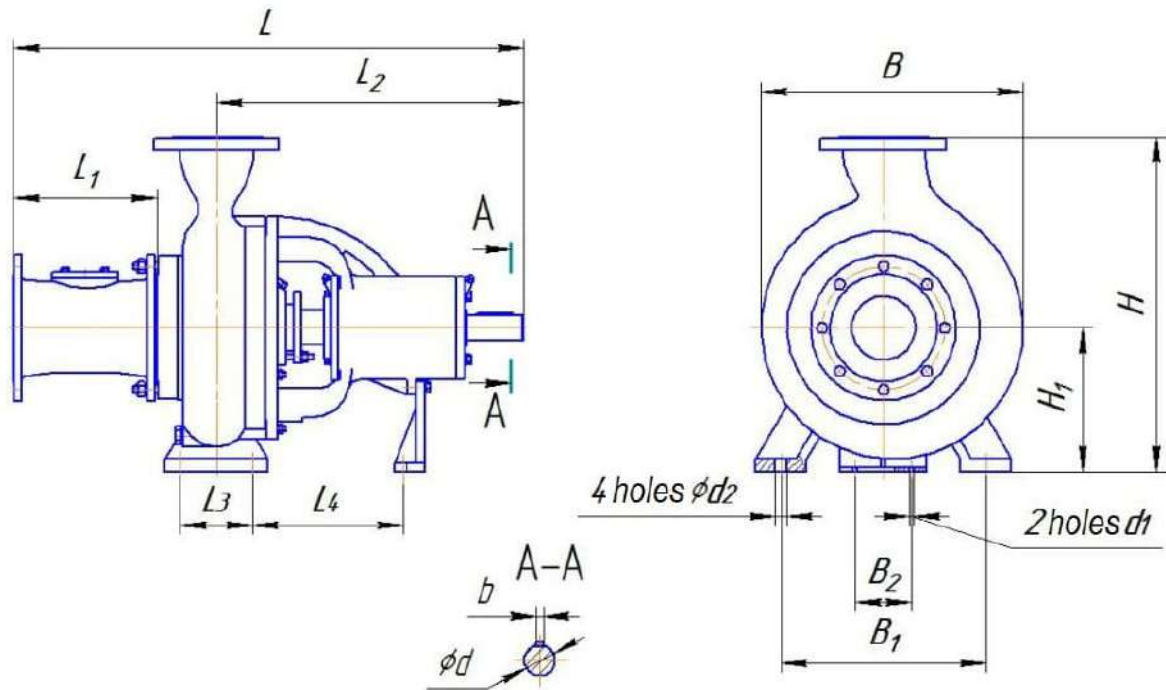
1 - pump housing	5 - key	9 - stuffing gland	14 - stuffing gland cover
2 - impeller	6 - impeller nut	11 - sealing ring (not installed in pumps CM 80-50-200, CM 100-65-200, CM 100-65-250, CM 125-80-315)	15 - bearing cover
3 - bracket	7 - pipe	12-protective sleeve	16 - cork
4 - rear cover	8 - bearings	13-nut	17 - shaft

Specification for the CM series pump:

PUMP	Flow rate, m <sup>3</sup> /h	Head, m	Motor power, kW	Speed, rpm	Efficiency, %	NPSH, m
2CM80-50-200/2	50	50	15	3000	59	5
2CM80-50-200a/2	45	43	11	3000	58	5
2CM80-50-200b/2	40	35	11	3000	58	5
2CM80-50-200/4	25	12,5	3	1500	58	5
2CM80-50-200a/4	22	10,5	2,2	1500	56	5
2CM80-50-200b/4	20	9	1,5	1500	56	5
2CM100-65-200/2	100	50	30	3000	69	5
2CM100-65-200a/2	86	42	22	3000	68	5
2CM100-65-200b/2	75	32	18,5	3000	68	5
2CM100-65-200/4	50	12,5	4	1500	66	3
2CM100-65-200a/4	43	10,5	3	1500	65	3
2CM100-65-200b/4	38	8	2,2	1500	65	3
2CM150-125-315/4	200	32	37	1500	69	4
2CM150-125-315a/4	175	26,5	30	1500	68	4
2CM150-125-315b/4	145	20,5	22	1500	68	4
2CM150-125-315/6	136	14	11	1000	69	4
2CM150-125-315a/6	120	10,5	7,5	1000	68	4
2CM150-125-315b/6	100	8,5	7,5	1000	68	4
2CM200-150-500/4	400	80	160	1500	70	7
2CM200-150-500a/4	380	64	110	1500	69	7
2CM200-150-500b/4	360	50	90	1500	69	7
2CM250-200-400/4	800	50	160	1500	74	7
2CM250-200-400a/4	760	42,5	132	1500	69	7
2CM250-200-400b/4	720	35	132	1500	69	7
2CM250-200-400/6	530	22	55	1000	73	4
2CM250-200-400a/6	500	18	45	1000	72	4
2CM250-200-400b/6	470	15	37	1000	72	4

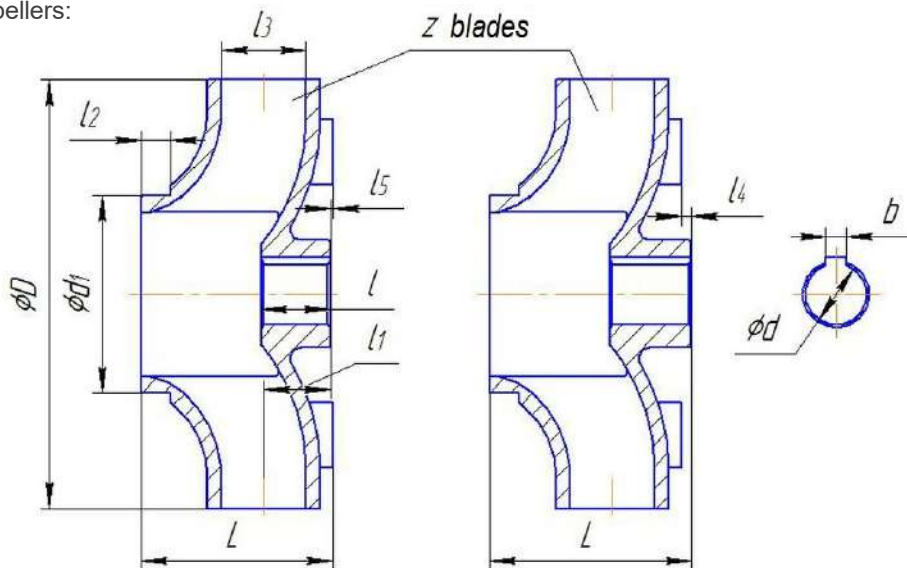
The performance curves for the 2CM series of sewage pumps can be found on page 16

Dimensions of the 2CM series pump:



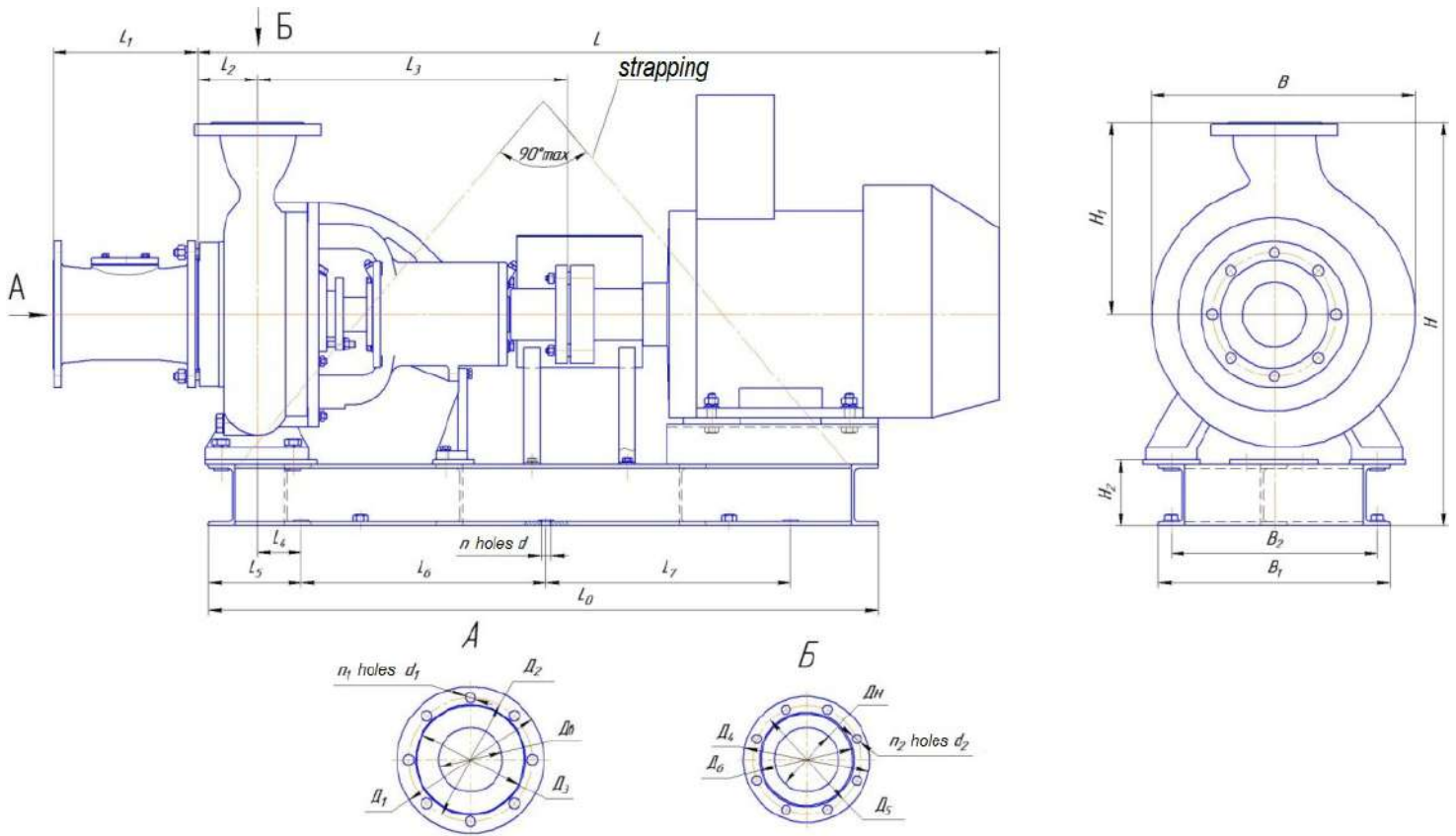
PUMP	H, mm	H1, mm	d, mm	d1, mm	d2, mm	b, mm	L, mm	L1, mm	L2, mm	L3, mm	L4, mm	B, mm	B1, mm	B2, mm	Weight, kg
2CM 80-50-200	370	160	28	14	14	8	736	190	470	70	328.5	269	190	110	92
2CM 100-65-200	405	180	28	14	14	8	783	195	495	90	329.5	305	260	110	107
2CM 150-125-315	652	280	48	14	24	16	997	280	601	140	295	476	400	110	258
2CM 200-150-500	995	400	75	18	24	20	1477	360	955	150	613	704	560	140	742
2CM 250-200-400	995	400	75	18	24	20	1512	380	951	150	613	678	560	140	759

Dimensions of pump impellers:



PUMP	D, mm	d, mm	d1, mm	L, mm	l, mm	l1, mm	l2, mm	l3, mm	l4, mm	l5, mm	b, mm	z, pcs
2CM 80-50-200	205	28	90	85	31	34	16	32	-	2	8	3
2CM 100-65-200	214	28	120*	97	33	39	17	44	-	2	8	2
2CM 150-125-315	335	48	170*	148	52	54	23	66	-	1	16	2
2CM 200-150-500	498	75	230*	204	77	82	30	64	19	-	20	3
2CM 250-200-400	430	75	244*	205	85	89	25	88	19	-	20	3

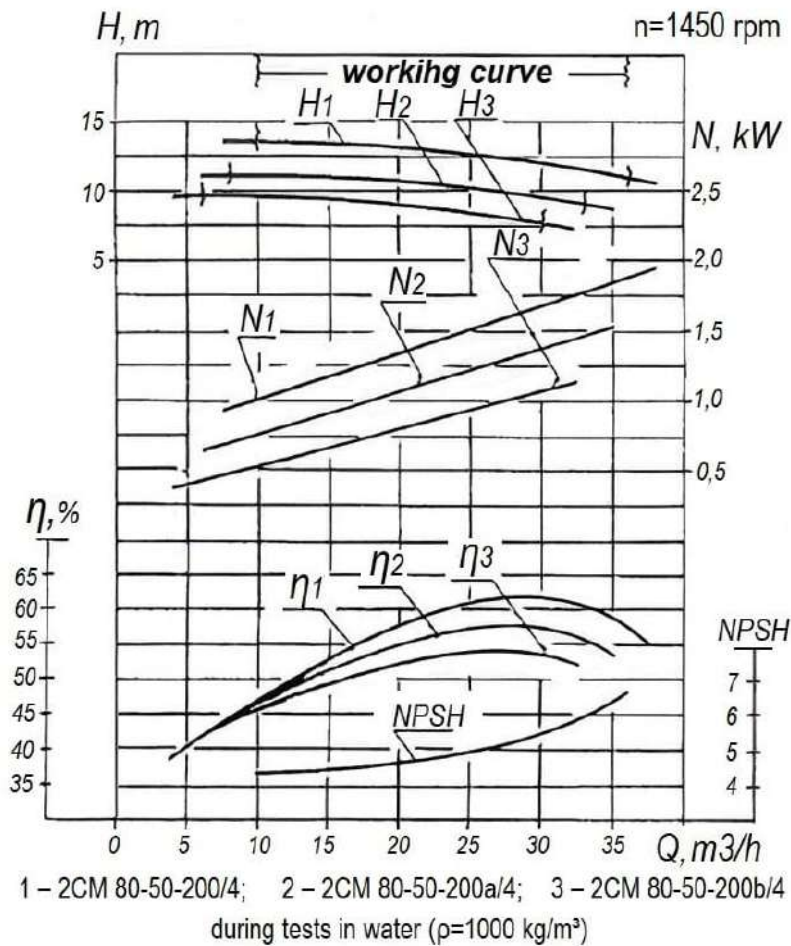
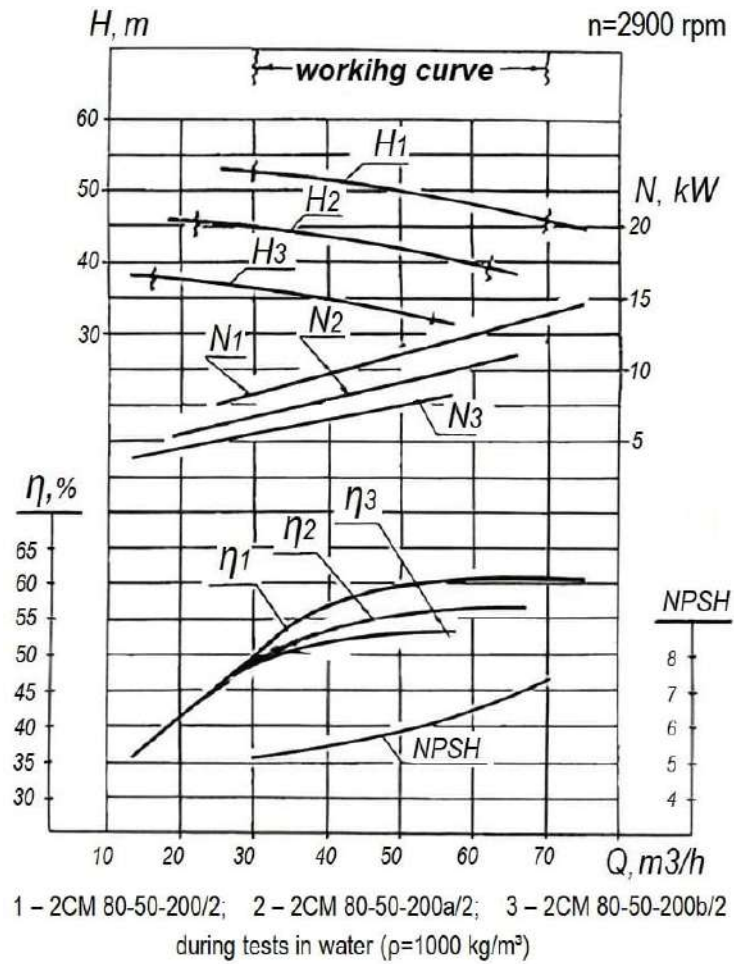
Dimensions of the pump unit 2CM series:

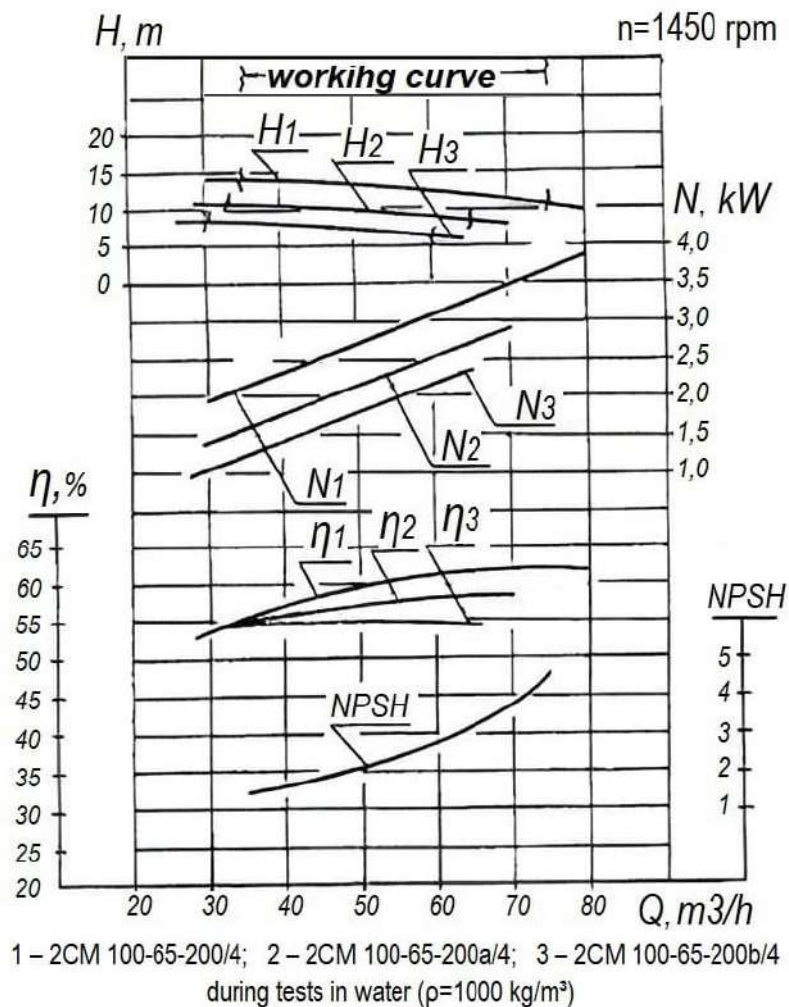
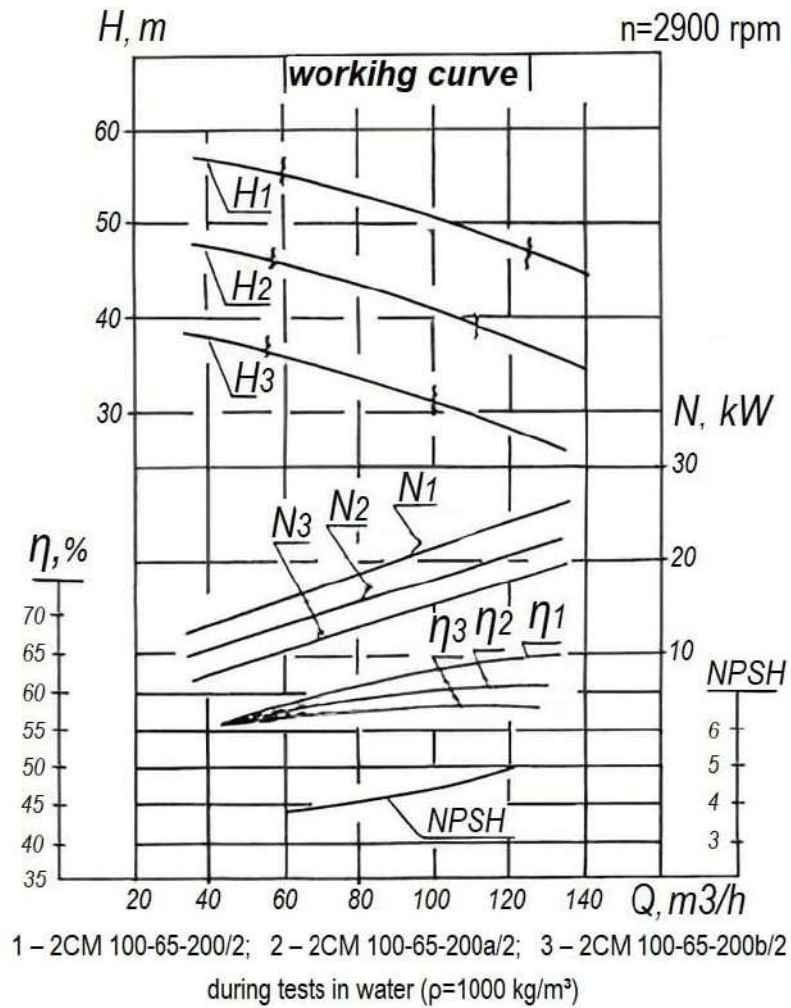


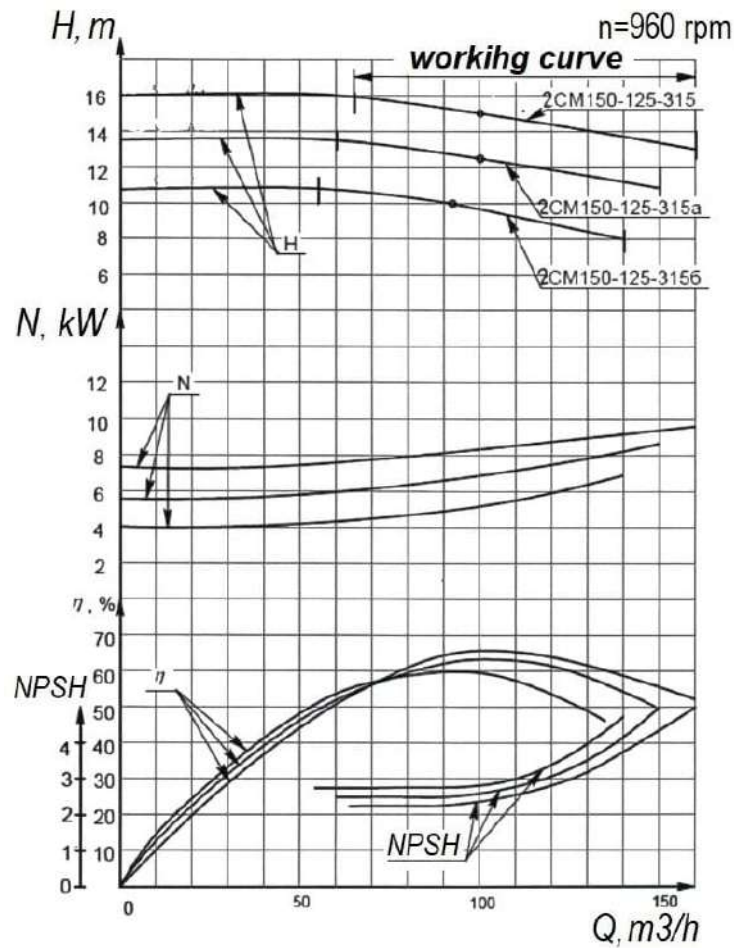
PUMP	Model electric motor	L	L1	L2	L3	L4	L5	L6	L7	L0	B	B1	B2	H	H1	H2	d	n
2CM80-50-200/2	AIR160S2	1406	190	75	470	35	110	600	0.0	990	270	246	190	480	210	128	20	4
2CM80-50-200/4	AIR100S4	906	190	76	470	30	95	600	0.0	790	270	230	190	470	210	100	19	4
2CM100-65-200/2	AIR180S2	1463	195	92	495	95	170	377	380	1097	305	316	262	535	225	152	25	6
2CM100-65-200/4	AIR100L4	964	210	78	495	110	175	500	0.0	850	305	292	260	505	225	100	18	4
2CM150-125-315/4	AIR200M4	1594	280	116	713	80	180	475	475	1412	476	520	400	780	372	152	20	6
2CM150-125-315/6	AIR160S6	1449	280	116	713	0.0	100	520	520	1240	476	450	400	782	372	130	20	6
2CM200-150-500/4	AIR315S4	2406	360	166	952	75	200	800	800	2000	678	618	560	1185	595	190	28	6
2CM 250-200-400/4	AIR315S4	2120	380	174	955	75	180	800	800	2025	704	620	560	1158	585	198	30	6
2CM 250-200-400/6	AIR250S4	2045	380	174	955	75	180	700	700	1758	704	620	560	1165	585	205	30	6

PUMP	DB	D1	D2	D3	d1	n1	DH	D4	D5	D6	d2	n2	Pump weight, kg	Pump unit weight, kg
2CM80-50-200/2	80	195	160	133	18	4	50	160	125	102	18	4	92	256
2CM80-50-200/4	80	195	160	133	18	4	50	160	125	102	18	4	92	130
2CM100-65-200/2	100	205	170	148	18	4	65	180	145	122	18	4	107	324
2CM100-65-200/4	100	205	170	148	18	4	65	180	145	122	18	4	107	163
2CM150-125-315/4	150	280	240	212	18	8	125	245	210	184	18	8	258	560
2CM150-125-315/6	150	280	240	212	18	8	125	245	210	184	18	8	258	461
2CM200-150-500/4	200	335	295	274	22	12	150	285	240	218	22	8	742	2008
2CM 250-200-400/4	250	390	350	320	22	12	200	335	285	270	22	8	759	2040
2CM 250-200-400/6	250	390	350	320	22	12	200	335	295	268	22	8	759	2015

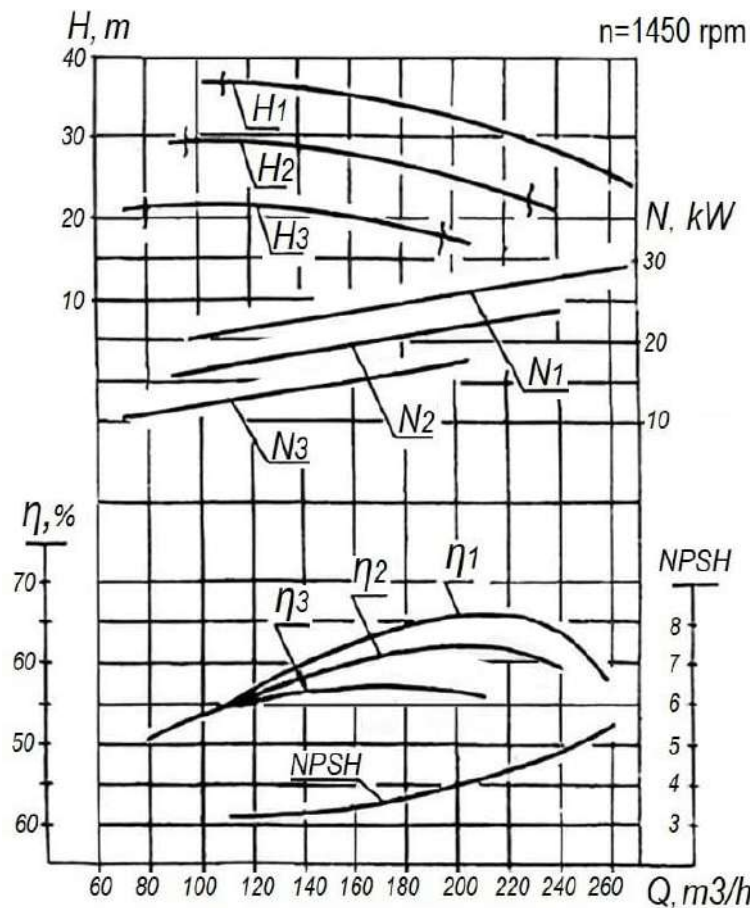
Performance curves for the 2CM series of sewage pumps:



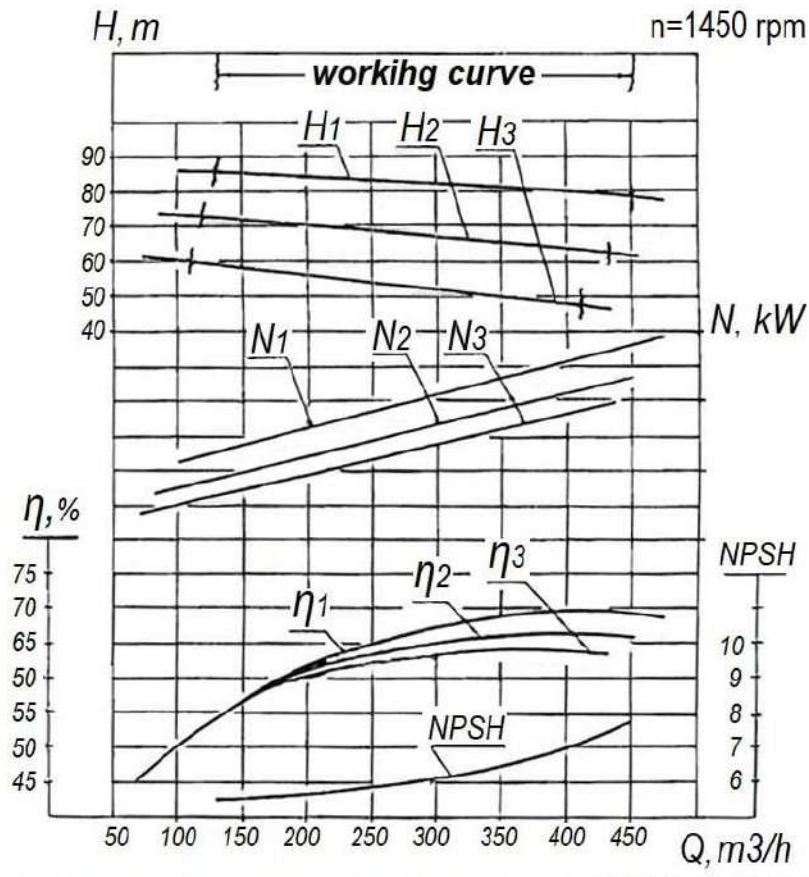




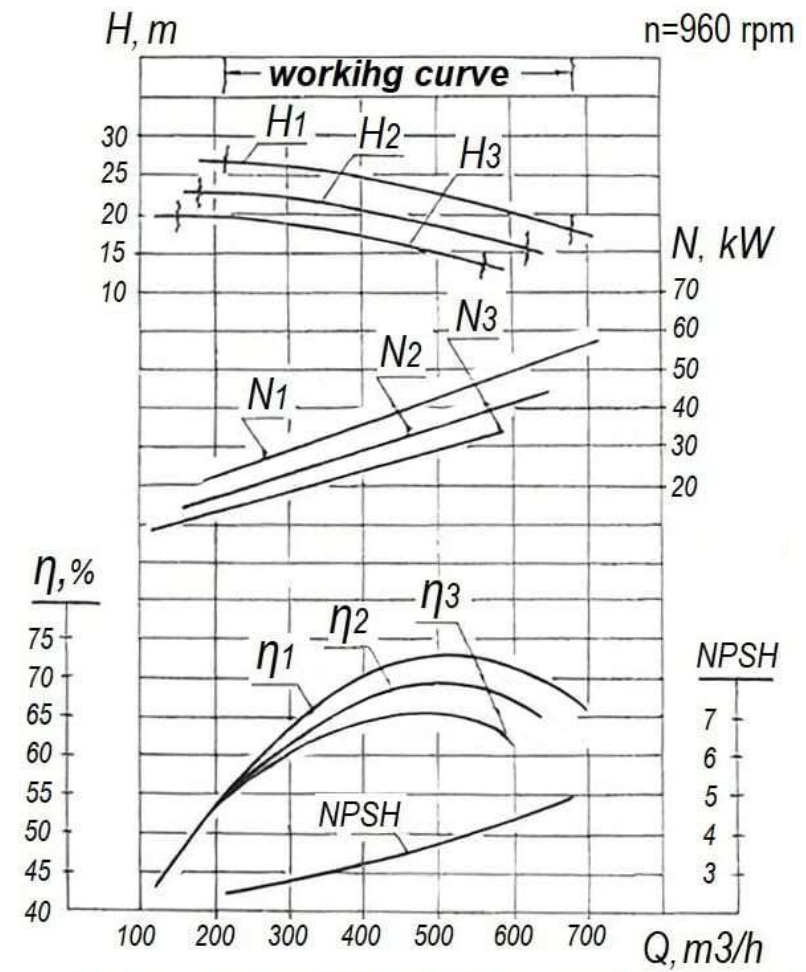
1- 2CM 150-125-315/6; 2- 2CM 150-125-315a/6; 3- 2CM 150-125-315b/6 during tests in water ( $\rho=1000 \text{ kg/m}^3$ )



1 - 2CM 150-125-315/4; 2 - 2CM 150-125-315a/4; 3 - 2CM 150-125-315b/4 during tests in water ( $\rho=1000 \text{ kg/m}^3$ )



1- 2CM 200-150-500/4; 2 - 2CM 200-150-500a/4; 3 - 2CM 200-150-500b/4  
during tests in water ( $\rho=1000 \text{ kg/m}^3$ )



1 - 2CM 250-200-400/6; 2 - 2CM 250-200-400a/6; 3 - 2CM 250-200-400b/6  
during tests in water ( $\rho=1000 \text{ kg/m}^3$ )

