

1. Product Information about Energy-Efficient Drives

In the following you will find the product information about energy-efficient drives according to the requirements of the **COMMISSION REGULATION (EU) No 2019/1781**. These will apply for the production years 2021 - 2023.

Requirements acc. to EU 2019 / 1781 Annex 1 Ch.2		Reference
1.	nominal efficiency at 100%, 75%, 50%	See chapter 2
2.	efficiency level	Name plate information – see chapter 4
3.	manufacturer's name or trade mark, commercial registration number and address	See chapter 6
4.	product's model identifier	
5.	number of poles	Name plate information – see chapter 4
6.	rated power output	Name plate information – see chapter 4
7.	rated input frequency	Name plate information – see chapter 4
8.	rated voltage	Name plate information – see chapter 4
9.	rated speed	Name plate information – see chapter 4
10.	single-phase or three-phase	Generally three-phase
11.	information on the range of operating conditions for which the motor is designed	See chapter 3
12.	if the motor is considered exempt from efficiency requirement in accordance with Article 2(2) of this Regulation, the specific reason why it is considered exempt	See data sheet of the respective drive

2. Tables Nominal Efficiency

Three-phase asynchronous with efficiency level IE2 2021 - 2023

P _N kW	Type	η % load		
		100	75	50
2-pole 50 Hz 400 V				
0,75	D80e-2	78,9	78,0	74,2
1,1	D80Mf-2	81,7	82,8	79,4
1,5	D90Sb-2	81,6	82,1	80,3
2,2	D90Lb-2	84,5	85,5	84,7
3,0	D100Lb-2	85,4	85,5	83,4
4,0	D100Lc-2	85,8	86,5	85,7
5,5	D112Me-2	87,9	87,9	86,2
7,5	D132Mc-2	89,5	89,2	87,4
11,0	D132Me-2	90,1	90,1	88,8
4-pole 50 Hz 400 V				
0,75	D80Mf-4	81,0	82,0	80,8
	D90Sb-4	81,8	82,6	81,3
1,1	D90Lb-4	83,1	83,7	82,1
1,5	D90Ld-4	83,7	84,7	83,5
2,2	D100Lc-4	85,8	86,5	85,4
3,0	D100L-4	86,5	87,1	86,1
4,0	D112M-4	88,3	88,5	87,2
5,5	D132Mb-4	88,9	89,4	88,5
7,5	D132Mc-4	88,7	89,1	88,3
11,0	D132M-4	89,8	90,3	89,6
6-pole 50 Hz 400 V				
1,5	D100Lc-6	81,9	82,3	80,0

Three-phase asynchronous with efficiency level IE3 2021 - 2023

P _N kW	Type	η % load		
		100	75	50
2-pole 50 Hz 400 V				
0,75	D80e-2	82,9	82,9	80,9
1,1	D80Mf-2	84,4	84,9	83,4
1,5	D90Sb-2	84,9	84,8	82,5
2,2	D90Lb-2	85,9	86,1	84,5
3,0	D100Lb-2	88,0	87,7	85,7
4,0	D100Ld-2	88,1	88,3	86,9
	D112M-2	89,4	89,0	88,7
5,5	D112Me-2	90,5	90,5	89,2
7,5	D132Mc-2	90,5	90,0	88,0
11,0	D132Me-2	92,3	92,1	90,7
4-pole 50 Hz 400 V				
0,75	D80Lh-4	82,7	82,1	78,9
	D90Lb-4	83,5	83,4	80,9
1,1	D90Ld-4	85,3	85,3	83,4
1,5	D100Lc-4	86,8	86,9	85,1
2,2	D100L-4	87,0	87,1	85,4
3,0	D112Mc-4	88,3	87,9	85,8
4,0	D112M-4	89,1	88,8	87,0
5,5	D132Mc-4	90,7	90,9	89,9
7,5	D132Md-4	90,9	90,8	89,4
6-pole 50 Hz 400 V				
0,75	D90Lc-6	79,1	77,8	73,5
1,1	D100Lc-6	83,1	82,2	78,8



3. Operating Conditions

Our energy-efficient drives are designed for the ambient conditions according to EN 60034-1 respectively EN 60204-1:

Ambient conditions	Requirement
Ambient temperatures	-15° up to +40 °C
Installation height	≤ 1000 m above sea level
Humidity	Up to 50% (at +40°) Up to 90% (at room temperature)

4. Description of Name Plate

On the name plate you can find informations like efficiency level, year of manufacture and part number

		Greiffenberger Antriebstechnik / www.abm — drives.com		
Made in Germany		D Mot	Nr	TNr 020022062
		VDE0530	IKL F	UT
Typ 4DF100L-4			C	IP 54
S 1	ETA 87,0	IE 3		
2,2	kW	230/400	V	50 Hz
Δ Y	8,0/4,6	A	cos 0,80	
1440				1/min
BREMSE	TS	Nm	V	A CB CA

Abbreviation	Unit	Designation	
Mot		D = three-phase motor	
Nr		Order number - serial number – balancing (F/H)	
TNr		ABM-part number (complies w. model number of VO 640/2009)	
IKL		Insulation class	
UT	°C	Maximum permissible ambient temperature (if contrary to standard)	
IP		Protection class	
Typ		ABM-Type	
LW		Delivery week and year (complies w. year of manufacture of VO 640/2009)	
		Operating mode – degree of efficiency – efficiency level	
	kW	Rated power output	
	V	Rated voltage	
	Hz	Rated input frequency	
		Connection (Delta / Star)	
	A	Rated current of motor	
		Cos-Phi of the motors	
	1/min	Rated speed at output shaft	
Bremse	TS	Nm	Braking torque (not for IE drives)
		V	Brake supply voltage (not for IE drives)
		A	Rated current of brake (not for IE drives)
CB	µF	Operating capacitor for single phase motor (not for IE drives)	
CA	µF	Starting capacitor for single phase motor (not for IE drives)	


Name plate for additional information on efficiency

TNr / PNr: 123456789		LW / DOP 49/02		
Wirkungsgrad / Efficiency in %				
	P_N	0,75 x P_N	0,50 x P_N	
50 Hz	86,5	86,5	86,5	IE2
60 Hz	86,5	86,5	86,5	IE2

5. Decommissioning and disposal

5.1. Decommissioning

- First, remove the electrical connections


 **Danger**

ELECTRIC SHOCK

Electrical parts are energized with hazardous voltage. When touching these parts you will get an electric shock. Death or severe injuries are the result.

- Any electrical work for the decommissioning must only be carried out by qualified specialists!
- Electrical work must only be carried out if the system is de-energised and secured against restart!

- For gear with oil filling: remove the lubricant
- Remove the drive from the machine
- Transport the drive to the work station prepared for the disassembly.
- Protect the drive and the components against falling when disassembling

 **Danger**

FALLING OBJECTS

Falling objects can cause severe injuries.

- Ensure secure fastening!

5.2. Recycling and disposal

Divide the components into the following category for recycling:

- Electronic scrap (e.g. circuit boards)
- Iron scrap (e.g. stator and rotor sheets)
- Aluminium (e.g. housing, rotor grouting)
- Copper (e.g. motor winding)
- Synthetics (e.g. insulation material, cables)

Dispose of the components in compliance with the national and local regulations or contact a waste disposal company. Dispose oil and grease of attached gears according to local regulations.

6. Addresses



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