



VEM  MOTOR

## Water-cooled motors

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## Product description

The demand for high-power motors requiring a minimum of installation space has increased significantly over the past few years, especially in mechanical engineering, and there above all from the manufacturers of injecting moulding machines, extruders, printing presses, paper machines, wire-drawing machines and machinery for the mining industry. For such applications, water cooling offers a very effective alternative for the cooling of asynchronous motors with high power density. The cooling effect is maintained also at slow running speeds. This is particularly beneficial where motors

are operated on a frequency converter, especially in applications with constant torque.

Further fields of application for water-cooled motors are heat recovery systems to utilise the waste heat of the motor, installation situations in which noise must be kept to a minimum, environments where heat losses must not be dissipated directly to the surroundings (e.g. air-conditioned rooms), extreme ambient conditions involving heavy dust, lint, dirt or moisture, and asynchronous generators for co-generation power plants.

### Design versions

Our proven modular concept on the basis of robust, low-vibration grey cast iron components is also followed for the water-cooled motor versions. The motor housing is designed as a grey cast iron housing with integrated cooling tubes up to size 280 and as a double-walled welded steel construc-

tion from size 315. The terminal boxes, end shields, winding insulation, degree of protection and paint finish correspond to the standard design. The cooling principle provides for increased power outputs and optimum vibration damping from a compact motor design.

Shaft height	Material for			Foot mounting
	Housing	End shields	Feet	
225 – 280	Grey cast iron with integrated cooling tubes	Grey cast iron	Grey cast iron	Bolted
315 – 400	Welded steel construction	Grey cast iron	Grey cast iron	Welded

### Degree of protection

The normal version of the motors meets the requirements for degree of protection IP 55. The protection rating can be raised to IP 56 where specified accordingly in the order, and motors with degree of protection IP 65 or higher can be supplied upon request.

In case of motors with a shaft end pointing upwards (IM V3/IM V36), the user must realise appropriate precautions to prevent the penetration of water along the shaft. On flange motors of construction Types IM V3/IM V36, a drain hole is provided as standard to prevent the collecting of liquid in the flange end.

Under normal circumstances, it is not necessary to implement special protection against the influences of the weather when motors are installed outdoors. If it is possible that the motors will be stored or operated at temperatures below freezing point, however, measures must be taken to prevent freezing of the cooling water inside the motor. At the same time, direct exposure to intensive sunlight must also be avoided, e.g. by way of a protective canopy.

### Water cooling

With water cooling, the heat losses arising in the motor are dissipated via the cooling water. The inlet and outlet for the cooling water are located at the non-drive end (N-end) of the motor. A suitable corrosion inhibitor must always be added to the cooling water. If there is a risk of exposure to temperatures below freezing point, it is furthermore

necessary to add an antifreeze agent or to use a combined additive. The motors are intended for operation with a closed circuit. Open-circuit operation is possible as a special version from size 315. Where use of an open system is planned, however, prior consultation with VEM motors GmbH is imperative.

## Output assignments

Size	Rated output [kW]							
	GR	EHL	GR	EHL	GR	EHL	GR	EHL
	2-pole		4-pole		6-pole		8-pole	
225 S	37	45	37	45	-	-	18,5	22
225 M	45	55	45	55	30	37	22	30
250 M	55	75	55	75	37	45	30	37
280 S	75	90	75	90	45	55	37	45
280 M	90	110	90	110	55	75	45	55
315 S	110	132	110	132	75	90	55	75
315 M	132	160	132	160	90	110	75	90
315 MX	160	200	160	200	110	132	90	110
315 MY	200	250	200	250	132	160	110	132
315 L	250	315	250	290	160	200	132	160
315 LX	315	355	315	355	200	240	160	200
355 M	355	400	355	400	250	315	200	250
355 MX	400	500	400	500	315	355	250	315
355 L	500	560	500	560	355	400	315	355
400 M	560	A	560	A	400	A	355	A
400 MX	630	A	630	A	450	A	400	A
400 L	710	A	710	A	500	A	450	A

GR... Basic series, EHL... Increased output  
A... Upon request

## Handling

If it is possible that the motors will be stored or operated at temperatures below freezing point, measures must be taken to prevent freezing of the cooling water inside the

motor. To this end, the cooling water can be drained before storage, or else an antifreeze agent can be added to permit operation at low temperatures.

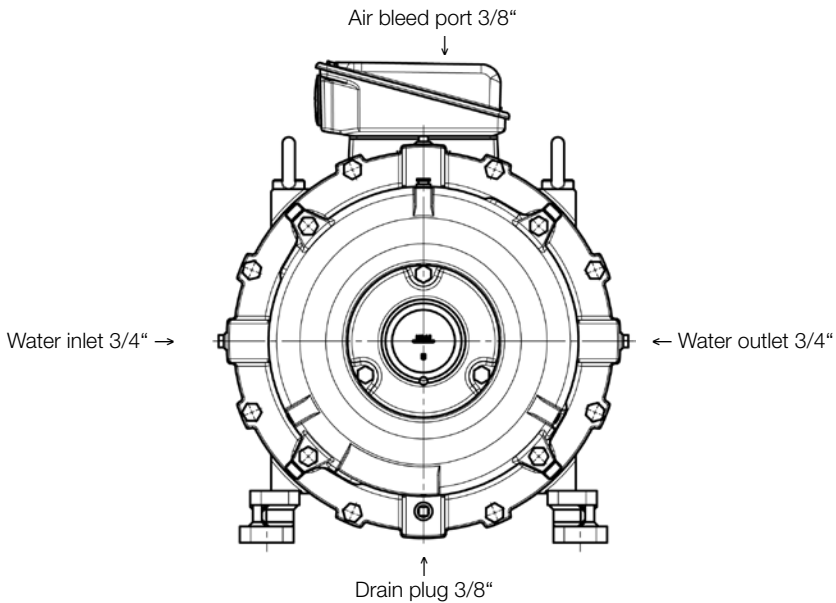
## Water supply to the motor, demands placed on cooling water

The cooling water must be of drinking water quality. The water pressure must not exceed 3.5 bar, and the maximum permissible cooling water inlet temperature is 30 °C. The following minimum requirements must be observed:

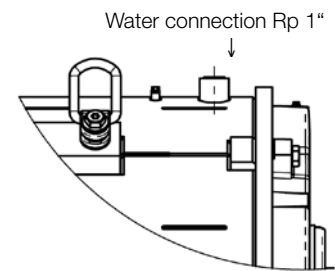
Baugröße	Cooling water flow rate [l/min]	Min. water pressure [bar]	Cooling water temperature rise [°C]
W.1B 225	10	0,5	6
W.1B 250	16	0,7	7
W.1B 280	18	1,0	9
W.1B 315	18	1,5	8
W.1B 355	20	2,0	10
W42B 355 MX	30	2,0	10–15
W42B 355 L	35	2,0	10–15
W42B 400	40	2,0	10–15

## Product description

The inlet and outlet for the cooling water are located at the non-drive end of the motor housing. Suitable sealing provisions are to be realised at the connection points.



Size 225 bis 280



Size 315/355

The water supply must be guaranteed at all times while the motor is in operation. Operation without cooling water is not permissible.

On motors of sizes 225 to 280, there is additionally a 3/8" air bleed port at the top of the N-end, and a 3/8" water

drain plug at the lowest point. The air bleed port must be opened when the cooling circuit is filled. The motor is filled with cooling water until water starts to flow out at the open air bleed port.

## Overview of technical data

The most important technical data are summarised in the following table. Further information can be taken from the catalogue section "Introduction" (chapter 1).

<b>Product group</b>	Squirrel-cage rotor, IEC/DIN
<b>Rated output</b>	30 to 710 kW
<b>Sizes</b>	225 to 400
<b>Housing material</b>	Grey cast iron
<b>Rated torque</b>	146 to 5400 Nm
<b>Efficiency classification/ efficiency determination</b>	IEC/EN 60034-30-1 / IEC/EN 60034-2-1, ≤ 1 kW direct measurement, > 1 kW residual loss method
<b>Method of connection</b>	Single-speed motors are designed in star-delta configuration as standard.
<b>Stator winding insulation</b>	Thermal class 155, optional 155 [F(B)], 180 to IEC/EN 60034-1
<b>Degree of protection</b>	IP 55 to IEC/EN 60034-5, optionally IP 56 or higher
<b>Type of cooling</b>	IC 71W (IC 31W upon request) to IEC/EN 60034-6
<b>Coolant temperature/ installation altitude</b>	max. 35 °C Altitude 1000 m above sea level
<b>Rated voltage</b>	Standard voltages to EN 60038 50 Hz: 230 V, 400 V, 500 V, 690 V 60 Hz: 275 V, 460 V, 480 V, 600 V Voltage ranges A and B to IEC/EN 60034-1 (Prior consultation necessary regarding 230 V, 50 Hz and 275 V, 60 Hz for motors from size 315)
<b>Duty Types</b>	S1, continuous duty, Short-time duty S2, 10/30/60 min Duty Type S3/S6, 25/40/60% c.d.f.
<b>Types of construction</b>	IM B3, IM B35, IM B5 and derived types to IEC/EN 60034-7
<b>Paint finish</b>	Normal finish "Moderate", colour RAL 7031, blue-grey Special finish "Worldwide", colour RAL 7031, blue-grey
<b>Vibration severity grade</b>	Grade "A" as standard for machines with no special vibration requirements
<b>Shaft ends</b>	to DIN 748 (IEC 60072), balanced with half-key
<b>Limit speeds</b>	Please refer to the section of "Limit speeds" in catalogue section "Motors for converter-fed operation", Chapter 4.
<b>Bearing design</b>	Please refer to the tables of "Bearing design data" in catalogue section „Standand motors“, Chapter 2.
<b>Motor mass</b>	Please refer to the technical selection lists.
<b>Terminal boxes</b>	Please refer to the section "Terminal boxes" in catalogue section „Standand motors“, Chapter 2.
<b>Documentation</b>	An operating and maintenance manual, a terminal plan and a safety data sheet are supplied with each motor.
<b>Tolerances</b>	Please refer to the section "Tolerances" in catalogue section "Introduction", Chapter 1.
<b>Options</b>	Please refer to the section "Overview of modifications" in catalogue section "Introduction", Chapter 1.

## Motor selection data

### Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3

Type of cooling IC 71W, duty cycle S1, continuous duty, thermal class 155,  
Degree of protection IP 55, efficiency determination according to IEC/EN 60034-2-1

Motor selection data															Design point 400 V, 50 Hz			
Type	$P_B$	$M_B$	$n_B$	IE class	$\eta_B$			$\cos \varphi_B$	$I_B$	$I_A/I_B$	$M_A/M_B$	$M_S/M_B$	$M_K/M_B$	Max. cooling water flow rate	Min. cooling water pressure	Max. cooling water pressure	J	m
	kW	Nm	rpm		to IEC/IEC 60034-2-1	100 %	75 %											
Synchronous 3000 rpm – 2-pole version																		
IE3-W41B 315 S2	110	354	2970	IE3-	95.2	94.5	93.5	0.89	187	10.0	1.9	1.7	3.0	18.0	1.00	10	1.21	750
IE3-W41B 315 M2	132	423	2980	IE3-	95.4	95.0	94.5	0.89	224	10.0	2.0	1.8	3.0	18.0	1.00	10	1.44	815
IE3-W41B 315 MX2	160	513	2980	IE3-	95.7	95.7	95.0	0.9	268	8.5	2.3	1.7	2.6	18.0	1.50	10	2.37	1095
IE3-W41B 315 MY2	200	641	2980	IE3-	95.8	95.9	95.5	0.91	331	8.3	2.6	1.6	2.4	18.0	1.50	10	2.82	1200
IE3-W41B 315 L2	250	800	2985	IE3-	95.8	96.0	95.9	0.93	405	9.0	2.3	1.2	2.3	18.0	1.50	10	3.66	1460
IE3-W41B 315 LX2	315	1008	2985	IE3-	95.8	95.8	95.8	0.92	516	8.5	2.8	1.6	2.5	18.0	1.50	10	4.43	1700
IE3-W41B 355 M2	355	1136	2985	IE3-	96.0	96.0	96.0	0.92	580	7.7	1.9	1.5	3.8	20.0	2.00	10	4.20	2000
IE3-W41B 355 MX2	400	1278	2990	IE3-	95.8	95.8	95.3	0.91	665	8.5	1.5	1.2	2.5	30.0	2.00	10	5.50	2200
IE3-W41B 355 L2	500	1597	2990	IE3-	95.8	95.8	95.3	0.90	840	9.0	2.0	1.3	3.0	35.0	2.00	10	7.10	2445
IE3-W42B 400 M2	560	1790	2988	IE3-	95.8	95.8	95.3	0.88	965	7.2	1.5	1.4	2.5	40.0	2.00	10	8.44	3000
IE3-W42B 400 MX2	630	2014	2988	IE3-	95.8	95.8	95.3	0.89	1070	7.3	1.6	1.4	2.5	40.0	2.00	10	9.41	3200
IE3-W42B 400 L2	710	2269	2988	IE3-	95.8	95.8	95.3	0.90	1195	7.6	1.7	1.4	2.0	40.0	2.00	10	10.41	3450
Synchronous 1500 rpm – 4-pole version																		
IE3-W41B 315 S4	110	706	1487	IE3-	95.4	95.0	94.3	0.82	203	9.5	1.9	1.7	2.7	18.0	1.00	10	1.96	760
IE3-W41B 315 M4	132	849	1485	IE3-	95.6	95.4	95.0	0.83	240	9.0	2.2	1.9	2.7	18.0	1.00	10	2.27	850
IE3-W41B 315 MX4	160	1026	1490	IE3-	95.8	95.8	95.0	0.84	287	9.5	2.1	2.0	3.2	18.0	1.50	10	4.01	1120
IE3-W41B 315 MY4	200	1282	1490	IE3-	96.0	95.8	95.5	0.87	346	9.5	2.1	1.7	2.7	18.0	1.50	10	4.82	1250
IE3-W41B 315 L4	250	1602	1490	IE3-	96.2	96.2	96.0	0.87	431	9.4	2.2	1.8	2.7	18.0	1.50	10	5.93	1450
IE3-W41B 315 LX4	315	2019	1490	IE3-	96.0	96.0	96.0	0.87	544	9.5	2.3	1.7	2.9	18.0	1.50	10	6.82	1630
IE3-W41B 355 M 4	355	2271	1493	IE3-	96.2	96.2	95.5	0.87	612	8.1	1.3	1.0	2.7	20.0	2.00	10	7.90	2150
IE3-W41B 355 MX4	400	2564	1490	IE3-	96.0	96.0	95.5	0.84	719	8.0	1.7	1.4	2.4	30.0	2.00	10	9.50	2400
IE3-W41B 355 L4	500	3205	1490	IE3-	96.0	96.0	95.5	0.84	899	7.2	1.6	1.2	2.2	35.0	2.00	10	10.00	2500
IE3-W42B 400 M4	560	3582	1493	IE3-	96.0	96.0	95.5	0.84	1006	9.0	3.4	2.9	3.9	40.0	2.00	10	12.60	2900
IE3-W42B 400 MX4	630	4030	1493	IE3-	96.0	96.0	95.5	0.85	1119	9.0	3.6	3.0	4.2	40.0	2.00	10	14.33	3100
IE3-W42B 400 L4	710	4542	1493	IE3-	96.0	96.0	95.5	0.85	1261	9.0	3.9	3.1	4.2	40.0	2.00	10	16.29	3400
Synchronous 1000 rpm – 6-pole version																		
IE3-W41B 315 S6	75	723	990	IE3-	94.6	94.0	93.5	0.86	133	8.2	1.8	1.4	2.3	18.0	1.50	10	5.55	1060
IE3-W41B 315 M6	90	868	990	IE3-	94.9	94.0	93.0	0.86	159	8.5	2.2	1.7	2.8	18.0	1.50	10	6	1100
IE3-W41B 315 MX6	110	1061	990	IE3-	95.1	95.0	94.5	0.86	194	8.5	2.5	1.7	2.7	18.0	1.50	10	6.67	1210
IE3-W41B 315 L6	132	1267	995	IE3-	95.4	95.0	94.5	0.87	230	9.0	2.8	2.0	3.2	18.0	1.50	10	8.6	1550
IE3-W41B 355 M6	160	1536	995	IE3-	95.6	95.0	94.6	0.82	295	8.0	2.1	0.0	2.7	20.0	2.00	10	8.2	1850
IE3-W41B 355 MX6	200	1919	995	IE3-	95.8	95.0	94.0	0.85	355	9.0	2.1	0.0	2.9	20.0	2.00	10	12.10	2200
IE3-W41B 355 L6	250	2395	997	IE3-	95.8	95.5	95.0	0.84	448	8.8	2.2	1.5	2.8	35.0	2.00	10	14.00	2400
IE3-W41B 355 LX6	315	3023	995	IE3-	95.8	95.7	95.3	0.84	565	7.5	1.6	1.1	2.3	35.0	2.00	10	14.00	2400
IE3-W42B 400 MY6	355	3407	995	IE3-	95.8	95.5	94.5	0.85	632	8.0	2.0	1.6	2.6	40.0	2.00	10	16.54	2900
IE3-W42B 400 M6	400	3847	993	IE3-	95.8	95.5	94.5	0.87	696	7.0	1.8	1.5	2.3	40.0	2.00	10	16.54	2900
IE3-W42B 400 MX6	450	4327	993	IE3-	95.8	95.7	94.6	0.83	821	7.3	1.8	1.5	2.1	40.0	2.00	10	18.44	3100
IE3-W42B 400 L6	500	4808	993	IE3-	95.8	95.6	94.5	0.83	911	7.5	1.9	1.7	2.2	40.0	2.00	10	20.63	3400

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3

Type of cooling IC 71W, duty cycle S1, continuous duty, thermal class 155,  
Degree of protection IP 55, efficiency determination according to IEC/EN 60034-2-1

Motor selection data													Design point 400 V, 50 Hz					
Type	$P_B$	$M_B$	$n_B$	IE class	$\eta_B$			$\cos \varphi_B$	$I_B$	$I_A/I_B$	$M_A/M_B$	$M_S/M_B$	$M_K/M_B$	Max. cooling water flow rate [l/min]	Min. cooling water pressure [bar]	Max. cooling water pressure [bar]	J	m
	kW	Nm	rpm		to IEC/IEC 60034-2-1	100 %	75 %											
Synchronous 750 rpm – 8-pole version																		
IE3-W41B 315 S8	55	707	743	IE3- 93.8	93.8	92.5	0.81	104	7.5	1.7	1.5	2.4	18.0	1.50	10	5.55	1060	
IE3-W41B 315 M8	75	968	740	IE3- 94.3	93.8	93.5	0.80	144	7.8	1.8	1.8	2.6	18.0	1.50	10	6	1100	
IE3-W41B 315 MX8	90	1154	745	IE3- 94.6	94.0	93.5	0.79	175	8.2	2.5	2.0	2.8	18.0	1.50	10	6.67	1250	
IE3-W41B 315 L8	110	1410	745	IE3- 94.9	94.0	93.5	0.8	210	8.3	2.2	1.9	2.8	18.0	1.50	10	10	1550	
IE3-W41B 355 M8	132	1692	745	IE3- 95.1	95.0	94.0	0.81	248	7.0	1.2	1.0	2.7	20.0	2.00	10	9.5	1850	
IE3-W41B 355 MX8	160	2054	744	IE3- 95.4	95.0	94.0	0.80	303	6.8	1.3	1.0	2.5	30.0	2.00	10	13.40	2200	
IE3-W41B 355 L8	200	2570	743	IE3- 95.6	95.5	94.0	0.77	393	6.5	1.6	1.0	2.7	35.0	2.00	10	15.80	2400	
IE3-W41B 355 LX8	250	3213	743	IE3- 95.6	95.4	93.8	0.78	487	6.4	2.5	1.9	2.5	35.0	2.00	10	15.80	2400	
IE3-W42B 400 MY8	315	4048	743	IE3- 95.6	95.5	94.5	0.78	611	6.4	2.5	1.9	2.5	40.0	2.00	10	17.94	2800	
IE3-W42B 400 M8	355	4550	745	IE3- 95.6	95.5	94.5	0.76	708	6.6	1.9	1.7	2.3	40.0	2.00	10	17.94	2900	
IE3-W42B 400 MX8	400	5134	744	IE3- 95.6	95.6	94.6	0.73	831	6.1	1.8	1.7	1.9	40.0	2.00	10	19.99	3100	
IE3-W42B 400 L8	450	5776	744	IE3- 95.6	95.6	94.6	0.72	947	6.4	2.0	1.7	2.0	40.0	2.00	10	22.34	3400	

Water-cooled three-phase motors with squirrel-cage rotor, High Efficiency, IE2



Type of cooling IC 71W, duty cycle S1, continuous duty, thermal class 155,  
Degree of protection IP 55, efficiency determination according to IEC/EN 60034-2-1

Motor selection data													Design point 400 V, 50 Hz					
Type	P <sub>B</sub> kW	M <sub>B</sub> Nm	n <sub>B</sub> rpm	IE class	η <sub>B</sub> to IEC/IEC 60034-2-1			cos φ <sub>B</sub> -	I <sub>B</sub> 400 V A	I <sub>A</sub> /I <sub>B</sub> -	M <sub>A</sub> /M <sub>B</sub> -	M <sub>S</sub> /M <sub>B</sub> -	M <sub>K</sub> /M <sub>B</sub> -	Max. cooling water flow rate [l/min]	Min. cooling water pressure [bar]	Max. cooling water pressure [bar]	J kgm <sup>2</sup>	m kg
					100 %	75 %	50 %											
Synchronous 3000 rpm – 2-pole version																		
IE2-WE1B 225 M2	45	146	2950	IE2- 92.9	92.2	91.2	0.87	80.5	6.9	1.7	1.1	2.7	10.0	0.5	3.5	0.220	295	
IE2-WE1B 250 M2	55	178	2955	IE2- 93.5	93.7	93.2	0.89	95.5	8.2	2.3	1.9	2.8	16.0	0.7	3.5	0.375	385	
IE2-WE1B 280 S2	75	241	2970	IE2- 94.1	94.0	91.5	0.90	128	7.9	2.1	1.7	3.0	18.0	1.0	3.5	0.65	500	
IE2-WE1B 280 M2	90	289	2970	IE2- 94.4	94.1	91.9	0.91	151	7.7	2.0	1.7	2.8	18.0	1.0	3.5	0.68	550	
IE2-WE1B 315 S2	110	353	2975	IE2- 94.5	94.3	93.3	0.89	189	8.0	1.3	1.2	2.4	18.0	1.5	10.0	1.21	730	
IE2-WE1B 315 M2	132	424	2975	IE2- 95.0	94.8	94.5	0.89	225	9.2	1.4	1.2	2.4	18.0	1.5	10.0	1.44	820	
IE2-WE1B 315 MX2	160	514	2973	IE2- 94.8	94.8	94.8	0.89	274	8.2	1.3	1.3	2.4	18.0	1.5	10.0	1.76	955	
IE2-WE1B 315 MY2	200	640	2983	IE2- 95.4	95.0	94.3	0.88	344	9.4	2.8	2.0	3.0	18.0	1.5	10.0	2.82	1200	
IE2-WE1B 315 L2	250	800	2984	IE2- 95.4	95.4	95.4	0.92	411	9.0	2.3	1.2	2.3	18.0	1.5	10.0	3.66	1450	
IE2-WE1B 315 LX2	315	1008	2985	IE2- 95.4	95.4	95.0	0.92	518	8.5	2.8	1.6	2.5	18.0	1.5	10.0	4.43	1700	
IE2-WE2B 355 M2	355	1136	2985	IE2- 95.5	95.5	95.5	0.92	583	7.7	1.9	1.5	3.8	20.0	2.0	10.0	4.20	2000	
IE2-WE2B 355 MX2	400	1278	2990	IE2- 95.5	95.5	95.5	0.91	664	9.4	1.8	1.0	3.0	30.0	2.0	10.0	4.50	2200	
IE2-WE2B 355 LY2	450	1440	2985	IE2- 95.5	95.5	95.5	0.92	739	7.0	1.3	0.9	2.4	35.0	2.0	10.0	7.10	2400	
IE2-WE2B 355 L2	500	1597	2990	IE2- 95.5	95.5	95.5	0.92	821	8.5	1.5	1.2	2.5	35.0	2.0	10.0	7.10	2400	
Synchronous 1500 rpm – 4-pole version																		
IE2-WE1B 225 MY4	30	194	1480	IE2- 92.3	91.3	88.2	0.80	58.5	7.3	2.1	1.7	2.9	10.0	0.5	3.5	0.275	277	
IE2-WE1B 225 M4	37	240	1475	IE2- 92.7	91.8	90.7	0.84	68.5	7.4	2.2	1.7	2.7	10.0	0.5	3.5	0.313	313	
IE2-WE1B 225 MX4	45	290	1483	IE2- 93.1	93.0	91.1	0.84	83	7.9	2.3	1.9	2.4	10.0	0.5	3.5	0.525	390	
IE2-WE1B 250 M4	55	354	1485	IE2- 94.0	94.1	92.5	0.84	101	8.0	2.0	1.7	2.3	16.0	0.7	3.5	0.95	535	
IE2-WE1B 280 S4	75	482	1485	IE2- 94.2	94.4	92.1	0.84	137	7.2	1.8	1.6	2.1	18.0	1.0	3.5	0.95	550	
IE2-WE1B 280 M4	90	580	1483	IE2- 94.3	94.5	94.0	0.84	164	7.6	1.8	1.6	2.3	18.0	1.0	3.5	1.10	610	
IE2-WE1B 315 S4	110	707	1485	IE2- 94.8	94.8	94.0	0.82	204	8.5	1.8	1.5	2.7	18.0	1.5	10.0	1.96	760	
IE2-WE1B 315 M4	132	849	1484	IE2- 95.0	95.0	94.5	0.83	242	8.2	1.8	1.6	2.3	18.0	1.5	10.0	2.27	850	
IE2-WE1B 315 MX4	160	1031	1482	IE2- 95.0	95.0	94.5	0.84	289	7.4	1.6	1.4	2.2	18.0	1.5	10.0	2.73	975	
IE2-WE1B 315 MY4	200	1282	1490	IE2- 95.1	95.1	94.5	0.87	349	8.5	1.8	1.6	2.5	18.0	1.5	10.0	4.82	1270	
IE2-WE1B 315 L4	250	1602	1490	IE2- 95.4	95.4	95.3	0.88	430	9.0	2.2	1.5	2.7	18.0	1.5	10.0	5.93	1450	
IE2-WE1B 315 LX4	315	2019	1490	IE2- 95.4	95.4	95.0	0.88	542	9.0	2.4	1.6	2.6	18.0	1.5	10.0	6.82	1630	
IE2-WE2B 355 M4	355	2271	1493	IE2- 95.5	95.5	95.0	0.87	617	8.0	1.3	1.0	2.7	20.0	2.0	10.0	7.90	2150	
IE2-WE2B 355 MX4	400	2557	1494	IE2- 95.5	95.5	95.5	0.88	687	8.5	1.3	1.0	3.0	30.0	2.0	10.0	9.50	2400	
IE2-WE2B 355 LY4	450	2873	1496	IE2- 95.5	95.5	95.5	0.86	791	8.5	1.4	0.8	2.9	35.0	2.0	10.0	10.00	2500	
IE2-WE2B 355 L4	500	3198	1493	IE2- 95.5	95.5	95.5	0.84	900	8.0	1.2	0.9	3.0	35.0	2.0	10.0	10.00	2500	
Synchronous 1000 rpm – 6-pole version																		
IE2-WE1B 200 MY6	22	214	980	IE2- 90.9	90.2	88.5	0.86	40.5	6.4	2.2	1.8	2.7	10.0	0.5	3.5	0.443	272	
IE2-WE1B 225 M6	30	291	985	IE2- 92.0	91.5	90.0	0.86	54.5	7.3	2.5	2.2	2.9	10.0	0.5	3.5	0.825	365	
IE2-WE1B 250 M6	37	359	985	IE2- 92.2	91.7	90.7	0.85	68	6.4	2.7	1.8	2.4	16.0	0.7	3.5	1.28	480	
IE2-WE1B 280 S6	45	437	983	IE2- 93.0	92.7	92.4	0.87	80.5	6.5	2.2	1.7	2.4	18.0	1.0	10.0	1.48	560	
IE2-WE1B 280 M6	55	531	990	IE2- 93.6	93.5	93.0	0.85	100	7.6	2.0	1.5	2.5	18.0	1.0	10.0	2.63	710	
IE2-WE1B 315 S6	75	723	990	IE2- 93.9	93.7	93.5	0.87	133	7.8	1.9	1.5	2.5	18.0	1.5	10.0	3.33	804	
IE2-WE1B 315 M6	90	868	990	IE2- 94.0	94.0	93.5	0.88	157	7.5	1.8	1.5	2.5	18.0	1.5	10.0	3.60	865	
IE2-WE1B 315 MX6	110	1061	990	IE2- 94.3	94.3	94.0	0.87	194	7.5	1.8	1.4	2.3	18.0	1.5	10.0	6.67	1210	
IE2-WE1B 315 MY6	132	1273	990	IE2- 94.6	94.3	94.0	0.87	231	7.5	1.9	1.4	2.2	18.0	1.5	10.0	6.67	1250	
IE2-WE1B 315 L6	160	1543	990	IE2- 94.8	94.5	93.5	0.88	277	7.5	2.0	1.5	2.4	18.0	1.5	10.0	8.60	1430	
IE2-WE1B 315 LX6	200	1929	990	IE2- 95.0	95.0	94.5	0.86	353	7.0	1.9	1.5	2.2	18.0	1.5	10.0	8.60	1460	
IE2-WE2B 355 M6	250	2402	994	IE2- 95.0	95.0	94.7	0.84	452	7.0	1.5	1.2	2.2	20.0	2.0	10.0	8.20	1850	
IE2-WE2B 355 MX6	315	3023	995	IE2- 95.2	95.2	95.2	0.86	555	7.0	1.3	1.1	2.2	30.0	2.0	10.0	12.1	2200	
IE2-WE2B 355 LY6	355	3407	995	IE2- 95.0	95.0	94.0	0.77	700	7.5	1.8	1.5	2.6	35.0	2.0	10.0	14.0	2400	



## Water-cooled three-phase motors with squirrel-cage rotor, High Efficiency, IE2

Type of cooling IC 71W, duty cycle S1, continuous duty, thermal class 155,  
Degree of protection IP 55, efficiency determination according to IEC/EN 60034-2-1

Motor selection data													Design point 400 V, 50 Hz					
Type	P <sub>B</sub> kW	M <sub>B</sub> Nm	n <sub>B</sub> rpm	IE class	η <sub>B</sub> to IEC/IEC 60034-2-1			cos φ <sub>B</sub> -	I <sub>B</sub> 400 V A	I <sub>A</sub> /I <sub>B</sub> -	M <sub>A</sub> /M <sub>B</sub> -	M <sub>S</sub> /M <sub>B</sub> -	M <sub>K</sub> /M <sub>B</sub> -	Max. cooling water flow rate [l/min]	Min. cooling water pressure [bar]	Max. cooling water pressure [bar]	J kgm <sup>2</sup>	m kg
					100 %	75 %	50 %											
Synchronous 750 rpm – 8-pole version																		
IE2-WE1B 225 S8	18.5	242	730	IE2- 89.6	89.4	87.2	0.78	38	5.4	2.1	2.0	2.8	10.0	0.5	3.5	0.440	265	
IE2-WE1B 225 M8	22	287	733	IE2- 90.6	89.4	89.9	0.78	45	5.6	2.2	1.8	2.6	10.0	0.5	3.5	0.825	380	
IE2-WE1B 250 M8	30	389	737	IE2- 91.5	91.2	88.3	0.78	60.5	5.5	2.2	1.8	2.5	16.0	0.7	3.5	1.350	480	
IE2-WE1B 280 S8	37	480	736	IE2- 91.6	91.1	88.6	0.79	73.5	5.4	2.0	1.7	2.3	18.0	1.0	3.5	1.55	550	
IE2-WE1B 280 M8	45	581	740	IE2- 92.7	92.7	92.0	0.79	88.5	6.7	1.8	1.5	2.5	18.0	1.0	10.0	2.63	690	
IE2-WE1B 315 S8	55	710	740	IE2- 93.0	93.0	92.5	0.80	107	6.0	1.8	1.5	2.2	18.0	1.5	10.0	3.33	800	
IE2-WE1B 315 M8	75	968	740	IE2- 93.5	93.5	93.0	0.81	143	6.0	1.8	1.5	2.1	18.0	1.5	10.0	3.6	880	
IE2-WE1B 315 MX8	90	1161	740	IE2- 92.1	91.6	90.1	0.81	174	6.0	1.9	0.0	2.2	18.0	1.5	10.0	6	1050	
IE2-WE1B 315 MY8	110	1420	740	IE2- 93.8	93.3	91.2	0.81	209	6.5	2.1	0.0	2.4	18.0	1.5	10.0	6.76	1250	
IE2-WE1B 315 L8	132	1704	740	IE2- 94.4	94.0	93.5	0.83	243	7.5	2.2	1.8	2.5	18.0	1.5	10.0	8.71	1430	
IE2-WE1B 315 LX8	160	2065	740	IE2- 94.2	94.2	93.8	0.80	306	7.2	2.2	1.8	2.5	18.0	1.5	10.0	8.71	1430	
IE2-WE2B 355 M8	200	2571	743	IE2- 94.7	94.1	91.5	0.77	396	0.0	0.0	0.0	0.0	20.0	2.0	10.0	9.5	1850	
IE2-WE2B 355 MX8	250	3205	745	IE2- 95.8	95.8	95.5	0.83	454	7.0	1.2	1.0	2.6	30.0	2.0	10.0	13.4	2200	
IE2-WE2B 355 LY8	280	3599	743	IE2- 94.8	94.1	91.5	0.78	547	0.0	0.0	0.0	0.0	35.0	2.0	10.0	15.8	2400	

## Dimensions

### Flange dimensions

#### Flanges with through-holes

Flange Type to DIN EN 50 347	Flange Type to DIN 42948	LA c1	M e1	N b1	P a1	S s1	T f1
FF 400	A 450	16	400	350	450	18	5
FF 500	A 550	18	500	450	550	18	5
FF 600	A 660	22	600	550	660	22	6
FF 740	A 800	25	740	680	800	22	6

DIN EN 50 347 assigns FF flanges with through-holes and FT flanges with threaded holes to the different sizes. The flange designations A and C defined in DIN 42948 also remain valid.

Flange assignments which deviate from the standard are specified in the flange assignment tables of this catalogue.

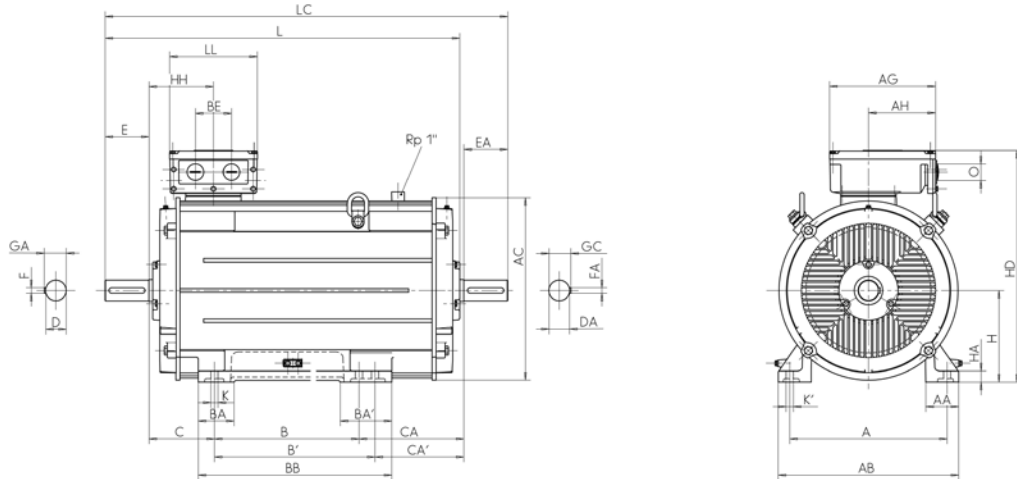
For tolerances for the dimension N(b1), refer to the corresponding dimension tables

LA (c1) Depth of engagement

**Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 315

**Type of construction IM B3 [IM 1001]**



Type designation	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
	b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE3-W41B 315 S2	508	126	590	550	406	120	-	503	216	126	65	65	M20	140	140	18	18
IE3-W41B 315 S4	508	126	590	550	406	120	-	503	216	126	80	70	M20	170	140	22	20
IE3-W41B 315 S8	508	126	590	550	406	120	-	503	216	126	80	70	M20	170	140	22	20
IE3-W41B 315 M2	508	126	590	550	457	120	-	554	216	130	65	65	M20	140	140	18	18
IE3-W41B 315 M4	508	126	590	550	457	120	-	554	216	130	80	70	M20	170	140	22	20
IE3-W41B 315 S6	508	110	590	610	406	120	150	554	216	259	80	70	M20	170	140	22	20
IE3-W41B 315 M6, 8	508	110	590	610	457	120	150	554	216	208	80	70	M20	170	140	22	20
IE3-W41B 315 MX2	508	110	590	610	457	120	150	554	216	208	65	65	M20	140	140	18	18
IE3-W41B 315 MX4	508	110	590	610	457	120	150	554	216	208	80	70	M20	170	140	22	20
IE3-W41B 315 MX6, 8	508	110	590	610	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE3-W41B 315 MX10, 12	508	110	590	610	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE3-W41B 315 MY2	508	110	590	610	457	120	-	573	216	307	65	65	M20	140	140	18	18
IE3-W41B 315 MY4, 6, 8	508	110	590	610	457	120	-	573	216	307	80	70	M20	170	140	22	20
IE3-W41B 315 L2	508	110	590	610	508	120	-	624	216	376	65	65	M20	140	140	18	18
IE3-W41B 315 L4, 6, 8	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20
IE3-W41B 315 LX2	508	110	590	610	508	120	-	624	216	496	65	65	M20	140	140	18	18
IE3-W41B 315 LX4	508	110	590	610	508	120	-	624	216	496	80	70	M20	170	140	22	20
IE3-W41B 315 LX6, 8	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20

Type designation	GA	GC	H	HA	HD	HH	K	K'	L	LC	TB Type	AG	LL	AH	O
	t	t1	h	c	p	A	s	s'	k	k1				-	
IE3-W41B 315 S2	69	69	315	44	731	211	28	35	879	1026	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S4	85	74.5	315	44	731	211	28	35	909	1056	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S8	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 M2	69	69	315	44	731	211	28	35	934	1081	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 M4	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S6	85	74.5	315	44	809	230	28	35	1044	1191	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 M6, 8	85	74.5	315	44	809	230	28	35	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX2	69	69	315	44	809	230	28	35	1014	1161	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX4	85	74.5	315	44	809	230	28	35	1044	1191	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX6, 8	85	74.5	315	44	809	230	28	35	964	1111	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX10, 12	85	74.5	315	44	809	230	28	35	964	1111	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MY2	69	69	315	44	809	230	28	35	1116	1260	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MY4, 6, 8	85	74.5	315	44	809	230	28	35	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 L2	69	69	315	44	809	230	28	35	1236	1380	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 L4, 6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX2	69	69	315	44	809	230	28	35	1356	1500	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX4	85	74.5	315	44	809	230	28	35	1386	1530	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A-SB	415	340	265	M63 x 1.5

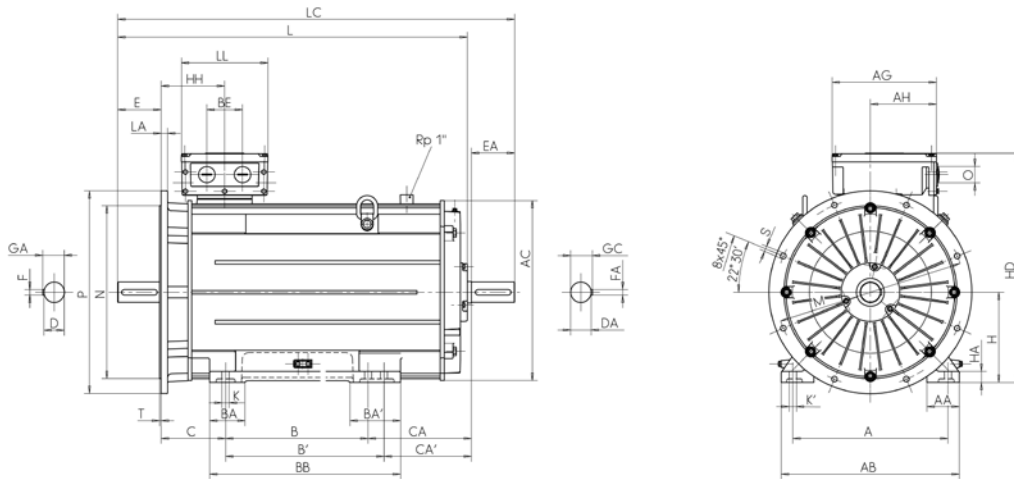
<sup>1)</sup> Centre holes to DIN 332-DS  
Subject to changes in the course of further development.

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 315

### Type of construction IM B35 [IM 2001]

Flange dimensions see page 5/9



Type designation	Flange size	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
		b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE3-W41B 315 S2	FF 600	508	126	590	550	406	120	-	503	216	126	65	65	M20	140	140	18	18
IE3-W41B 315 S4	FF 600	508	126	590	550	406	120	-	503	216	126	80	70	M20	170	140	22	20
IE3-W41B 315 S8	FF 600	508	126	590	550	406	120	-	503	216	126	80	70	M20	170	140	22	20
IE3-W41B 315 M2	FF 600	508	126	590	550	457	120	-	554	216	130	65	65	M20	140	140	18	18
IE3-W41B 315 M4	FF 600	508	126	590	550	457	120	-	554	216	130	80	70	M20	170	140	22	20
IE3-W41B 315 S6	FF 600	508	110	590	610	406	120	150	554	216	259	80	70	M20	170	140	22	20
IE3-W41B 315 M6, 8	FF 600	508	110	590	610	457	120	150	554	216	208	80	70	M20	170	140	22	20
IE3-W41B 315 MX2	FF 600	508	110	590	610	457	120	150	554	216	208	65	65	M20	140	140	18	18
IE3-W41B 315 MX4	FF 600	508	110	590	610	457	120	150	554	216	208	80	70	M20	170	140	22	20
IE3-W41B 315 MX6, 8	FF 600	508	110	590	610	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE3-W41B 315 MX10, 12	FF 600	508	110	590	610	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE3-W41B 315 MY2	FF 600	508	110	590	610	457	120	-	573	216	307	65	65	M20	140	140	18	18
IE3-W41B 315 MY4, 6, 8	FF 600	508	110	590	610	457	120	-	573	216	307	80	70	M20	170	140	22	20
IE3-W41B 315 L2	FF 600	508	110	590	610	508	120	-	624	216	376	65	65	M20	140	140	18	18
IE3-W41B 315 L4, 6, 8	FF 600	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20
IE3-W41B 315 LX2	FF 600	508	110	590	610	508	120	-	624	216	496	65	65	M20	140	140	18	18
IE3-W41B 315 LX4	FF 600	508	110	590	610	508	120	-	624	216	496	80	70	M20	170	140	22	20
IE3-W41B 315 LX6, 8	FF 600	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20

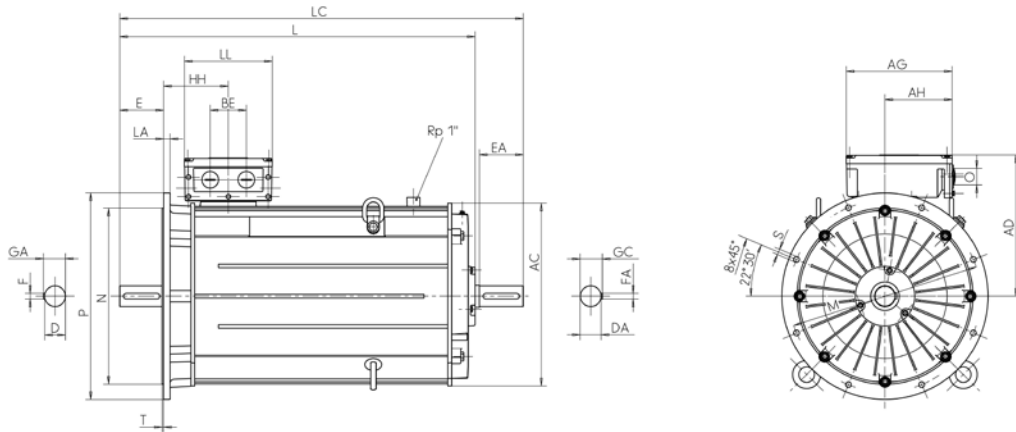
Type designation	GA	GC	H	HA	HD	HH	K	K'	L	LC	TB Type	AG	LL	AH	0
	t	t1	h	c	p	A	s	s'	k	k1					
IE3-W41B 315 S2	69	69	315	44	731	211	28	35	879	1026	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S4	85	74.5	315	44	731	211	28	35	909	1056	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S8	69	69	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 M2	85	74.5	315	44	731	211	28	35	934	1081	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 M4	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S6	85	74.5	315	44	809	230	28	35	1044	1191	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 M6, 8	85	74.5	315	44	809	230	28	35	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX2	69	69	315	44	809	230	28	35	1014	1161	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX4	85	74.5	315	44	809	230	28	35	1044	1191	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX6, 8	85	74.5	315	44	809	230	28	35	964	1111	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX10, 12	85	74.5	315	44	809	230	28	35	964	1111	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MY2	69	69	315	44	809	230	28	35	1116	1260	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MY4, 6, 8	85	74.5	315	44	809	230	28	35	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 L2	69	69	315	44	809	230	28	35	1236	1380	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 L4, 6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX2	69	69	315	44	809	230	28	35	1356	1500	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX4	85	74.5	315	44	809	230	28	35	1386	1530	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A-SB	415	340	265	M63 x 1.5

<sup>1)</sup> Centre holes to DIN 332-DS  
Subject to changes in the course of further development.

**Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
 Thermal class 155, degree of protection IP 55  
 Size 315

**Type of construction IM B5 [IM 3001] to Type of construction 315 MY**  
**Type of construction IM V1 [IM 3011]**



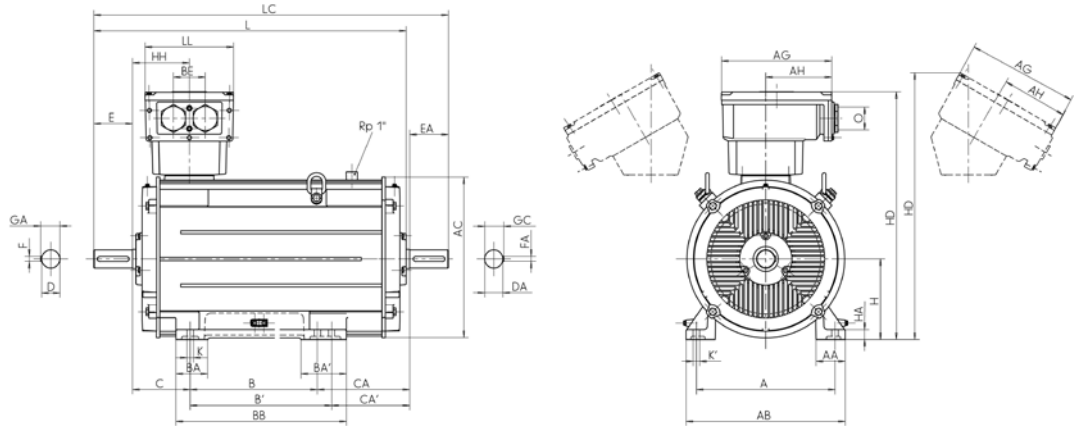
Type designation	Flange size	AC g	AD g1	D d	DA d1	DB <sup>1)</sup>	E l	EA l1	F u	FA u1	GA t	GC t1	H h	HH A	L k	LC k1	TB Type	AG x	LL z	AH -	O r
IE3-W41B 315 S2	FF 600	550	416	65	65	M20	140	140	18	18	69	69	315	211	879	1026	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S4	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	909	1056	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S8	FF 600	550	416	65	65	M20	140	140	18	18	69	69	315	211	964	1111	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 M2	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	934	1081	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 M4	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	964	1111	200 A	282	242	-	M63 x 1.5
IE3-W41B 315 S6	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1044	1191	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 M6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1014	1161	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX4	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1044	1191	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	964	1111	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MX10, 12	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	964	1111	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MY2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1116	1260	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 MY4, 6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 L2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1236	1380	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 L4, 6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1266	1410	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1356	1500	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX4	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1386	1530	400 A-SB	415	340	265	M63 x 1.5
IE3-W41B 315 LX6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1266	1410	400 A-SB	415	340	265	M63 x 1.5

<sup>1)</sup> Centre holes to DIN 332-DS  
 Subject to changes in the course of further development.

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3

Type of cooling IC 71W, duty cycle S1, continuous duty,  
 Thermal class 155, degree of protection IP 55  
 Size 355

### Type of construction IM B3 [IM 1001]



Type designation	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
	b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE3-W41B 355 MY2, M2	610	130	700	715	560	140	200	750	254	398	80	80	M20	170	170	22	22
IE3-W41B 355 MY4, 6, 8	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 M4	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 M6, 8	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 MX6, 8	610	130	700	715	560	140	200	750	254	518	100	80	M24	210	170	28	22
IE3-W41B 355 MX2	610	130	700	715	560	140	200	750	254	518	80	80	M20	170	170	22	22
IE3-W41B 355 LY2, L2	610	130	700	715	630	140	200	750	254	448	80	80	M20	170	170	22	22
IE3-W41B 355 MX4	610	130	700	715	560	140	200	750	254	448	100	80	M24	210	170	28	22
IE3-W41B 355 LY4, 6, 8, L4	610	130	700	715	630	140	200	750	254	448	100	80	M24	210	170	28	22

Type designation	GA	GC	H	HA	HD	HD <sup>2)</sup>	HH	K	K'	L	LC	TB Type	AG	LL	AH	BE	O
	t	t1	h	c	p	p	A	s	s'	k	k1		x	z	-	-	r
IE3-W41B 355 MY2, M2	85	85	355	44	1088	1172	250	28	28	1365	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MY4, 6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M4	106	85	355	44	1088	1172	250	28	28	1405	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX6, 8	106	85	355	44	1088	1172	250	28	28	1525	1712	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY2, L2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 MX4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY4, 6, 8, L4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2

<sup>1)</sup> Centre holes to DIN 332-DS

<sup>2)</sup> Terminal box left/right

Subject to changes in the course of further development.

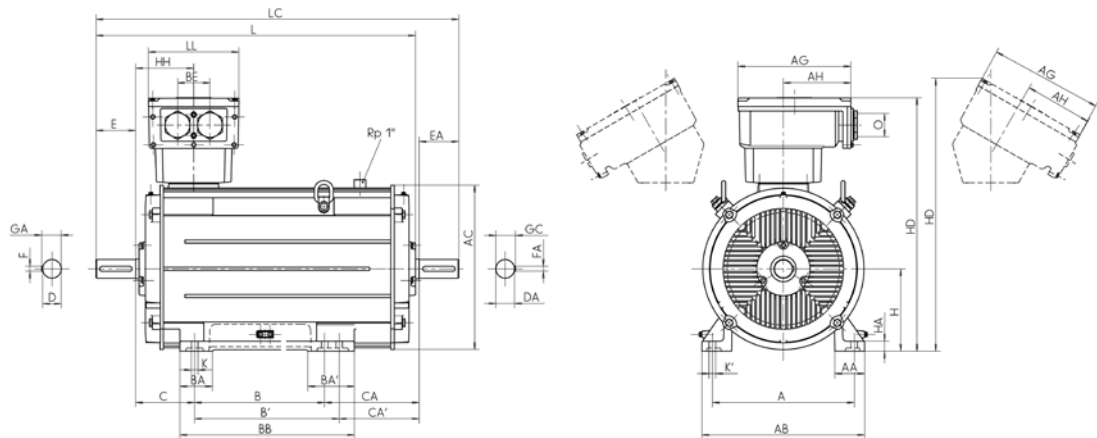
Size 400 upon request

**Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 355

**Type of construction IM B35 [IM 2001]**

Flange dimensions see page 5/9



Type designation	Flange size	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
		b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE3-W41B 355 MY2, M2	FF 740	610	130	700	715	560	140	200	750	254	398	80	80	M20	170	170	22	22
IE3-W41B 355 MY4, 6, 8	FF 740	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 M4	FF 740	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 M6, 8	FF 740	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 MX6, 8	FF 740	610	130	700	715	560	140	200	750	254	518	100	80	M24	210	170	28	22
IE3-W41B 355 MX2	FF 740	610	130	700	715	560	140	200	750	254	518	80	80	M20	170	170	22	22
IE3-W41B 355 LY2, L2	FF 740	610	130	700	715	630	140	200	750	254	448	80	80	M20	170	170	22	22
IE3-W41B 355 MX4	FF 740	610	130	700	715	560	140	200	750	254	448	100	80	M24	210	170	28	22
IE3-W41B 355 LY4, 6, 8, L4	FF 740	610	130	700	715	630	140	200	750	254	448	100	80	M24	210	170	28	22

Type designation	GA	GC	H	HA	HD	HD <sup>2)</sup>	HH	K	K'	L	LC	TB Type	AG	LL	AH	BE	O
	t	t1	h	c	p	p	A	s	s'	k	k1		x	z	-	-	r
IE3-W41B 355 MY2, M2	85	85	355	44	1088	1172	250	28	28	1365	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MY4, 6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M4	106	85	355	44	1088	1172	250	28	28	1405	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX6, 8	106	85	355	44	1088	1172	250	28	28	1525	1712	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY2, L2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 MX4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY4, 6, 8, L4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2

<sup>1)</sup> Centre holes to DIN 332-DS

<sup>2)</sup> Terminal box left/right

Subject to changes in the course of further development.

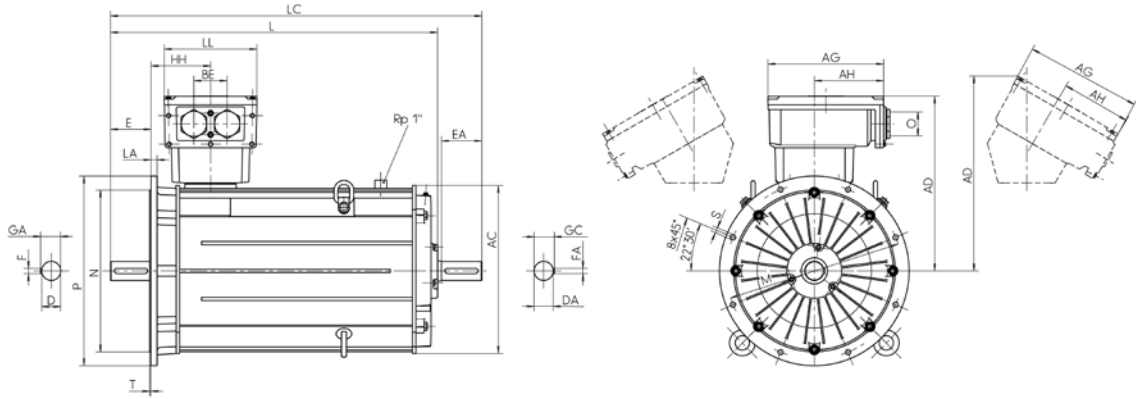
Size 400 upon request

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE3

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 355

### Type of construction IM V1 [IM 3011]

Flange dimensions see page 5/9



Type designation	Flange size	AC	AD	AD <sup>*)</sup>	D	DA	DB <sup>*)</sup>	E	EA	F	FA	GA	GC	H	HH	L	LC	TB Type	LL	AH	BE	O	
		g	g1	g1	d	d1		l	l1	u	u1	t	t1	h	A	k	k1	x	z	-	-	r	
IE3-W41B 355 MY2, M2	FF 740	715	733	817	80	80	M20	170	170	22	22	85	85	355	250	1365	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MY4, 6, 8	FF 740	715	733	817	100	80	M24	210	170	28	22	106	85	355	250	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M4	FF 740	715	733	817	100	80	M24	210	170	28	22	106	85	355	250	1405	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M6, 8	FF 740	715	733	817	100	80	M24	210	170	28	22	106	85	355	250	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX6, 8	FF 740	715	733	819	100	80	M24	210	170	28	22	106	85	355	327	1525	1712	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX2	FF 740	715	729	819	80	80	M20	170	170	22	22	85	85	355	327	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY2, L2	FF 740	715	729	819	80	80	M20	170	170	22	22	85	85	355	327	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 MX4	FF 740	715	729	819	100	80	M24	210	170	28	22	106	85	355	327	1525	1712	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY4, 6, 8, L4	FF 740	715	729	819	100	80	M24	210	170	28	22	106	85	355	327	1525	1712	1000 A	615	475	385	200	M72 x 2

<sup>\*)</sup> Centre holes to DIN 332-DS

<sup>\*\*)</sup> Terminal box left/right

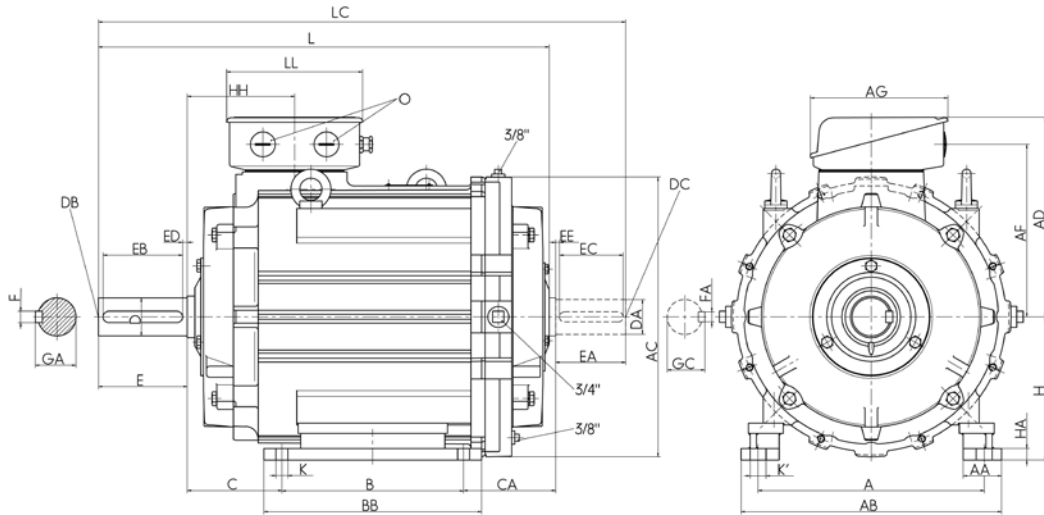
Subject to changes in the course of further development.

Size 400 upon request

**Water-cooled three-phase motors with squirrel-cage rotor, High Efficiency, IE2**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
 Thermal class 155, degree of protection IP 55  
 Size 225 bis 280

**Type of constructionen IM B3 [IM 1001]**



Type designation	Flange size	DS-Shaft ends																	
		A	AA	AB	AC	AD	AD'	AF	B	BB	C	CA	D	DB	E	EB	ED	F	
	b	n	f	g	KL/KR	g1	a	e	w1	w2	d	-	l				u		
IE2-WE1B- 225 S2	FF 400	356	75	413	390	300	217	300	240	286	343	149	196	55	M20	110	100	5	16
IE2-WE1B- 225 S4, 8	FF 400	356	75	413	390	300	217	300	240	286	343	149	196	60	M20	140	125	7.5	18
IE2-WE1B- 225 M2	FF 400	356	75	413	390	300	217	300	240	311	368	149	211	55	M20	110	100	5	16
IE2-WE1B- 225 M4	FF 400	356	75	413	390	300	217	300	240	311	368	149	211	60	M20	140	125	7.5	18
IE2-WE1B- 225 M6, 8	FF 400	356	75	413	390	300	217	300	240	311	368	149	171	60	M20	140	125	7.5	18
IE2-WE1B- 250 M2	FF 500	406	84	471	440	358	234	358	282	349	412	168	210	60	M20	140	125	7.5	18
IE2-WE1B- 250 M4, 6, 8	FF 500	406	84	471	440	358	234	358	282	349	412	168	210	65	M20	140	125	7.5	18
IE2-WE1B- 280 S2	FF 500	457	94	522	490	386	266	386	310	368	431	190	234	65	M20	140	125	7.5	18
IE2-WE1B- 280 M2	FF 500	457	94	522	490	386	266	386	310	419	482	190	229	65	M20	140	125	7.5	18
IE2-WE1B- 280 S4, 6, 8	FF 500	457	94	522	490	386	266	386	310	368	431	190	234	75	M20	140	125	7.5	20
IE2-WE1B- 280 M4, 6, 8	FF 500	457	94	522	490	386	266	386	310	419	482	190	229	75	M20	140	125	7.5	20

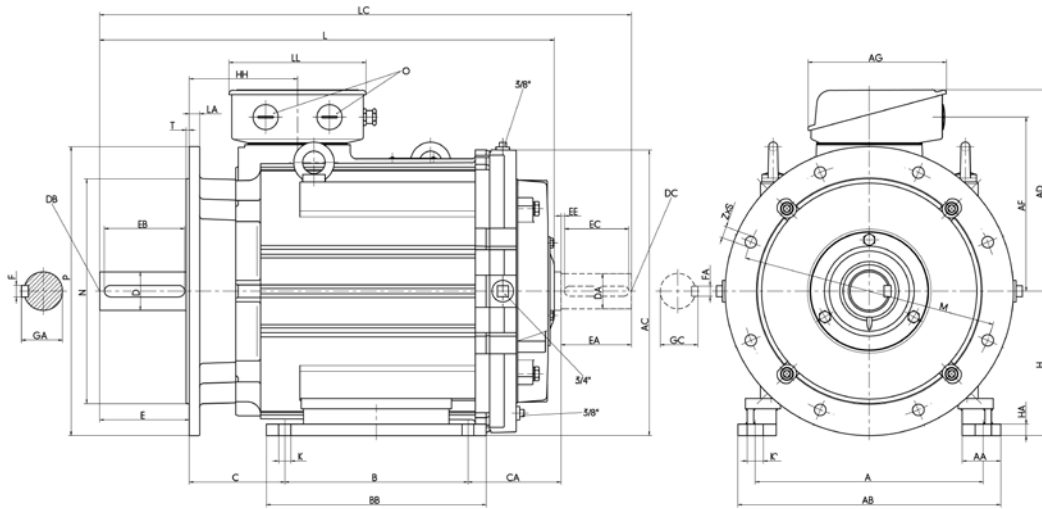
Type designation	NS-Shaft ends																		
	GA	DA	DC	EA	EC	EE	FA	GC	H	HA	HH	K	K'	L	LC	TB Type	LL	AG	O
	t	d1	l1			u1	t1	h	c	A	s	s'	k	k1		z	x	-	
IE2-WE1B- 225 S2	59	55	M16	110	100	5	16	59	225	25	168	19	25	680	800	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 S4, 8	64	55	M16	110	100	5	16	59	225	25	168	19	25	710	830	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 M2	59	55	M16	110	100	5	16	59	225	25	168	19	25	680	800	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 M4	64	55	M16	110	100	5	16	59	225	25	168	19	25	710	830	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 M6, 8	64	55	M16	110	100	5	16	59	225	25	168	19	25	710	830	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 250 M2	64	55	M16	110	100	5	16	59	250	28	177	24	30	737	857	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 250 M4, 6, 8	69	55	M16	110	100	5	16	59	250	28	177	24	30	737	857	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 S2	69	65	M20	140	125	7.5	18	69	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 M2	69	65	M20	140	125	7.5	18	69	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 S4, 6, 8	79.5	65	M20	140	125	7.5	18	69	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 M4, 6, 8	79.5	65	M20	140	125	7.5	18	69	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5



## Water-cooled three-phase motors with squirrel-cage rotor, High Efficiency, IE2

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 225 bis 280

### IM B35 [IM 2001]

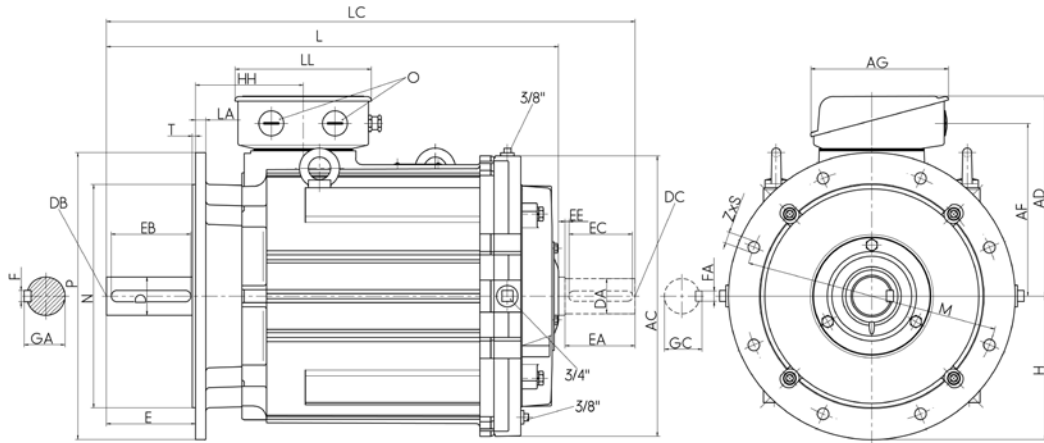


Type designation	Tolerances				Mating parts
	H	N	D	DA	
IE2-WE1B- 225 S2	-0.5	h6	m6	m6	H7
IE2-WE1B- 225 S4, 8	-0.5	h6	m6	m6	H7
IE2-WE1B- 225 M2	-0.5	h6	m6	m6	H7
IE2-WE1B- 225 M4	-0.5	h6	m6	m6	H7
IE2-WE1B- 225 M6, 8	-0.5	h6	m6	m6	H7
IE2-WE1B- 250 M2	-0.5	h6	m6	m6	H7
IE2-WE1B- 250 M4, 6, 8	-0.5	h6	m6	m6	H7
IE2-WE1B- 280 S2	-1	h6	m6	m6	H7
IE2-WE1B- 280 M2	-1	h6	m6	m6	H7
IE2-WE1B- 280 S4, 6, 8	-1	h6	m6	m6	H7
IE2-WE1B- 280 M4, 6, 8	-1	h6	m6	m6	H7

**Water-cooled three-phase motors with squirrel-cage rotor, High Efficiency, IE2**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
 Thermal class 155, degree of protection IP 55  
 Size 225 bis 280

**Type of constructionen IM B5 [IM 3001]**



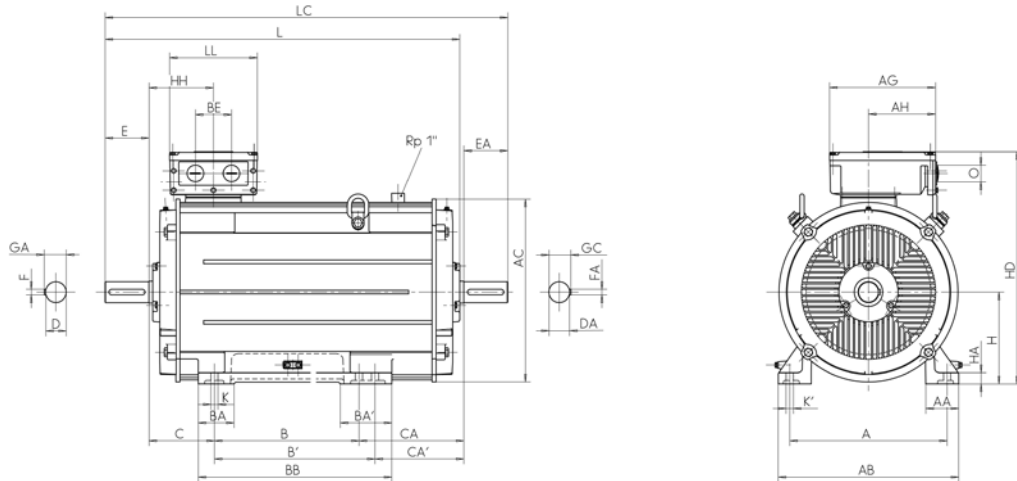
Type designation	Flange size	A	AA	AB	AC	AD	AD	AD'	AF	B	BB	C	CA	H	HA	HH	K	K'	L	LC	TB	LL	AG	O
		b	n	f	g	KL/KR	g1			a	e	w1	w2	d	-	l			u	Type				
IE2-WE1B- 225 S2	FF 400	356	75	413	390	300	217	300	240	286	343	149	196	225	25	168	19	25	680	800	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 S4, 8	FF 400	356	75	413	390	300	217	300	240	286	343	149	196	225	25	168	19	25	710	830	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 M2	FF 400	356	75	413	390	300	217	300	240	311	368	149	211	225	25	168	19	25	680	800	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 M4	FF 400	356	75	413	390	300	217	300	240	311	368	149	211	225	25	168	19	25	710	830	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 225 M6, 8	FF 400	356	75	413	390	300	217	300	240	311	368	149	171	225	25	168	19	25	710	830	100 A	207	212	2 x M50 x 1.5
IE2-WE1B- 250 M2	FF 500	406	84	471	440	358	234	358	282	349	412	168	210	250	28	177	24	30	737	857	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 250 M4, 6, 8	FF 500	406	84	471	440	358	234	358	282	349	412	168	210	250	28	177	24	30	737	857	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 S2	FF 500	457	94	522	490	386	266	386	310	368	431	190	234	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 M2	FF 500	457	94	522	490	386	266	386	310	419	482	190	229	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 S4, 6, 8	FF 500	457	94	522	490	386	266	386	310	368	431	190	234	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5
IE2-WE1B- 280 M4, 8	FF 500	457	94	522	490	386	266	386	310	419	482	190	229	280	32	206	24	30	875	1028	200 A	242	282	2 x M63 x 1.5

Type designation	DS-Schaft ends											NS-Schaft ends											Tolerances				Mating parts		
	LA	M	N	S	T	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC	-	-	-	-	H	N	D		DA	
	c1	e1	b1	s1	f1	d	-	l		u	t	d1	l1		u1	t1													
IE2-WE1B- 225 S2	16	400	350	18	5	55	M20	110	100	5	16	59	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 225 S4, 8	16	400	350	18	5	60	M20	140	125	7.5	18	64	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 225 M2	16	400	350	18	5	55	M20	110	100	5	16	59	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 225 M4	16	400	350	18	5	60	M20	140	125	7.5	18	64	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 225 M6, 8	16	400	350	18	5	60	M20	140	125	7.5	18	64	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 250 M2	18	500	450	18	5	60	M20	140	125	7.5	18	64	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 250 M4, 6, 8	18	500	450	18	5	65	M20	140	125	7.5	18	69	55	M16	110	100	5	16	59	-0.5	h6	m6	m6					H7	
IE2-WE1B- 280 S2	18	500	450	18	5	65	M20	140	125	7.5	18	69	65	M20	140	125	7.5	18	69	-1	h6	m6	m6					H7	
IE2-WE1B- 280 M2	18	500	450	18	5	65	M20	140	125	7.5	18	69	65	M20	140	125	7.5	18	69	-1	h6	m6	m6					H7	
IE2-WE1B- 280 S4, 6, 8	18	500	450	18	5	75	M20	140	125	7.5	20	79.5	65	M20	140	125	7.5	18	69	-1	h6	m6	m6					H7	
IE2-WE1B- 280 M4, 8	18	500	450	18	5	75	M20	140	125	7.5	20	79.5	65	M20	140	125	7.5	18	69	-1	h6	m6	m6					H7	

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE2

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 315

### Type of construction IM B3 [IM 1001]



Type designation	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
	b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE2-WE1B 315 S2	508	126	590	550	406	120	-	503	216	126	65	65	M20	140	140	18	18
IE2-WE1B 315 S4, 6, 8	508	126	590	550	406	120	-	503	216	126	80	70	M20	170	140	22	20
IE2-WE1B 315 M2	508	126	590	550	457	120	-	554	216	130	65	65	M20	140	140	18	18
IE2-WE1B 315 M4, 6, 8	508	126	590	550	457	120	-	554	216	130	80	70	M20	170	140	22	20
IE2-WE1B 315 MX2	508	126	590	550	457	120	150	554	216	208	65	65	M20	140	140	18	18
IE2-WE1B 315 MX4	508	126	590	550	457	120	150	554	216	208	80	70	M20	170	140	22	20
IE2-WE1B 315 MX6, 8	508	126	590	550	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE2-WE1B 315 MX10, 12	508	126	590	550	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE2-WE1B 315 MY2	508	110	590	610	457	120	-	573	216	307	65	65	M20	140	140	18	18
IE2-WE1B 315 MY4, 6, 8	508	110	590	610	457	120	-	573	216	307	80	70	M20	170	140	22	20
IE2-WE1B 315 L2	508	110	590	610	508	120	-	624	216	376	65	65	M20	140	140	18	18
IE2-WE1B 315 L4, 6, 8	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20
IE2-WE1B 315 LX2	508	110	590	610	508	120	-	624	216	496	65	65	M20	140	140	18	18
IE2-WE1B 315 LX4	508	110	590	610	508	120	-	624	216	496	80	70	M20	170	140	22	20
IE2-WE1B 315 LX6, 8	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20

Type designation	GA	GC	H	HA	HD	HH	K	K'	L	LC	TB Type	AG	LL	AH	Ø
	t	t1	h	c	p	A	s	s'	k	k1				-	
IE2-WE1B 315 S2	69	69	315	44	731	211	28	35	879	1026	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 S4, 6, 8	85	74.5	315	44	731	211	28	35	909	1056	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 M2	69	69	315	44	731	211	28	35	934	1081	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 M4, 6, 8	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX2	69	69	315	44	731	211	28	35	1014	1161	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX4	85	74.5	315	44	731	211	28	35	1044	1191	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX6, 8	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX10, 12	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MY2	69	69	315	44	809	230	28	35	1116	1260	400 A SB	415	340	265	M63 x 1.5
IE2-WE1B 315 MY4, 6, 8	85	74.5	315	44	809	230	28	35	1146	1290	400 A SB	415	340	265	M63 x 1.5
IE2-WE1B 315 L2	69	69	315	44	809	230	28	35	1236	1380	400 A SB	415	340	265	M63 x 1.5
IE2-WE1B 315 L4, 6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX2	69	69	315	44	809	230	28	35	1356	1500	400 A SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX4	85	74.5	315	44	809	230	28	35	1386	1530	400 A SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A SB	415	340	265	M63 x 1.5

<sup>1)</sup> Centre holes to DIN 332-DS

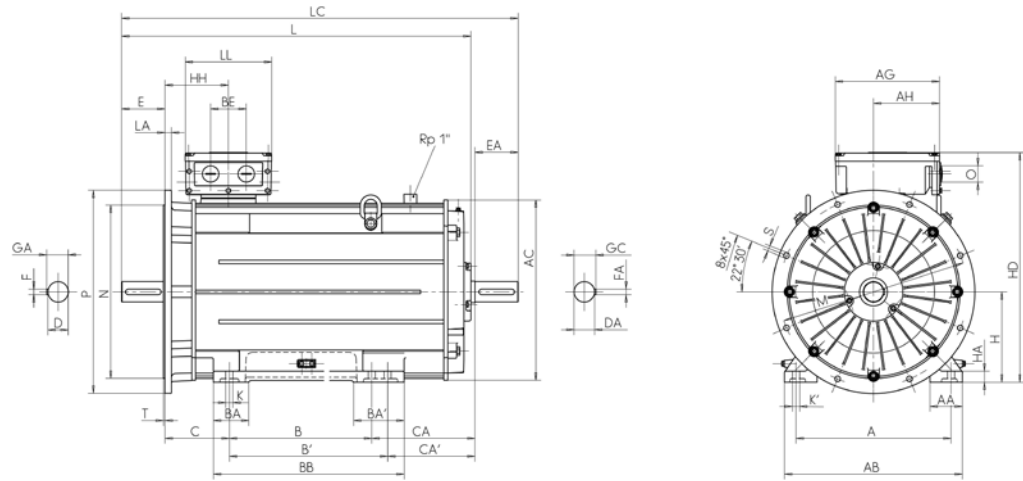
Subject to changes in the course of further development.

**Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE2**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 315

**Type of construction IM B35 [IM 2001]**

Flange dimensions see page 5/9



Type designation	Flange size	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
		b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE2-WE1B 315 S2	FF 600	508	126	590	550	406	120	-	503	216	126	65	65	M20	140	140	18	18
IE2-WE1B 315 S4, 6, 8	FF 600	508	126	590	550	406	120	-	503	216	126	80	70	M20	170	140	22	20
IE2-WE1B 315 M2	FF 600	508	126	590	550	457	120	-	554	216	130	65	65	M20	140	140	18	18
IE2-WE1B 315 M4, 6, 8	FF 600	508	126	590	550	457	120	-	554	216	130	80	70	M20	170	140	22	20
IE2-WE1B 315 MX2	FF 600	508	126	590	550	457	120	150	554	216	208	65	65	M20	140	140	18	18
IE2-WE1B 315 MX4	FF 600	508	126	590	550	457	120	150	554	216	208	80	70	M20	170	140	22	20
IE2-WE1B 315 MX6, 8	FF 600	508	126	590	550	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE2-WE1B 315 MX10, 12	FF 600	508	126	590	550	457	120	150	554	216	128	80	70	M20	170	140	22	20
IE2-WE1B 315 MY2	FF 600	508	110	590	610	457	120	-	573	216	307	65	65	M20	140	140	18	18
IE2-WE1B 315 MY4, 6, 8	FF 600	508	110	590	610	457	120	-	573	216	307	80	70	M20	170	140	22	20
IE2-WE1B 315 L2	FF 600	508	110	590	610	508	120	-	624	216	376	65	65	M20	140	140	18	18
IE2-WE1B 315 L4, 6, 8	FF 600	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20
IE2-WE1B 315 LX2	FF 600	508	110	590	610	508	120	-	624	216	496	65	65	M20	140	140	18	18
IE2-WE1B 315 LX4	FF 600	508	110	590	610	508	120	-	624	216	496	80	70	M20	170	140	22	20
IE2-WE1B 315 LX6, 8	FF 600	508	110	590	610	508	120	-	624	216	376	80	70	M20	170	140	22	20

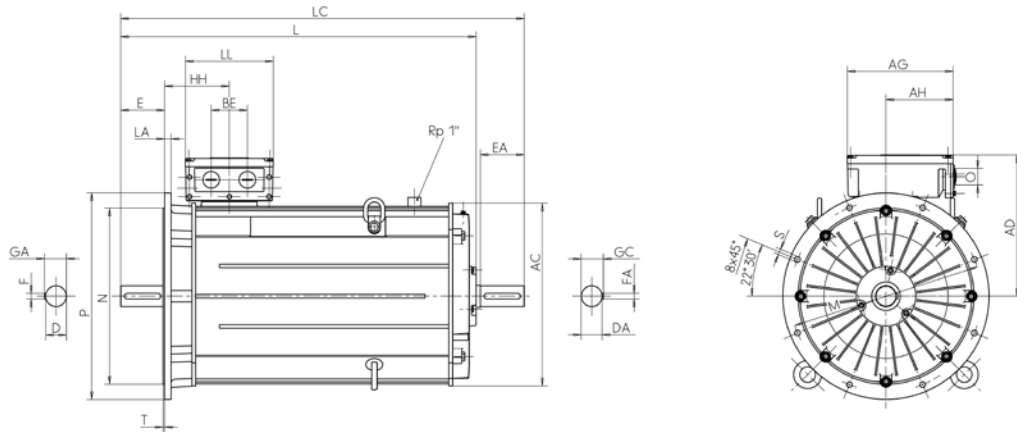
Type designation	GA	GC	H	HA	HD	HH	K	K'	L	LC	TB Type	AG	LL	AH	0
	t	t1	h	c	p	A	s	s'	k	k1					
IE2-WE1B 315 S2	69	69	315	44	731	211	28	35	879	1026	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 S4, 6, 8	85	74.5	315	44	731	211	28	35	909	1056	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 M2	69	69	315	44	731	211	28	35	934	1081	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 M4, 6, 8	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX2	69	69	315	44	731	211	28	35	1014	1161	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX4	85	74.5	315	44	731	211	28	35	1044	1191	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX6, 8	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX10, 12	85	74.5	315	44	731	211	28	35	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MY2	69	69	315	44	809	230	28	35	1116	1260	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 MY4, 6, 8	85	74.5	315	44	809	230	28	35	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 L2	69	69	315	44	809	230	28	35	1236	1380	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 L4, 6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX2	69	69	315	44	809	230	28	35	1356	1500	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX4	85	74.5	315	44	809	230	28	35	1386	1530	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX6, 8	85	74.5	315	44	809	230	28	35	1266	1410	400 A-SB	415	340	265	M63 x 1.5

<sup>1)</sup> Centre holes to DIN 332-DS  
Subject to changes in the course of further development.

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE2

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 315

**Type of construction IM B5 [IM 3001] to type of construction 315 MY**  
**Type of construction IM V1 [IM 3011]**



Type designation	Flange size	AC g	AD g1	D d	DA d1	DB <sup>1)</sup>	E l	EA l1	F u	FA u1	GA t	GC t1	H h	HH A	L k	LC k1	TB Type	AG x	LL z	AH -	O r
IE2-WE1B 315 S2	FF 600	550	416	65	65	M20	140	140	18	18	69	69	315	211	879	1026	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 S4, 6, 8	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	909	1056	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 M2	FF 600	550	416	65	65	M20	140	140	18	18	69	69	315	211	934	1081	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 M4, 6, 8	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX2	FF 600	550	416	65	65	M20	140	140	18	18	69	69	315	211	1014	1161	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX4	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	1044	1191	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX6, 8	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MX10, 12	FF 600	550	416	80	70	M20	170	140	22	20	85	74.5	315	211	964	1111	200 A	282	242	-	M63 x 1.5
IE2-WE1B 315 MY2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1116	1260	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 MY4, 6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1146	1290	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 L2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1236	1380	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 L4, 6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1266	1410	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX2	FF 600	610	494	65	65	M20	140	140	18	18	69	69	315	230	1356	1500	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX4	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1386	1530	400 A-SB	415	340	265	M63 x 1.5
IE2-WE1B 315 LX6, 8	FF 600	610	494	80	70	M20	170	140	22	20	85	74.5	315	230	1266	1410	400 A-SB	415	340	265	M63 x 1.5

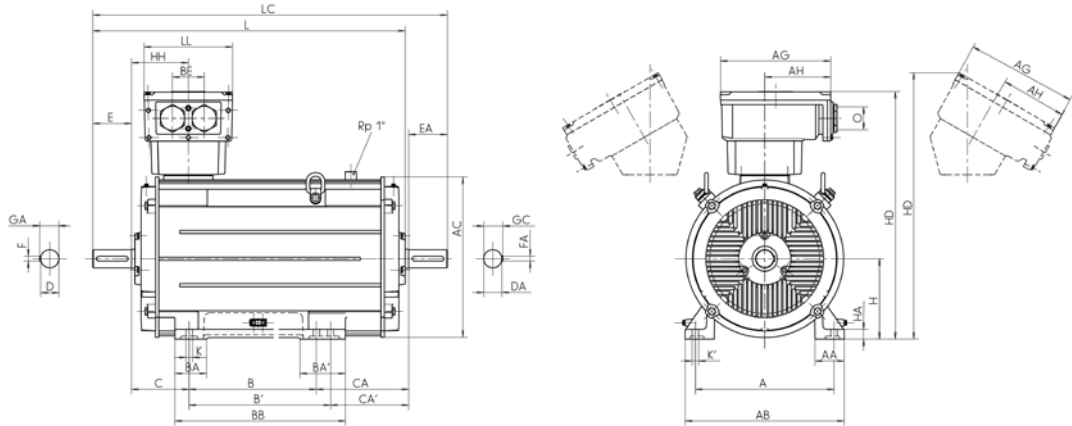
<sup>1)</sup> Centre holes to DIN 332-DS

Subject to changes in the course of further development.

**Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE2**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
 Thermal class 155, degree of protection IP 55  
 Size 355

**Type of construction IM B3 [IM 1001]**



Type designation	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
	b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE2-WE2B 355 MY2, M2	610	130	700	715	560	140	200	750	254	398	80	80	M20	170	170	22	22
IE2-WE2B 355 MY4, 6, 8	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE2-WE2B 355 M4	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE2-WE2B 355 M6, 8	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE2-WE2B 355 MX6, 8	610	130	700	715	560	140	200	750	254	518	100	80	M24	210	170	28	22
IE2-WE2B 355 MX2	610	130	700	715	560	140	200	750	254	518	80	80	M20	170	170	22	22
IE2-WE2B 355 LY2, L2	610	130	700	715	630	140	200	750	254	448	80	80	M20	170	170	22	22
IE2-WE2B 355 MX4	610	130	700	715	560	140	200	750	254	448	100	80	M24	210	170	28	22
IE2-WE2B 355 LY4, 6, 8, L4	610	130	700	715	630	140	200	750	254	448	100	80	M24	210	170	28	22

Type designation	GA	GC	H	HA	HD	HD <sup>2)</sup>	HH	K	K'	L	LC	TB Type	AG	LL	AH	BE	O
	t	t1	h	c	p	p	A	s	s'	k	k1		x	z	-	-	r
IE2-WE2B 355 MY2, M2	85	85	355	44	1088	1172	250	28	28	1365	1552	630 A	496	390	301	140	M72 x 2
IE2-WE2B 355 MY4, 6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE2-WE2B 355 M4	106	85	355	44	1088	1172	250	28	28	1405	1552	630 A	496	390	301	140	M72 x 2
IE2-WE2B 355 M6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE2-WE2B 355 MX6, 8	106	85	355	44	1088	1172	250	28	28	1525	1712	630 A	496	390	301	140	M72 x 2
IE2-WE2B 355 MX2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE2-WE2B 355 LY2, L2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE2-WE2B 355 MX4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2
IE2-WE2B 355 LY4, 6, 8, L4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2

<sup>1)</sup> Centre holes to DIN 332-DS

<sup>2)</sup> Terminal box left/right

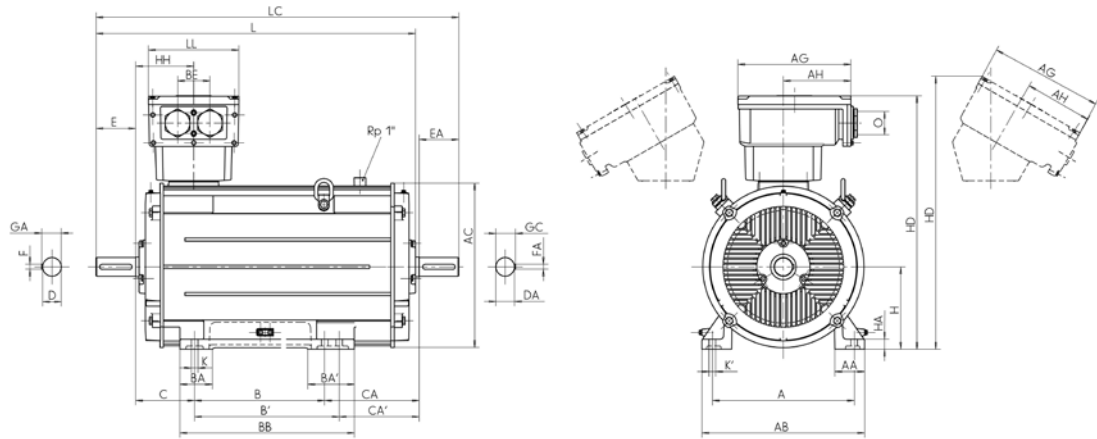
Subject to changes in the course of further development.

## Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE2

Type of cooling IC 71W, duty cycle S1, continuous duty,  
Thermal class 155, degree of protection IP 55  
Size 355

### Type of construction IM B35 [IM 2001]

Flange dimensions see page 5/9



Type designation	Flange size	A	AA	AB	AC	B	BA	BA'	BB	C	CA	D	DA	DB <sup>1)</sup>	E	EA	F	FA
		b	n	f	g	a	m	m1	e	w1	w2	d	d1		l	l1	u	u1
IE3-W41B 355 MY2, M2	FF 740	610	130	700	715	560	140	200	750	254	398	80	80	M20	170	170	22	22
IE3-W41B 355 MY4, 6, 8	FF 740	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 M4	FF 740	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 M6, 8	FF 740	610	130	700	715	560	140	200	750	254	398	100	80	M24	210	170	28	22
IE3-W41B 355 MX6, 8	FF 740	610	130	700	715	560	140	200	750	254	518	100	80	M24	210	170	28	22
IE3-W41B 355 MX2	FF 740	610	130	700	715	560	140	200	750	254	518	80	80	M20	170	170	22	22
IE3-W41B 355 LY2, L2	FF 740	610	130	700	715	630	140	200	750	254	448	80	80	M20	170	170	22	22
IE3-W41B 355 MX4	FF 740	610	130	700	715	560	140	200	750	254	448	100	80	M24	210	170	28	22
IE3-W41B 355 LY4, 6, 8, L4	FF 740	610	130	700	715	630	140	200	750	254	448	100	80	M24	210	170	28	22

Type designation	GA	GC	H	HA	HD	HD <sup>2)</sup>	HH	K	K'	L	LC	TB Type	AG	LL	AH	BE	O
	t	t1	h	c	p	p	A	s	s'	k	k1		x	z	-	-	r
IE3-W41B 355 MY2, M2	85	85	355	44	1088	1172	250	28	28	1365	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MY4, 6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M4	106	85	355	44	1088	1172	250	28	28	1405	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M6, 8	106	85	355	44	1088	1172	250	28	28	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX6, 8	106	85	355	44	1088	1172	250	28	28	1525	1712	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY2, L2	85	85	355	44	1084	1174	250	28	28	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 MX4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY4, 6, 8, L4	106	85	355	44	1084	1174	250	28	28	1525	1712	1000 A	615	475	385	200	M72 x 2

<sup>1)</sup> Centre holes to DIN 332-DS

<sup>2)</sup> Terminal box left/right

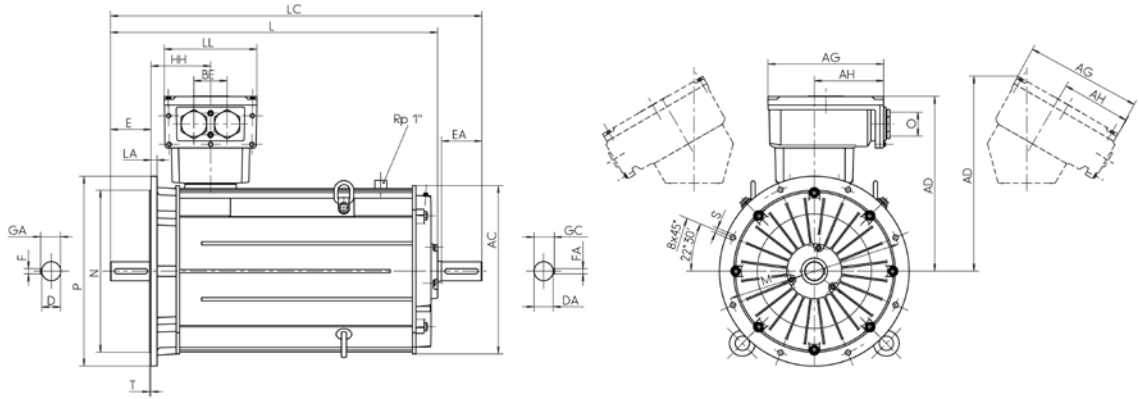
Subject to changes in the course of further development.

**Water-cooled three-phase motors with squirrel-cage rotor, Premium Efficiency IE2**

Type of cooling IC 71W, duty cycle S1, continuous duty,  
 Thermal class 155, degree of protection IP 55  
 Size 355

**Type of construction IM V1 [IM 3011]**

Flange dimensions see page 5/9



Type designation	Flange size	AC	AD	AD <sup>*)</sup>	D	DA	DB <sup>*)</sup>	E	EA	F	FA	GA	GC	H	HH	L	LC	TB Type	LL	AH	BE	O	
		g	g1	g1	d	d1		l	l1	u	u1	t	t1	h	A	k	k1		x	z	-	-	r
IE3-W41B 355 MY2, M2	FF 740	715	733	817	80	80	M20	170	170	22	22	85	85	355	250	1365	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MY4, 6, 8	FF 740	715	733	817	100	80	M24	210	170	28	22	106	85	355	250	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M4	FF 740	715	733	817	100	80	M24	210	170	28	22	106	85	355	250	1405	1552	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 M6, 8	FF 740	715	733	817	100	80	M24	210	170	28	22	106	85	355	250	1405	1592	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX6, 8	FF 740	715	733	819	100	80	M24	210	170	28	22	106	85	355	327	1525	1712	630 A	496	390	301	140	M72 x 2
IE3-W41B 355 MX2	FF 740	715	729	819	80	80	M20	170	170	22	22	85	85	355	327	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY2, L2	FF 740	715	729	819	80	80	M20	170	170	22	22	85	85	355	327	1485	1672	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 MX4	FF 740	715	729	819	100	80	M24	210	170	28	22	106	85	355	327	1525	1712	1000 A	615	475	385	200	M72 x 2
IE3-W41B 355 LY4, 6, 8, L4	FF 740	715	729	819	100	80	M24	210	170	28	22	106	85	355	327	1525	1712	1000 A	615	475	385	200	M72 x 2

<sup>\*)</sup> Centre holes to DIN 332-DS

<sup>\*\*)</sup> Terminal box left/right

Subject to changes in the course of further development.





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