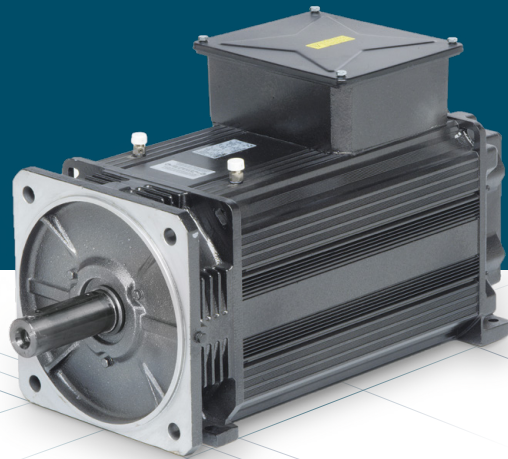


Asynchronous motors for inverter vector control **VA Series**

Italian technology since 1953



Asynchronous motors for inverter vector control VA Series



About

Brusatori offers the VA series of asynchronous, square-case motors, developed to be connected to variable frequency drives. VA motors are 4-pole three-phase asynchronous motors with squirrel-cage winding and are available with IP23 and IP54 protection ratings. Five mechanical sizes with air cooling (160 - 180 - 225 - 280 - 355) are available, covering a power range from 15 kW to 1115 kW.

In addition, 4 mechanical sizes with water cooling (160 - 180 - 225 - 280) are available, covering a power range from 21 kW to 456 kW.

Specifications and strengths

The VA series three-phase asynchronous motors have been designed to be powered by a frequency converter in accordance with IEC 60034-25 and to provide the highest performance. The high power-to-size ratio, accompanied by excellent dynamic response to speed variations, make these motors suitable for a wide variety of applications. Their overall dimensions and power outputs make them suitable for replacing DC motors. They are particularly used in industrial applications where high speeds and high performances are required. They are available in a wide variety of configurations and can be customized upon customer request.

The main strength and distinguishing feature of this type of motors is linked to the peculiar characteristic of having been designed and approved for UL certification.

Key advantages of VA Series motors

- Component production (flanges, shafts, casings), motor assembly, testing and painting are all carried out within the Brusatori plant in Cuggiono (MI).
- High level of product reliability
- Customization of various motor parts to meet customer requirements, such as:
 - shaft diameters and lengths
 - flange sizes (upon request)
 - terminal box position
 - fan position
- Mounting of special transducers (if mechanically possible)

Standard features

- Winding insulation: class F according to IEC EN 60034-1
- Thermal rating: class F according to IEC EN 60034-1
- Protection rating: IP54 with axial ventilation, IP54 with radial ventilation or IP23 on all sizes
- Cooling: IC 416 (for IP54 motor); IC 06 (for IP23 motor); IC 9W7 (for water-cooled motors) according to IEC EN 60034-5
- Balancing grade: A (with half key for shafts with EN 60034-14 key)
- Service position: any
- Lifetime lubricated ball bearings
- Thermal protection: thermal protector with normally closed contact. Intervention temperature $150\pm5^{\circ}\text{C}$. (Maximum voltage 250 Vac, maximum current 6 Aac)
- Color: black RAL 9005
- Reference conditions: ambient temperature from $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$, max. altitude 1000m above sea level
- Storage temperature: -20°C to $+70^{\circ}\text{C}$

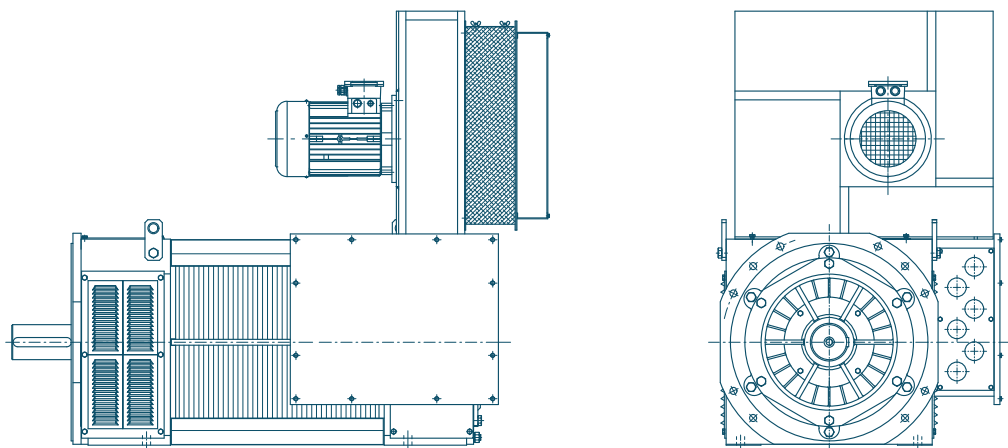
Options

- Special voltage/frequency windings
- Incremental encoder, supply voltage 4-32 Vdc, programmable output voltage and number of pulses
- Sinusoidal encoder 1 Vpp -1024 pulses/revolution
- Single-turn or multi-turn absolute encoder
- 2-pole resolver, 7 Vrms
- Parking brake
- Keyless shaft
- Roller bearing (optional) for all motors
- High speed bearing (optional) for all motors
- IM B3/B35 construction form
- Terminal box on the side



Motors VA_160-180-225-280-355

IP23

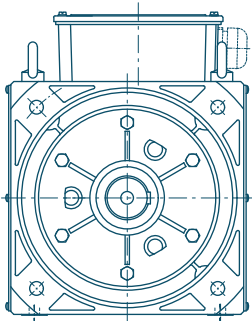
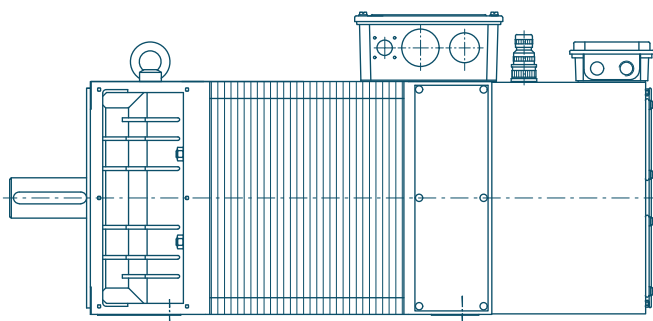


S I Z E	LENGTH	S			M			L			P			X		
	SPEED	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)
V A 1 6 0	580	25,5	420	49,8	27,7	455	54	31,1	512	60,6	34,5	568	67,3	/		
	1000	42	401	79,7	45,5	435	86,4	51,1	488	96,6	56,7	542	108			
	1500	60	382	110	65	414	120	73	465	134	81	516	150			
	1800	72	382	132	78	414	143	87,6	465	160	97,3	516	179			
	2200	83,6	363	153	90,6	393	166	102	442	186	113	490	208			
	2600	93,6	344	171	101	373	186	114	419	207	126	464	233			
V A 1 8 0	580	34,9	574	67,3	50,8	837	98,1	58,8	968	113	66	1086	127	/		
	1000	57,4	548	109	83,7	799	158	96,8	924	183	108	1031	204			
	1500	82	522	151	120	761	218	138	880	253	155	987	284			
	1800	98,4	522	180	143	761	263	166	880	303	175	928	319			
	2200	106	459	193	154	670	281	178	774	326	195	846	356			
V A 2 2 5	580	70,1	1155	135	80,8	1331	156	87,2	1436	168	102	1683	197	119	1958	229
	1000	115	1103	216	133	1271	249	143	1370	268	168	1607	314	196	1869	365
	1500	165	1050	299	190	1210	345	205	1305	372	240	1530	435	280	1780	506
	1800	198	1050	358	228	1210	412	246	1305	445	288	1530	521	335	1780	606
V A 2 8 0	580	157	2591	297	187	3080	353	213	3504	401	234	3850	441	/		
	1000	259	2473	479	308	2940	569	350	3344	647	385	3675	710			
	1500	370	2355	663	440	2800	788	500	3185	896	550	3500	984			
	1800	444	2355	794	528	2800	943	600	3185	1072	660	3500	1177			
V A 3 5 5	580	263	5016	491	305	5820	569	351	6695	655	/			/		
	750	386	4919	701	448	5707	813	516	6565	934						
	1000	510	4870	897	592	5650	1041	681	6500	1195						
	1250	625	4773	1099	725	5537	1275	834	6370	1464						
	1500	727	4627	1278	843	5368	1482	970	6175	1705						
	1800	835	4432	1469	869	5142	1704	1115	5915	1960						

UL AVAILABLE

Motors VA_160-180-225

IP54 axial

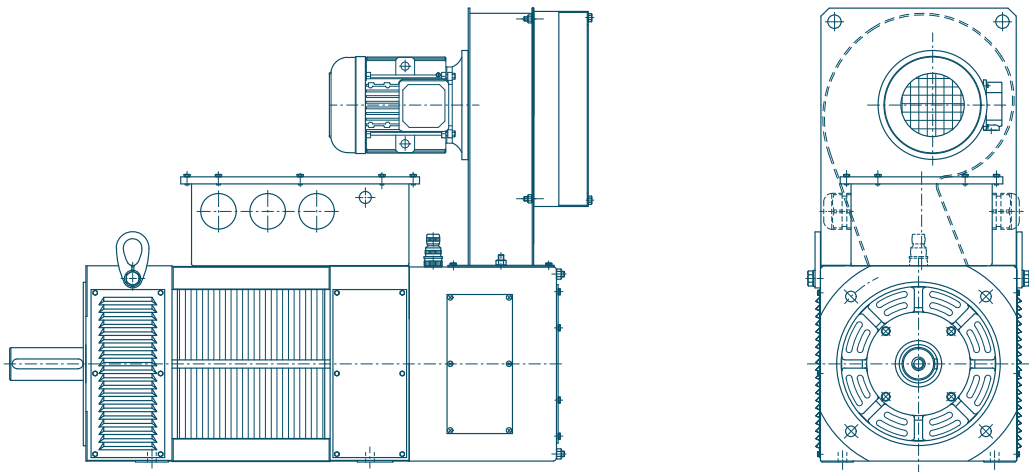


S I Z E	LENGTH	S			M			L			P			X		
	SPEED	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)
V A 1 6 0	580	15,3	252	29,5	17,9	294	34,5	20,8	343	40,2	23,4	385	45,1	/		
	1000	25,2	240	47,8	29,4	281	55,8	34,3	328	62,7	38,5	368	71,1			
	1500	36	229	66,1	42	268	77,3	49	312	86,9	55	350	98,6			
	1800	43,2	229	79,1	50,4	268	92,5	58,8	312	104	66	350	118			
	2200	50,1	218	91,8	58,5	254	107	68,3	296	120	76,6	333	137			
	2600	56,1	206	103	65,5	241	120	76,4	281	135	85,8	315	153			
V A 1 8 0	580	21,4	357	41,3	29	476	55,1	32,5	535	62	36,6	586	67,1	/		
	1000	35,7	341	66	47,6	455	47,6	53,5	512	98,6	58,7	561	108			
	1500	51	325	91,8	68	433	68	76,5	487	137	85	540	152			
	1800	61,2	325	110	81,6	433	81,6	92	487	178	102	540	182			
	2200	65,8	286	117	87,5	381	87,5	98,6	428	176	108	467	192			
V A 2 2 5	580	38	626	72,5	45,4	748	87	50	823	95	58,5	963	111	72,5	1193	139
	1000	62,6	598	116	74,8	714	138	82,3	785	152	96	920	178	119	1138	220
	1500	89,2	569	161	107	680	191	117	748	211	138	875	247	170	1084	304
	1800	107	569	192	128	680	229	141	748	252	165	875	294	204	1084	365

UL AVAILABLE

Motors VA_180-225-280-355

IP54 radial

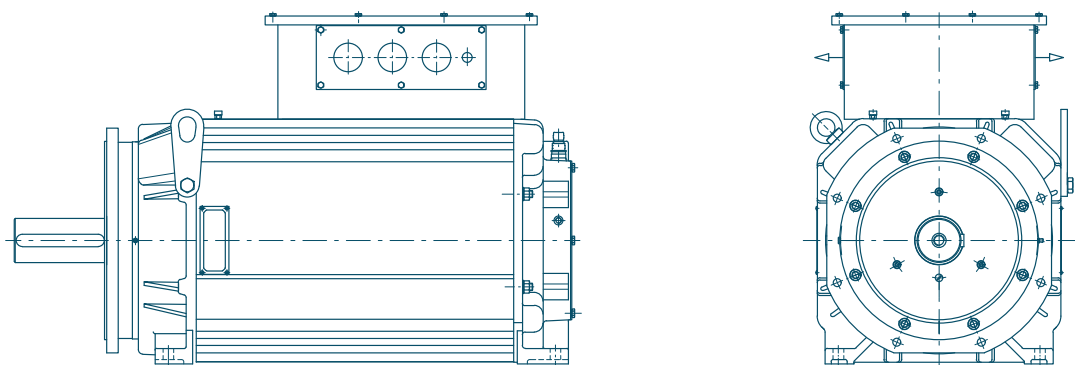


S I Z E	LENGTH	S			M			L			P			X		
	SPEED	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)
V A 1 8 0	580	25,2	420	48,7	34	560	64,9	38,3	630	73	41,9	690	79	/		
	1000	42	401	77,7	56	535	103	63	602	116	69,1	660	127			
	1500	60	382	108	80	510	143	90	573	161	100	636	179			
	1800	72	382	129	96	510	172	108	573	193	120	636	214			
	2200	77,4	336	138	103	448	185	116	504	207	127	550	226			
V A 2 2 5	580	44,8	737	85,4	53,4	880	102	58,8	968	112	68,8	1133	131	85,2	1403	163
	1000	73,7	704	136	88	840	162	96,8	924	179	113	1082	209	140	1339	259
	1500	105	670	189	126	800	225	138	880	248	162	1030	290	200	1275	358
	1800	126	670	226	151	800	269	166	880	296	194	1030	346	240	1275	429
V A 2 8 0	580	97,9	1612	185	119	1954	225	140	2310	265	153	2519	289	/		
	1000	161	1538	298	196	1874	362	231	2205	426	252	2405	465			
	1500	230	1465	413	280	1785	502	330	2100	591	360	2290	644			
	1800	276	1465	494	336	1785	601	396	2100	707	432	2290	770			
V A 3 5 5	580	163	3105	300	191	3657	354	217	4141	401	/			/		
	750	239	3045	434	282	3586	511	319	4060	577						
	1000	316	3015	556	372	3550	654	421	4020	739						
	1250	387	2955	681	455	3479	801	516	3940	906						
	1500	450	2864	791	530	3373	931	600	3819	1055						
	1800	517	2744	909	609	3231	1071	690	3658	1212						

UL AVAILABLE

Motors VA_160-180-225-280 W

water cooling



S I Z E	LENGTH	S			M			L			P			X		
	SPEED	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)	Pn (kW)	Tn (Nm)	In (A)
V A 1 6 0	580	/			21,3	351	42,6	25,5	420	49,3	29,8	491	58,2	36,1	595	70,6
	1000				35	335	66,5	42	401	76,7	49	468	90,7	59,5	568	110
	1500				50	319	92,3	60	382	106	70	446	126	85	541	152
	1800				60	319	110	72	382	127	84	446	150	102	541	182
	2200				67,6	293	124	81	351	143	94,5	410	168	115	498	203
	2600				73,8	271	134	88,4	325	155	103	379	183	125	460	222
V A 1 8 0	580	/			46,8	770	90,3	56,1	924	108	/			61,7	1015	119
	1000				77	735	142	92,4	882	171				101	969	188
	1500				110	700	197	132	840	237				145	923	260
	1800				132	700	236	158	840	283				174	923	311
	2200				148	644	264	178	773	317				196	849	347
V A 2 2 5	580	/			/			68,1	1122	132	78,8	1298	152	97,9	1612	189
	1000							112	1071	207	130	1239	240	161	1538	298
	1500							160	1020	287	185	1180	332	230	1465	413
	1800							192	1020	344	222	1180	398	276	1465	494
V A 2 8 0	580	102	1678	195	123	2030	235	145	2382	276	162	2662	309	/		
	1000	168	1601	310	203	1937	375	238	2273	440	266	2541	492			
	1500	240	1525	430	290	1845	520	340	2165	610	380	2420	682			
	1800	287	1525	514	348	1845	622	408	2165	730	456	2420	816			

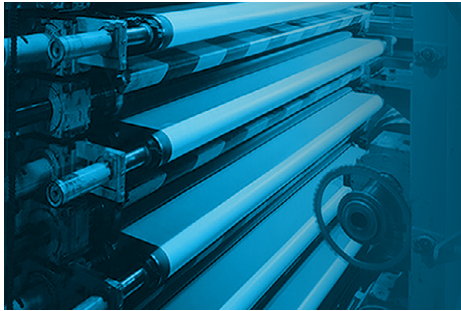
UL AVAILABLE

Applications



TEXTILE

Ironers, dryers, vaporizers, calenders



PRINTING

Rotogravure printing machines, flexographic printing machines, converting lines, laminators, coating lines



PLASTICS

Extrusion lines, pipe machines, profile machines, stretch lines, tape lines, recycling lines



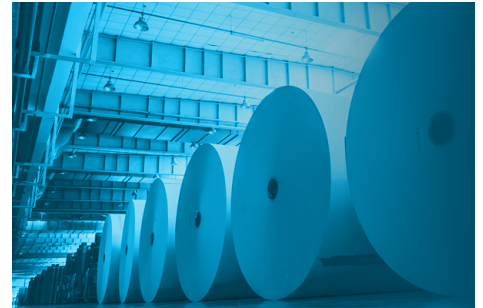
MACHINE TOOLS

Grinders, milling machines, machining centers, sawing machines



METALS

Winders-unwinders, loaders and stackers, tube lines, drawing lines, cable production lines, longitudinal and transverse cutting lines



PAPER

Winders-unwinders, cutters, rewinders, wrappers



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