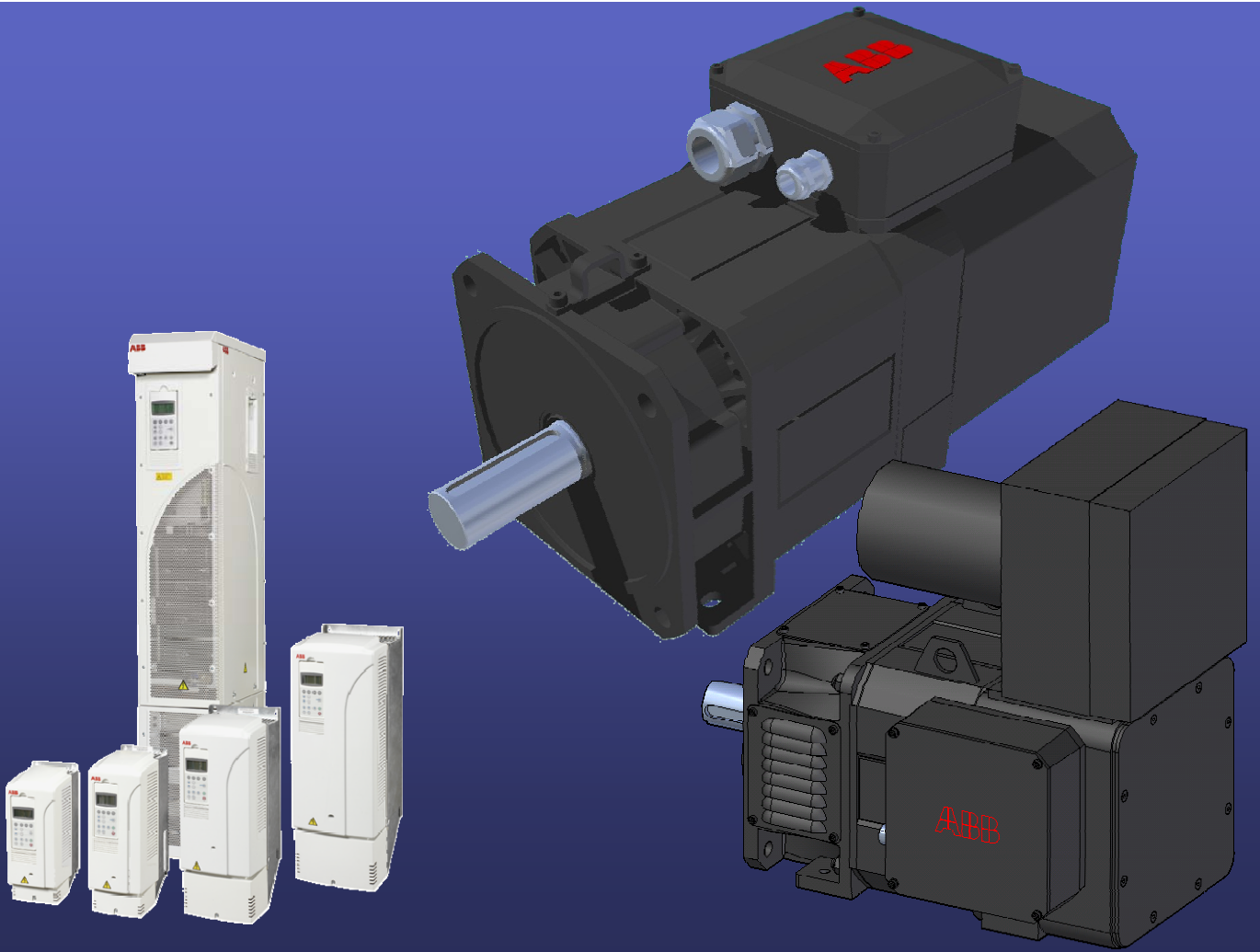


# Motion control technology

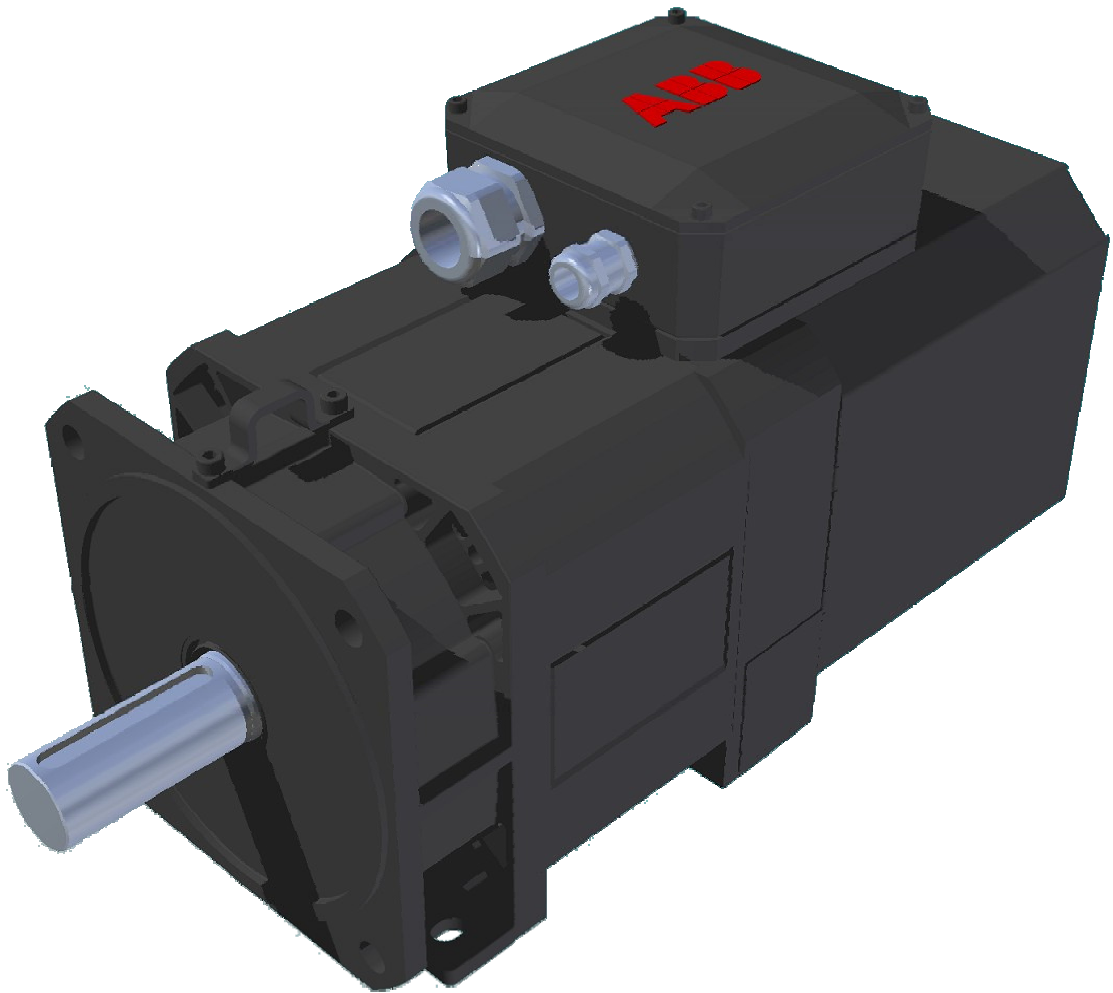
## HDP Series

### AC Induction Servomotors



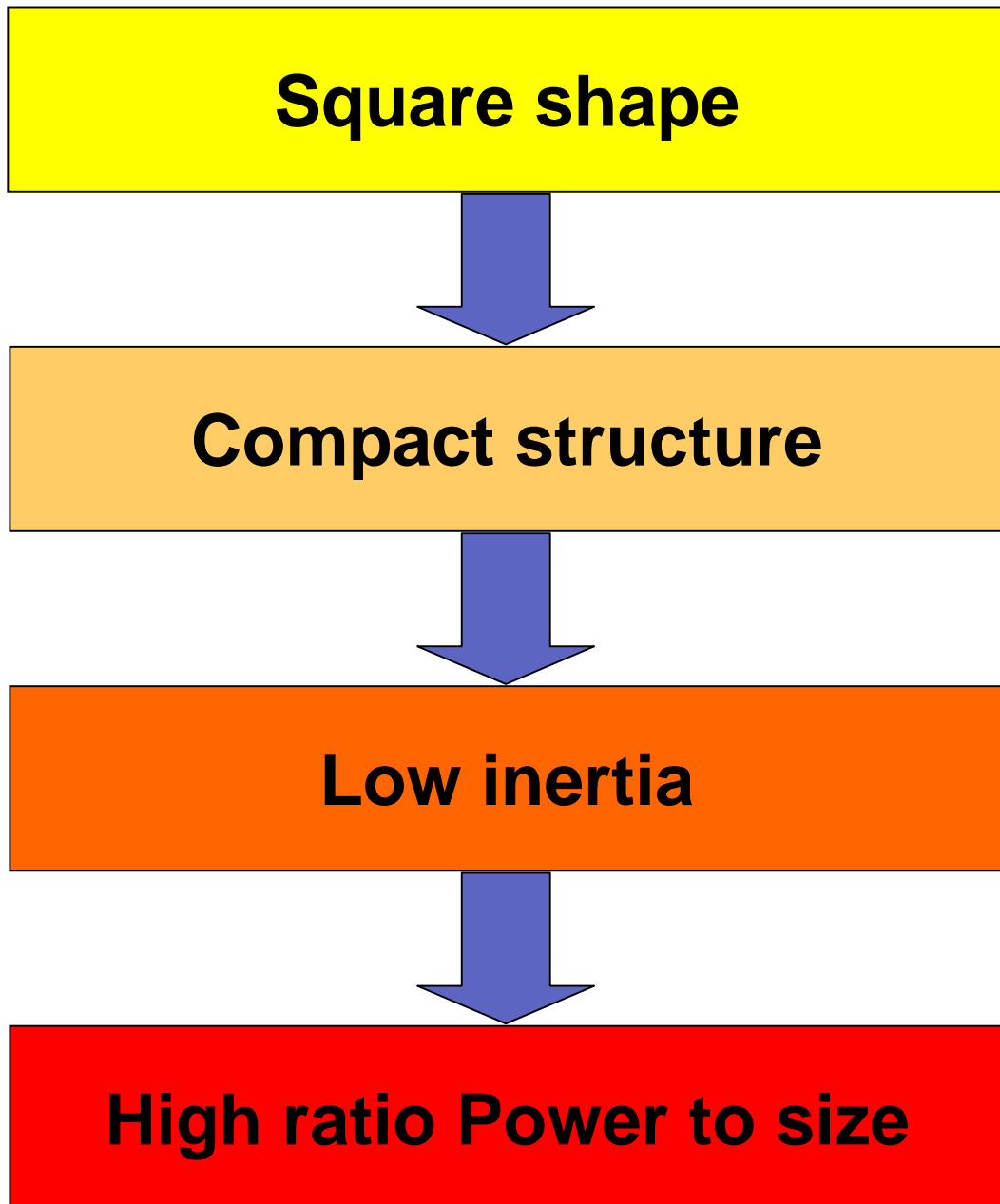
# HDP Series AC Induction Servomotors

**The HDP Servomotor series is the ABB solution for the High Dynamics Performances application with asynchronous motors.**



# HDP Series AC induction Servomotors

**High Dynamics Performances AC Induction Servomotors. Main highlights:**



# HDP Main features

- 4 or 6 poles
- From 400V up to 460V main voltage
- Up to 8000 rpm maximum speed
- Motor transducers:
  - Resolver, Encoders
- Insulation class F
- Holding brake
- HDP-C type:
  - IP 54 with axial fan forced air cooling
- HDP-V type:
  - IP 23 with radial fan
- Terminal box for power cables
- Connectors for signal cable
- Mounting: B35
  - other mountings optional
- CE certification

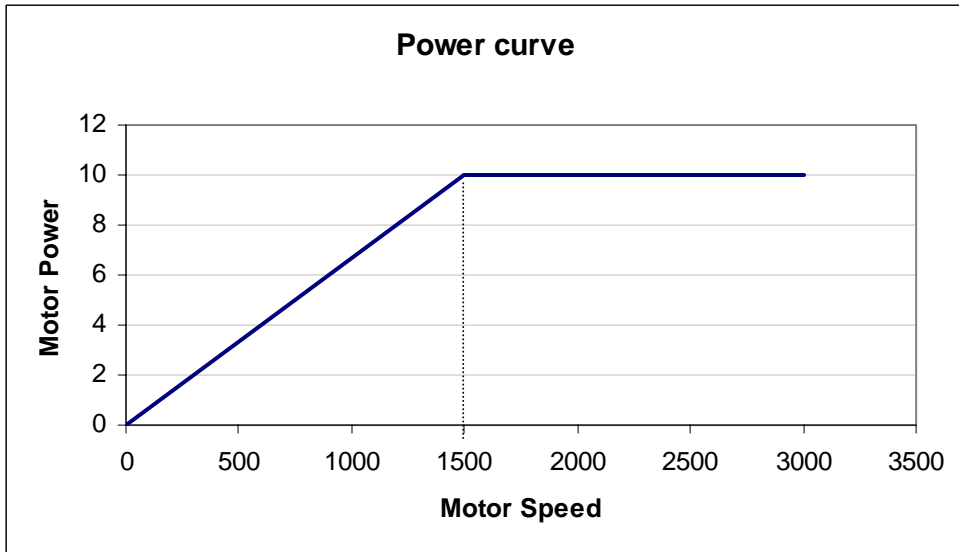
# HDP-C (IP54) Motor power range

<b>MOTOR SIZE</b>	<b>Power range (kW)</b>
100	2 – 21
132	8 – 56
160	19 – 84
200	32 – 123

# HDP-V (IP23) Motor power range

<b>MOTOR SIZE</b>	<b>Power range (kW)</b>
100	4 – 30
132	15 – 95
160	37 – 139
200	70 – 258

# HDP main data: power curve

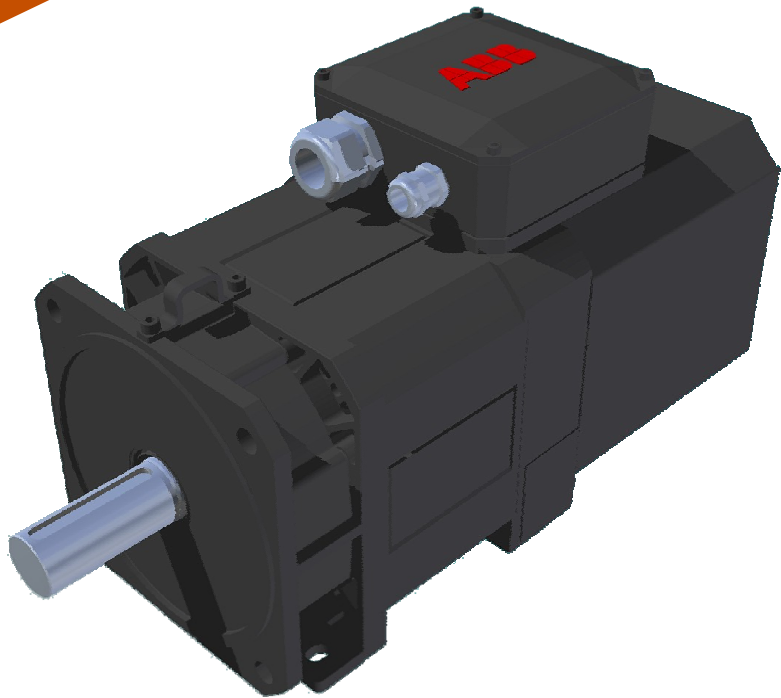


**The HDP Motor series power curve is dependant on the converter supply.**

**The general behaviour is shown in figure**

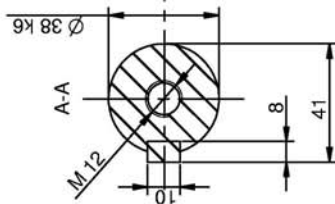
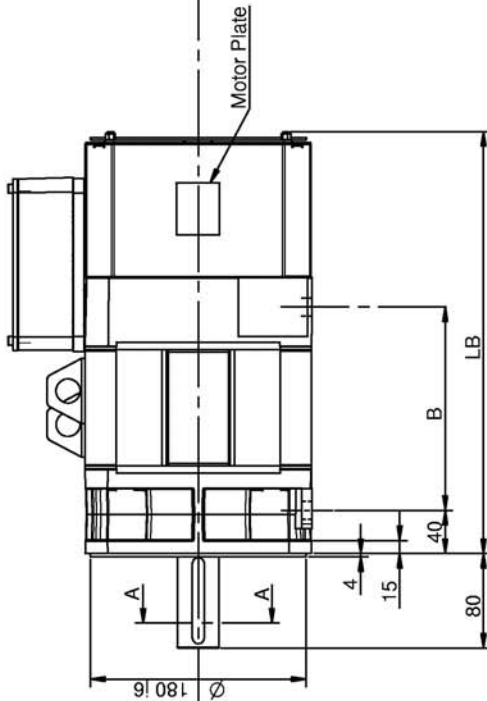
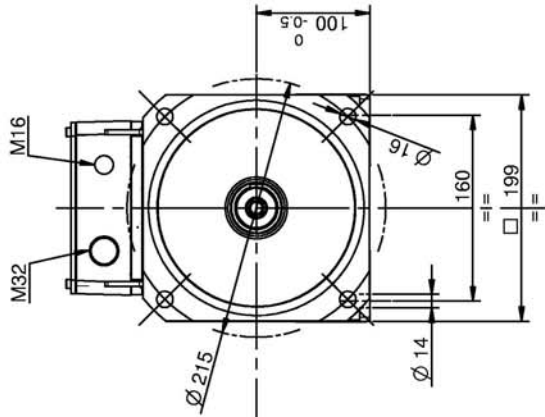
# HDP-C H (h100 IP54)

# HDP-C H





# HDP-C H (h100 IP54) size main data



A	B	C	D
E	F	G	H
I	L	M	N
MODIFIC.			

CHECKED BY	DESIGN	DATE	SCALE	DATE	SCALE	DATE	SCALE
		10/10/05					
<input type="checkbox"/> ROUGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> EXACT				DIMENSION WITHOUT TOLERANCE PRECISION AFTER UNI 5307:83			
DENOMINATION <b>ABB</b> ABB SACE S.p.A.				External Dimensions - HDP Servomotor - - H100 IP 54 - Without Brake			
SERIES				CODE			
CH.X				CHXXXXXXXX			
DRAWING NO.				15.31001/E			

Series	Code	B	LB
CH.1	CH1XXXXXXXX	272	410
CH.2	CH2XXXXXXXX	297	435
CH.3	CH3XXXXXXXX	332	470
CH.4	CH4XXXXXXXX	382	520
CH.5	CH5XXXXXXXX	422	560
CH.6	CH6XXXXXXXX	467	605



# HDP-C H (h100 IP54) size main data

Dati nominali / Rated data (UN=400 V)												
Duty			S1				S6/40%					
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm <sup>2</sup> ]
C-H.1	1	1070	56.1	2.1	18.9	5	1650	3	26.5	7	1150	0.0062
	2	1600	82.7	3.2	18.9	7	2600	4.4	26.4	9.8	1850	
	3	2180	111.3	4.3	18.9	9.5	3550	6	26.5	13.3	2450	
	4	3200	162.2	5.3	15.7	11.7	5450	7.4	22	16.4	3850	
	5	4210	212.4	6.3	14.3	14.2	7150	8.8	20.1	19.9	5050	
C-H.2	1	1080	54	2.9	26	6.5	1750	4.1	36.5	9.1	1250	0.0075
	2	1590	79.5	4.2	25.3	9.3	2600	5.9	35.4	13	1850	
	3	2250	112.5	5.9	25.1	12.8	3850	8.3	35.2	17.9	2750	
	4	3240	162	7.2	21.1	15.4	5700	10	29.5	21.6	4000	
	5	4360	218	8.8	19.4	19.5	7650	12.4	27.1	27.3	5350	
C-H.3	1	1080	54	4	35.6	8.8	1850	5.6	49.8	12.3	1300	0.0102
	2	1630	81.5	5.9	34.5	12.6	2900	8.2	48.3	17.6	2050	
	3	2230	111.5	8	34.2	17	3950	11.2	47.9	23.8	2800	
	4	3340	167	10.1	28.9	21.5	6050	14.2	40.5	30.1	4250	
	5	4620	231	12.6	26.1	26.6	8350	17.7	36.6	37.2	5900	
C-H.4	1	1170	58.5	5.8	47.3	12.5	2050	8.1	66.3	17.5	1450	0.0142
	2	1590	79.5	7.9	47.4	17	2950	11.1	66.4	23.8	2100	
	3	2300	115	11.1	46	23	4250	15.5	64.4	32.2	3000	
	4	3260	163	13.5	39.6	28.4	6050	18.9	55.4	39.8	4250	
	5	4320	216	16.3	36.1	35	8000	22.9	50.6	49	5650	
C-H.5	1	1170	58.5	7.1	57.7	15	2600	9.9	80.7	21	1850	0.0168
	2	1590	79.5	9.5	56.9	20.2	3700	13.3	79.7	28.3	2600	
	3	2250	112.5	13.5	57.1	27.9	5200	18.9	80	39.1	3700	
	4	3190	159.5	15.8	47.3	32.5	7050	22.1	66.2	45.5	4950	
	5	4230	211.5	18.9	42.8	39.5	8900	26.5	59.9	55.3	6250	
C-H.6	1	1170	58.5	8.8	71.4	18.6	2650	12.3	100	26	1850	0.0198
	2	1680	84	12.1	69.1	25	3900	17	96.7	35	2750	
	3	2080	104	14.7	67.7	30.5	5000	20.6	94.8	42.7	3550	
	4	3140	157	18.9	57.6	39	7250	26.5	80.6	54.6	5100	
	5	3920	196	21.1	51.3	44	8650	29.5	71.9	61.6	6050	

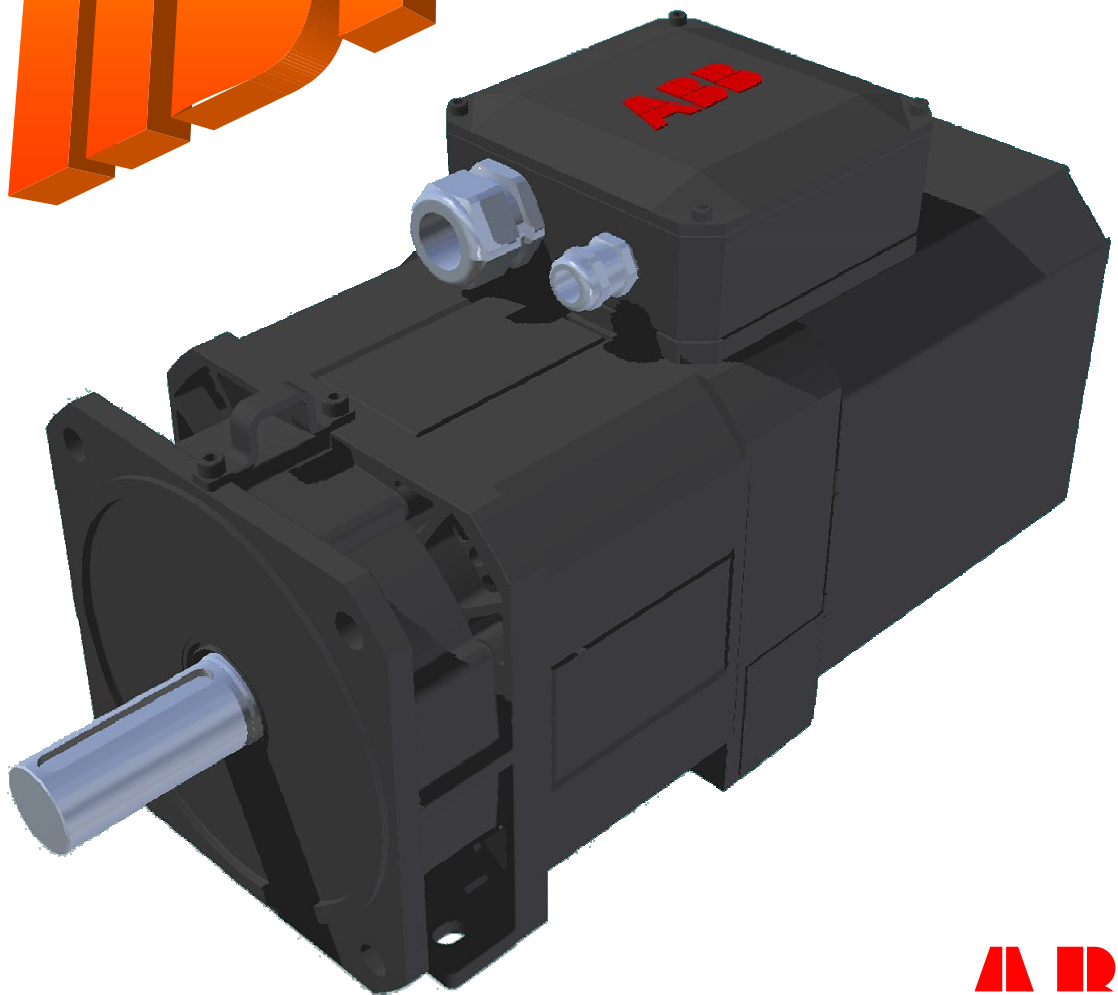
The h100 size motors are available with various rated speed:

**1000, 1600, 2200, 3200, 4200 RPM**

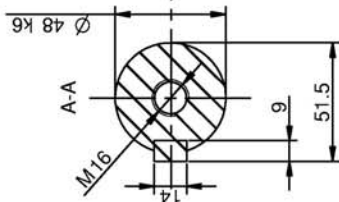
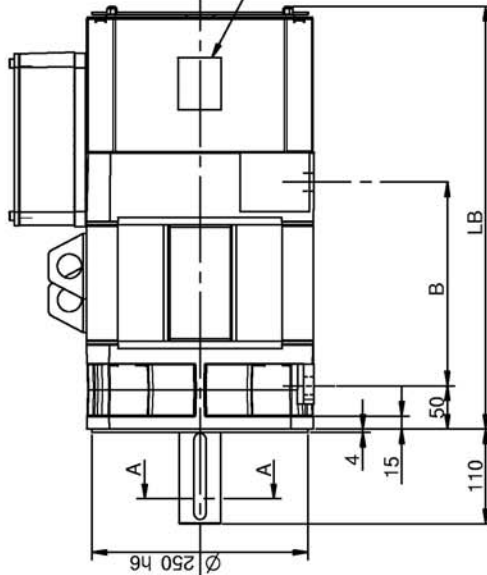
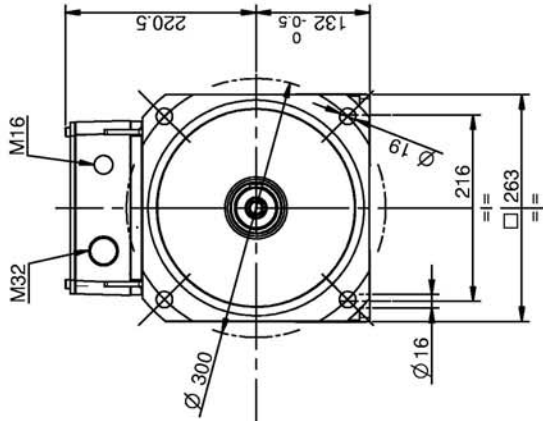


# HDP-C M (h132 IP54)

# HDP-C M



# HDP-C M (h132 IP54) size main data



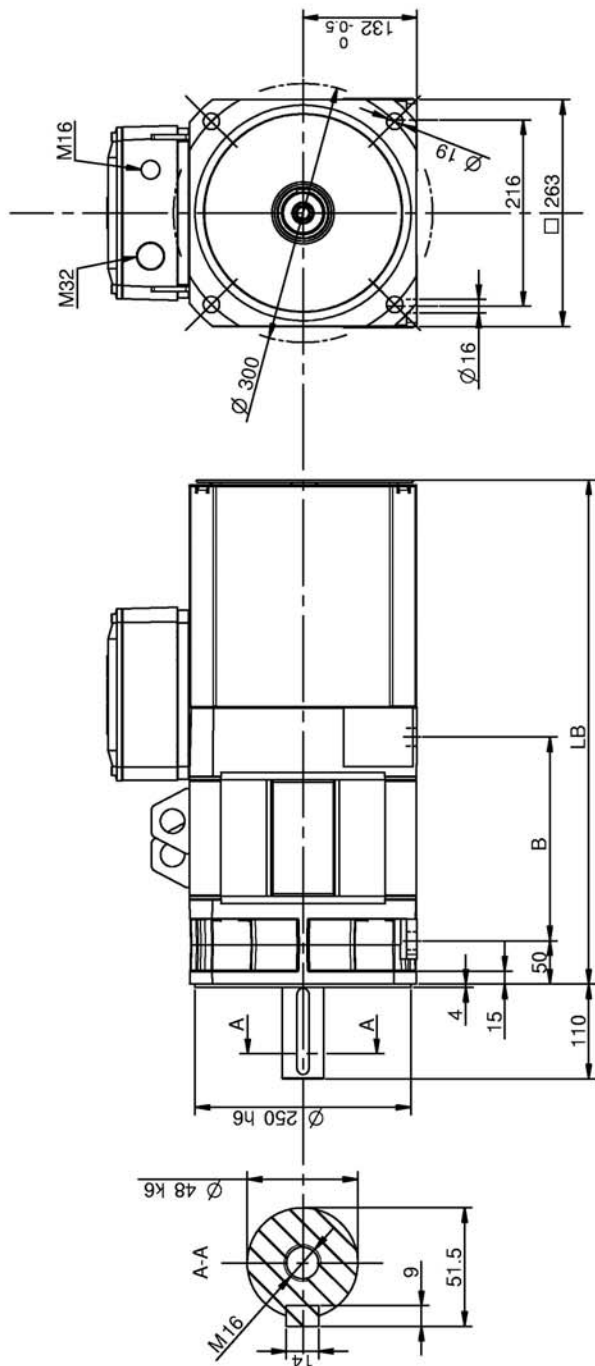
A	B	C	D
E	F	G	H
I	L	M	N
MODIFIC.			

CHECKED BY	DESIGN	DATE	SCALE	DENOMINATION
		22/09/05		ROUGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> EXACT <input type="checkbox"/>
<b>External Dimensions</b>				
- HDP Servomotor - - H132 IP 54 - Without Brake				
SERIES		ABB S.p.A.		
CODE		ABB SACE S.p.A.		
DRAWING NO.		15.30005/E		

Series	Code	B	LB
CM.1	CM1xxxxxxx	236	484
CM.2	CM2xxxxxxx	281	529
CM.3	CM3xxxxxxx	316	564
CM.4	CM4xxxxxxx	386	634
CM.5	CM5xxxxxxx	456	704



# HDP-C M (h132 IP54) size main data



A	B	C	D
E	F	G	H
I	L	M	N
MODIFIC.			

CHECKED BY	DESIGN	DATE	SCALE	DE NOMINATION
		21/03/05		
SERIES	External Dimensions			
CODE	- HDP Servomotor - - H132 IP 54 - With Brake			
DRAWING NO.	15.30007/E			
CM.x	ABB S.p.A.			
CMxxxxxxx	ABB SACE S.p.A.			

Series	Code	B	LB
CM.1	CM1xxxxxxxxx	236	584
CM.2	CM2xxxxxxxxx	281	629
CM.3	CM3xxxxxxxxx	316	664
CM.4	CM4xxxxxxxxx	386	734
CM.5	CM5xxxxxxxxx	456	804



# HDP-C M (h132 IP54) size main data

Dati nominali / Rated data (UN=400 V)												
Duty				S1				S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
C-M.1	1	1090	37.3	8.5	74.2	17.0	1900	11.9	103.9	23.8	1368	0.061
	2	1650	56.2	12.1	70.0	23.7	3000	16.9	97.9	33.2	2105	
	3	2210	74.7	15.8	68.2	30.6	4000	22.1	95.5	42.8	2842	
	4	3420	114.7	20.0	55.8	39.0	5850	28.0	78.2	54.6	4105	
	5	4330	145.3	23.2	51.1	45.0	7350	32.4	71.6	63.0	5158	
C-M.2	1	1090	37.2	11.6	102.0	22.0	2100	16.3	142.8	30.8	1450	0.080
	2	1580	53.7	15.8	95.5	31.0	3000	22.1	133.7	43.4	2100	
	3	2150	72.6	21.1	93.6	41.0	4300	29.5	131.1	57.4	3050	
	4	3160	106.3	26.3	79.6	51.0	6300	36.9	111.4	71.4	4400	
	5	4240	142.3	31.6	71.1	61.0	7900	44.2	99.5	85.4	5550	
C-M.3	1	1040	36.0	13.1	120.6	25.2	2100	18.4	168.8	35.3	1450	0.094
	2	1640	55.8	19.4	113.3	37.4	3800	27.2	158.6	52.4	2700	
	3	2240	75.8	26.3	112.1	50.0	5150	36.8	156.9	70.0	3650	
	4	3220	108.3	31.6	93.6	60.5	7100	44.2	131.1	84.7	5000	
	5	4030	135.3	35.8	84.8	69.0	7900	50.1	118.7	96.6	5550	
C-M.4	1	1040	35.8	16.8	154.4	32.0	2550	23.5	216.1	44.8	1800	0.122
	2	1620	55.1	25.2	148.8	48.0	3900	35.3	208.4	67.2	2750	
	3	2210	74.5	33.7	145.5	64.0	5100	47.1	203.8	89.6	3600	
	4	3120	104.7	40.1	122.6	76.0	6600	56.1	171.7	106.4	4650	
	5	3860	129.5	47.3	117.1	90.0	7350	66.3	164.0	126.0	5150	
C-M.5	1	1065	36.6	22.1	198.6	42.0	2600	31.0	278.0	58.8	1850	0.150
	2	1730	58.5	34.3	189.3	65.0	4000	48.0	265.0	91.0	2850	
	3	2110	71.2	42.2	191.0	80.0	4650	59.1	267.4	112.0	3250	
	4	3320	111.4	52.7	151.6	100.0	6850	73.8	212.2	140.0	4800	
	5	3830	128.4	55.8	139.1	106.0	7350	78.1	194.7	148.4	5150	

The h132 size motors are available with various rated speed:

**1000, 1500, 2200, 3400, 4300 RPM**



# HDP-C M (h132 IP54) size main data

Dati nominali / Rated data (UN=460 V)												
Duty			S1				S6/40%					
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
C-M.1	1	1030	35.4	8.0	74.2	14.1	1800	11.2	103.9	19.7	1300	0.061
	2	1540	52.5	11.3	70.1	19.2	2800	15.8	98.1	26.9	2000	
	3	2110	71.5	15.0	67.9	25.2	3800	21.0	95.1	35.3	2700	
	4	2630	88.8	17.0	61.7	28.9	4500	23.8	86.4	40.5	3150	
	5	3420	115.0	20.0	55.9	33.6	5850	28.0	78.2	47.1	4100	
	6	4150	139.1	22.2	51.1	37.3	7100	31.1	71.5	52.3	5000	
C-M.2	1	1020	35.2	11.0	103.0	18.2	1950	15.4	144.2	25.4	1400	0.080
	2	1510	51.5	15.0	94.9	25.2	2900	21.0	132.8	35.3	2050	
	3	2060	69.8	20.2	93.7	34.0	4150	28.3	131.1	47.6	2950	
	4	2520	85.0	23.0	87.2	39.2	5050	32.2	122.0	54.9	3550	
	5	3140	105.7	26.1	79.4	43.2	6300	36.5	111.1	60.5	4450	
	6	4060	136.3	30.2	71.0	50.0	7550	42.3	99.5	70.0	5300	
C-M.3	1	1030	35.5	13.0	120.6	21.7	2100	18.2	168.8	30.3	1500	0.094
	2	1510	51.5	19.1	120.8	31.9	3500	26.7	169.1	44.7	2450	
	3	2210	74.8	26.0	112.4	43.0	5100	36.4	157.3	60.1	3600	
	4	2610	88.2	28.0	102.5	47.5	5750	39.2	143.4	66.5	4050	
	5	3030	102.0	30.0	94.6	50.0	6700	42.0	132.4	70.0	4700	
	6	3870	129.9	34.0	83.9	57.0	7550	47.6	117.5	79.8	5300	
C-M.4	1	970	33.6	15.6	153.6	25.7	2350	21.8	215.0	35.9	1650	0.122
	2	1590	54.3	24.8	149.0	41.0	3850	34.7	208.6	57.3	2700	
	3	2070	70.2	31.5	145.3	51.7	4800	44.1	203.5	72.4	3400	
	4	2630	88.7	37.5	136.2	62.4	5800	52.5	190.7	87.3	4100	
	5	3100	104.4	36.2	111.5	59.9	6550	50.7	156.1	83.8	4600	
	6	3690	124.1	45.0	116.5	74.0	7050	63.0	163.1	103.6	4950	
C-M.5	1	1000	34.6	21.0	200.6	34.5	2400	29.4	280.8	48.3	1700	0.150
	2	1620	55.1	32.5	191.6	53.7	3750	45.5	268.3	75.1	2650	
	3	2020	68.4	40.0	189.1	65.7	4450	56.0	264.8	92.0	3150	
	4	2680	90.4	47.0	167.5	80.0	5800	65.8	234.5	112.0	4100	
	5	3110	104.8	50.0	153.6	82.2	6400	70.0	215.0	115.1	4500	
	6	3510	118.0	53.0	144.2	87.1	6750	74.2	201.9	122.0	4750	

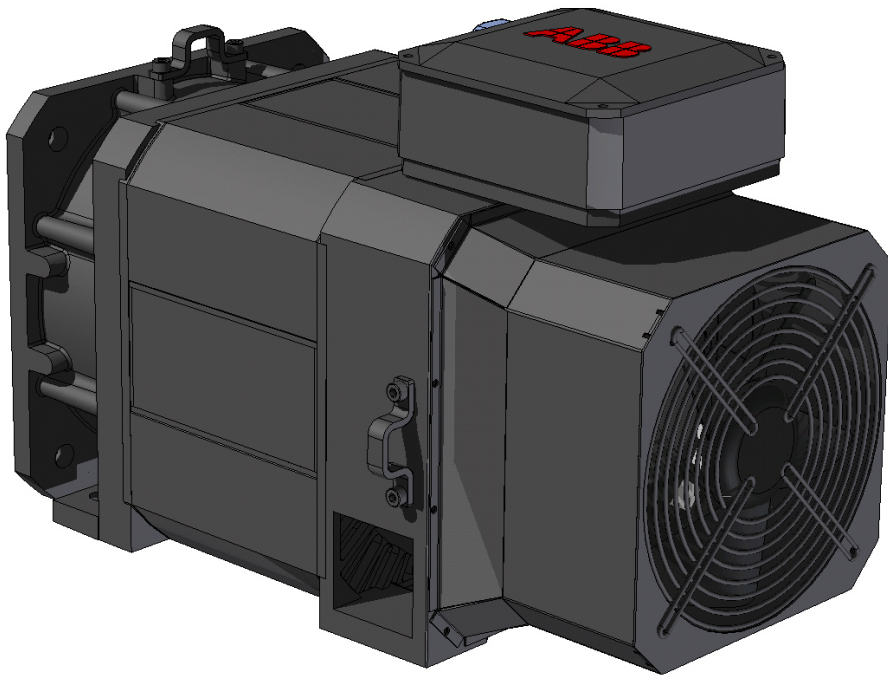
The h132 size motors are available with various rated speeds:

**1000, 1500, 2000, 2600, 3400, 4000 RPM**



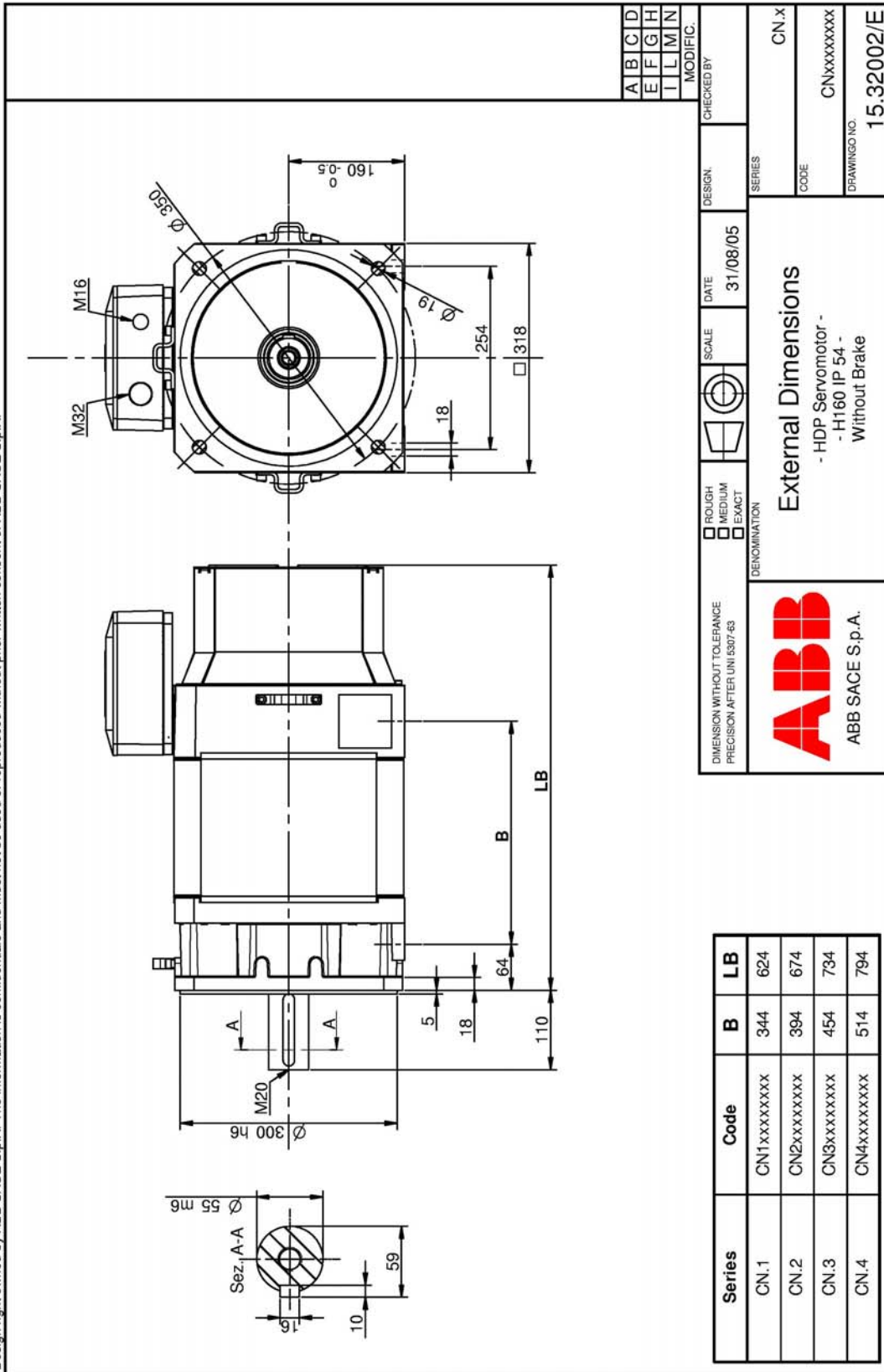
# HDP-C N (h160 IP54)

# HDP-C N





# HDP-C N (h160 IP54) size main data



A B C D  
E F G H  
I L M N  
MODIFIC.

CHECKED BY

DESIGN DATE 31/08/05

SCALE

ROUGH MEDIUM EXACT

DENOMINATION

External Dimensions

- HDP Servomotor -  
- H160 IP 54 -  
Without Brake

ABB S.p.A.

ABB SACE S.p.A.

SERIES CN.X

CODE CNxxxxxxxxx

DRAWING NO. 15.32002/E



# HDP-C N (h160 IP54) size main data

Dati nominali / Rated data (UN=400 V)												
Duty			S1					S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
C-N.1	1	900	31.1	19.6	207.9	38.5	1800	27.4	291.0	53.9	1250	0.240
	2	1260	43.2	26.2	199.0	50.5	2700	36.7	278.6	70.7	1900	
	3	1580	53.7	31.6	191.0	60.5	3300	44.2	267.4	84.7	2350	
	4	2630	88.9	42.1	152.8	85.4	5250	58.9	213.9	119.6	3700	
	5	3160	106.3	48.5	146.5	96.7	6300	67.8	205.0	135.4	4400	
C-N.2	1	820	28.4	22.1	257.1	42.5	1750	30.9	360.0	59.5	1250	0.280
	2	1210	41.1	31.6	249.2	59.5	2600	44.2	348.8	83.3	1850	
	3	1580	53.7	39.0	235.6	73.0	3450	54.5	329.8	102.2	2550	
	4	2530	85.3	52.7	199.0	103.0	5300	73.8	278.6	144.2	3800	
	5	3160	106.3	59.0	178.3	117.0	6300	82.6	249.6	163.8	4400	
C-N.3	1	840	28.9	27.3	310.4	53.0	1900	38.2	434.6	74.2	1350	0.340
	2	1260	43.2	38.8	294.5	73.5	2800	54.4	412.3	102.9	2050	
	3	1580	53.7	47.4	286.5	89.0	3800	66.3	401.1	124.6	2850	
	4	2530	84.9	63.3	238.8	125.0	5850	88.6	334.3	175.0	4050	
	5	3260	109.5	73.6	215.7	147.0	6750	103.1	301.9	205.8	4900	
C-N.4	1	820	28.4	31.5	367.3	61.0	1900	44.1	514.3	85.4	1400	0.400
	2	1210	41.1	44.2	348.8	84.0	2800	61.8	488.4	117.6	2100	
	3	1740	58.9	60.1	329.9	115.0	4200	84.2	461.9	161.0	3150	
	4	2650	89.5	76.8	276.7	152.0	6350	107.5	387.4	212.8	4800	
	5	3160	106.3	84.3	254.7	168.0	6850	118.0	356.6	235.2	5200	

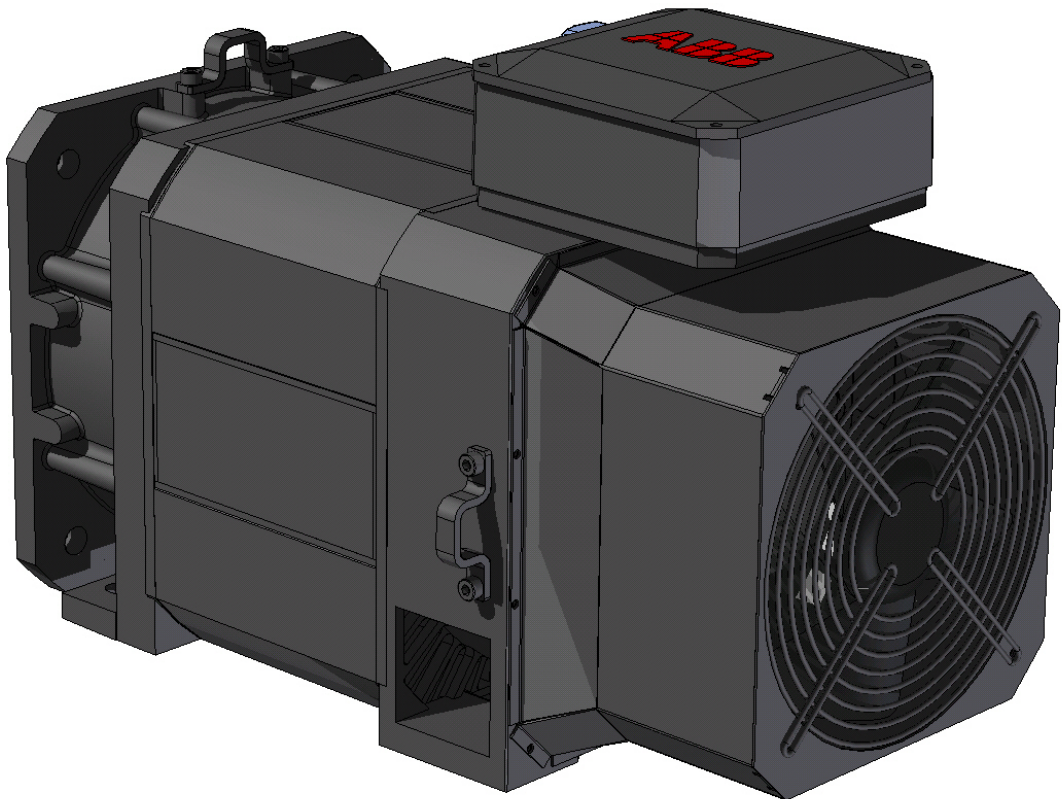
The h160 size motors are available with various rated speeds:

**900, 1200, 1600, 2600, 3100 RPM**



# HDP-C R (h200 IP54)

# HDP-C R

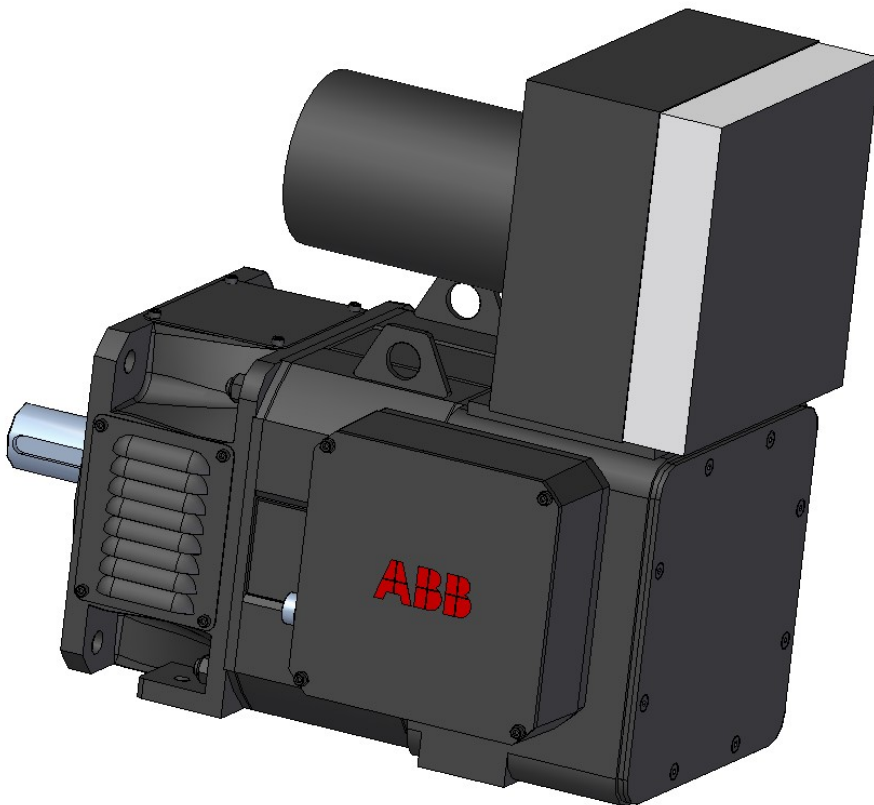


# HDP-C R (h200 IP54) size main data

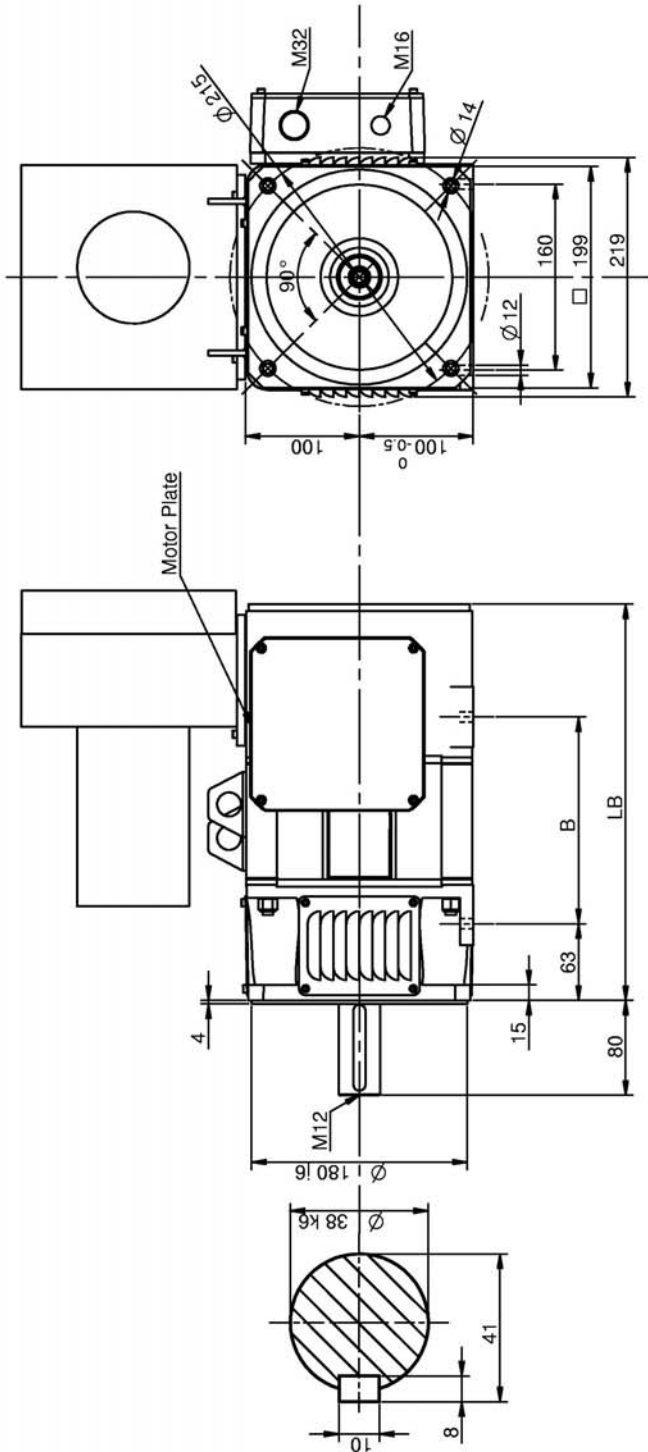
Dati nominali / Rated data (UN=400 V)												
Duty			S1					S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
C-R1.	1	810	41.8	32	372.1	63	1650	44	521	88.2	1150	0.680
	2	1360	46	50	348	96	2900	69	487.2	134.4	2050	
	3	1750	58.9	61	333.7	118	3700	86	467.2	165.2	2650	
	4	2550	85.6	77	288.1	150	5250	108	403.4	210	3850	
	5	3440	115.4	89	248.3	174	5250	125	347.6	243.6	4850	
C-R2.	1	810	28.3	39	458.9	72	1750	55	642.5	100.8	1250	0.780
	2	1350	45.6	57	402.9	107	3000	80	564.1	149.8	2050	
	3	1640	55.4	69	404.1	129	3650	97	565.7	180.6	2450	
	4	2190	73.7	81	353.6	156	4850	114	495	218.4	3300	
	5	3090	103.9	98	303.2	191	5250	137	424.4	267.4	4350	
C-R3.	1	820	28.2	44	514.3	86	1850	62	720	120.4	1300	0.910
	2	1020	34.9	54	502.2	104	2350	75	703	145.6	1700	
	3	1610	54.4	78	461.9	151	4050	109	646.7	211.4	2950	
	4	2140	71.9	95	423.4	183	5150	133	592.8	256.2	3700	
	5	2880	96.8	116	383.4	226	5250	162	536.8	316.4	4650	
C-R4.	1	830	28.6	53	604.5	101	2000	74	846.3	141.4	1400	1.090
	2	1110	37.5	67	573.1	129	2700	93	802.3	180.6	1900	
	3	1685	56.7	95	537.2	183	4200	133	752.1	256.2	3050	
	4	2160	72.4	111	489.2	208	5200	155	684.9	291.2	3700	
	5	2790	93.3	128	439.7	245	5250	180	615.6	343	4450	
C-R5.	1	790	27.1	60	725.9	116	2000	84	1016	162.4	1400	1.340
	2	1110	37.5	77	664	151	2900	108	930	211.4	2050	
	3	1620	54.7	102	601.6	194	4250	143	842	271.6	3000	
	4	1920	64.6	113	561.5	210	4800	158	786	294	3450	
	5	2150	72.4	123	546.4	230	5250	172	765	322	3900	

# HDP-V (IP23)

# HDP-V



# HDP-V H (h100 IP23) size main data



A	B	C	D
E	F	G	H
I	L	M	N
MODIFIC.			

CHECKED BY	DESIGN	DATE	SCALE	07/10/05
SERIES				
External Dimensions				
- HDP Servomotor -				
- H100 IP 23 -				
Without Brake				
ABB SACE S.p.A.				
ABB				
ABB SACE S.p.A.				
DIMENSION WITHOUT TOLERANCE				
PRECISION AFTER UNI 5307:63				
<input type="checkbox"/> ROUGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> EXACT				
DENOMINATION				
VH.X				
CODE				
VHXXXXXXXXXX				
DRAWING NO.				
15.31002/E				

Series	Code	B	LB
VH.1	VH1XXXXXXXXXX	272	330
VH.2	VH2XXXXXXXXXX	297	355
VH.3	VH3XXXXXXXXXX	332	390
VH.4	VH4XXXXXXXXXX	382	440
VH.5	VH5XXXXXXXXXX	422	480
VH.6	VH6XXXXXXXXXX	467	525



# HDP-V H (h100 IP23) size main data

Dati nominali / Rated data (UN=400 V)												
Duty			S1				S6/40%					
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
V-H1.	1	1110	55.5	4	30.9	8.9	1700	5	43.3	12.5	1250	0.0062
	2	1605	80.3	5	30.8	12.5	2400	7	43.1	17.5	1850	
	3	2250	112.5	7	30	16.6	2550	10	42.1	23.2	1900	
	4	2630	131.5	8	29.2	18.1	3950	11	40.8	25.3	3000	
	5	3480	174	10	27.8	23.2	5200	14	38.9	32.5	3950	
	6	4030	201.5	12	27.4	26.1	6050	16	38.4	36.5	4600	
V-H2.	1	1080	54	5	42.1	10.7	1700	7	59	15	1250	0.0075
	2	1645	82.3	7	41.6	16.1	2600	10	58.3	22.5	1950	
	3	2140	107	9	41.9	21.2	3300	13	58.6	29.7	2550	
	4	2560	128	11	39.3	24	4000	15	55	33.6	3000	
	5	3110	155.5	13	38.9	28.7	4850	18	54.4	40.2	3650	
	6	3640	182	14	37.3	32.5	5700	20	52.2	45.5	4250	
V-H3.	1	1090	54.5	7	57.5	14.5	1750	9	80.5	20.3	1300	0.0102
	2	1620	81	10	57.1	21.3	2650	14	79.9	29.8	2000	
	3	2060	103	12	56.8	27.2	3300	17	79.5	38.1	2550	
	4	2600	130	15	55.3	34	4200	21	77.4	47.6	3150	
	5	3120	156	17	52.6	39	5000	24	73.6	54.6	3800	
	6	3460	173	18	51	41.8	5550	26	71.3	58.5	4150	
V-H4.	1	1110	55.5	9	76.4	20	1800	12	107	28	1350	0.0142
	2	1610	80.5	13	76.8	29	2600	18	107.5	40.6	1950	
	3	2220	111	17	74.7	38.5	3600	24	104.6	53.9	2700	
	4	2480	124	18	71.1	40.5	4000	26	99.6	56.7	3000	
	5	2790	139.5	21	70.3	45.3	4450	29	98.4	63.4	3350	
	6	3390	169.5	24	68.2	54	5450	34	95.5	75.6	4100	
V-H5.	1	980	49	9	88.3	20.4	1650	13	123.7	28.6	1250	0.0168
	2	1435	71.7	13	87.8	29.2	2350	18	122.9	40.9	1800	
	3	1710	85.5	15	85.5	33.8	2850	21	119.7	47.3	2150	
	4	2300	115	20	83.2	45	3800	28	116.5	63	2850	
	5	2794	139.7	24	81.1	52.7	4450	33	113.5	73.8	3350	
	6	3350	167.5	27	78.1	61	5350	38	109.3	85.4	4050	
V-H6.	1	1000	50	11	102.5	24	1700	15	143.6	33.6	1250	0.0198
	2	1390	69.5	15	102.7	33	2300	21	143.8	46.2	1750	
	3	1690	84.5	18	102.7	40	2800	25	143.7	56	2100	
	4	2290	114.5	24	101.2	54	3800	34	141.7	75.6	2850	
	5	2730	136.5	28	97.7	62	4350	39	136.8	86.8	3300	
	6	3050	152.5	30	92.5	65.5	4900	41	129.6	91.7	3700	





# HDP-V M (h132 IP23) size main data

Dati nominali / Rated data (UN=400 V)												
Duty			S1					S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
V-M.1	1	1120	39.3	15.8	135.2	31.0	1700	22.2	189.2	43.4	1250	0.061
	2	1670	57.3	23.3	133.0	45.0	2550	32.6	186.2	63.0	1900	
	3	2300	78.4	29.5	122.7	58.0	3450	41.4	171.7	81.2	2650	
	4	2720	92.3	33.7	118.5	66.0	4100	47.2	165.8	92.4	3100	
	5	3340	112.9	40.0	114.5	76.5	5050	56.1	160.3	107.1	3800	
	6	3950	133.2	44.2	107.0	85.0	5950	61.9	149.8	119.0	4450	
V-M.2	1	1110	38.5	20.1	172.8	39.0	1750	28.1	242.0	54.6	1300	0.080
	2	1690	57.8	30.6	173.1	60.0	2650	42.9	242.4	84.0	2000	
	3	2110	71.9	36.9	167.1	72.0	3250	51.7	234.0	100.8	2450	
	4	2530	85.8	42.2	159.2	82.0	3950	59.0	222.9	114.8	3000	
	5	2810	95.2	46.3	157.4	89.0	4350	64.8	220.4	124.6	3300	
	6	3590	121.1	54.7	145.6	105.0	5600	76.6	203.9	147.0	4200	
V-M.3	1	1090	38.3	24.4	213.3	47.0	1750	34.1	298.6	65.8	1300	0.094
	2	1580	54.7	34.8	210.1	67.0	2550	48.7	294.2	93.8	1900	
	3	2060	70.5	44.4	205.7	84.0	3300	62.1	288.0	117.6	2550	
	4	2580	87.8	52.6	194.9	102.0	4150	73.7	272.9	142.8	3150	
	5	2970	100.5	57.9	186.3	113.0	4800	81.1	260.8	158.2	3650	
	6	3480	117.2	64.3	176.6	126.0	5600	90.1	247.2	176.4	4200	
V-M.4	1	1010	35.8	28.9	273.6	56.0	1650	40.5	383.0	78.4	1250	0.122
	2	1660	57.2	47.6	273.8	91.0	2700	66.6	383.3	127.4	2050	
	3	2110	72.1	60.1	272.2	116.0	3350	84.2	381.1	162.4	2550	
	4	2470	84.0	66.5	257.1	128.0	3950	93.1	360.0	179.2	3000	
	5	2760	93.5	70.6	244.2	137.0	4400	98.8	341.9	191.8	3300	
	6	3460	116.4	84.3	233.0	163.0	5550	118.0	326.1	228.2	4150	
V-M.5	1	990	35.1	35.8	345.5	70.0	1700	50.1	483.7	98.0	1250	0.150
	2	1655	56.9	58.0	334.6	110.0	2750	81.2	468.4	154.0	2050	
	3	2120	72.3	73.8	332.6	141.0	3550	103.4	465.7	197.4	2700	
	4	2360	80.4	80.1	324.1	153.0	3900	112.1	453.7	214.2	2950	
	5	2690	91.1	86.5	307.1	166.0	4300	121.1	430.0	232.4	3250	
	6	3090	104.2	94.9	293.4	184.0	4950	132.9	410.7	257.6	3750	

The h132 size motors are available with various rated speeds:

**1000, 1500, 2300, 2700, 3300, 4000 RPM**

The maximum allowed speed is 7500 RPM



# HDP-V M (h132 IP23) size main data

Dati nominali / Rated data (UN=460 V)												
Duty			S1					S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
V-M.1	1	1090	38.1	15.4	134.9	26.2	1650	21.6	188.9	36.7	1250	0.061
	2	1620	55.8	22.5	132.7	37.8	2450	31.5	185.8	53.0	1850	
	3	2140	73.1	27.5	122.7	46.3	3250	38.5	171.8	64.8	2450	
	4	2680	91.0	33.0	117.6	55.2	4050	46.2	164.6	77.3	3050	
	5	3200	108.3	38.0	113.4	63.3	4800	53.2	158.8	88.6	3600	
V-M.2	1	1090	38.0	19.5	170.9	33.1	1700	27.3	239.2	46.3	1300	0.080
	2	1550	53.3	28.0	172.5	47.9	2450	39.2	241.6	67.0	1850	
	3	1970	67.2	34.0	164.8	57.8	3100	47.6	230.8	80.9	2350	
	4	2510	85.2	42.0	159.8	71.1	3900	58.8	223.7	99.6	2950	
	5	3130	105.8	48.0	146.5	80.1	4900	67.2	205.1	112.1	3700	
V-M.3	1	1050	36.8	23.5	213.8	39.7	1700	32.9	299.3	55.5	1300	0.094
	2	1500	51.8	33.0	210.1	55.3	2400	46.2	294.2	77.5	1800	
	3	2000	68.5	43.0	205.3	71.0	3200	60.2	287.5	99.5	2400	
	4	2430	82.6	50.0	196.5	83.2	3900	70.0	275.1	116.5	2950	
	5	3040	102.8	58.0	182.2	96.0	4900	81.2	255.1	134.4	3700	
V-M.4	1	930	32.9	26.5	272.2	44.5	1500	37.1	381.0	62.4	1150	0.122
	2	1590	54.8	45.0	270.3	75.2	2550	63.0	378.4	105.2	1950	
	3	2160	73.8	61.0	269.7	102.6	3500	85.4	377.6	143.6	2650	
	4	2690	91.0	68.0	241.4	113.8	4350	95.2	338.0	159.3	3300	
	5	3250	109.5	80.0	235.1	132.4	5200	112.0	329.1	185.4	3900	
V-M.5	1	990	34.9	36.0	347.3	61.2	1650	50.4	486.2	85.7	1250	0.150
	2	1520	52.5	53.0	333.0	87.6	2550	74.2	466.2	122.6	1950	
	3	2060	70.5	71.5	331.5	118.2	3400	100.1	464.1	165.5	2550	
	4	2520	85.7	83.0	314.6	137.3	4050	116.2	440.4	192.3	3050	
	5	3160	106.7	96.0	290.2	158.9	5100	134.4	406.2	222.5	3850	

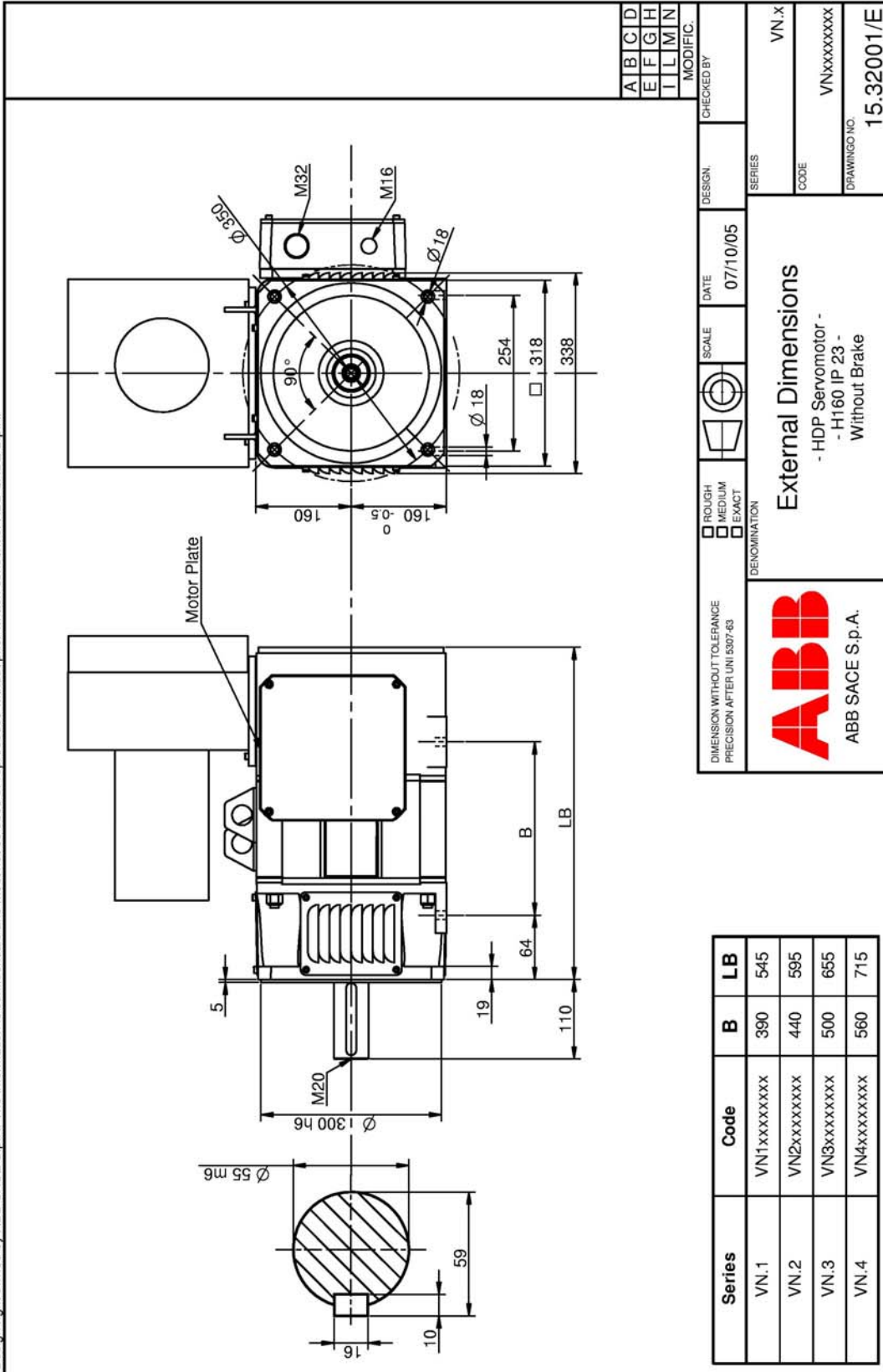
The h132 size motors are available with various rated speeds:

**1000, 1500, 2000, 2600, 3200 RPM**

The maximum allowed speed is 7500 RPM



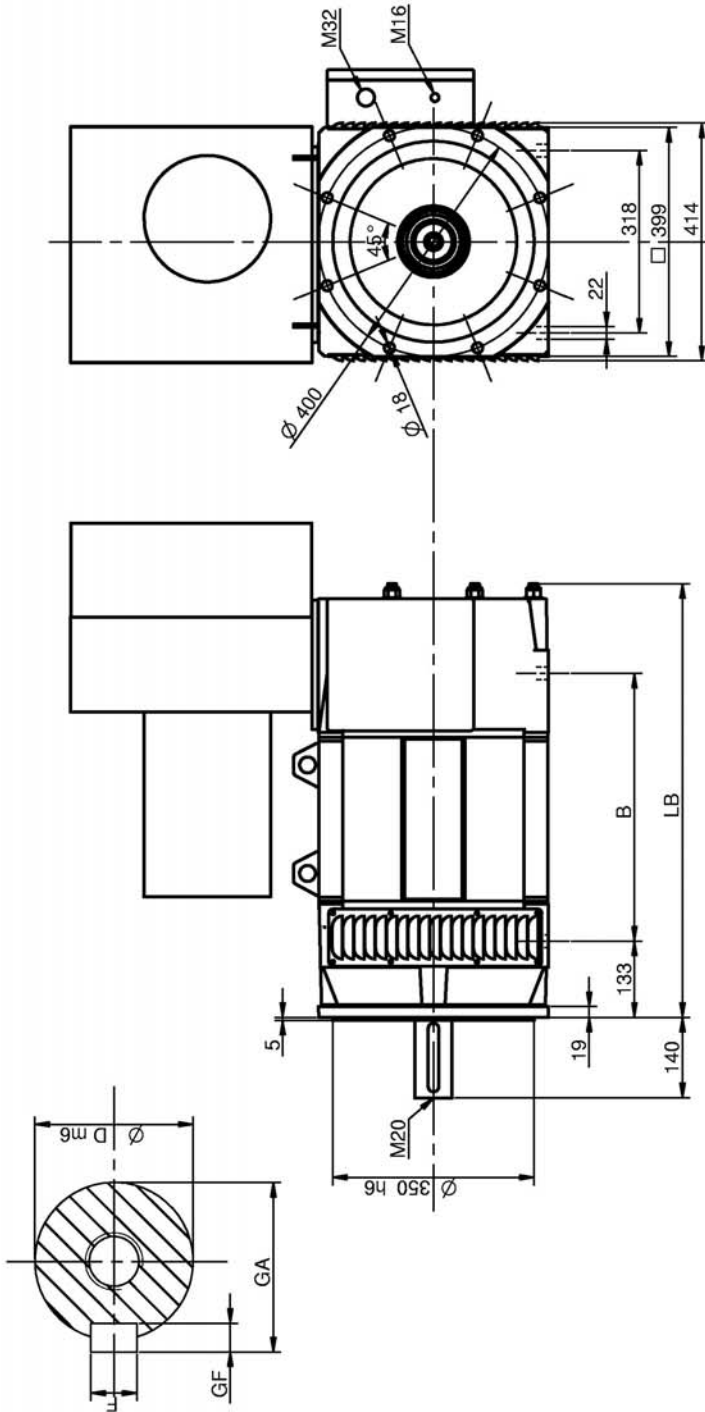
# HDP-V N (h160 IP23) size main data



# HDP-V N (h160 IP23) size main data

Dati nominali / Rated data (UN=400 V)												
Duty				S1				S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P costante	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm2]
V-N.1	1	1060	36.3	37	331	73.0	1600	51	463.4	102.2	1250	0.240
	2	1380	46.8	47	327	94.0	2100	66	457.6	131.6	1600	
	3	1680	56.8	58	328	113.0	2550	81	459.6	158.2	1950	
	4	2210	74.7	74	318	145.0	3350	103	445.7	203.0	2550	
	5	3260	109.5	98	287	194.0	4900	137	401.1	271.6	3750	
V-N.2	1	780	26.8	33	400	64.0	1200	46	560.2	89.6	950	0.280
	2	1140	38.9	47	396	91.0	1800	66	554.6	127.4	1350	
	3	1740	58.9	72	394	134.0	2750	100	551.1	187.6	2050	
	4	2370	80.0	91	365	168.0	3700	127	511.1	235.2	2800	
	5	2940	98.9	105	342	194.0	4600	147	478.4	271.6	3450	
V-N.3	1	800	27.7	39	465	76.0	1300	55	651.3	106.4	1000	0.340
	2	1260	43.0	60	454	114.0	2050	84	635.4	159.6	1550	
	3	1640	55.6	78	453	144.0	2650	109	634.3	201.6	2000	
	4	2340	78.8	105	430	194.0	3800	148	602.3	271.6	2850	
	5	3030	101.9	126	398	235.0	4900	177	557.2	329.0	3700	
V-N.4	1	910	31.2	51	533	99.0	1450	71	746.3	138.6	1100	0.400
	2	1230	41.8	68	530	134.0	2000	96	742.6	187.6	1550	
	3	1750	59.1	95	518	178.0	2850	133	725.0	249.2	2100	
	4	2520	84.5	127	480	239.0	4050	177	671.5	334.6	3050	
	5	2960	99.3	139	449	261.0	4750	195	628.2	365.4	3600	

# HDP-V R (h200 IP23) size main data



A	B	C	D
E	F	G	H
I	L	M	N
MODIFIC.			

CHECKED BY	DESIGN	DATE	SCALE	DEMINOMINATION	 <p><b>ABB SACE S.p.A.</b></p>
		31/01/06		<input type="checkbox"/> ROUGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> EXACT	
				DIMENSION WITHOUT TOLERANCE PRECISION AFTER UNI 5307-63	
External Dimensions - HDP Servomotor - - H200 IP 23 - Without Brake			SERIES	CODE	DRAWING NO.
			VR.x	VRxxxxxxx	15.33000/E

Series	Code	B	LB	D	F	GF	GA
VR.1	VR1xxxxxxxxx	426	720	65	18	11	69
VR.2	VR2xxxxxxxxx	466	760	65	18	11	69
VR.3	VR3xxxxxxxxx	516	810	65	18	11	69
VR.4	VR4xxxxxxxxx	586	880	75	20	12	79.5
VR.5	VR5xxxxxxxxx	686	980	75	20	12	79.5



# HDP-V R (h200 IP23) size main data

Dati nominali / Rated data (UN=400 V)												
Duty			S1					S6/40%				
Caratteristiche nominali												
	Codice	Velocità	Frequenza	Potenza	Coppia	Corrente	Velocità max a P costante	Potenza	Coppia	Corrente	Velocità max a P	Inerzia Rotore
Rated data												
	Code	Speed	Frequency	Power	Torque	Current	Max speed at constant P	Power	Torque	Current	Max speed at constant P	Rotor Inertia
Size	Val	nN[rpm]	fN[Hz]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	PN[kW]	MN[Nm]	IN[A]	nmax[rpm]	J [kgm <sup>2</sup> ]
V-R1.	1	920	31.2	70	725	131	1400	97	1014	183.4	1100	0.680
	2	1230	41.8	92	718	172	1950	129	1006	240.8	1450	
	3	1740	58.8	124	681	227	2750	174	953	317.8	2050	
	4	2430	81.8	158	620	290	3800	221	868	406	2850	
	5	2950	98.9	179	580	323	4600	251	812	452.2	3400	
V-R2.	1	930	31.9	81	836	155	1500	114	1170	217	1150	0.780
	2	1290	43.9	110	815	206	2100	154	1141	288.4	1600	
	3	1700	57.5	139	778	254	2750	194	1090	355.6	2050	
	4	2460	82.8	184	714	335	3950	258	1000	469	3000	
	5	2740	91.9	196	683	360	4400	274	957	504	3300	
	6	3050	102.5	210	659	385	4900	294	922	539	3700	
V-R3.	1	780	26.8	79	962	153	1250	110	1346	214.2	950	0.910
	2	1180	40.2	118	955	225	1900	165	1337	315	1400	
	3	1580	53.5	153	923	284	2550	214	1293	397.6	1900	
	4	2250	75.8	200	848	365	3650	280	1187	511	2750	
	5	2540	85.3	216	812	396	4100	302	1137	554.4	3050	
	6	2880	96.8	237	784	434	4650	331	1098	607.6	3450	
V-R4.	1	800	27.6	96	1144	187	1350	134	1601	261.8	1000	1.090
	2	1240	42.5	148	1141	282	2050	207	1598	394.8	1600	
	3	1600	54	185	1106	347	2700	259	1548	485.8	2000	
	4	2060	69.5	215	999	400	3400	302	1399	560	2600	
	5	2370	79.6	235	947	437	3950	329	1325	611.8	2950	
V-R5.	1	780	27	109	1329	212	1350	152	1861	296.8	1000	1.340
	2	1000	34	137	1307	262	1750	192	1830	366.8	1250	
	3	1160	39.6	158	1302	300	2000	222	1823	420	1450	
	4	1790	60.4	237	1264	444	3050	332	1770	621.6	2250	
	5	2150	72.3	258	1147	487	3700	362	1606	681.8	2700	

# HDP Accessories

# ACCESSORIES



# HDP Accessories: position sensors

- Encoders:
  - Leine & Linde
    - RHI 503
    - Supply voltage 10/30 Vdc
    - Output A/A-, B/B-, Zero
    - 1024 pulse/turn (other resolution possible)
    - Vibration < 300m/s<sup>2</sup> (IEC 60068-2-6)
    - Protection IP 67 (IP 66 shaft DE)
  
- Resolvers (2 poles):
  - Tyco
    - Operating temperature: -55 °C...+155 °C
    - Admissible speed: 10,000 RPM max.
    - Accuracy: ±10'
    - Input voltage: 7 Vrms
    - Pole pairs: 1
    - Vibrations: 196 m/ s<sup>2</sup>, 10Hz - 500Hz
    - Shock: 980 m/s<sup>2</sup>, 11ms



# HDP Accessories: Brakes

- Spring brakes for HDP-C motors:
  - Size H (h100): 36 Nm (option: 46 Nm)
  - Size M (h132): 90 Nm (option: 125 Nm)
  - Size N (h160): 150 Nm (option: 235 Nm)
  - Size R (h200): 260 Nm (option: 400 Nm)
  
- Spring brakes for HDP-V motors:
  - Size H (h100): 90 Nm (option: 125 Nm)
  - Size M (h132): 150 Nm (option: 235 Nm)
  - Size N (h160): 260 Nm (option: 400 Nm)

# HDP Accessories: Fan Data

## ■ Axial fan for HDP-C :

- $V_n = 3 \times 220\Delta\text{-}400Y$  [V]
- $f_n = 50/60$  [Hz]
- $I_n = 0.31/0.18$  [A] (50 Hz)
- $I_n = 0.38/0.22$  [A] (60 Hz)
- $P_n = 90$  [W] (50 Hz) – 110 [W] (60 Hz)

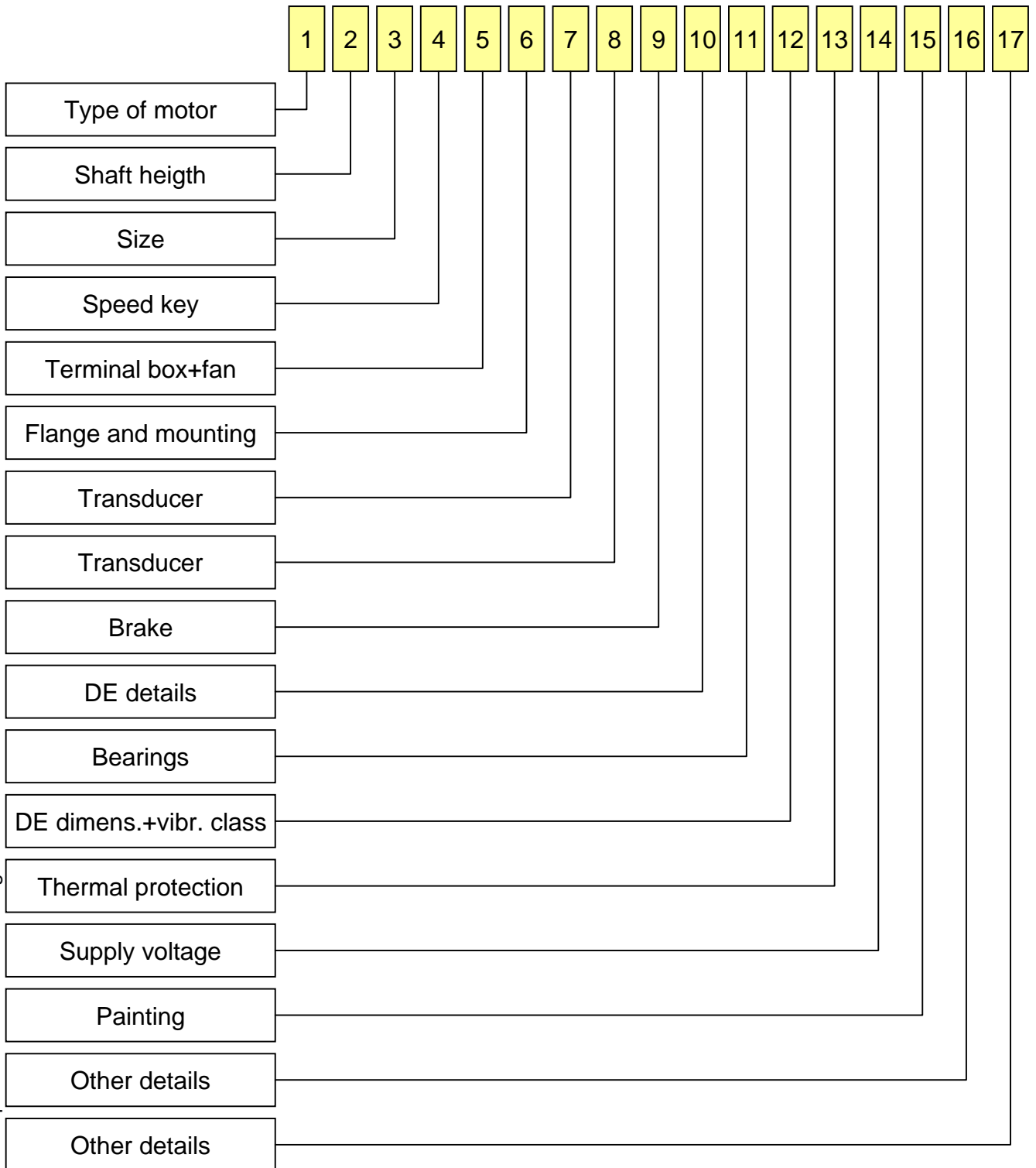
## ■ Radial fan for HDP-V :

- $V_n = 3 \times 220\text{-}240\Delta\text{-}440\text{-}480Y$  [V]
- $f_n = 50/60$  [Hz]
- HDP-V N
  - $P_n = 250$  [W] (50 Hz) – 300 [W] (60 Hz)
- HDP-V M
  - $P_n = 370$  [W] (50 Hz) – 450 [W] (60 Hz)
- HDP-V N
  - $P_n = 1100$  [W] (50 Hz) – 1320 [W] (60 Hz)
- HDP-V R
  - $P_n = 3000$  [W] (50 Hz) – 3600 [W] (60 Hz)

# HDP Accessories: Bearings

- HDP-C/V H (h100)
  - DE-side: 6308 ZXC3
  - NDE-side: 6206 ZXC3
  
- HDP-C/V M (h132)
  - DE-side: 6310 ZXC3
  - NDE-side: 6308 ZXC3
  
- HDP-C/V N (h160)
  - DE-side: 6312 ZXC3
  - NDE-side: 6309 ZXC3
  
- HDP-C/V R (h200)
  - DE-side: 6315 ZXC3
  - NDE-side: 6314 ZXC3
  
- ❖ *Roller bearings: optional*

# HDP Ordering codes



# HDP Ordering codes

Code		Available values			
1	Type of motor	C = IP54	V = IP23		
2	Shaft height	H = h100	M = h132	N = h160	R = h200
3	Size	1-2-3-4-(depending on shaft height also 5-6)			
4	Speed key	1-2-3-4-5 speed values depend on shaft height			
5	Terminal box+fan	3 (terminal box up, IP54)	A=tbox right, D=tbox left; fan up IP23		
6	Flange and mounting	0 = B35, 1 = V1, 3 = V3; flange depends on shaft height			
7	Position Transducer	00 = No transducer	01 = Leine & Linde RIH 503		
8		02 = Eltra EL49P1024Z8	03 = Resolver Tyco		
9	Brake	0 = No Brake	1 = Standard spring Brake		
10	DE details	0=keyway+oil seal not mounted	2=keyway	4=keyway+oilseal	
11	Bearings	0 = Ball Bearings	1 = Roller Bearings		
12	DE dim + vibr class	0 = Class "R" DIN 45665; dimensions depend on shaft height			
13	Thermal protection	1=Thermal switch separated	4=Ther.sw. with feedb.signals		
14	Supply voltage	A = 400 Vac	B = 460 Vac		
15	Painting	0 = Black RAL 9005			
16	Other details & Accessories	00 = No accessories	01 = demosturing heaters		
17		02 = microswitches	03 = silencer device for IP23		

For codes not listed please contact ABB Sace – Line S Customer Service



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