

DESCRIPTION

Marine centrifugal fans WPM are destined for operation in the ventilation systems of seagoing ships with unrestricted cruising area as well as offshore objects. They may be used as exhaust or supply fans and be installed inside the compartments. WPM fans are of compact, sturdy construction and equipped with high efficient impeller with backward-curved blades. Working parameters of fans are shown on performance curves $P_t=f(V)$ with respect to inert gas of specific density $\rho=1,2\text{kg/m}^3$ and temperature $t=20^\circ\text{C}$, where:

P_t (Pa) – fan total pressure,
 V (m^3/s) – air displacement.

Allowable tolerances of working parameters of fans (air displacement, pressure, power consumption and efficiency) are in accordance with standard PN-77/M-43021. Temperature of conveyed medium should not exceed $+45^\circ\text{C}$, dust contents $0,3\text{g/m}^3$. Surface treatment – hot-dip galvanized.

Housing is made of carbon steel. Impeller is made of sea water resistant aluminum alloys. Electric motor is executed as marine, induction, squirrel-cage and three-phase. It is suitable for 50 or 60Hz electric installation. Smaller motors are coupled directly to fan casings, larger fitted on supporting pedestal. Fans in explosion-proof execution are fitted with brass lining on inner surface of housing in way of impeller. On request fans may be supplied with flanged flexible connections for inlet and/or outlet and set of shock absorbers.

MARKING

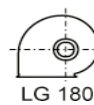
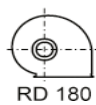
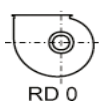
Example: WPM type fan of nominal diameter $\text{DN}=160$, with impeller speed 3500 min^{-1} , with LO position: WPM 160/4-LO

TECHNICAL SPECIFICATION & DIMENSIONS

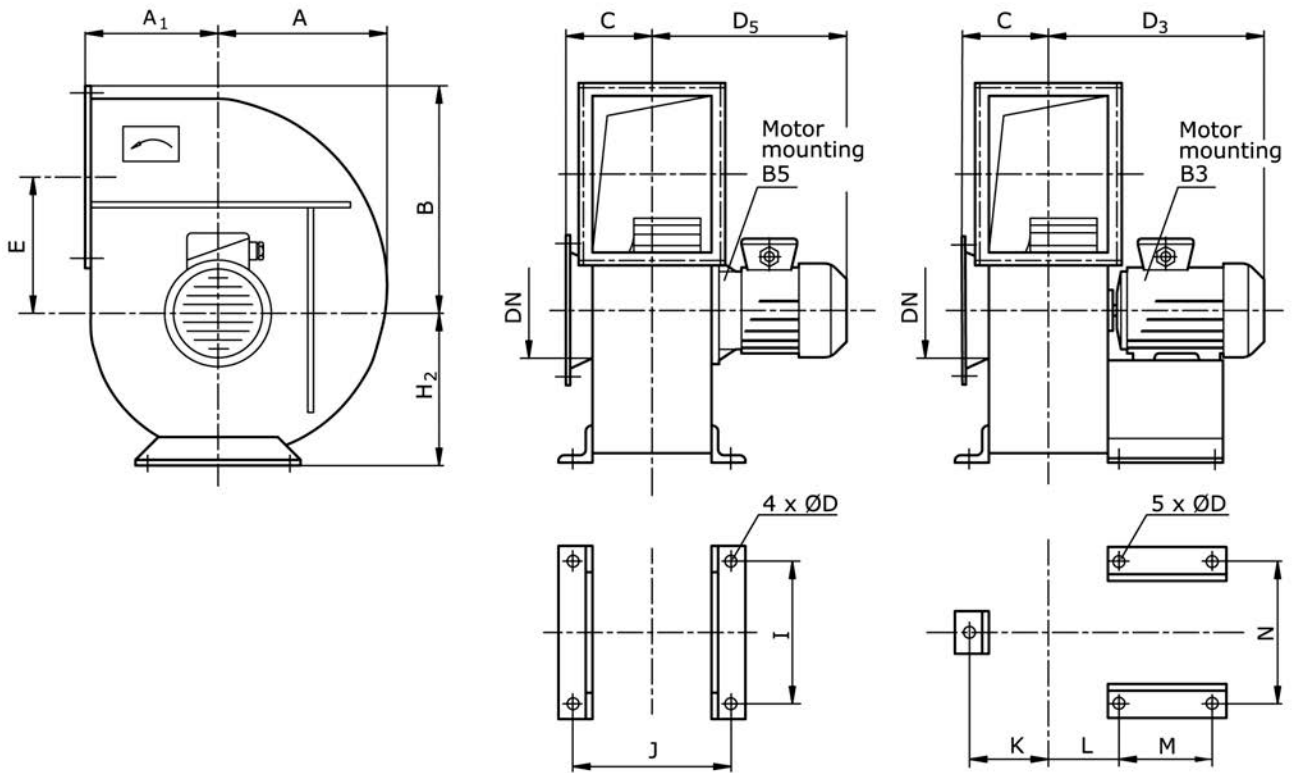
Impeller speed:

- 1 – 1450 min^{-1} (50 Hz)
- 2 – 2900 min^{-1} (50 Hz)
- 3 – 1750 min^{-1} (60 Hz)
- 4 – 3500 min^{-1} (60 Hz)

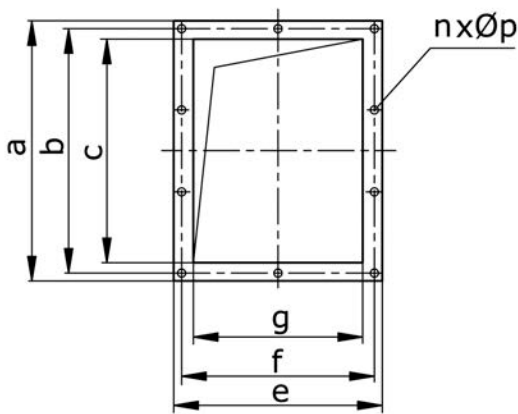
Discharge orientation viewed from drive side



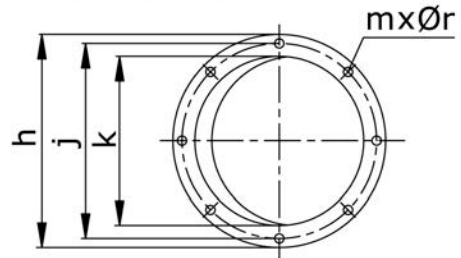
Fan type	Nominal airflow [m ³ /s]	Total nominal pressure [Pa]	Impeller speed [1/min]	Maximum noise level [dB(A)]	Supply [V/Hz]
160/1	0.085	145	1340	71	3x380/50
160A/1	0.12	185	1340	73	
200/1	0.17	230	1400	78	
200A/1	0.24	290	1400	79	
250/1	0.34	360	1400	84	
250A/1	0.49	450	1420	85	
315/1	0.69	565	1420	92	
315A/1	0.97	705	1420	93	
400/1	1.37	880	1430	98	
400A/1	1.92	1100	1435	99	
500/1	2.67	1370	1460	104	
500A/1	3.75	1700	1435	105	
630/1	5.35	2180	1465	109	
630A/1	7.5	2710	1475	111	
125A/2	0.11	435	2800	84	
160/2	0.16	540	2800	87	
160A/2	0.23	690	2820	90	
200/2	0.33	870	2820	94	
200A/2	0.47	1120	2820	96	
250/2	0.66	1380	2860	99	
250A/2	0.95	1750	2910	101	
315/2	1.32	2170	2910	105	
160/3	0.10	210	1610	73	3x440/60
160A/3	0.14	265	1610	76	
200/3	0.20	335	1700	82	
200A/3	0.29	415	1700	84	
250/3	0.41	525	1720	88	
250A/3	0.58	660	1720	89	
315/3	0.83	830	1710	96	
315A/3	1.18	1040	1720	97	
400/3	1.65	1310	1720	103	
400A/3	2.38	1660	1755	104	
500/3	3.35	2080	1750	109	
500A/3	4.80	2620	1750	110	
630/3	6.82	3300	1760	114	
630A/3	9.60	4100	1770	116	
125A/4	0.146	675	3400	88	
160/4	0.21	850	3400	90	
160A/4	0.29	1060	3400	92	
200/4	0.41	1320	3400	98	
200A/4	0.58	1660	3450	100	
250/4	0.79	2050	3500	104	



OUTLET FLANGE



INLET FLANGE





Fan type	125 A	160	160 A	200	200 A	250	250 A	315	315 A	400	400 A	500	500 A	630	630 A	
Dimensions [mm]	DN	125	160	200		250		315		400		500		630		
	A	170	216	270		335		420		535		667		840		
	A ₁	125	160	200		245		310		390		486		612		
	B	210	262	327		402		505		632		780		980		
	C	90	100	110	120	130	150	165	190	205	240	260	300	325	380	410
	D ₃	-	-	-	320	330	420	450	520	465	490	580	720	780	890	960
	D ₅	230	275	285	300	310	320	350	390	420	500	-	-	-	-	-
	E	117	150	187		234		295		374		467		588		
	H ₀	175	225	275		345		430		540		680		960		
	H ₂	150	190	240		295		370		470		580		730		
	H ₄	130	165	210		260		315		400		500		630		
	H ₆	210	265	330		420		510		650		790		995		
	I	160	200		250		315		400		500		-		-	
	J	164	180	196	214	234	266	290	308	338	382	412	-	-	-	-
	K	-	-	-	112	123	133	146	158	173	190	210	235	248	295	310
	L	-	-	-	110	120	130	143	150	165	185	200	240	253	305	320
	M	-	-	150		200		200		250		340		450		
	N	-	-	250		315		400		500		620		780		
	∅D	12	12	12		15		15		15		15		18		
	a	184	224	280		336		420		516		626		772		
b	166	206	260		316		396		492		600		746			
c	140	180	225		280		355		450		558		704			
e	170	172	186	216	236	256	282	316	336	382	422	468	494	568	594	
f	152	154	169	196	216	236	262	292	322	358	398	444	470	544	570	
g	120	125	140	160	180	200	225	250	280	315	355	400	425	500	530	
h	200	225		280		370		440		540		660		820		
j	180	210		260		340		410		510		630		790		
k	160	190		240		306		380		480		600		756		
nx∅p	4x∅7	8x∅7		8x∅9		10x∅9		10x∅9		16x∅9		18x∅9		24x∅9		
mx∅r	6x∅7	8x∅7		8x∅9		8x∅9		12x∅9		16x∅9		16x∅9		24x∅9		

