

## MOTORI PER USO CON INVERTER - INVERTER DUTY MOTORS

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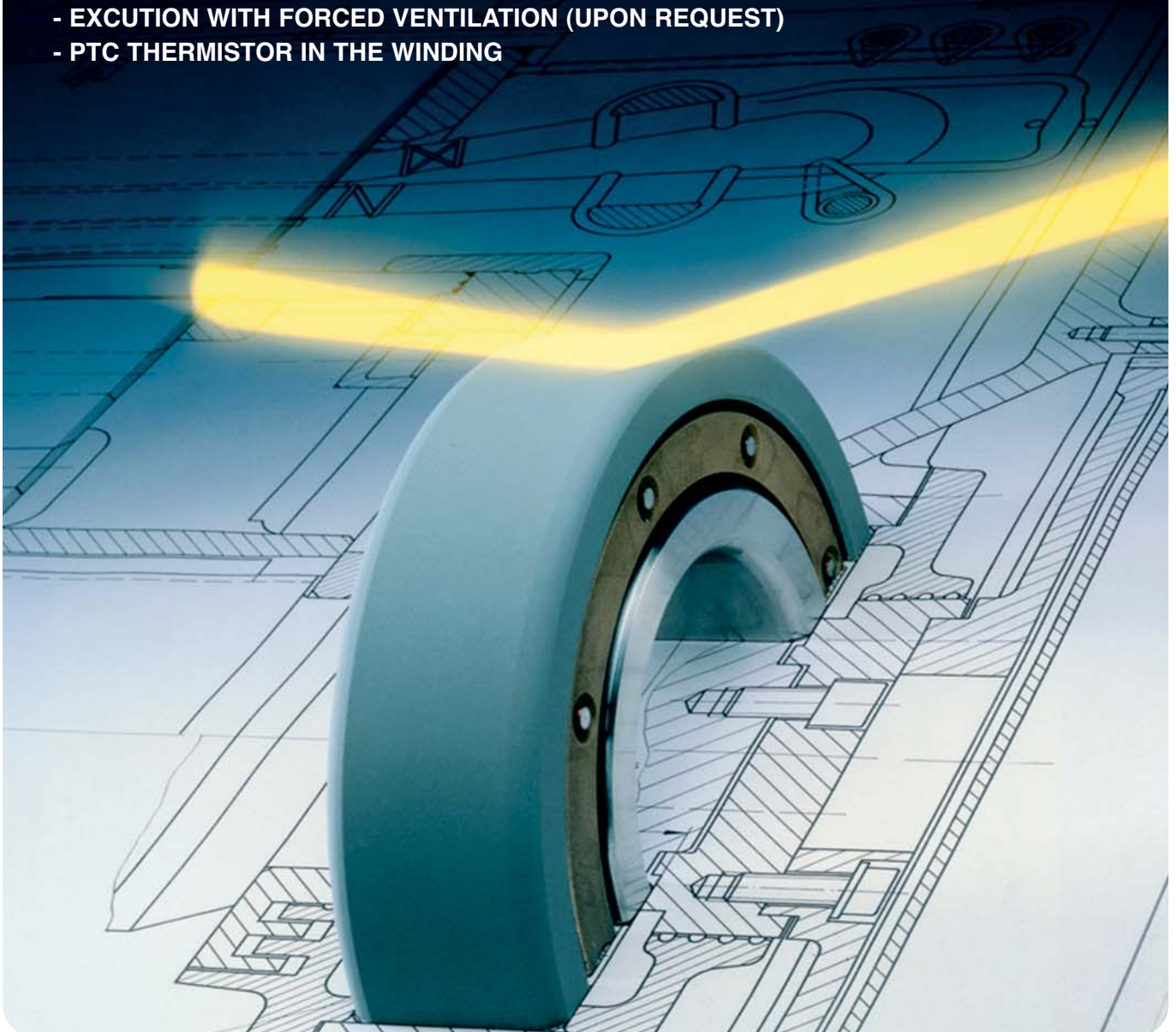
The technical data listed in this catalogue may not be considered as binding.  
Felm reserves the right to make modifications at any time without notice.

## **MOTORI ADATTI AD USO CON INVERTER**

- IMPREGNAZIONE SOTTO VUOTO (VPI)
- ISOLAMENTO BASE FILO DOPPIO SMALTO RINFORZATO
- ISOLAMENTO PROGETTATO PER RISISTERE ALLA SHOCK ARMONICO
- CORRENTI PARESSE SULL'ALBERO NEUTRALIZZATE DA CUSCINETTI ISOLATI SKF (INSOCOAT)
- SERVOVENTILATI (SU RICHIESTA)
- COMPLETI DI PTC NEGLI AVVOLGIAMNTI

## **MOTORS ADPTED FOR INVERTER USE**

- VACUUM PRESSURE IMPREGNATION (VPI)
- DOUBLE INSULATED REINFORCED COPPER WIRES
- SPECIAL INSULATION SYSTEM , HIGH FREQUENCY HARMONIC SHOCK RESISTANCE
- INSULATING BEARINGS CONSTRUCTION FOR SHAFT VOLTAGE RESISTANCE, SKF BEARINGS (INSOCOAT)
- EXCUTION WITH FORCED VENTILATION (UPON REQUEST)
- PTC THERMISTOR IN THE WINDING



SPECIFICHE TECNICHE (50HZ) 4 POLI  
 TECHNICAL SPECIFICATION (50HZ) 4 POLE

Type	output	Current	Rated Torque	Break-down torque /rated torque multiple	Rated speed	weight kg	
	KW	A	Nm			r/min	IC416
Y <sub>2</sub> -VP90S-4	1.1	2.80	7.53	2.8	1395	24.0	22.0
Y <sub>2</sub> -VP90L-4	1.5	3.70	10.1	2.8	1412	29.0	28.0
Y <sub>2</sub> -VP100L <sub>1</sub> -4	2.2	5.08	14.7	2.8	1431	36.0	34.0
Y <sub>2</sub> -VP100L <sub>2</sub> -4	3	6.86	20.0	2.8	1431	40.0	38.0
Y <sub>2</sub> -VP112M-4	4	8.48	26.5	2.8	1438	48.0	44.0
Y <sub>2</sub> -VP132S-4	5.5	11.7	36.3	2.8	1445	70.0	61.0
Y <sub>2</sub> -VP132M-4	7.5	15.1	49.5	2.8	1445	82.0	73.0
Y <sub>2</sub> -VP160M-4	11	22.0	72.4	2.8	1451	125	113
Y <sub>2</sub> -VP160L-4	15	29.5	98.5	2.8	1452	145	133
Y <sub>2</sub> -VP180M-4	18.5	35.0	120	2.8	1465	187	167
Y <sub>2</sub> -VP180L-4	22	42.0	143	2.8	1464	201	181
Y <sub>2</sub> -VP200L-4	30	56.6	195	2.8	1468	257	232
Y <sub>2</sub> -VP225S-4	37	70.6	240	2.8	1472	317	287
Y <sub>2</sub> -VP225M-4	45	84.9	290	2.8	1477	352	322
Y <sub>2</sub> -VP250M-4	55	102	355	2.8	1477	411	381
Y <sub>2</sub> -VP280S-4	75	137	483	2.8	1481	545	510
Y <sub>2</sub> -VP280M-4	90	163	580	2.8	1481	635	600
Y <sub>2</sub> -VP315S-4	110	204	707	2.8	1485	961	921
Y <sub>2</sub> -VP315M-4	132	237	848	2.8	1485	1042	1002
Y <sub>2</sub> -VP315L <sub>1</sub> -4	160	282	1028	2.8	1486	1110	1070
Y <sub>2</sub> -VP315L <sub>2</sub> -4	200	360	1281	2.8	1491	1221	1181
Y <sub>2</sub> -VP355M-4	250	444	1600	2.8	1492	1765	1720
Y <sub>2</sub> -VP355L-4	315	558	2015	2.8	1493	1995	1950

**SPECIFICHE TECNICHE (50HZ) 6 POLI**  
**TECHNICAL SPECIFICATION (50HZ) 6 POLE**

Type	output	Current	Rated Torque	Break-down torque /rated torque multiple	Rated speed r/min	weight kg	
	KW	A	Nm			IC416	IC411
Y <sub>2</sub> -VP90S-6	0.75	2.29	7.76	2.8	922	25.0	23.0
Y <sub>2</sub> -VP90L-6	1.1	3.15	11.4	2.8	918	29.0	25.0
Y <sub>2</sub> -VP100L-6	1.5	3.96	15.3	2.8	933	36.0	33.0
Y <sub>2</sub> -VP112M-6	2.2	5.27	22.2	2.8	946	43.0	39.0
Y <sub>2</sub> -VP132S-6	3	7.36	29.6	2.8	965	64.0	56.0
Y <sub>2</sub> -VP132M <sub>1</sub> -6	4	9.52	39.5	2.8	965	79.0	71.0
Y <sub>2</sub> -VP132M <sub>2</sub> -6	5.5	12.5	54.3	2.8	967	83.0	75.0
Y <sub>2</sub> -VP160M-6	7.5	16.8	74.0	2.8	968	120	108
Y <sub>2</sub> -VP160L-6	11	23.0	108	2.8	966	143	131
Y <sub>2</sub> -VP180L-6	15	30.8	146	2.8	976	191	171
Y <sub>2</sub> -VP200L <sub>1</sub> -6	18.5	37.3	180	2.8	978	246	216
Y <sub>2</sub> -VP200L <sub>2</sub> -6	22	43.9	215	2.8	976	255	225
Y <sub>2</sub> -VP225M-6	30	58.9	291	2.8	984	322	292
Y <sub>2</sub> -VP250M-6	37	69.3	360	2.8	981	438	408
Y <sub>2</sub> -VP280S-6	45	84.2	436	2.8	985	500	465
Y <sub>2</sub> -VP280M-6	55	102	535	2.8	983	575	540
Y <sub>2</sub> -VP315S-6	75	143	723	2.8	990	901	861
Y <sub>2</sub> -VP315M-6	90	173	870	2.8	988	980	940
Y <sub>2</sub> -VP315L <sub>1</sub> -6	110	206	1063	2.8	988	1150	1110
Y <sub>2</sub> -VP315L <sub>2</sub> -6	132	243	1275	2.8	989	1215	1175
Y <sub>2</sub> -VP355M <sub>1</sub> -6	160	283	1540	2.8	992	1735	1690
Y <sub>2</sub> -VP355M <sub>2</sub> -6	200	353	1925	2.8	992	1915	1870
Y <sub>2</sub> -VP355L-6	250	445.4	2409	2.8	991	2025	1980

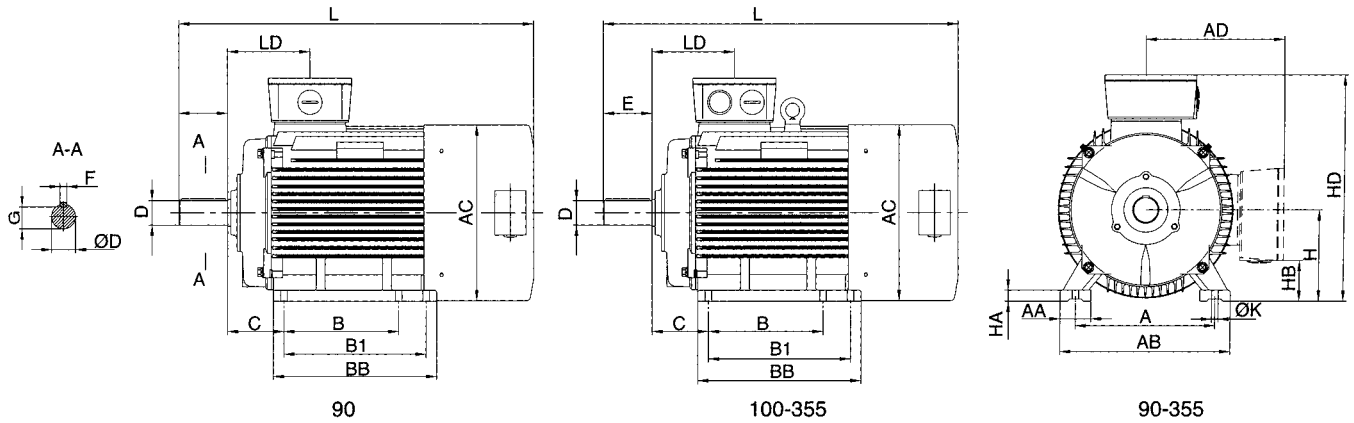
SPECIFICHE TECNICHE (50HZ) 8 POLI  
TECHNICAL SPECIFICATION (50HZ) 8 POLE

Type	output	Current	Rated Torque	Break-down torque /rated torque multiple	Rated speed r/min	weight kg	
	KW	A	Nm			IC416	IC411
Y <sub>2</sub> -VP132S-8	2.2	5.92	29.3	2.8	715	70.0	62.0
Y <sub>2</sub> -VP132M-8	3	7.56	40.1	2.8	713	74.0	66.0
Y <sub>2</sub> -VP160M <sub>1</sub> -8	4	9.71	53.2	2.8	718	106	94.0
Y <sub>2</sub> -VP160M <sub>2</sub> -8	5.5	13.3	72.7	2.8	722	118	106
Y <sub>2</sub> -VP160L-8	7.5	17.0	99.3	2.8	721	140	128
Y <sub>2</sub> -VP180L-8	11	24.9	144	2.8	725	190	170
Y <sub>2</sub> -VP200L-8	15	33.8	196	2.8	731	255	230
Y <sub>2</sub> -VP225S-8	18.5	40.8	241	2.8	733	297	272
Y <sub>2</sub> -VP255M-8	22	46.1	286	2.8	734	319	294
Y <sub>2</sub> -VP250M-8	30	62.2	390	2.8	734	395	370
Y <sub>2</sub> -VP280S-8	37	75.6	480	2.8	736	510	475
Y <sub>2</sub> -VP280M-8	45	93.3	583	2.8	737	590	555
Y <sub>2</sub> -VP315S-8	55	112	710	2.8	740	945	905
Y <sub>2</sub> -VP315M-8	75	150	968	2.8	740	1021	981
Y <sub>2</sub> -VP315L <sub>1</sub> -8	90	179	1160	2.8	741	1141	1071
Y <sub>2</sub> -VP315L <sub>2</sub> -8	110	217	1415	2.8	742	1200	1160
Y <sub>2</sub> -VP355M <sub>1</sub> -8	132	252	1694	2.8	744	1845	1800
Y <sub>2</sub> -VP355M <sub>2</sub> -8	160	298	2053	2.8	744	1935	1890
Y <sub>2</sub> -VP355L-8	200	379	2567	2.8	744	2085	2040

## DIMENSIONI SCATOLA MORSETTIERA DATA OF THE TERMINAL BOX

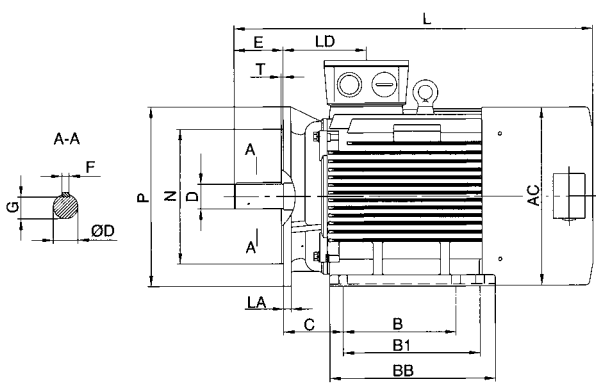
Terminal box	Frame size	Diameter of screw thread
1	90~100	1-M20x1.5
2	112~132	1-M25x1.5
3	160~180	2-M32x1.5
4	200~225	2-M50x1.5
5	250~315	2-M63x1.5
6	355	2-M72x2.0



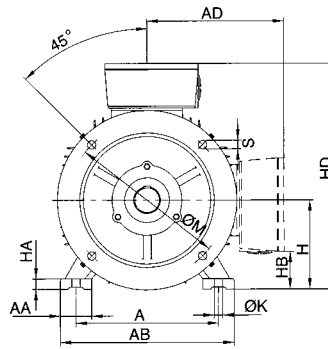


◆ B3

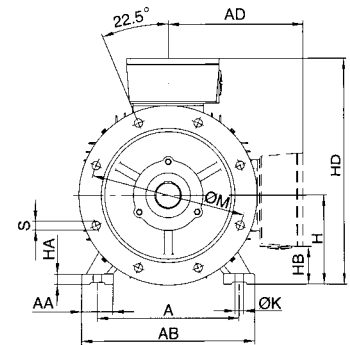
Frame size	Mounting dimensions (mm)										Overall dimensions (mm)									
	A	B	B1	C	D	E	F	G	H	K	AB	AC	AD	HD	BB	LD	HA	HB	AA	L
90S	140	100	/	56	24	50	8	20	90	10	180	175	155	245	140	105	12	50	35	385
90L	140	125	/	56	24	50	8	20	90	10	180	175	155	245	165	120	12	50	35	410
100L	160	140	/	63	28	60	8	24	100	12	200	200	180	270	175	130	14	55	40	450
112M	190	140	/	70	28	60	8	24	112	12	230	225	190	305	180	145	17	60	45	460
132S	216	140	/	89	38	80	10	33	132	12	265	260	210	345	190	165	18	65	55	520
132M	216	178	/	89	38	80	10	33	132	12	265	260	210	345	230	185	18	65	55	560
160M	254	210	/	108	42	110	12	37	160	15	315	315	260	415	260	212	20	80	65	660
160L	254	254	/	108	42	110	12	37	160	15	315	315	260	415	300	235	20	80	65	710
180M	279	241	/	121	48	110	14	42.5	180	15	350	360	280	455	310	240	22	105	70	690
180L	279	279	/	121	48	110	14	42.5	180	15	350	360	280	455	350	240	22	105	70	720
200L	318	305	/	133	55	110	16	49	200	19	390	400	305	505	370	185	25	85	70	840
225S	356	286	/	149	60	140	18	53	225	19	435	450	335	550	370	195	28	110	75	900
225M	356	311	/	149	60	140	18	53	225	19	435	450	335	550	370	195	28	110	75	930
250M	406	349	/	168	65	140	18	58	250	24	485	490	365	620	445	215	30	120	80	1000
280S	457	368	/	190	75	140	20	67.5	280	24	545	550	400	675	490	215	35	140	85	1100
280M	457	419	/	190	75	140	20	67.5	280	24	545	550	400	675	540	215	35	140	85	1150
315S	508	406	/	216	80	170	22	71	315	28	630	625	555	865	570	250	49	110	120	1320
315M/L	508	457	508	216	80	170	22	71	315	28	630	625	555	865	680	250	49	110	120	1400
355M	610	500	560	254	95	170	25	86	355	28	730	710	/	1010	750	330	52	/	120	1600
355L	610	560	630	254	95	170	25	86	355	28	730	710	/	1010	750	330	52	/	120	1600



90-355



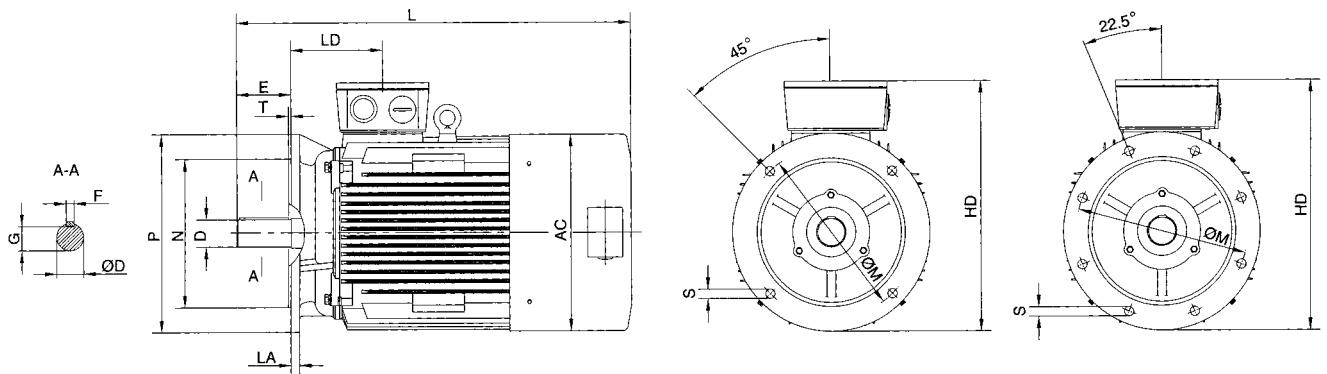
90-200



225-355

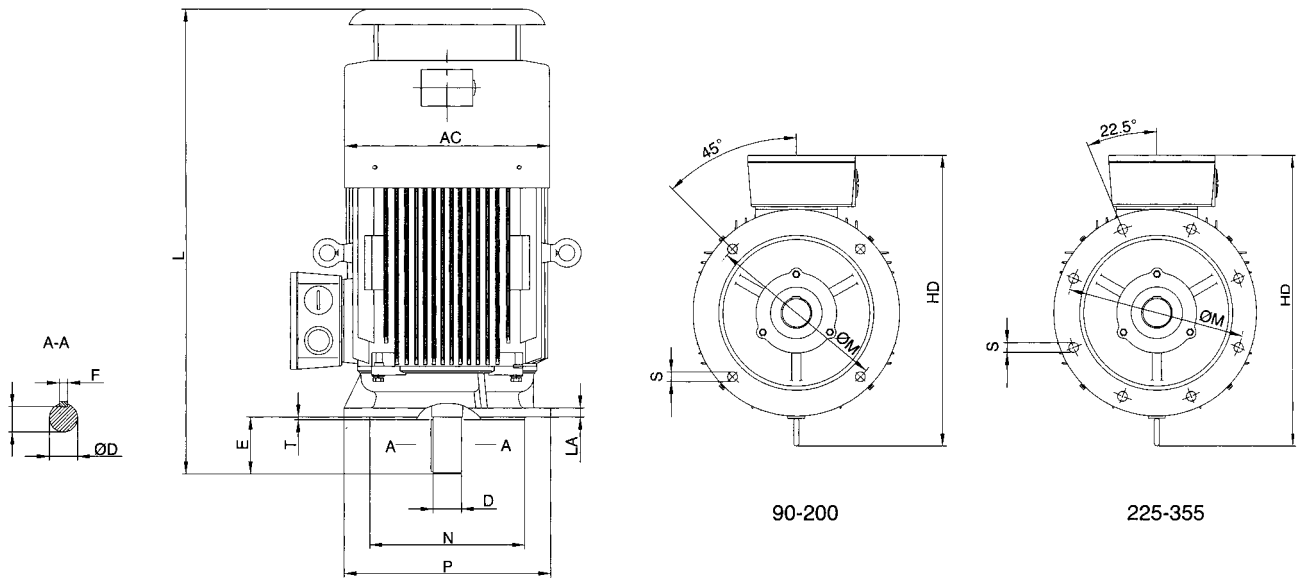
◆ B35

Frame size	Mounting dimensions (mm)															Overall dimensions (mm)				
	A	B	B1	C	D	E	F	G	H	K	M	N	P	S	T	AB	AC	AD	HD	L
90S	140	100	/	56	24	50	8	20	90	10	165	130	200	4-Ø12	4	180	175	155	245	385
90L	140	125	/	56	24	50	8	20	90	10	165	130	200	4-Ø12	4	180	175	155	245	410
100L	160	140	/	63	28	60	8	24	100	12	215	180	250	4-Ø15	4	200	200	180	270	450
112M	190	140	/	70	28	60	8	24	112	12	215	180	250	4-Ø15	4	230	225	190	305	460
132S	216	140	/	89	38	80	10	33	132	12	265	230	300	4-Ø15	4	265	260	210	345	520
132M	216	178	/	89	38	80	10	33	132	12	265	230	300	4-Ø15	4	265	260	210	345	560
160M	254	210	/	108	42	110	12	37	160	15	300	250	350	4-Ø19	5	315	315	260	415	660
160L	254	254	/	108	42	110	12	37	160	15	300	250	350	4-Ø19	5	315	315	260	415	710
180M	279	241	/	121	48	110	14	42.5	180	15	300	250	350	4-Ø19	5	350	360	280	455	690
180L	279	279	/	121	48	110	14	42.5	180	15	300	250	350	4-Ø19	5	350	360	280	455	720
200L	318	305	/	133	55	110	16	49	200	19	350	300	400	4-Ø19	5	390	400	305	505	840
225S	356	286	/	149	60	140	18	53	225	19	400	350	450	8-Ø19	5	435	450	335	550	900
225M	356	311	/	149	60	140	18	53	225	19	500	450	450	8-Ø19	5	435	450	335	550	930
250M	406	349	/	168	65	140	18	58	250	24	500	450	550	8-Ø19	5	485	490	365	620	1000
280S	457	368	/	190	75	140	20	67.5	280	24	500	450	550	8-Ø19	5	545	550	400	675	1100
280M	457	419	/	190	75	140	20	67.5	280	24	500	450	550	8-Ø19	5	545	550	400	675	1150
315S	508	406	/	216	80	170	22	71	315	28	600	550	660	8-Ø24	6	630	625	555	865	1320
315M/L	508	457	508	216	80	170	22	71	315	28	600	550	660	8-Ø24	6	630	625	555	865	1400
355M	610	500	560	254	95	170	25	86	355	28	740	680	800	8-Ø24	6	730	710	/	1010	1600
355L	610	560	630	254	95	170	25	86	355	28	740	680	800	8-Ø24	6	730	710	/	1010	1600



◆ B5

Frame size	Mounting dimensions (mm)											Overall dimensions (mm)		
	D	E	F	G	H	K	M	N	P	S	T	AC	HD	L
90S	24	50	8	20	90	10	165	130	200	4-Ø12	4	175	255	385
90L	24	50	8	20	90	10	165	130	200	4-Ø12	4	175	255	410
100L	28	60	8	24	100	12	215	180	250	4-Ø15	4	200	290	450
112M	28	60	8	24	112	12	215	180	250	4-Ø15	4	225	310	460
132S	38	80	10	33	132	12	265	230	300	4-Ø15	4	260	365	520
132M	38	80	10	33	132	12	265	230	300	4-Ø15	4	260	365	560
160M	42	110	12	37	160	15	300	250	350	4-Ø19	5	315	425	660
160L	42	110	12	37	160	15	300	250	350	4-Ø19	5	315	425	710
180M	48	110	14	42.5	180	15	300	250	350	4-Ø19	5	360	450	690
180L	48	110	14	42.5	180	15	300	250	350	4-Ø19	5	360	450	720
200L	55	110	16	49	200	19	350	300	400	4-Ø19	5	400	505	840
225S	60	140	18	53	225	19	400	350	450	8-Ø19	5	450	550	900
225M	60	140	18	53	225	19	500	450	450	8-Ø19	5	450	550	930
250M	65	140	18	58	250	24	500	450	550	8-Ø19	5	490	645	1000
280S	75	140	20	67.5	280	24	500	450	550	8-Ø19	5	550	665	1100
280M	75	140	20	67.5	280	24	500	450	550	8-Ø19	5	550	665	1150



◆ V1

Frame size	Mounting dimensions (mm)											Overall dimensions (mm)		
	D	E	F	G	H	K	M	N	P	S	T	AC	HD	L
90S	24	50	8	20	90	10	165	130	200	4-Ø12	4	175	255	415
90L	24	50	8	20	90	10	165	130	200	4-Ø12	4	175	255	445
100L	28	60	8	24	100	12	215	180	250	4-Ø15	4	200	290	485
112M	28	60	8	24	112	12	215	180	250	4-Ø15	4	225	310	510
132S	38	80	10	33	132	12	265	230	300	4-Ø15	4	260	365	565
132M	38	80	10	33	132	12	265	230	300	4-Ø15	4	260	365	605
160M	42	110	12	37	160	15	300	250	350	4-Ø19	5	315	425	710
160L	42	110	12	37	160	15	300	250	350	4-Ø19	5	315	425	760
180M	48	110	14	42.5	180	15	300	250	350	4-Ø19	5	360	450	750
180L	48	110	14	42.5	180	15	300	250	350	4-Ø19	5	360	450	780
200L	55	110	16	49	200	19	350	300	400	4-Ø19	5	400	505	920
225S	60	140	18	53	225	19	400	350	450	8-Ø19	5	450	550	995
225M	60	140	18	53	225	19	500	450	450	8-Ø19	5	450	550	1030
250M	65	140	18	58	250	24	500	450	550	8-Ø19	5	490	645	1085
280S	75	140	20	67.5	280	24	500	450	550	8-Ø19	5	550	665	1185
280M	75	140	20	67.5	280	24	500	450	550	8-Ø19	5	550	665	1235
315S	80	170	22	71	315	28	600	550	660	8-Ø24	6	625	985	1470
315M/L	80	170	22	71	315	28	600	550	660	8-Ø24	6	625	985	1550
355M	95	170	25	86	355	28	740	680	800	8-Ø24	6	710	1145	1740
355L	95	170	25	86	355	28	740	680	800	8-Ø24	6	710	1145	1740

## CUSCINETTI BEARINGS

B3 B35 B5 V1				
Frame size	Driving End		Non-driving End *	
	2 (pole)	4/6/8 (pole)	2 (pole)	4/6/8 (pole)
90	6205ZZ/C3	6205ZZ/C3	6205ZZ/C3	6205ZZ/C3
100	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3
112	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3
132	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3
160	6309ZZ/C3	6309ZZ/C3	6309ZZ/C3	6309ZZ/C3
180	6311C3	6311C3	6311C3	6311C3
200	6312C3	6312C3	6312C3	6312C3
225	6313C3	6313C3	6313C3	6313C3
250	6314C3	6314C3	6314C3	6314C3
280	6314C3	6317C3	6314C3	6317C3
315	6317C3	6319C3(NU319)	6317C3	6319C3
355	6319C3	6322C3(NU322)	6319C3	6320C3

\* cuscinetti ISOCOAT SKF tipo VLO241

\* bearings ISOCOAT SKF type VLO241

## VIBRAZIONI VIBRATION

Frame size	≤132		>132~225		>225~400	
	600~1800	>1800~3600	600~1800	>1800~3600	500~1800	>1800~3600
Synchronous Speed r/min						
Vibration Class	Effective Value of speed mm/s					
N	1.8		2.8		3.5	
R	0.71	1.12	1.12	1.80	1.80	2.80
S	0.45	0.71	0.71	1.12	1.12	1.80





