



Drive technology 2027 | 2028

Motor overview

Nidec
AMEC



Nidec AMEC – Go everywhere

Nidec AMEC (Automotive Motors & Electronic Controls) is a core Business Unit within the Appliance Automotive Division (AAD) of Nidec Corporation. With revenues exceeding USD 2.2 billion and a global team of over 11,000 employees across 14 manufacturing facilities, AMEC plays a pivotal role in shaping the future of mobility. AMEC designs and delivers advanced solutions for the automotive industry, including motors for steering, brake, comfort, oil and water pumps and belt start generators. These technologies are essential to advancing vehicle safety, environmental performance, and driving comfort, empowering automakers worldwide to meet the demands of a rapidly evolving market.

Our Comfort solutions are dedicated to the silent, seamless technologies that create a first-class journey for every passenger. From the smooth motion of windows and roof systems to precise seat adjustments, automatic tailgates, and even spoiler and towbar actuation, Nidec AMEC designs and manufactures the high-precision motors for a range of comfort applications. Silent motor performance is key to enhancing the driving experience, especially critical in electric vehicles, where our technology helps maintain a quiet and premium cabin environment.



Nidec in facts

Nidec Corporation	Turnover 2024 \$17.1 bn
Employees	over 100,000 globally
Nidec AMEC	Turnover 2024 \$2.2 bn
Employees	over 11,000 globally

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Nidec AMEC – Platform Comfort



Our focus: powerful, optimally designed electric motors with a compact design that can be used in a wide range of target industries. As a manufacturing and technology center, the Bietigheim-Bissingen site can look back on over 100 years of company history and thus on comprehensive expertise and many years of experience. We achieve individual solutions and the highest quality standards through our high-performance, fully automated production lines with 100% final testing, thus ensuring the efficiency and safety of our motors for our customers' applications.

Our development team designs motors and gearboxes according to customer-specific requirements, which we put through their paces in our own test centers and laboratories. Our in-house

sample and prototype construction makes us particularly flexible. Strong development for the highest product quality Safety and reliable performance are also ensured by the high standards of the automotive industry ISO 9001, ISO TS 16949, ISO 14001, and ISO 5001, as well as our 100% automatic testing. This is one of the reasons why our motors are characterized by smooth running, long service life, robust construction, and electrical safety thanks to low voltage.

Nidec AMEC Test Center and Laboratory

- Noise and vibration measuring
- 3D measurement
- EMC measuring room
- Service life test center with climate chambers

Areas of application

Direct current motors without transmission

- Seat and furniture adjustment
- Logistics automation
- Office machines
- Bed adjustment



Motors with spur gear transmission

- Roller shutter motors / building technology
- Spoiler adjustments
- Trailer adjustments
- Curtain adjustments
- Medical devices



Motors with worm gear transmission (special solutions)

- Door motors
- Seat adjustments / furniture adjustments
- Antenna adjustment systems (SAT system)
- Laboratory devices
- Rehabilitation equipment (patient lifts)
- Window adjustment systems



Motors with worm gear transmission

- Coffee machines / vending machines
- Garage door motors
- Central lubrication units
- Stair lifts
- Barriers and traffic systems
- Solarpanel adjustments



Technical explanations

Changes and mistakes, also of a technical nature, are reserved. Please only use the quotation drawings as the construction basis for this reason. You receive this from your responsible representative. Some of the images in the catalogue do not comply with the DIN regulations! The indicated operating parameters refer to an ambient temperature of 20°C.

The motors included in the catalogue are not intended for the end consumer. In accordance with EU directives, these products do not require a CE Mark. Some motors could be customerspecific in design, and for this reason, are only available to be delivered under reservation and upon request.

Terms, symbols and units in accordance with DIN

Symbols	Symbols / Example / Explanation
Art. no.	404 854
Nominal voltage	V (U_n)
Max. torque	Nm _{max}
Idle speed	N ₀ [min ⁻¹] U/min
Nominal power	W (P_n)
Nominal current	A (I_n)
Noload current	A (I_0)
Max. power	A (I_{max})
Hall sensors	N = no hall sensor / 1 = single hall sensor / 2 = dual hall sensor
Reduction	Transmission gear reduction in ratio
Gearwheel material	P = plastic / M = Metal
Thermal switch	Y = Yes / N = No
Interference suppression	Y = Yes / N = No
Transmission housing	lh = left transmission housing / rh = right transmission housing
Characteristic curve	Characteristic curve in accordance with quotation drawing
Shaft	Shaft drawing in accordance with quotation drawing
Electric power connection	Electrical contacts in accordance with quotation drawing

Please note that you can find detailed information on our quotation drawings.



Rotation direction
when looking at
the motor shaft

The characteristic curve shows the rotation speed and the power depending on the torque. It entails medium values at room temperature. Deviations of $\pm 10\%$ are possible in the series.



left



right

Preferred rotation direction:

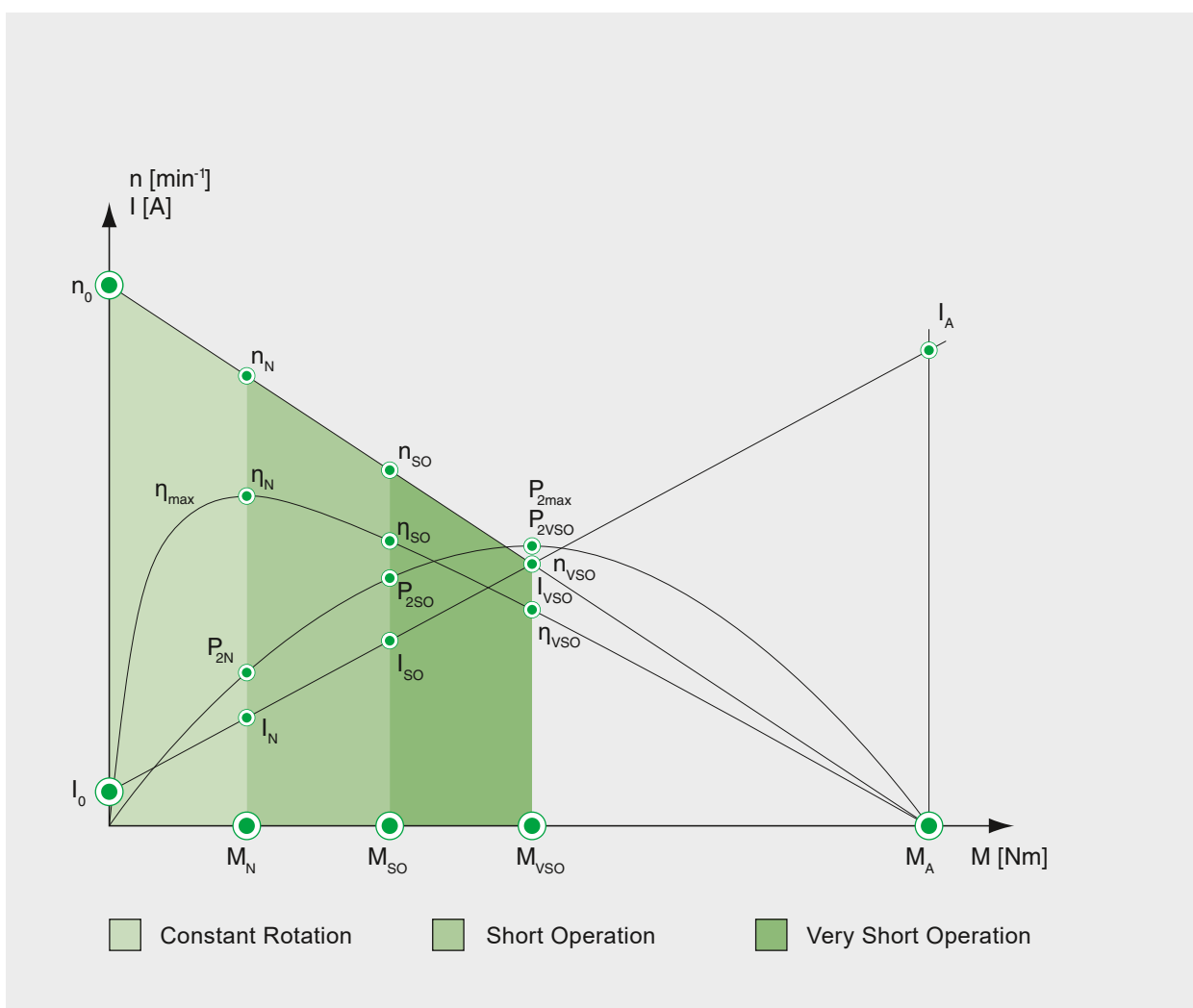
Motors with worm gear transmission have a preferred rotation direction that is illustrated with a large arrow in the drawings. If the motor turns in the opposite direction of the preferred rotation direction, the power output falls by approximately 10%.

Characteristic curves

CR	Constant Rotation
SO	Short Operation
VSO	Very Short Operation
P	Power output in Watt
P_{2N}	Nominal power output in Watt
P_{2max}	Maximum power output in Watt
P_{2SO}	Power output in short operation in Watt
P_{2VSO}	Power output in very short operation in Watt
M	Torque in Nm
M_A	Starting torque in Nm
M_N	Nominal output torque in Nm
M_{SO}	Output torque in short operation in Nm
M_{VSO}	Output torque in very short operation in Nm
n	Rotation speed in min ⁻¹

n_0	Idle speed in min ⁻¹
n_N	Nominal rotation speed in min ⁻¹
n_{SO}	Rotation speed in short operation in min ⁻¹
n_{VSO}	Rotation speed in very short operation min ⁻¹
I	Current in A
I_0	Noload current in A
I_A	Starting current in A
I_N	Nominal current in A
I_{SO}	Current in short operation in A
I_{VSO}	Current in very short operation in A
η	Efficiency in %
η_N	Nominal efficiency in %
η_{SO}	Efficiency in short operation in %
η_{VSO}	Efficiency in very short operation in %

Working area



DIRECT CURRENT MOTORS WITHOUT TRANSMISSION

GMK-GMM

As 12volt and 24volt motor with Interference suppression and hall sensors



Technical description

Motor housing	deep drawn and corrosion protection
Magnetic field	Permanent magnet
Type of transmission	—
Transmission housing	—
Gearwheel material	—
Transmission lubrication	—
Mechanical interface	Drive shaft
Electrical interface	Stranded wires with plug
Sensor	—
Thermal protection	Optional
Interference suppression	Optional

Applications

Industry

Linear drives

Automobile

Electric torque management,
automated manual transmission

DIRECT CURRENT MOTORS WITHOUT TRANSMISSION

CM3 - 4

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel, rolled and corrosion protection
Magnetic field	Permanent magnet
Type of transmission	—
Transmission housing	—
Gearwheel material	—
Transmission lubrication	—
Mechanical interface	Drive shaft
Electrical interface	Plug or stranded wires
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

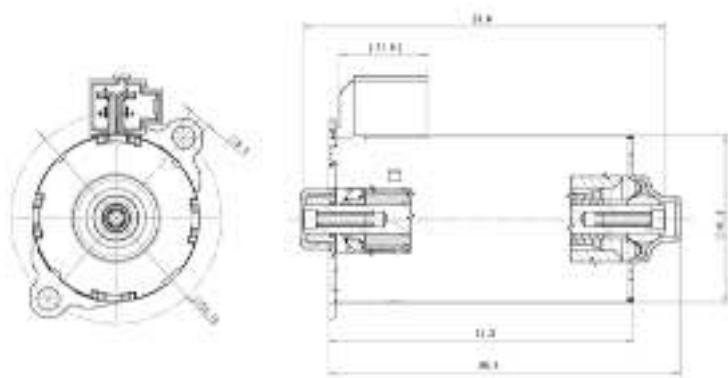
Industry

Linear drives, mechanical engineering

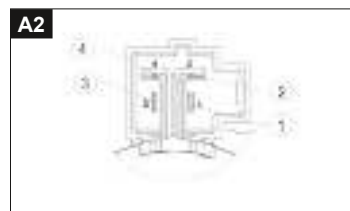
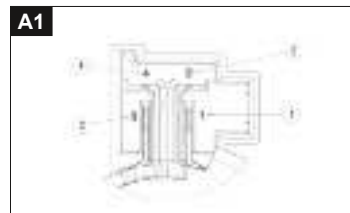
Automobile

Longitudinal seat adjustment

CM3-4 405 942 / 405 975 / 405 896



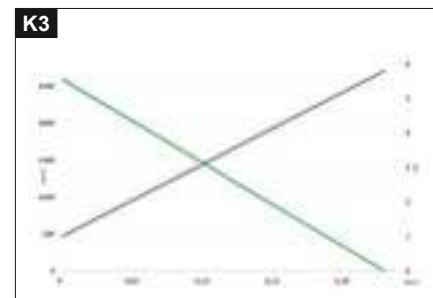
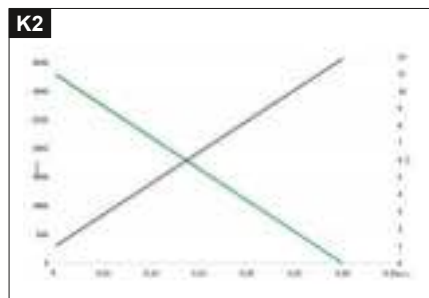
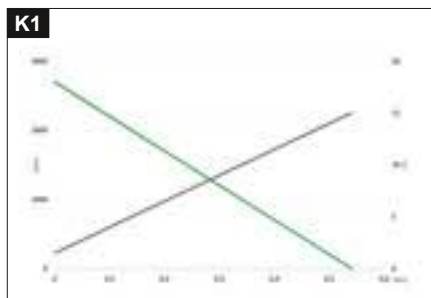
Connections



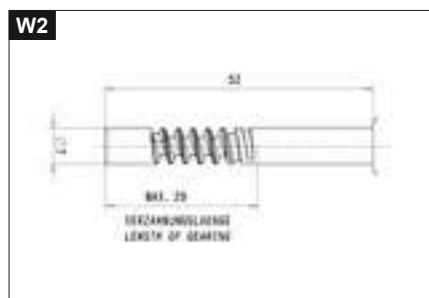
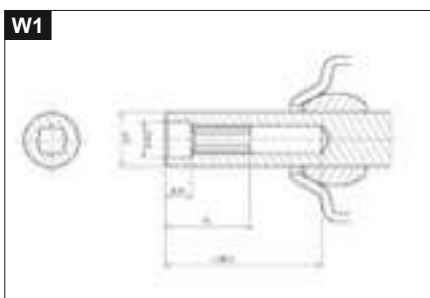
Overview

Type		Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
		V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
405 942	CM4	12,0	0,5	2700,0	36,0	3,0	1,5	15,0	1	--	--	N	Y	---	K1	W1	A1
405 975	CM3	12,0	0,3	3300,0	60,0	5,0	1,0	11,9	1	--	--	N	Y	---	K2	W1	A2
405 896	CM3	12,0	0,2	2600,0	43,2	3,6	1,0	5,8	2	--	--	N	Y	---	K3	W2	A1

Characteristic curves



Shafts



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MOTORS WITH SPUR GEAR TRANSMISSION

GMAG

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Galvanised sheet steel
Magnetic field	Permanent magnet
Type of transmission	SPUR gear transmission
Transmission housing	Plastic
Gearwheel material	Plastic (P); Metal (M)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Stranded wires with blade receptacles or tinplated stranded wires
Sensor	Optional
Thermal protection	–
Interference suppression	Optional

Applications

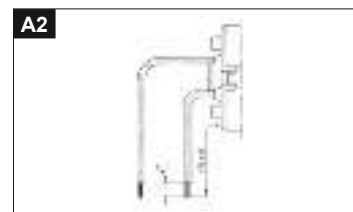
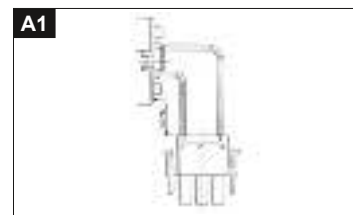
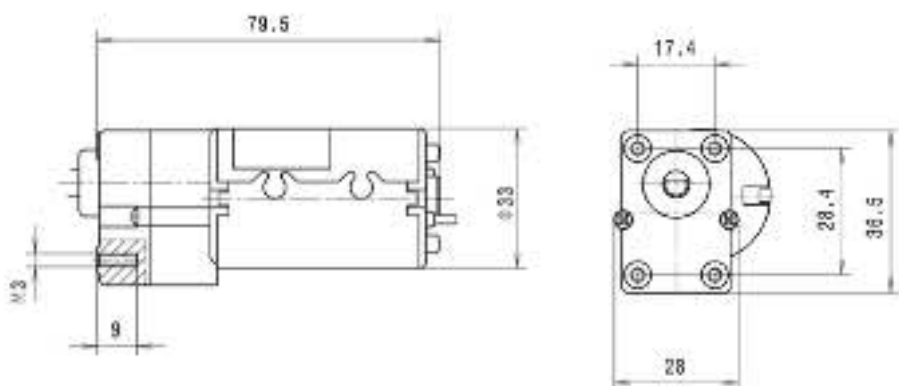
Industry

Linear drives, general mechanical engineering, medical technology

Automobile

Spoiler adjustment

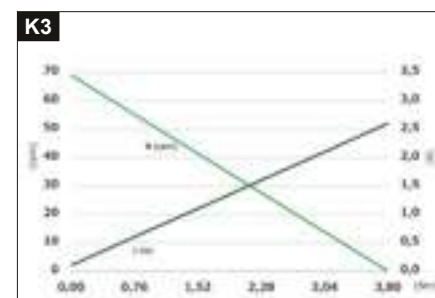
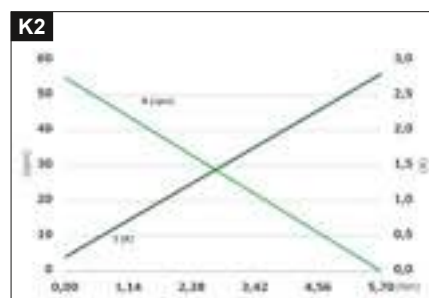
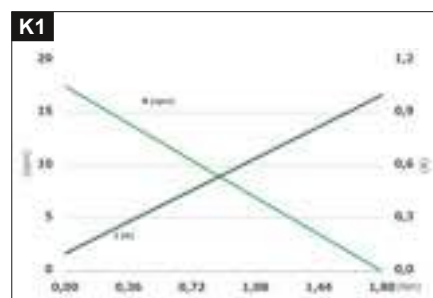
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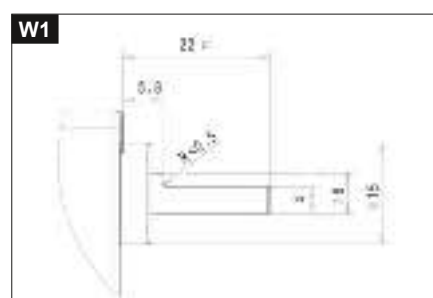
Overview

Type	Nominal voltage V	Max. torque Nm	Idle speed min ⁻¹	Nominal power W	Nominal current A	No-load current A	Max. current A	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
402 757	12,0	1,8	17,5	2,2	0,2	0,1	1,0	N	109:1	---	N	Y	---	K1	W1	A1
402 781	24,0	5,7	55,0	7,8	0,3	0,2	2,8	N	109:1	---	N	Y	---	K2	W1	A2
404 327	24,0	3,8	69,0	10,7	0,4	0,1	2,6	N	109:1	---	N	Y	---	K3	W1	A3

Characteristic curves



Shafts



MOTORS WITH SPUR GEAR TRANSMISSION

GMPI

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel, rolled protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Spur gear transmission
Transmission housing	Plastic
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Plug or stranded wires with plug
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

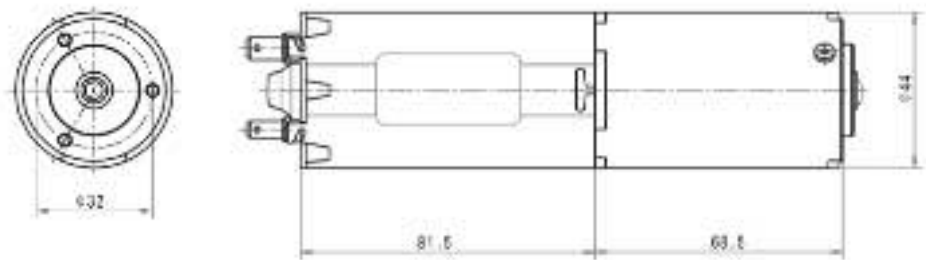
Industry

Linear drives,
building technology

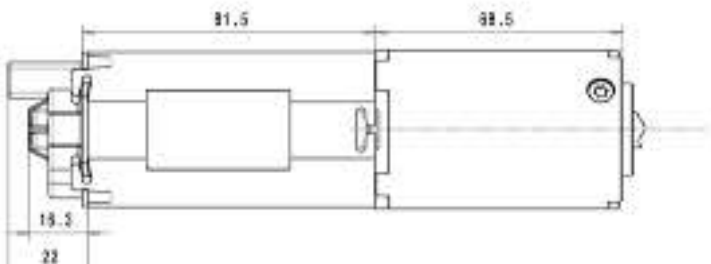
Automobile

Rear spoiler adjustment

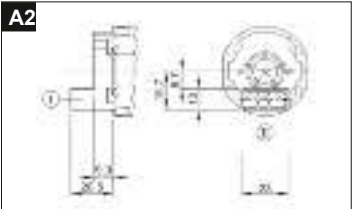
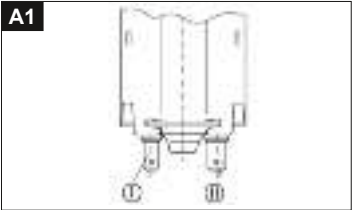
A1



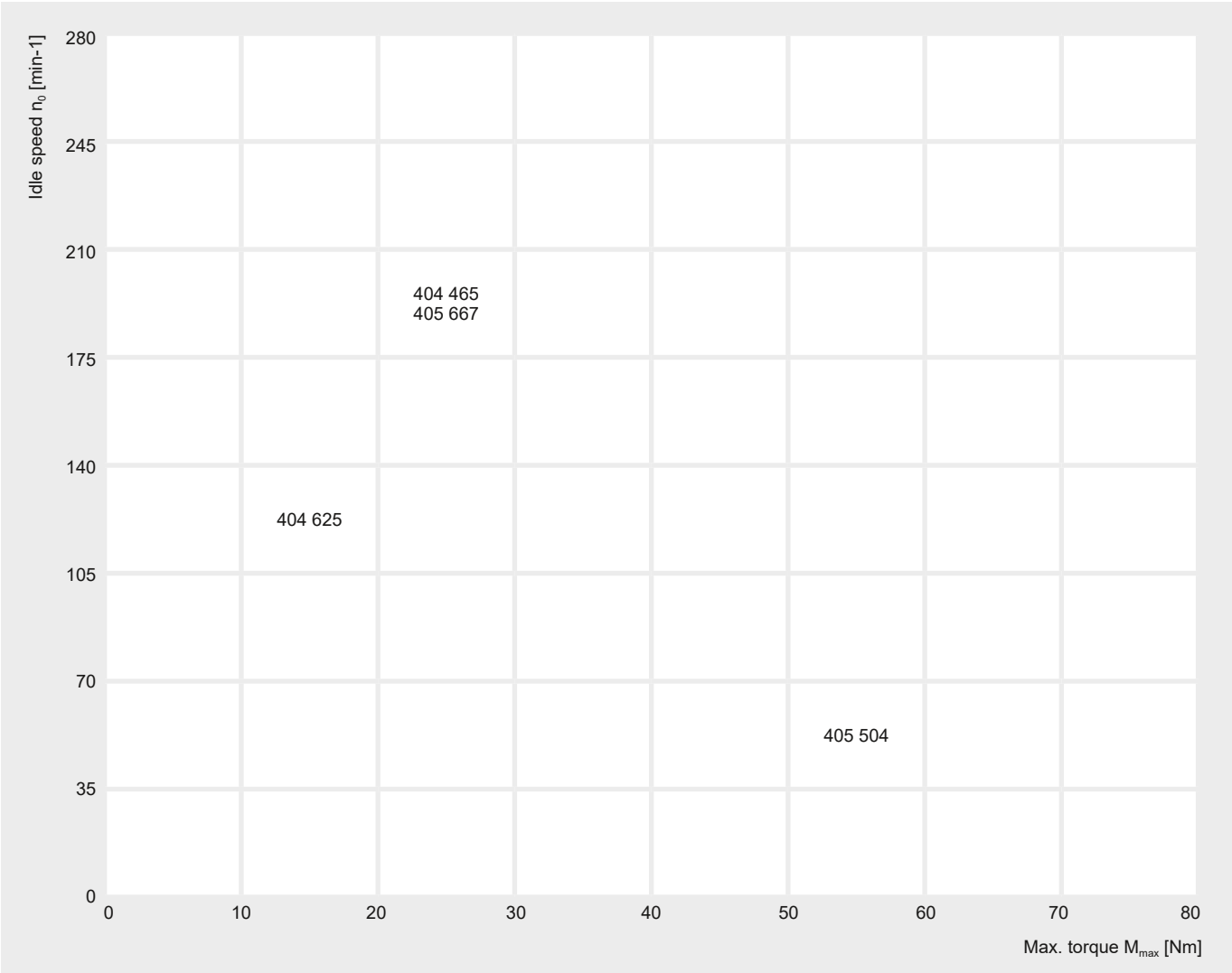
A2



Connections



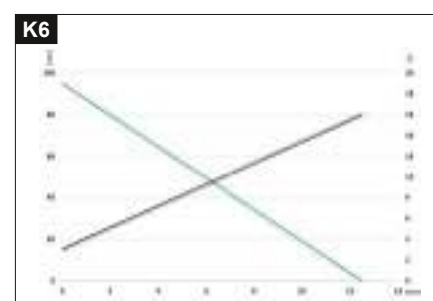
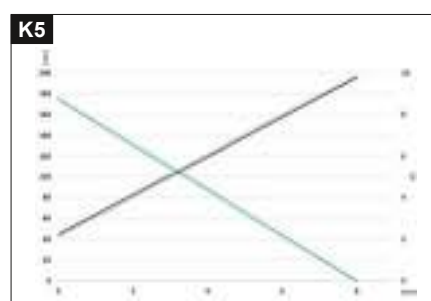
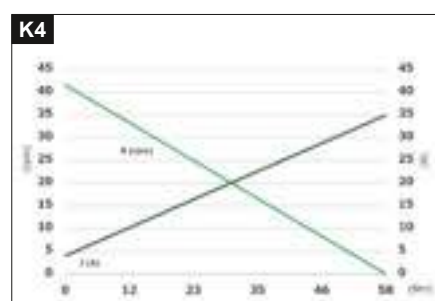
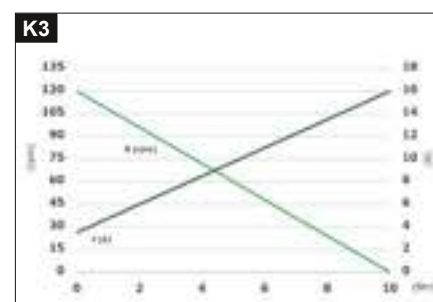
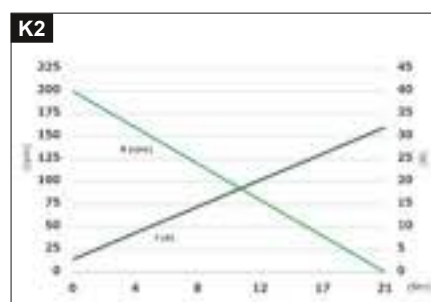
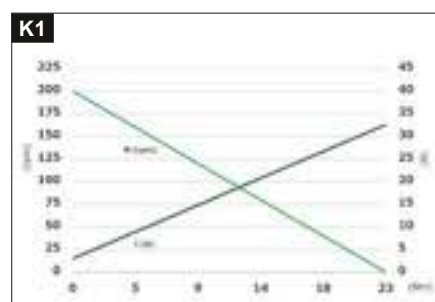
Product matrix



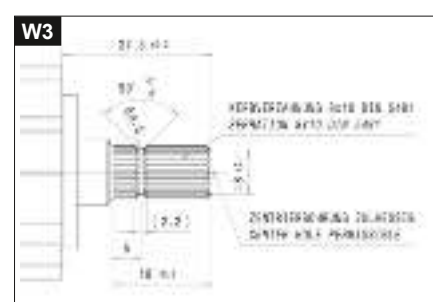
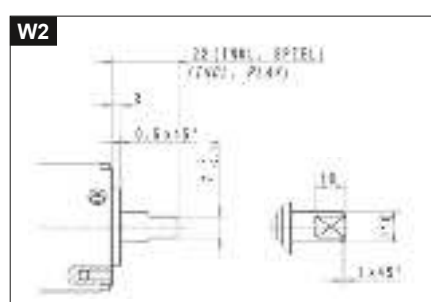
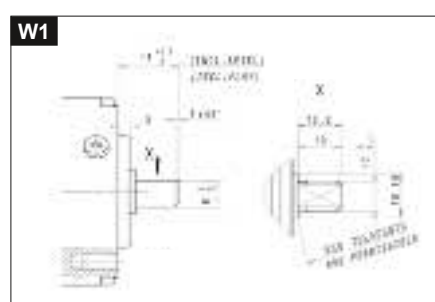
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 465	24,0	22,8	200,0	160,8	6,7	3,0	32,6	N	40:1	P	N	Y	---	K1	W1	A1
404 625	12,0	10,2	120,0	57,5	4,3	3,5	16,1	N	40:1	P	Y	Y	---	K3	W1	A1
405 504	12,0	58,0	41,7	120,0	10,0	4,0	34,9	1	116:1	P	N	Y	---	K4	W3	A2
405 533	24,0	4,0	175,0	101,0	4,2	2,2	5,9	N	21:1	P	N	Y	---	K5	W2	A2
405 536	12,0	12,5	95,0	54,0	4,5	3,0	16,0	2	40:1	P	N	Y	---	K6	W2	A2
405 667	24,0	20,7	200,0	168,0	7,0	2,8	32,0	N	40:1	P	N	Y	---	K2	W2	A1

Characteristic curves



Shafts



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MOTORS WITH WORM GEAR TRANSMISSION

CM3G

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel, rolled protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Worm gear transmission
Transmission housing	Plastic
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Steel worm gear
Electrical interface	Plug
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

Industry

Building technology,
Adjust table height

Automobile

Adjust seat height and
incline,
Adjustable sunroof

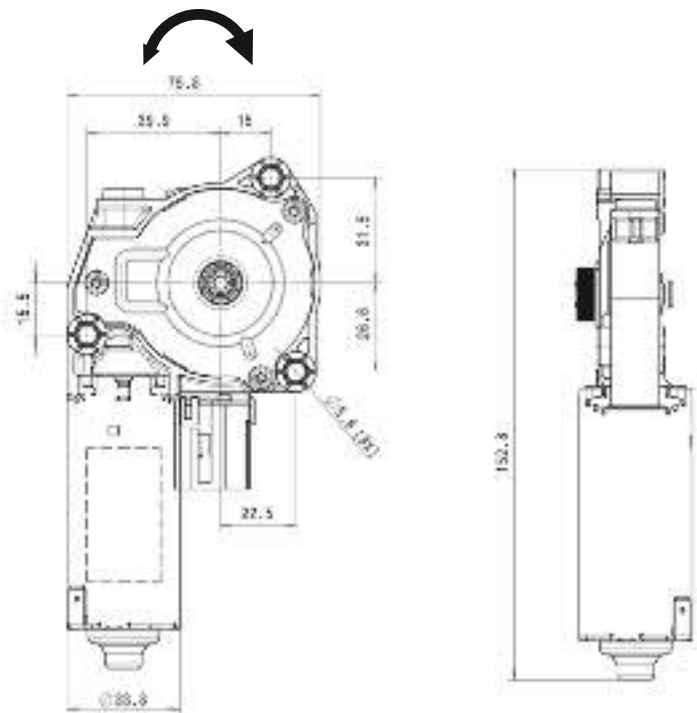
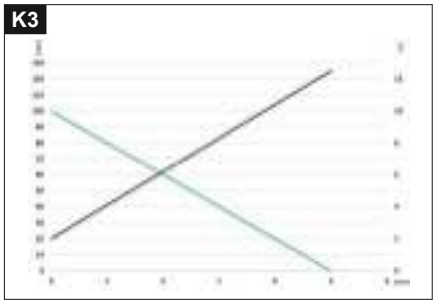
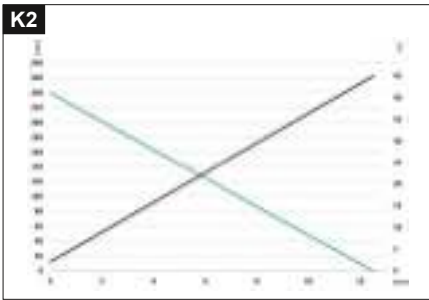
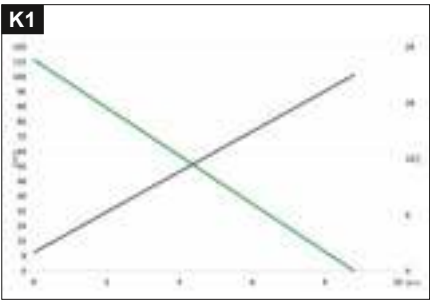


Image shows the transmission design on the right

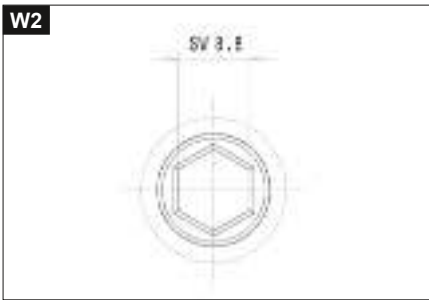
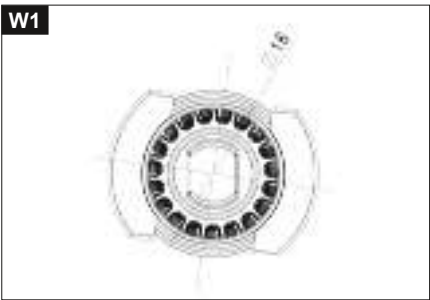
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
405 884	12,0	8,8	113,0	72,0	6,0	2,0	21,0	2	72:2	P	N	Y	lh	K1	W1	A1
406 314	24,0	12,5	240,0	216,0	9,0	2,0	45,0	2	37:1	P	N	Y	rh	K2	W2	A2
406 334	12,0	5,0	100,0	72,0	6,0	2,0	12,5	1	37:1	P	N	Y	rh	K3	W2	A2

Characteristic curves



Shafts



MOTORS WITH WORM GEAR TRANSMISSION

GMPD

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel, rolled protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Combination transmission: Worm gear and Spur gears
Transmission housing	Plastic
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interfaces	Profiled hollow shaft
Electrical interface	Plugs or stranded wires with plug
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

Industry
Mechanical engineering
Automobile
Mechanical engineering

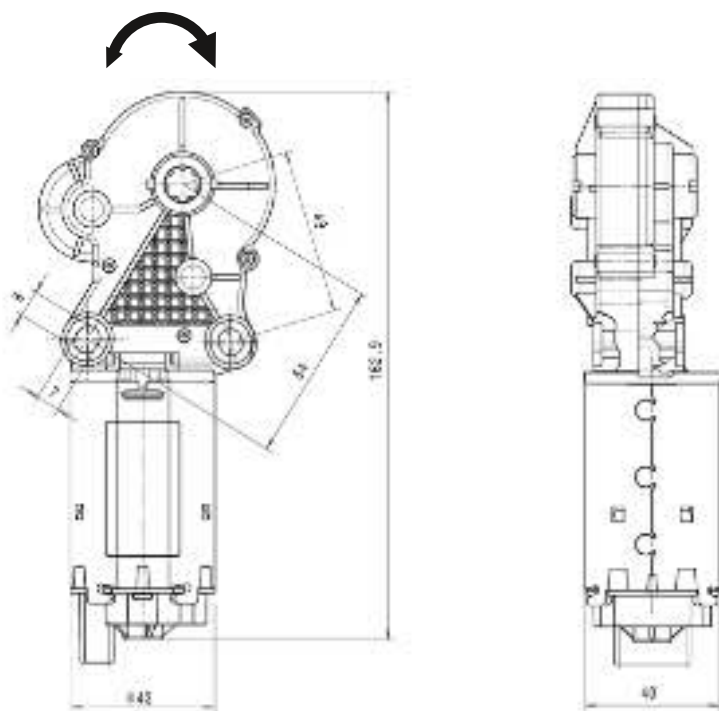
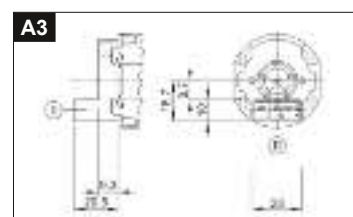
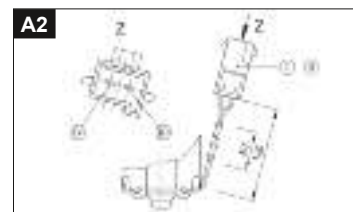
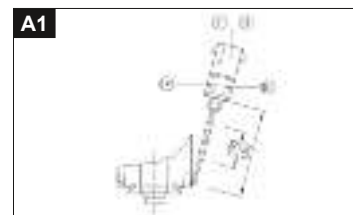


Image shows the transmission design on the right

Connections



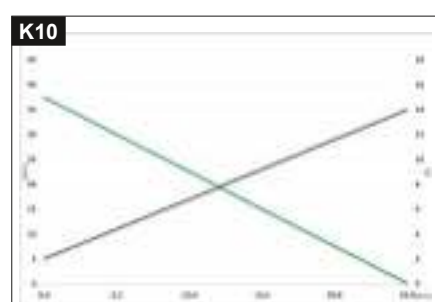
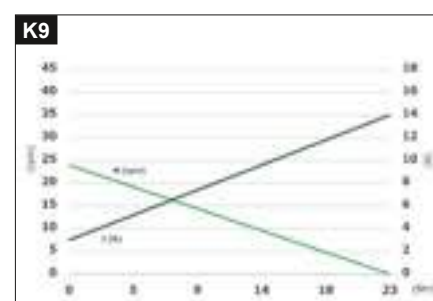
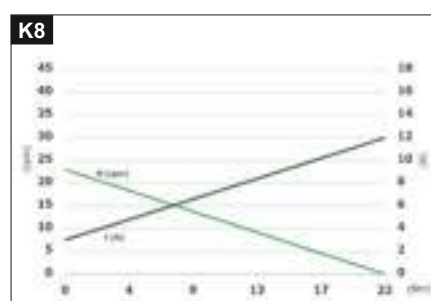
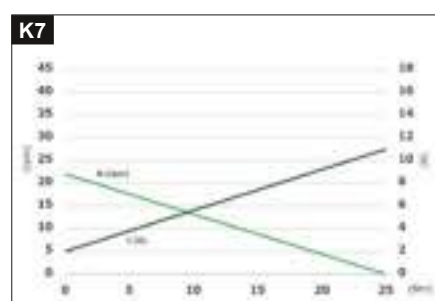
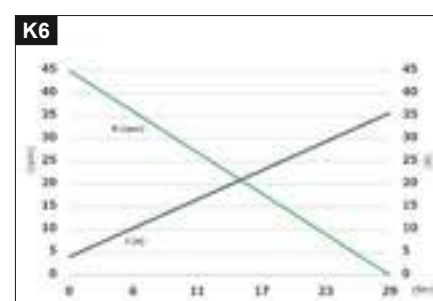
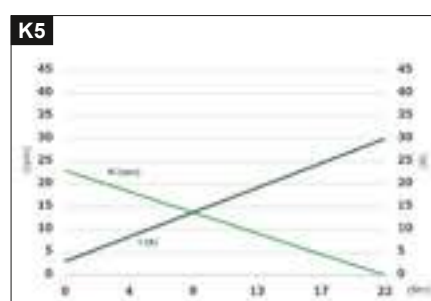
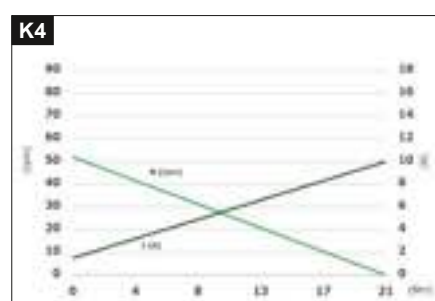
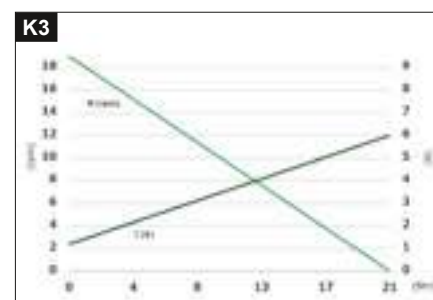
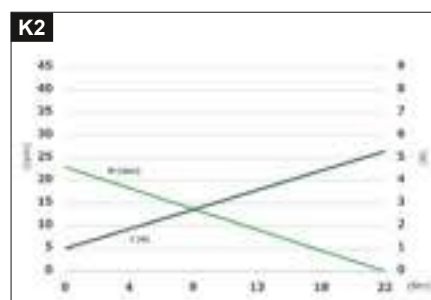
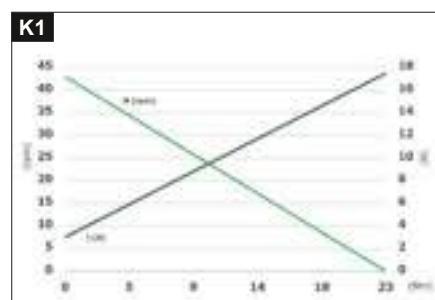
Product matrix



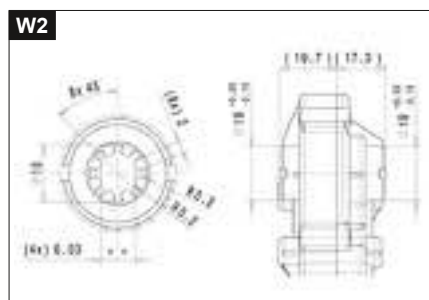
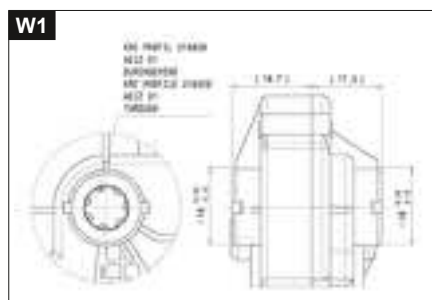
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 682	24,0	40,0	43,0	113,0	4,7	3,0	17,5	N	210:1	P	N	Y	---	K1	W1	A1
404 980	12,0	28,6	45,0	91,6	8,3	4,0	35,7	N	210:1	P	N	Y	---	K6	W1	A3
405 030	12,0	25,0	22,0	42,3	3,3	2,0	11,0	1	155:1	P	Y	Y	---	K7	W2	A3
405 228	24,0	21,0	19,0	44,6	1,9	1,2	6,0	N	246:1	P	Y	Y	---	K3	W1	A2
405 794	24,0	21,0	52,0	37,1	1,5	1,5	10,0	2	87:1	P	N	Y	---	K4	W1	A3
405 968	12,0	23,0	24,0	40,4	3,4	3,0	12,3	N	210:1	P	Y	Y	---	K8	W2	A3
406 182	12,0	21,5	23,0	42,8	3,3	3,0	11,9	1	210:1	P	Y	Y	---	K8	W1	A3
406 185	12,0	21,5	23,0	88,2	6,8	3,0	29,4	1	210:1	P	Y	Y	---	K5	W1	A3
406 187	12,0	21,5	23,0	42,8	3,3	3,0	11,9	1	210:1	P	Y	Y	---	K8	W1	A3
406 188	12,0	23,0	24,0	45,0	3,8	3,0	14,0	1	210:1	P	Y	Y	---	K9	W1	A3
406 317	24,0	26,0	37,0	96,0	4,0	2,0	14,0	N	157,5:1	P	N	Y	---	K10	W1	A1
406 340	24,0	22,0	23,0	36,3	1,3	1,0	5,3	N	210:1	P	Y	Y	---	K2	W1	A1

Characteristic curves



Shafts



MOTORS WITH WORM GEAR TRANSMISSION

GMPG

As 12-volt and 24-volt motor with Interference suppression
and hall sensors



Technical description

Motor housing	Sheet steel, rolled and corrosion protection
Magnetic field	Permanent magnet
Type of transmission	Worm gear transmission
Transmission housing	Zinc die casting
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Plug
Sensor	optional
Thermal protection	optional
Interference suppression	optional

Applications

Industry

machines for gastronomy,
office machines,
furniture adjustment,
mechanical engineering

Automobile

Adjustable sunroof

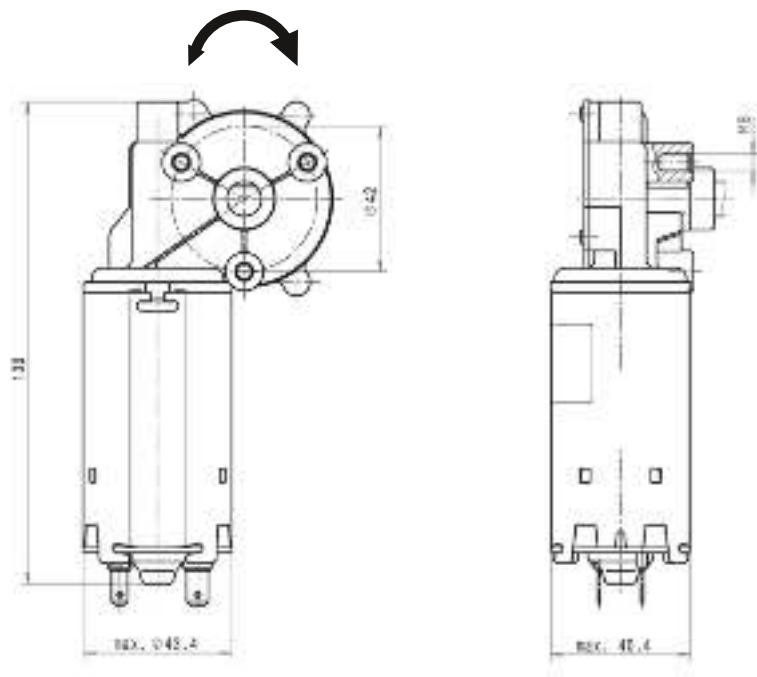
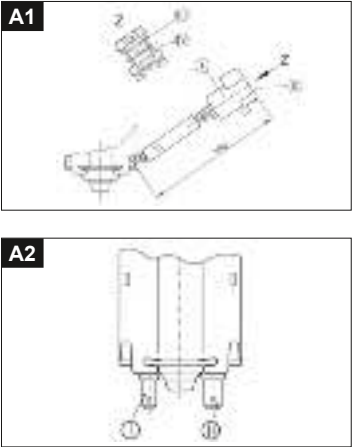
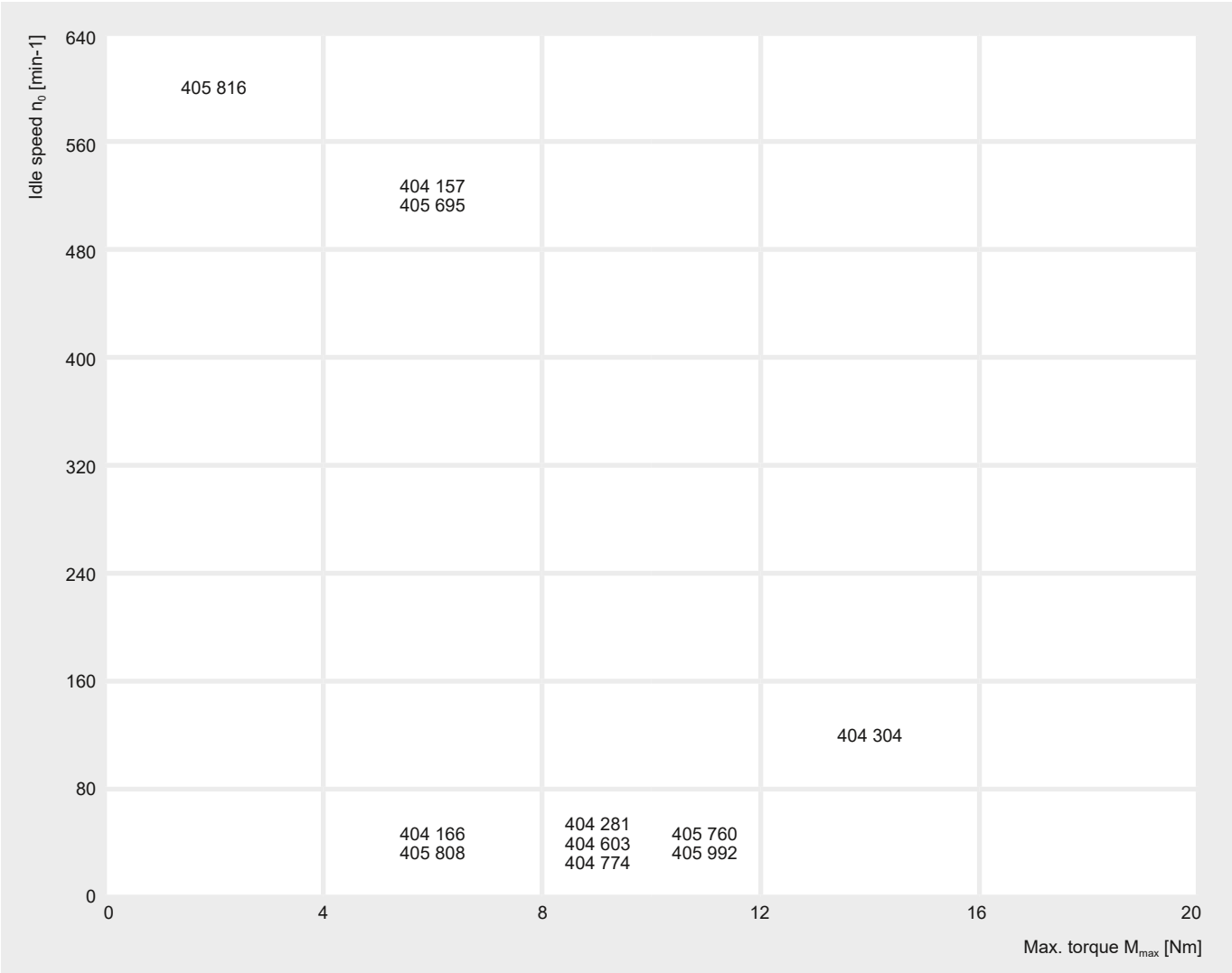


Image shows the transmission design on the right

Connections



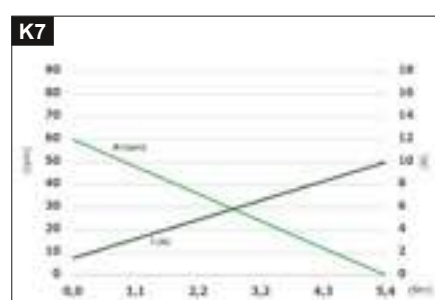
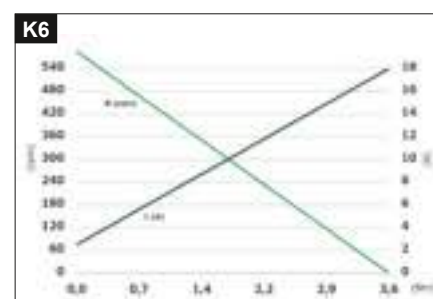
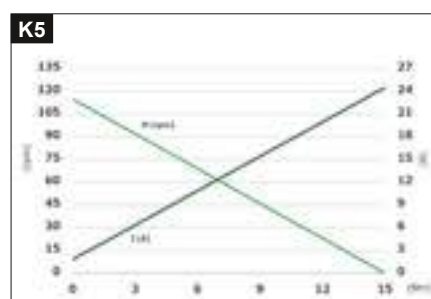
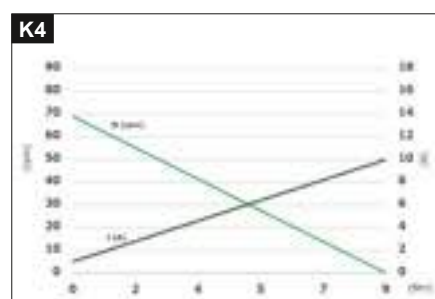
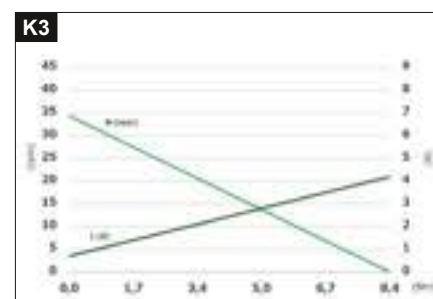
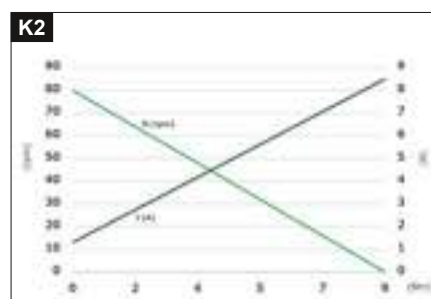
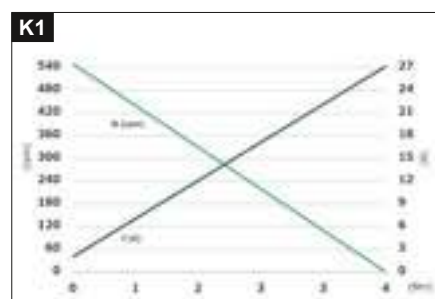
Product matrix



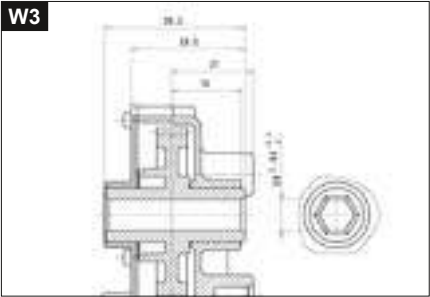
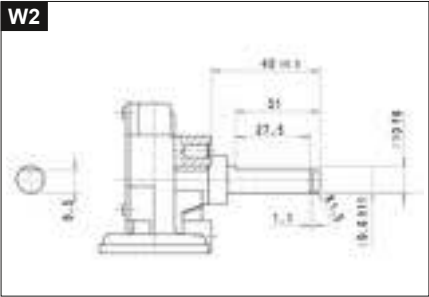
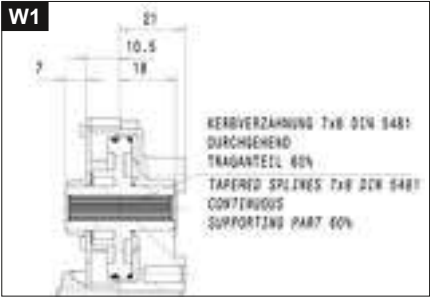
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 157	24,0	4,2	550,0	145,0	6,0	2,0	27,2	N	56:4	P	Y	Y	lh	K1	W1	A3
404 166	12,0	5,4	60,0	27,6	2,3	0,8	8,4	N	62:1	P	N	N	lh	K7	W1	A3
404 281	24,0	9,1	69,0	55,5	2,3	1,0	10,1	N	62:1	P	N	Y	rh	K4	W1	A3
404 304	24,0	15,0	115,0	130,0	5,4	1,8	24,5	N	62:1	P	N	Y	rh	K5	W1	A3
404 603	24,0	9,0	80,0	61,0	2,5	1,3	8,5	N	62:1	P	Y	Y	rh	K2	W2	A3
404 774	24,0	8,4	34,4	28,3	1,2	0,7	4,2	N	72:1	P	N	Y	lh	K3	W3	A3
405 695	24,0	4,1	550,0	166,5	6,9	2,0	26,5	N	56:4	P	Y	Y	rh	K1	W1	A3
405 760	24,0	9,0	80,0	61,0	3,0	1,3	9,0	2	62:1	P	Y	Y	rh	K2	W2	A3
405 808	12,0	5,3	60,0	29,5	2,5	1,5	10,1	N	62:1	P	N	Y	lh	K7	W1	A3
405 816	24,0	3,6	585,0	153,0	6,4	2,5	18,0	N	56:4	P	Y	Y	lh	K6	W1	A3
405 992	24,0	9,0	34,0	27,4	1,1	0,7	4,3	N	72:1	P	N	Y	rh	K3	W3	A3

Characteristic curves



Shafts



MOTORS WITH WORM GEAR TRANSMISSION

DCCK31

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel rolled and protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Worm gear transmission
Transmission housing	Zinc die casting
Gearwheel material	Plastic (P); Metal (M)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Plug
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

Industry

Garage door and door opener, pumps, lubricating technology, household devices, linear drives

Automobile

Tailgate adjustment
Roller shutter drive

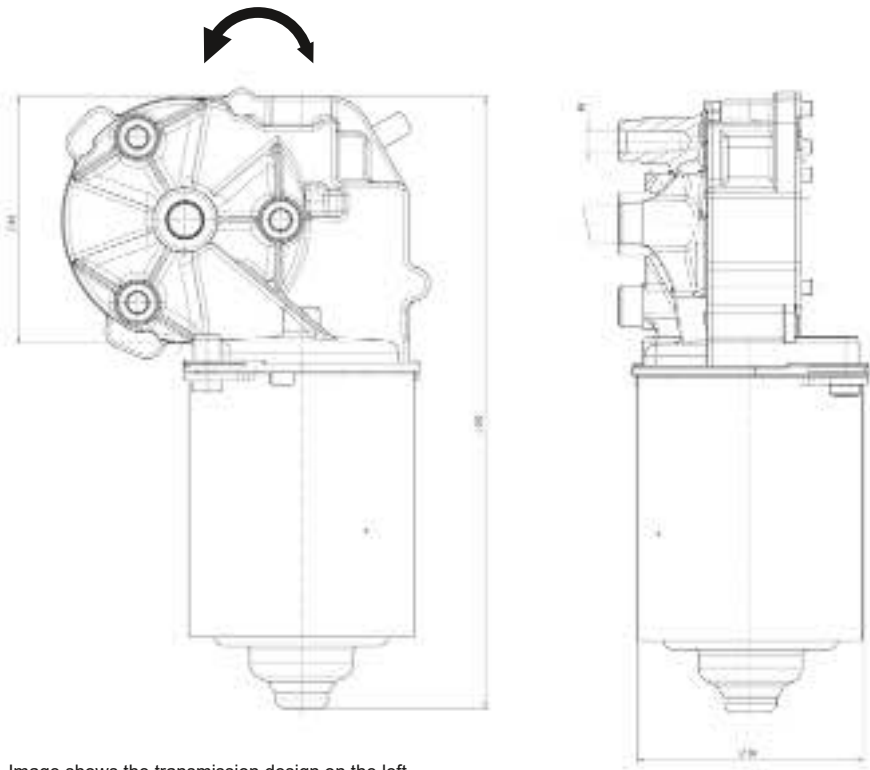
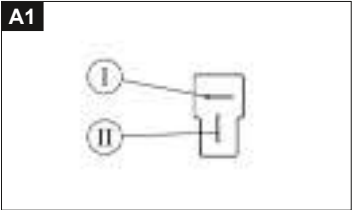
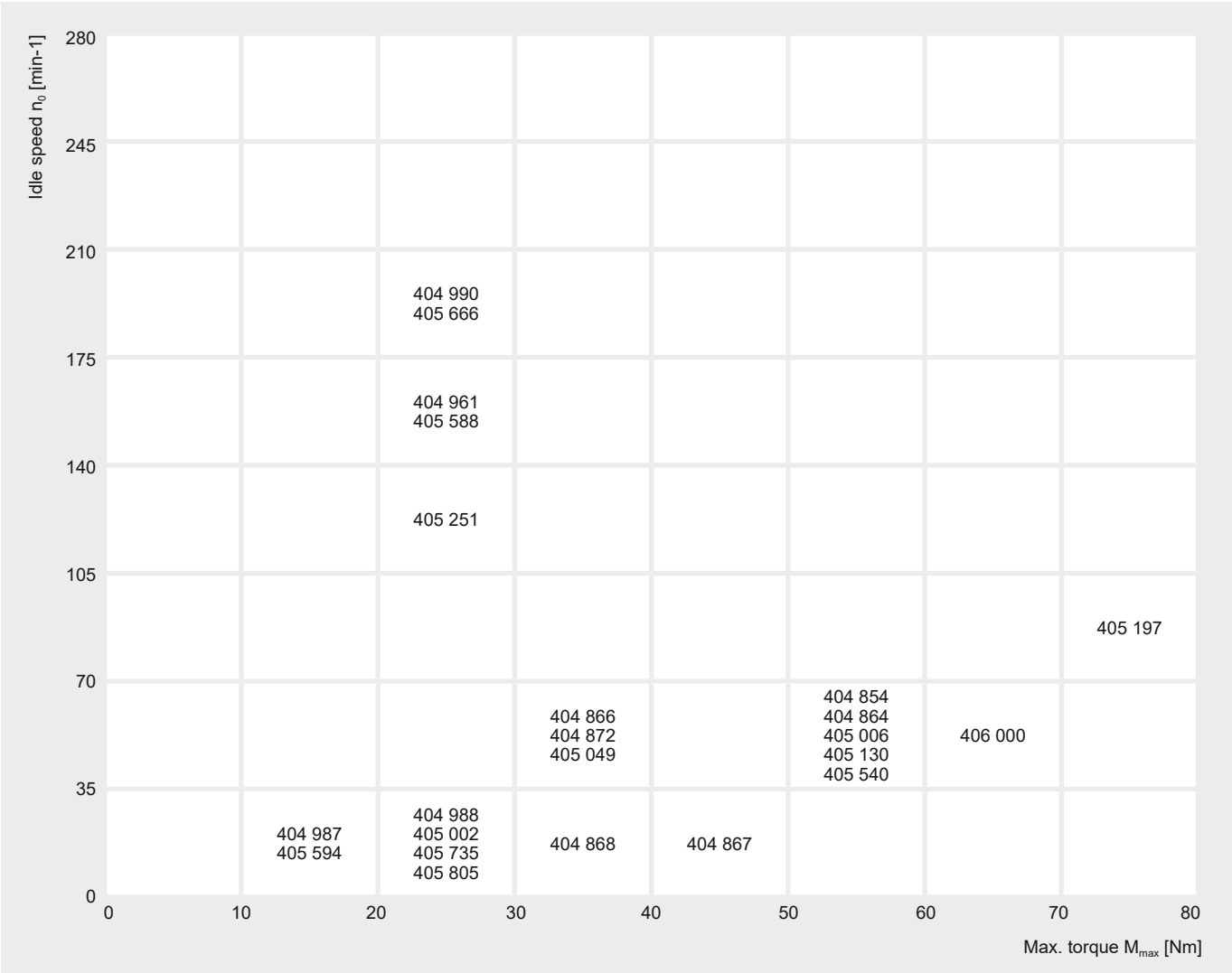


Image shows the transmission design on the left

Connections



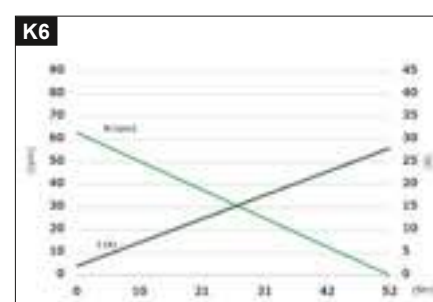
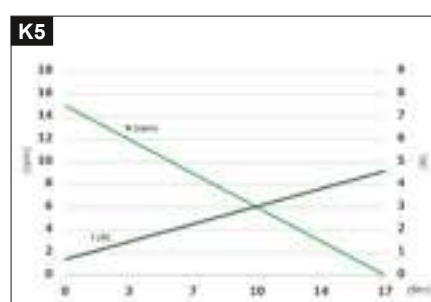
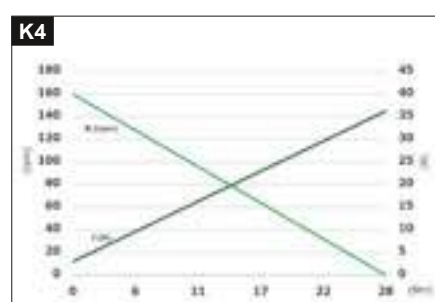
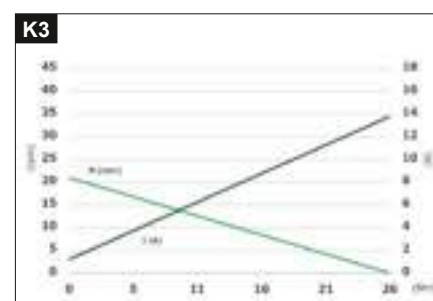
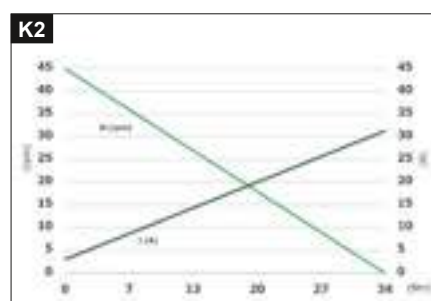
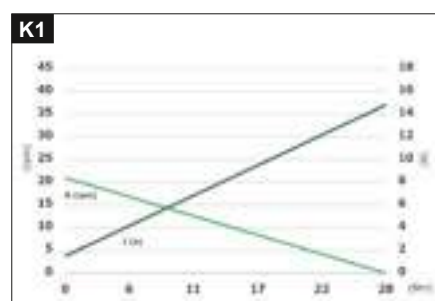
Product matrix



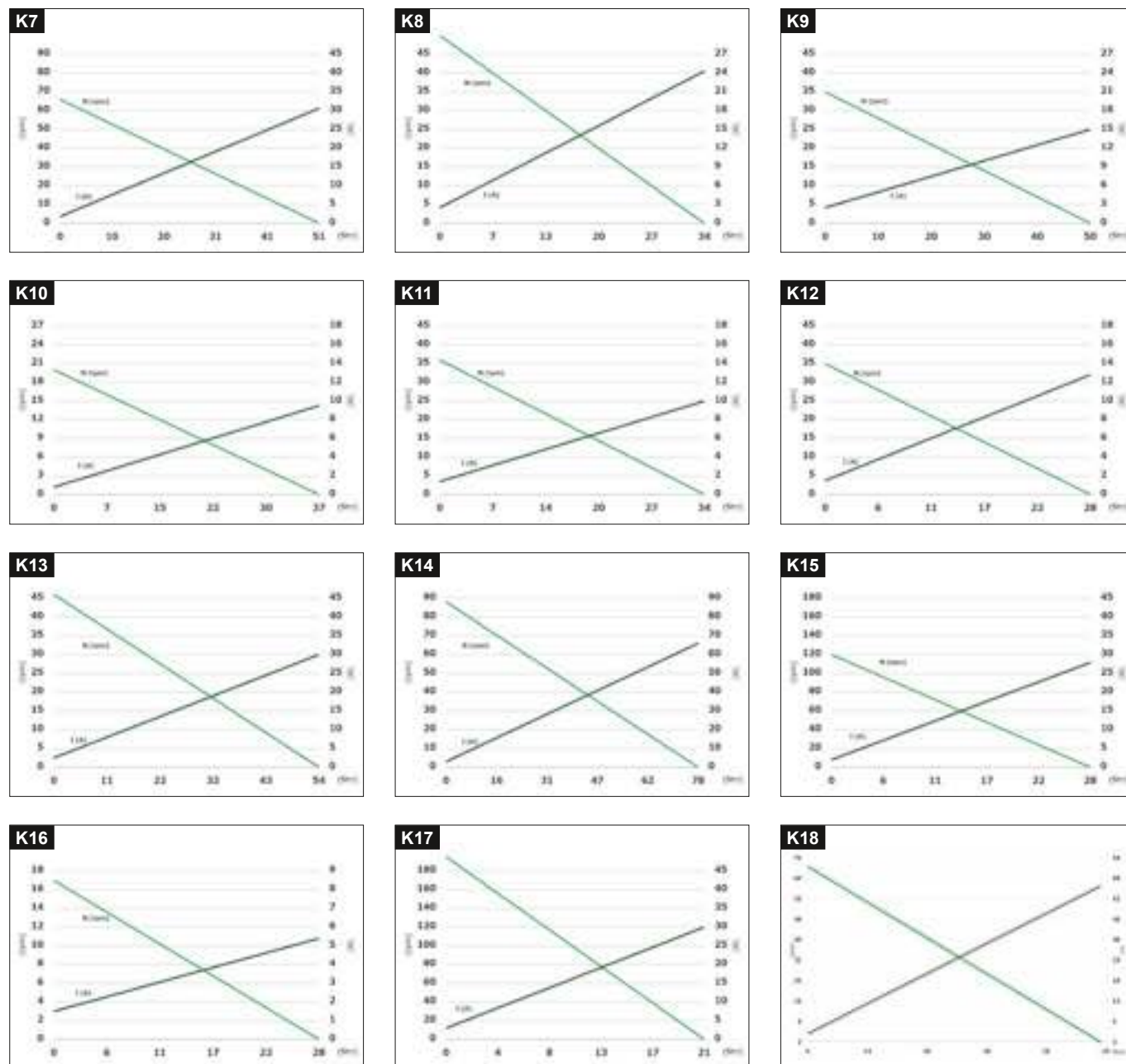
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 854	24,0	52,0	63,0	74,0	3,1	2,0	28,1	1	69:1	P	N	Y	lh	K6	W1	A1
404 864	24,0	51,1	66,0	75,0	3,1	1,8	30,6	N	69:1	P	N	Y	rh	K7	W2	A1
404 866	24,0	33,7	50,0	139,0	7,7	2,5	24,3	N	69:1	P	N	Y	rh	K8	W3	A1
404 867	24,0	49,9	35,0	65,0	2,7	2,5	14,8	N	69:1	P	N	Y	rh	K9	W4	A1
404 868	24,0	37,0	20,0	32,2	1,3	0,8	9,5	N	69:1	P	N	Y	rh	K10	W5	A1
404 872	24,0	34,0	36,0	36,0	1,5	1,4	10,0	N	69:1	P	Y	Y	lh	K11	W6	A1
404 961	24,0	28,0	160,0	92,0	3,8	3,0	36,3	2	53:2	P	N	Y	lh	K4	W7	A1
404 987	24,0	17,0	15,0	31,0	1,3	0,7	4,6	2	78:1	M	N	Y	rh	K5	W8	A1
404 988	24,0	28,0	35,0	55,0	2,3	1,5	12,8	2	69:1	P	N	Y	rh	K12	W9	A1
404 990	24,0	21,0	195,0	160,0	6,7	3,0	30,0	2	53:2	P	N	Y	rh	K17	W10	A1
405 002	12,0	28,0	21,0	25,1	2,1	1,5	14,8	N	69:1	P	N	Y	rh	K1	W5	A1
405 006	24,0	52,3	63,0	74,0	3,1	2,2	28,0	2	69:1	P	N	Y	lh	K6	W11	A1
405 049	12,0	33,5	45,0	79,0	6,6	3,0	31,3	N	69:1	P	N	Y	rh	K2	W1	A1
405 130	24,0	54,0	46,0	102,0	4,3	2,5	29,9	1	69:1	P	N	Y	lh	K13	W12	A1
405 197	24,0	78,0	88,0	113,0	4,7	3,0	66,0	1	69:1	P	N	Y	lh	K14	W1	A1
405 251	24,0	27,6	120,0	137,0	5,7	2,0	27,9	1	53:2	P	N	Y	lh	K15	W7	A1
405 540	24,0	51,8	63,5	74,0	3,1	2,2	27,6	1	69:1	P	N	Y	lh	K6	W1	A1
405 588	24,0	28,4	160,0	92,0	3,9	3,0	36,4	2	53:2	P	N	Y	lh	K4	W10	A1
405 594	24,0	17,0	14,5	31,0	1,3	0,8	5,2	2	78:1	M	N	Y	rh	K5	W13	A1
405 666	24,0	21,2	195,0	160,0	6,7	3,0	30,4	2	53:2	P	N	Y	rh	K17	W10	A1
405 735	12,0	26,3	21,0	30,0	2,5	1,2	13,8	N	78:1	M	N	Y	rh	K3	W8	A1
405 805	24,0	27,8	17,0	36,0	1,5	1,5	5,4	2	69:1	P	N	Y	rh	K16	W1	A1
406 000	24,0	64,0	69,0	120,0	5,0	2,4	46,0	1	69:1	P	N	Y	lh	K18	W1	A1

Characteristic curves



Characteristic curves



Info



This image shows a full page of blank graph paper. The grid consists of small, evenly spaced squares formed by thin black lines. There are no margins, text, or other markings on the page.

MOTORS WITH WORM GEAR TRANSMISSION

DCCK35

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel rolled and protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Worm gear transmission
Transmission housing	Zinc die casting
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Plug
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

Industry

Building technology,
mechanical engineering

Automobile

Sliding door adjustment,
tailgate adjustment

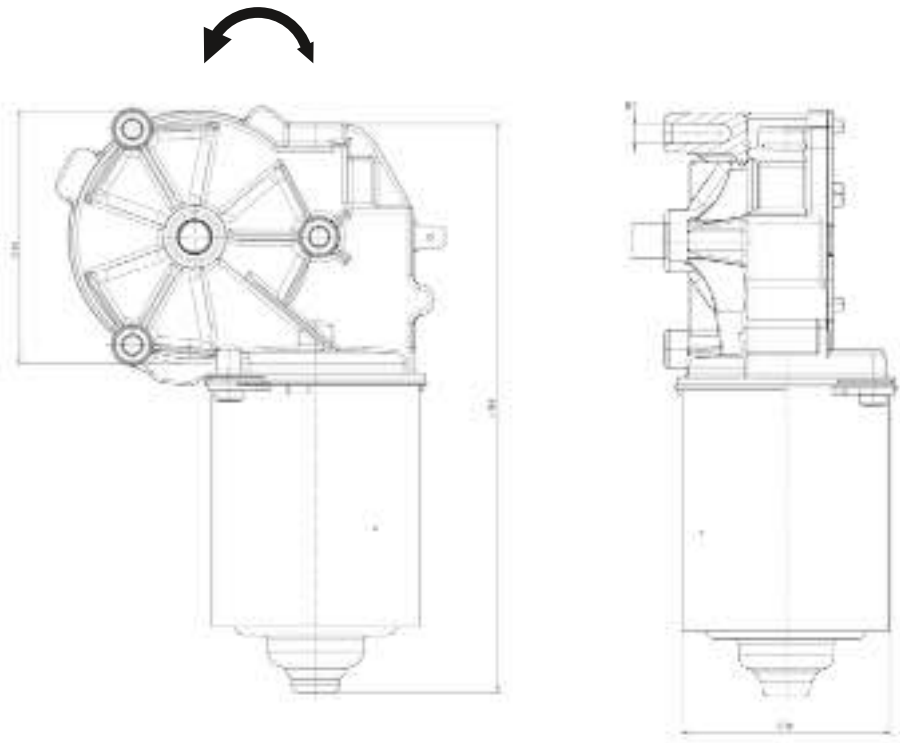
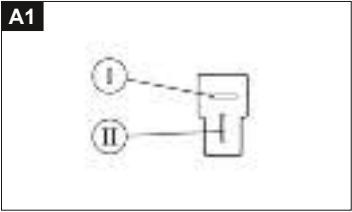
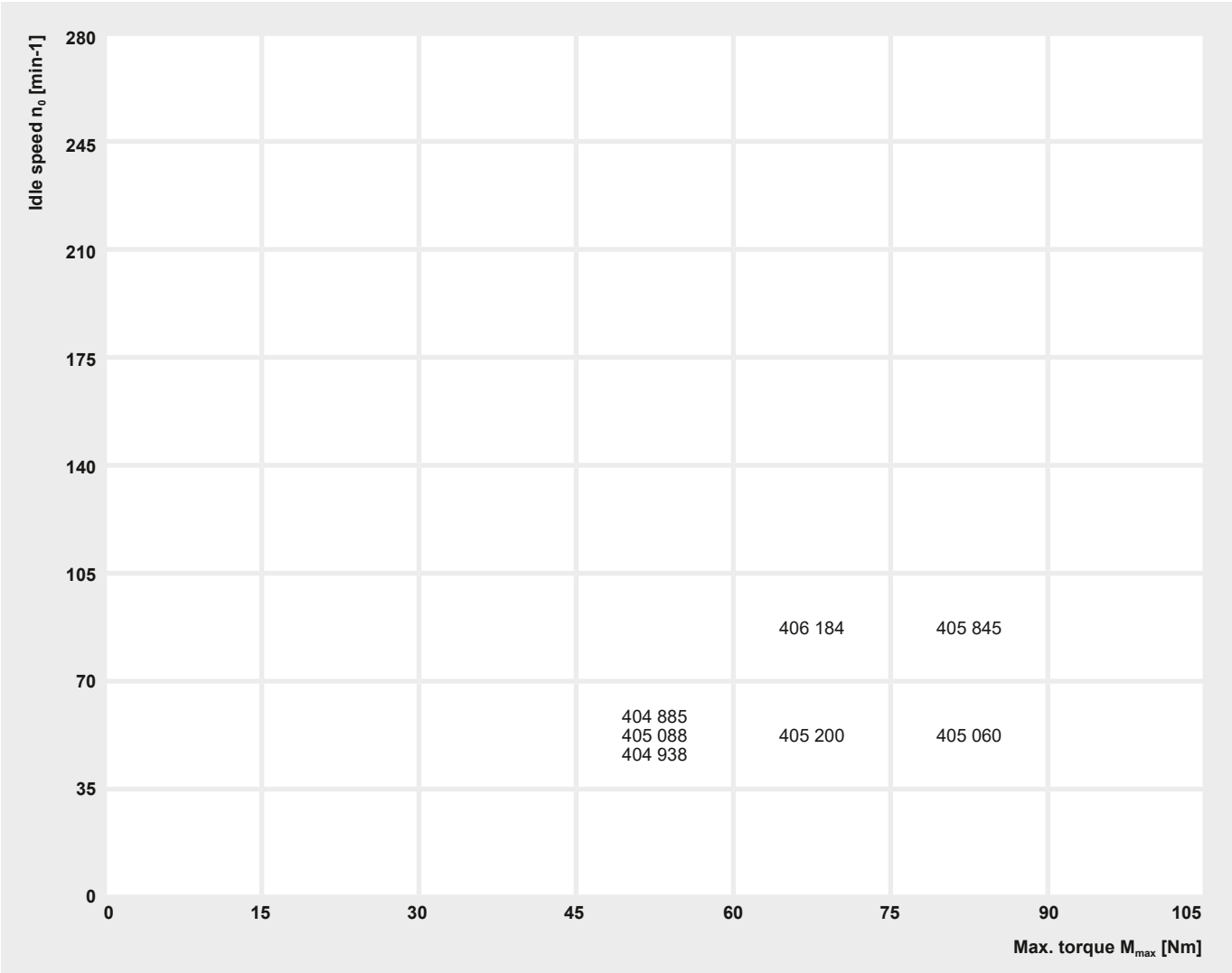


Image shows the transmission design on the left

Connections

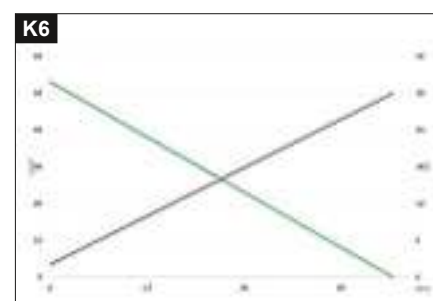
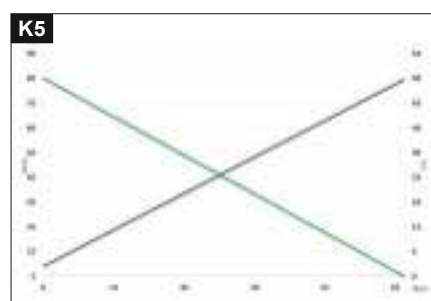
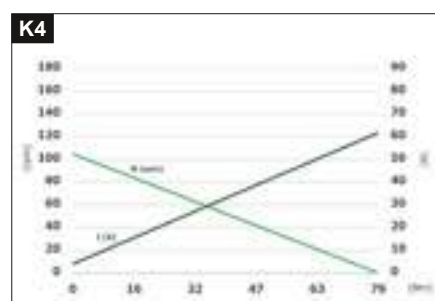
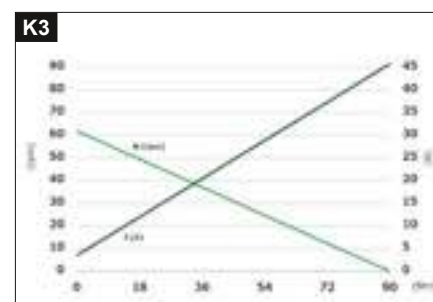
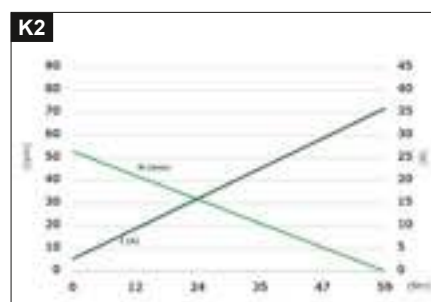
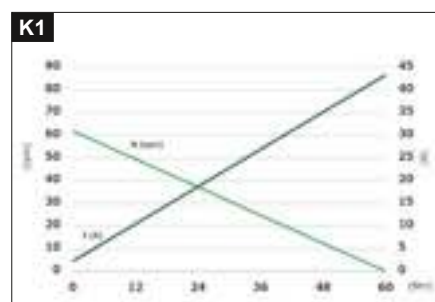


Product matrix

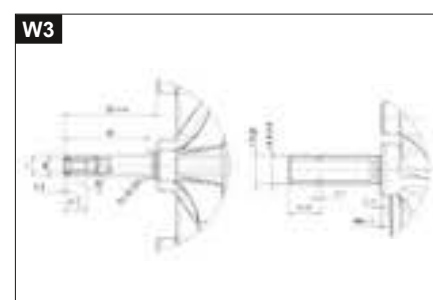
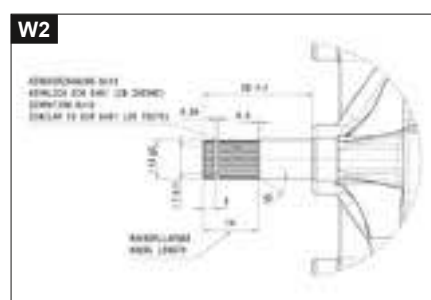
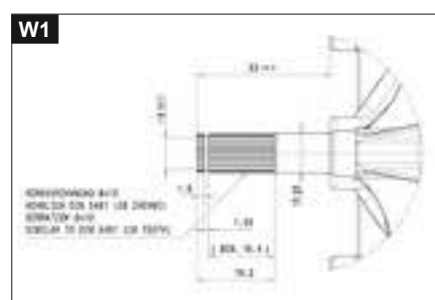


Characteristic curves

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 885	24,0	60,0	62,0	158,0	6,6	2,2	43,4	2	63:1	P	N	Y	lh	K1	W1	A1
404 938	24,0	46,0	53,0	96,0	4,0	53,0	30,0	N	63:1	P	N	Y	lh	K6	W1	A1
405 060	24,0	90,0	62,0	110,0	4,6	3,5	45,8	2	91:1	P	N	Y	rh	K3	W2	A1
405 088	24,0	59,0	53,0	113,0	4,7	2,7	36,0	2	91:1	P	N	Y	lh	K2	W3	A1
405 200	24,0	60,0	62,0	158,0	6,6	2,2	43,4	1	63:1	P	N	Y	lh	K1	W1	A1
405 845	24,0	78,8	105,0	326,0	13,6	4,0	61,8	2	63:1	P	N	Y	lh	K4	W1	A1
406 184	24,0	67,0	80,0	180,0	7,5	2,4	48,0	1	63:1	P	N	Y	lh	K5	W1	A1



Shafts



This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin, dark gray lines. The lines are spaced evenly both horizontally and vertically across the entire page, creating a continuous pattern of squares suitable for drawing or technical work. There are no margins, text, or other markings on the paper.

MOTORS WITH WORM GEAR TRANSMISSION

SW2L

As 12-volt and 24-volt motor with Interference suppression
and hall sensors



Technical description

Motor housing	Sheet steel deep drawn and protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Worm gear transmission
Transmission housing	Aluminium die casting
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Plug
Sensor	Optional
Thermal protection	–
Interference suppression	Optional

Applications

Industry

Door opener, patient lifter,
mechanical engineering

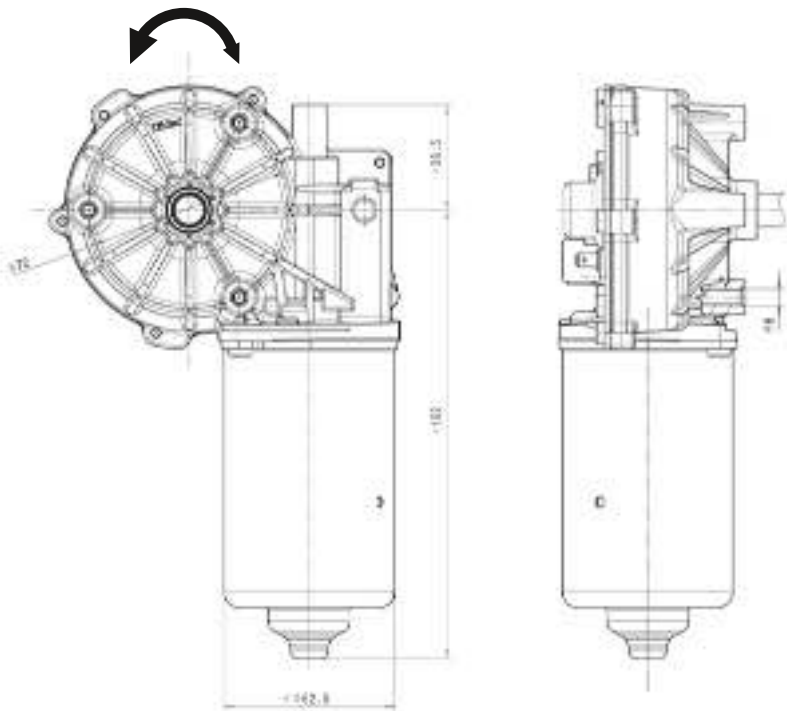
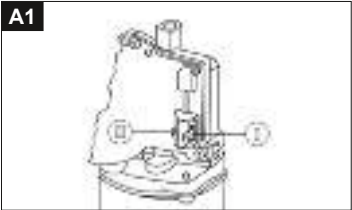
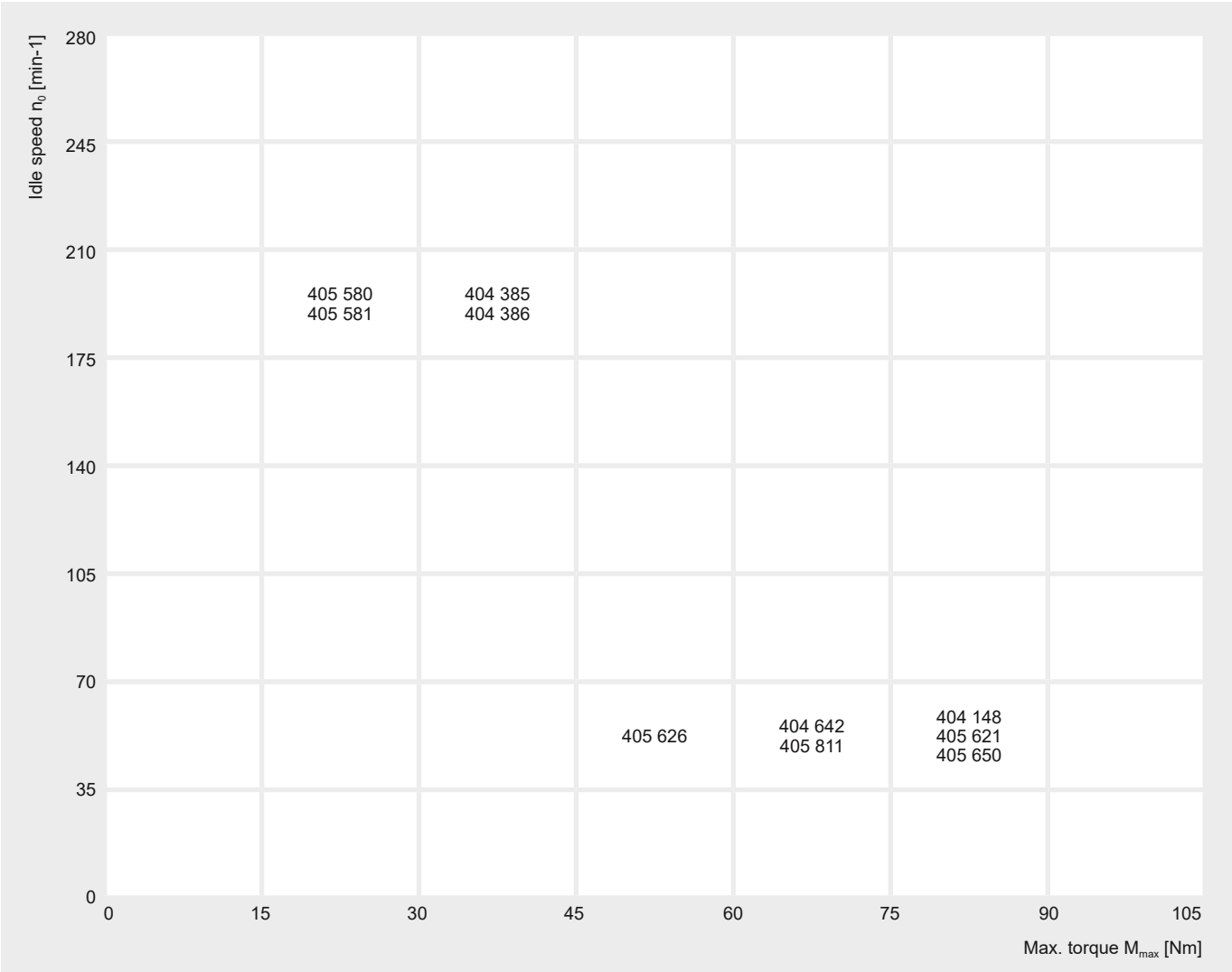


Image shows the transmission design on the left

Connections



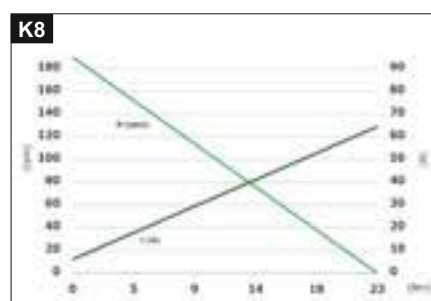
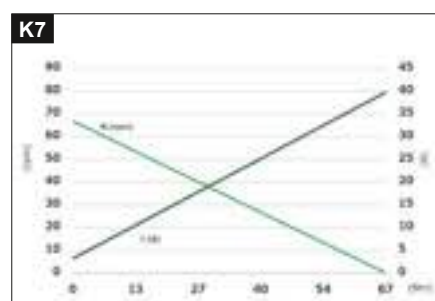
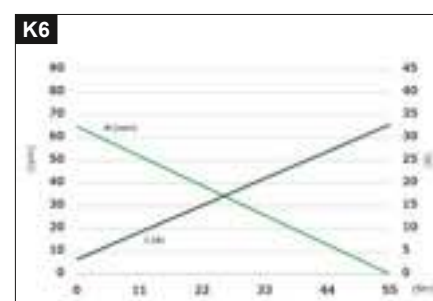
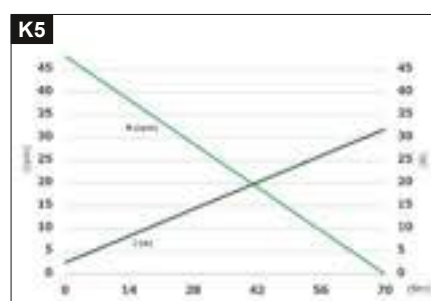
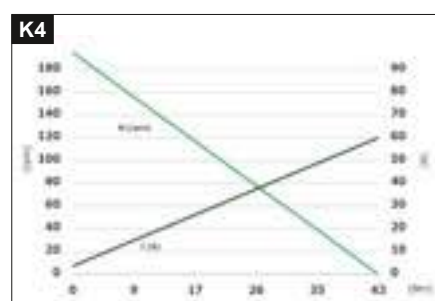
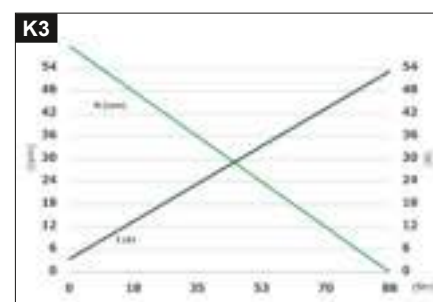
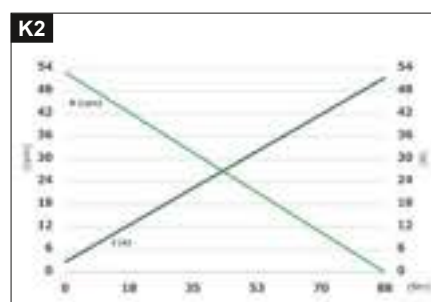
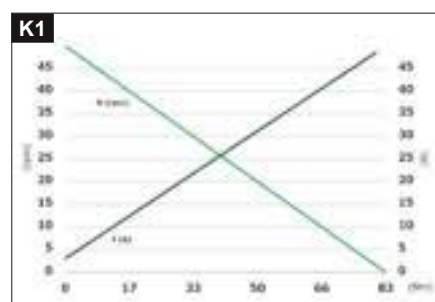
Product matrix



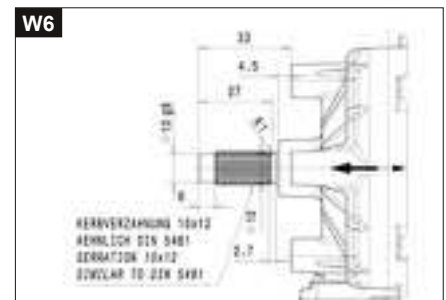
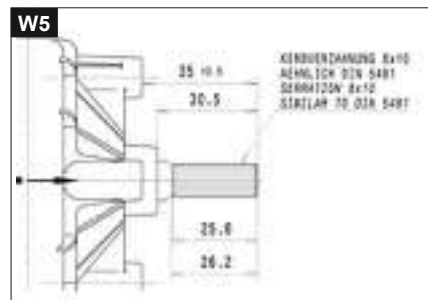
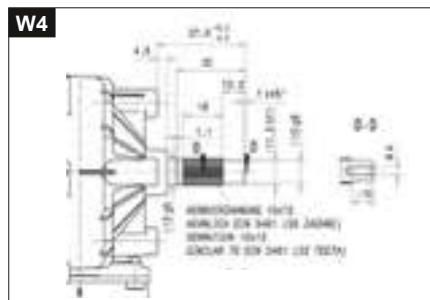
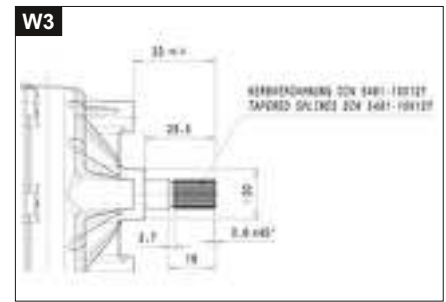
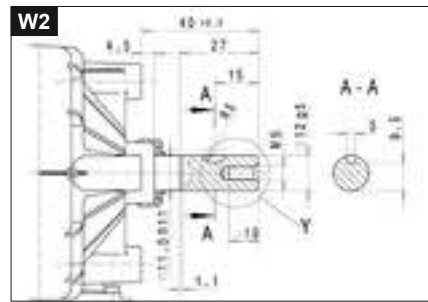
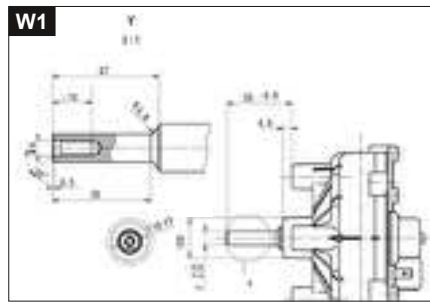
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 148	24,0	83,0	50,0	103,0	4,3	3,0	49,0	N	74:1	P	N	Y	rh	K1	W1	A1
404 385	24,0	43,4	195,0	166,4	6,9	3,5	59,7	N	103:4	P	N	Y	lh	K4	W2	A1
404 386	24,0	43,4	195,0	166,4	6,9	3,5	59,7	N	103:4	P	N	Y	rh	K4	W2	A1
404 642	24,0	70,2	48,0	130,3	5,4	2,5	31,9	1	74:1	P	Y	Y	lh	K5	W3	A1
405 580	12,0	22,5	190,0	160,8	13,4	6,0	64,5	N	103:4	P	N	Y	lh	K8	W2	A1
405 581	12,0	22,5	190,0	160,8	13,4	6,0	64,5	N	103:4	P	N	Y	rh	K8	W2	A1
405 621	24,0	88,3	53,0	165,2	6,9	2,7	51,6	2	74:1	P	N	Y	lh	K2	W4	A1
405 626	24,0	54,8	65,0	168,4	7,0	3,2	32,9	1	74:1	P	N	Y	lh	K6	W5	A1
405 650	24,0	87,8	60,0	123,6	5,2	3,5	53,3	2	74:1	P	N	Y	lh	K3	W3	A1
405 659	24,0	83,0	50,0	103,0	4,3	3,0	49,0	N	74:1	P	N	Y	rh	K1	W6	A1
405 811	24,0	67,0	67,0	169,4	7,1	3,2	39,8	2	74:1	P	N	Y	lh	K7	W5	A1

Characteristic curves



Shafts



MOTORS WITH WORM GEAR TRANSMISSION

SW3K

As 12-volt and 24-volt motor with Interference suppression and hall sensors



Technical description

Motor housing	Sheet steel deep drawn and protected against corrosion
Magnetic field	Permanent magnet
Type of transmission	Worm gear transmission
Transmission housing	Zinc die casting
Gearwheel material	Plastic (P)
Transmission lubrication	Grease, permanent lubrication
Mechanical interface	Drive shaft
Electrical interface	Plug
Sensor	Optional
Thermal protection	Optional
Interference suppression	Optional

Applications

Industry

Garage door and door opener, pumps, lubricating technology, household devices, linear drives

Automobile

Tailgate adjustment

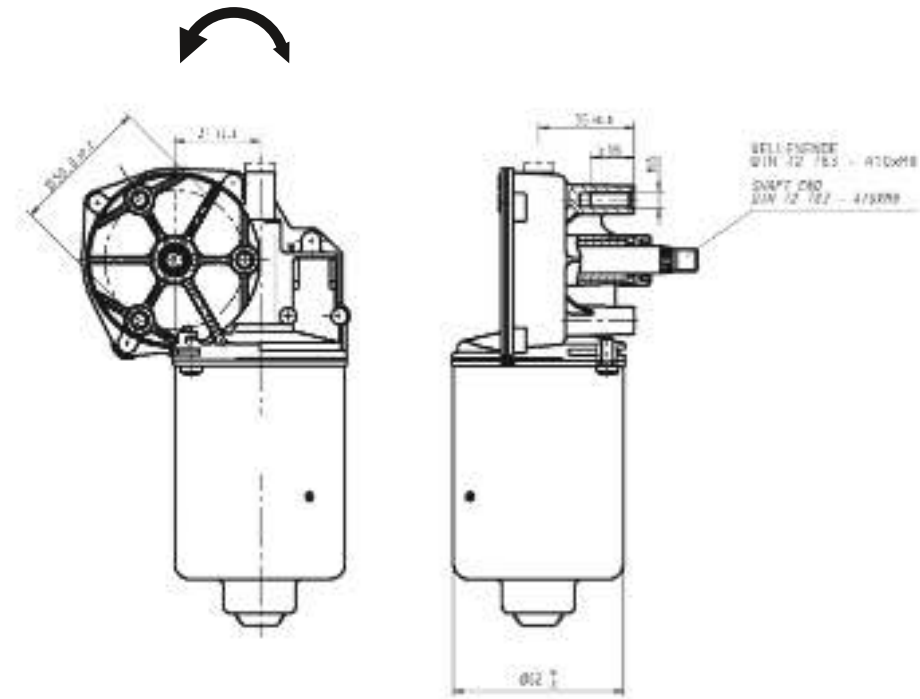
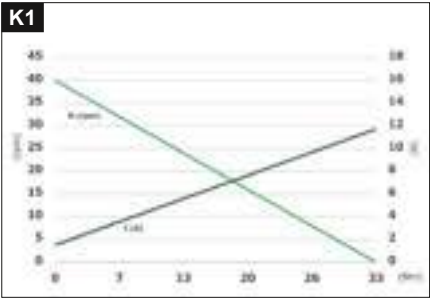


Image shows the transmission design on the left

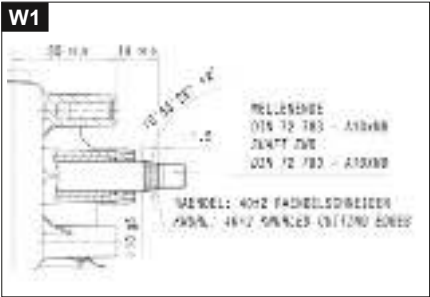
Overview

	Nominal voltage	Max. torque	Idle speed	Nominal power	Nominal current	No-load current	Max. current	Hall sensors	Gear reduction	Gearwheel material	Thermal switch	Interference suppression	Gear housing	Characteristic curve	Shaft	Electrical connection
Type	V	Nm	min ⁻¹	W	A	A	A	N/1/2	xx:x	P/M	Y/N	Y/N	lh/rh	K	W	A
404 497	24,0	33,2	40,0	47,3	2,0	1,5	11,7	N	55:1	P	N	N	lh	K1	W1	A1

Characteristic curves



Shafts



GLOBAL FOOTPRINT



North America

2 manufacturing sites
~ 2,500 employees

Latin America

1 manufacturing site
~ 100 employees

GO EVERYWHERE



Europe & Middle East

6 manufacturing sites
~ 3,500 employees

Asia Pacific

5 manufacturing sites
~ 5,000 employees

Nidec AMEC
14 manufacturing sites
+11K employees

Global distributors

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3115 HK Schiedam
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Fax +31 1 02 46 00 19
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www.eissesbv.nl

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