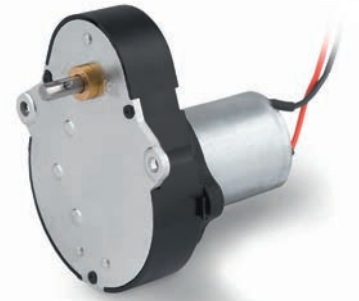


UGM-DC

Gearbox UGM with DC Motor PC280LG

Voltage (Vdc) 12/24
Height (mm)

Max. torque (cNm) 60



Standard Data

Ambient temperature operation	°C -10 ... +55
Ambient temperature storage	°C -20 ... +80
Rotor stalling	not permissible
Thermal class	130 (B) according to DIN EN 60085 : 2008
Approval	standard
Electrical connection	terminals
Mounting	any position
Weight	105 g
Axial thrust	20 N
Lateral force	100 N
Output shaft	∅ 4 × 10 mm (others on request)
Slipping clutch	no
Bearings	sintered bronze, self-lubricating

Order Reference

Motor type	JP	DC Motor (brushed)	JP	2	A	N	M4	M	40C	N	N	N
Motor size	2	diameter 24.4 mm										
Motor version	A	12 V; no-load speed 3600 rpm										
	B	24 V; no-load speed 2400 rpm										
Approval	N	standard										
Voltage	M1	12 Vdc										
	M4	24 Vdc										
Gearbox size	M											
Gear ratio	40C	400										
Connection	N	terminals, without lead wire										
	A	with lead wire and connector (on request)										
Slipping clutch	N	without slipping clutch										
Shaft end	N	standard shaft ∅ 4 × 10, others on request										

All specifications are representative only and maybe subject to variation. For confirmation of values, please contact Johnson Electric.
Please also read "Saia Motors Important Notes" on catalog or at www.johnsonelectric.com/SaiaMotorsNotes



UGM-DC

Technical Data

Motor JP2A

Voltage supply	V	12
No-load motor speed	rpm	3600
Rated motor speed	rpm	2900
Rated motor current	mA	105
Rated motor torque	cNm	0.24

Gear ratio		120	150	240	300	400	500	1000	1500
Rated output speed	rpm	24	20	12	10	8	6	3	2
Rated output torque	cNm	18	23	36	45	60	60	60	60

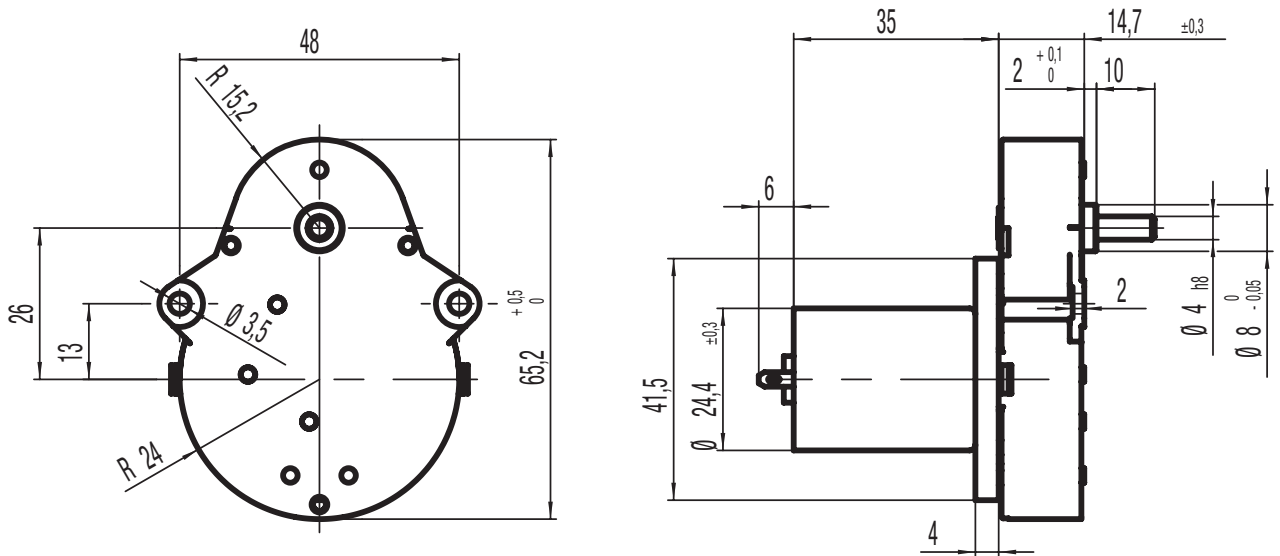
Motor JP2B

Voltage supply	V	24
No-load motor speed	rpm	2400
Rated motor speed	rpm	1800
Rated motor current	mA	34
Rated motor torque	cNm	0.19

Gear ratio		120	150	240	300	400	500	1000	1500
Rated output speed	rpm	15	12	8	6	4.5	4	2	1.5
Rated output torque	cNm	14	18	28	36	48	59	60	60

All values approximate. Speed tolerance on request.
Output torque permissible max. 60cNm.
Continuous duty cycle permissible at rated torque.
Higher torque at lower duty cycle on request.
Lifetime on request.

Dimensions



UGB-DC

Gearbox with UGB DC Motor PC280LG

Voltage (Vdc) 12/24
Height (mm)

Max. torque (cNm) 200



Standard Data

Ambient temperature operation	°C -10 ... +55
Ambient temperature storage	°C -20 ... +80
Rotor stalling	not permissible
Approval	standard
Electrical connection	terminals
Mounting	any position
Weight	200 g
Axial thrust	100 N
Lateral force	300 N
Output shaft	∅ 8 × 12 mm (others on request)
Slipping clutch	optional
Bearings	sintered bronze, self-lubricating

Order Reference

Motor type	JP	DC Motor (brushed)	JP	2	A	N	M4	B	30C	N	N	N
Motor size	2	diameter 24.4 mm										
Motor version	A	12 V; no-load speed 3600 rpm										
	B	24 V; no-load speed 2400 rpm										
Approval	N	standard										
Voltage	M1	12 Vdc										
	M4	24 Vdc										
Gearbox size	B											
Gear ratio	30C	300										
Connection	N	terminals, without lead wire										
	A	with lead wire and connector (on request)										
Slipping clutch	N	without slipping clutch										
Shaft end	N	standard shaft ∅ 8 × 12, others on request										

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UGB-DC

Technical Data

Motor JP2A

Voltage supply	V	12
No-load motor speed	rpm	3600
Rated motor speed	rpm	2900
Rated motor current	mA	105
Rated motor torque	cNm	0.24

Gear ratio		150	200	300	500	600	750	1000	1500
Rated output speed	rpm	20	15	10	6	5	4	3	2
Rated output torque	cNm	23	30	45	75	90	115	150	200

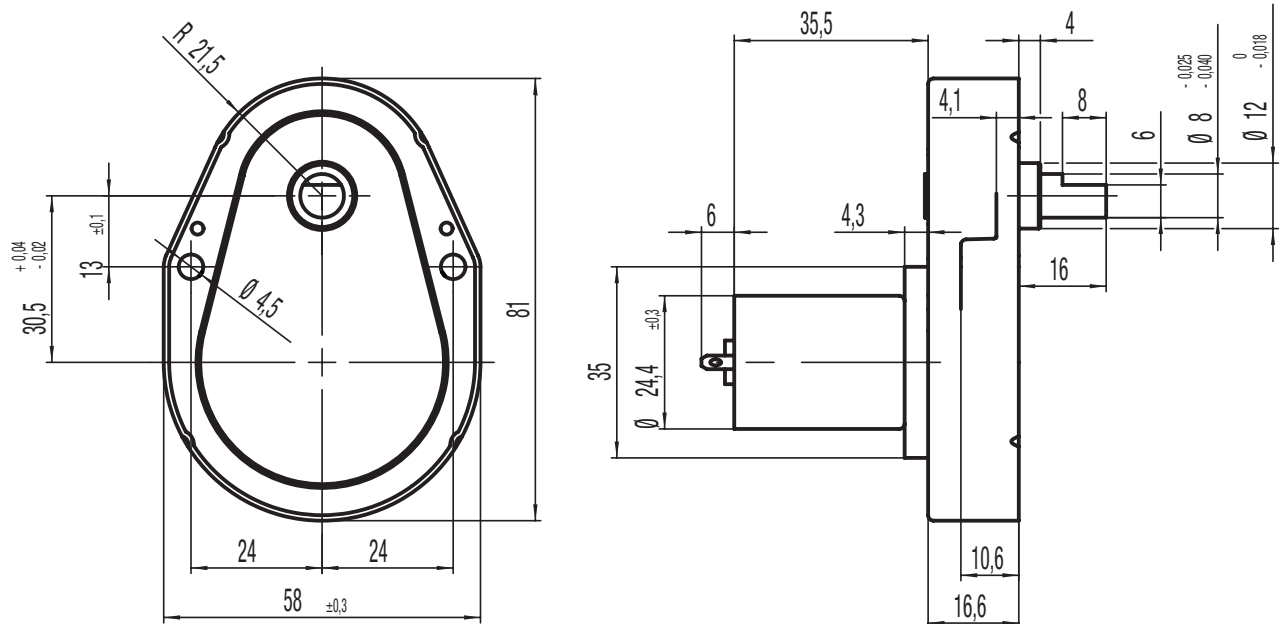
Motor JP2B

Voltage supply	V	24
No-load motor speed	rpm	2400
Rated motor speed	rpm	1800
Rated motor current	mA	34
Rated motor torque	cNm	0.19

Gear ratio		150	200	300	500	600	750	1000	1500
Rated output speed	rpm	12	9	6	4	3	2.5	2	1.5
Rated output torque	cNm	18	24	36	59	70	90	120	180

All values approximate. Speed tolerance on request.
Output torque permissible max. 200cNm.
Continuous duty cycle permissible at rated torque.
Higher torque at lower duty cycle on request.
Lifetime on request.
Other gear ratios on request.

Dimensions



UGF-DC

Gearbox UGF with DC Motor HC485G

Voltage (Vdc) 12/24

Max. torque
(cNm) 400



Standard Data

Ambient temperature operation	°C -10 ... +55
Ambient temperature storage	°C -20 ... +80
Rotor stalling	not permissible
Approval	standard
Electrical connection	terminals
Mounting	any position
Weight	290 g
Axial thrust	100 N
Lateral force	400 N
Output shaft	∅ 8 × 12 mm (others on request)
Slipping clutch	no
Bearings	sintered bronze, self-lubricating

Order Reference

Motor type	JP	DC Motor (brushed)	JP	4	A	N	M4	F	33C	N	N	N
Motor size	4	diameter 31.2 mm										
Motor version	A	12 V; no-load speed 4500 rpm										
	B	24 V; no-load speed 4600 rpm										
Approval	N	standard										
Voltage	M1	12 Vdc										
	M4	24 Vdc										
Gearbox size	F											
Gear ratio	33C	333										
Connection	N	terminals, without lead wire										
	A	with lead wire and connector (on request)										
Slipping clutch	N	without slipping clutch										
Shaft end	N	standard shaft ∅ 8 × 12, others on request										

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UGF-DC

Technical Data

Motor JP2A

Voltage supply	V	12
No-load motor speed	rpm	4500
Rated motor speed	rpm	3700
Rated motor current	mA	520
Rated motor torque	cNm	1.0

Gear ratio		125	166	250	333	500	750	1000	1200
Rated output speed	rpm	30	22	15	11	7.5	5	3.7	3.1
Rated output torque	cNm	80	100	150	200	300	400	400	400

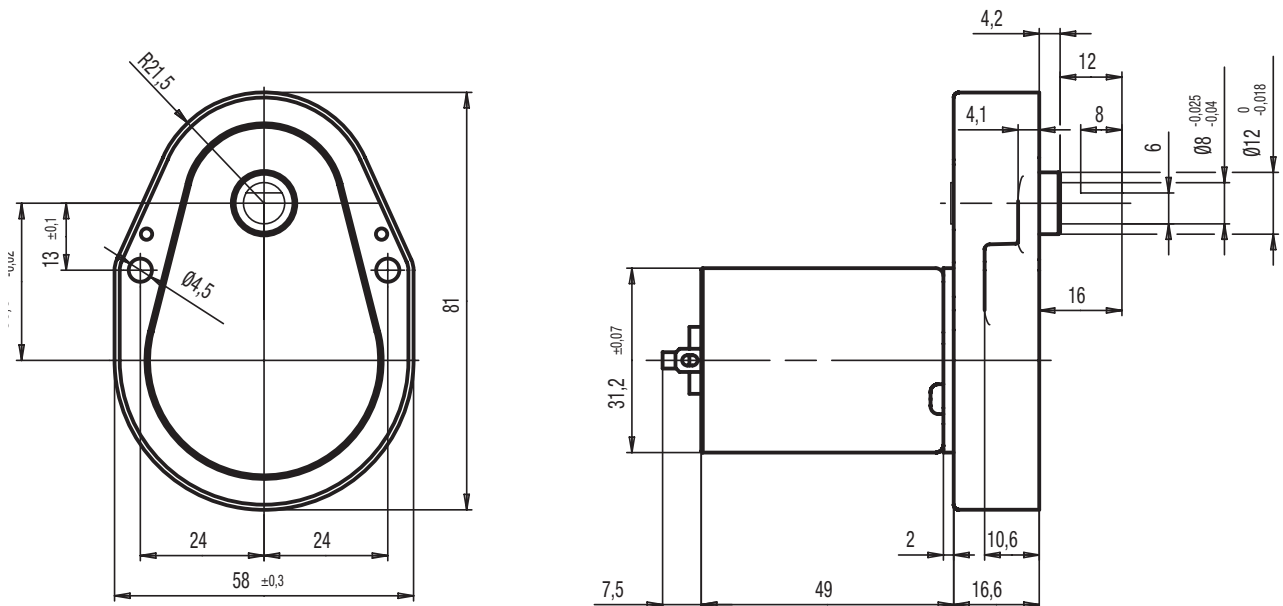
Motor JP2B

Voltage supply	V	24
No-load motor speed	rpm	4600
Rated motor speed	rpm	3900
Rated motor current	mA	260
Rated motor torque	cNm	1.0

Gear ratio		125	166	250	333	500	750	1000	1200
Rated output speed	rpm	31	23	16	12	8	5.2	3.9	3.2
Rated output torque	cNm	80	100	150	200	300	400	400	400

All values approximate. Speed tolerance on request.
Output torque permissible max. 400cNm.
Continuous duty cycle permissible at rated torque.
Higher torque at lower duty cycle on request.
Lifetime on request.
Other gear ratios on request.

Dimensions



UGO-DC

Gearbox UGO with BLDC Motor E9IDS



Voltage (Vdc)	24
Max. torque (cNm)	600
Characteristics	Driver electronics integrated inside motor
Options	Closed loop speed control Brake feature by relay shortcut circuit

Standard Data

Ambient temperature operation	°C 0 ... +50
Ambient temperature storage	°C -20 ... +80
Rotor stalling	not permissible
Approval	standard
Electrical connection	connector at motor
Mounting	any position
Weight	500 – 600 g
Axial thrust	30 N
Lateral force	80 N
Output shaft	∅ 8 × 25 mm (others on request)
Slipping clutch	no
Bearings	bronze

Order Reference

Motor type	JP	BLDC Motor (brushed)	JP	9	B	N	M4	O	75C	A	N	N
Motor size	9	diameter 50 mm										
Motor version	B	24 V; no-load speed 5900 rpm										
Approval	N	standard										
Voltage	M4	24Vdc										
Gearbox size	O											
Gear ratio	75C	750										
Connection	N	lead wires										
	A	with connector at motor										
Slipping clutch	N	without slipping clutch										
Shaft end	N	standard shaft ∅ 8 × 25, others on request										

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UGO-DC

Technical Data

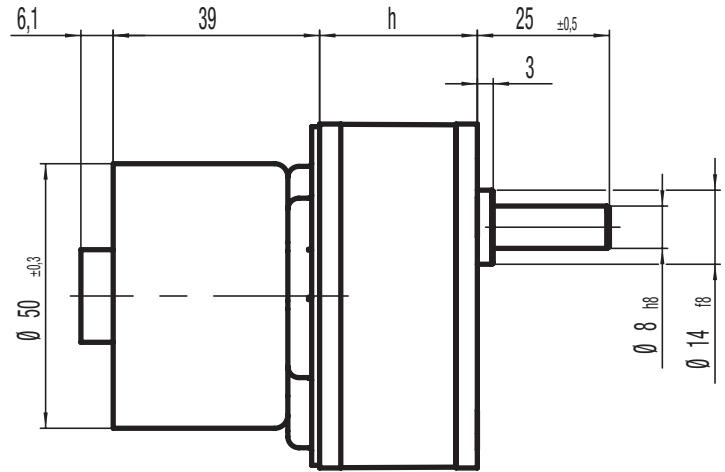
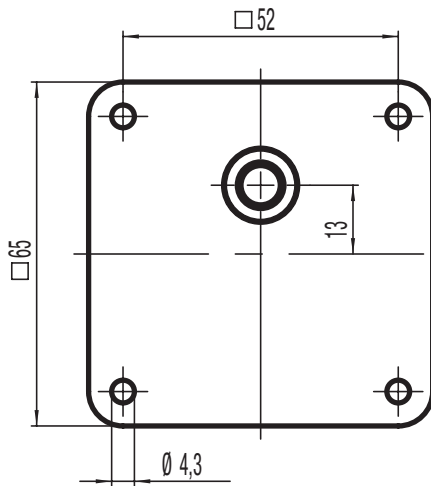
Motor JP2A

Voltage supply	V	24
No-load motor speed	rpm	5900
Rated motor speed	rpm	4600
Rated motor current	mA	850
Rated motor torque	cNm	3.0

Gear ratio		18.75	37.5	62.5	93.75	125	187.5	375	750
Rated output speed	rpm	240	120	74	48	37	24	12	6
Rated output torque	cNm	40	80	120	170	230	340	600	600

All values approximate. Speed tolerance on request.
Output torque permissible max. 600cNm.
Continuous duty cycle permissible at rated torque.
Higher torque at lower duty cycle on request.
Lifetime on request.
Other gear ratios on request.

Dimensions



$h = 29,8$ (ratio max. 187,5)
 $h = 38$ (ratio >187,5)

UGP-DC

Gearbox UGP with DC Motor HC785G

Voltage (Vdc) 24

Max. torque
(cNm) 600



Standard Data

Ambient temperature operation	°C 0 ... +50
Ambient temperature storage	°C -20 ... +80
Rotor stalling	not permissible
Approval	standard
Electrical connection	terminals
Mounting	any position
Weight	500 – 600 g
Axial thrust	30 N
Lateral force	80 N
Output shaft	∅ 8 × 25 mm (others on request)
Slipping clutch	no
Bearings	bronze

Order Reference

Motor type	JP	DC Motor (brushed)	JP	7	B	N	M4	P	37C	N	N	N
Motor size	7	diameter 42 mm										
Motor version	B	24 V; no-load speed 4500 rpm										
Approval	N	standard										
Voltage	M4	24 Vdc										
Gearbox size	P											
Gear ratio	37C	375										
Connection	N	terminals, without lead wire										
	A	with lead wire and connector (on request)										
Slipping clutch	N	without slipping clutch										
Shaft end	N	standard shaft ∅ 8 × 25, others on request										

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UGP-DC

Technical Data

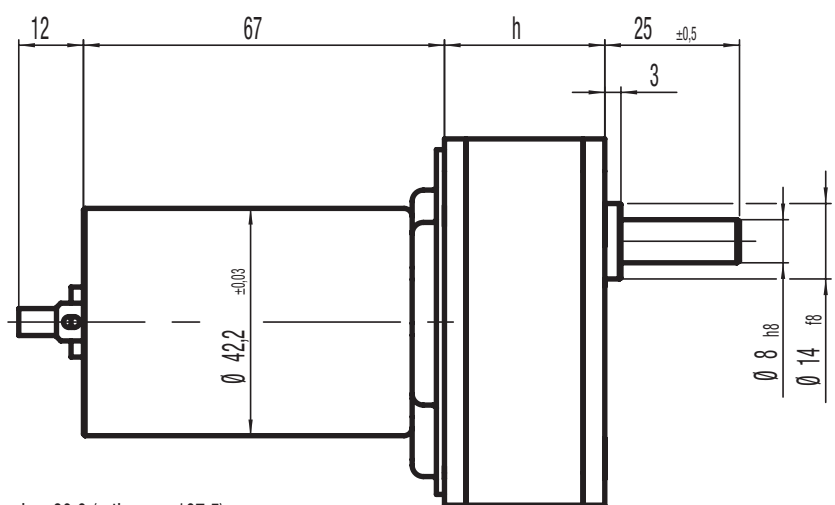
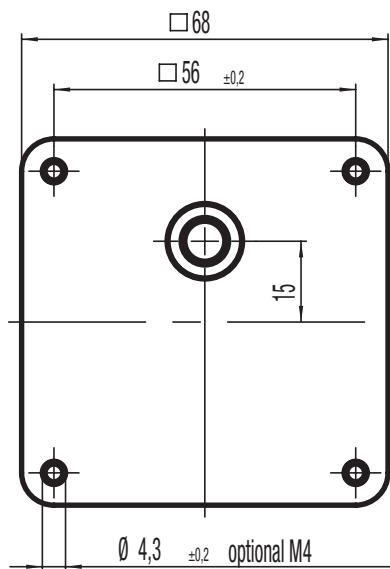
Motor JP7B

Voltage supply	V	24
No-load motor speed	rpm	4500
Rated motor speed	rpm	3800
Rated motor current	mA	900
Rated motor torque	cNm	3.5

Gear ratio		18.75	37.5	62.5	93.75	125	187.5	375	750
Rated output speed	rpm	200	100	60	40	30	20	10	5
Rated output torque	cNm	45	90	140	200	270	400	600	600

All values approximate. Speed tolerance on request.
Output torque permissible max. 600cNm.
Continuous duty cycle permissible at rated torque.
Higher torque at lower duty cycle on request.
Lifetime on request.
Other gear ratios on request.

Dimensions



$h = 29,8$ (ratio max. 187,5)
 $h = 38$ (ratio >187,5)

Characteristics:

High Speed Gearmotor

Specifications:

Dimensions	: 27.5 x 27.5 x 60.0 mm
Shaft Diameter	: Ø 4.000 mm
Input Voltage	: 12.0 V DC
Torque	: 5.00 cNm
Noise Level	: 65 dB(A)
Noise Level Condition	: Measured at 10cm from microphone
Weight	: 110 g
Operating Temperature Range	: 0 to 65 °C
Storage Temperature Range	: -20 to 65 °C
Gearbox Ratio	: 10.70

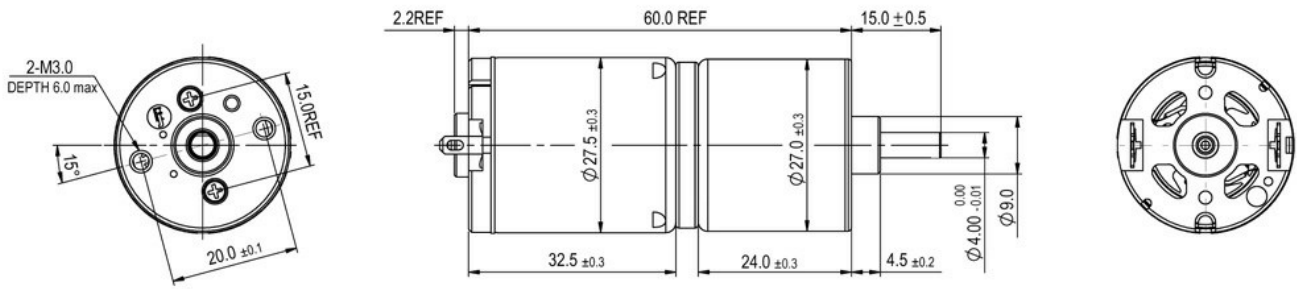
**Performance Data:**

	Typical Loading
Current (A)	0.65
Efficiency (%)	33
Output Power (W)	2.20
Speed (rpm)	430
Torque (mNm)	50.00

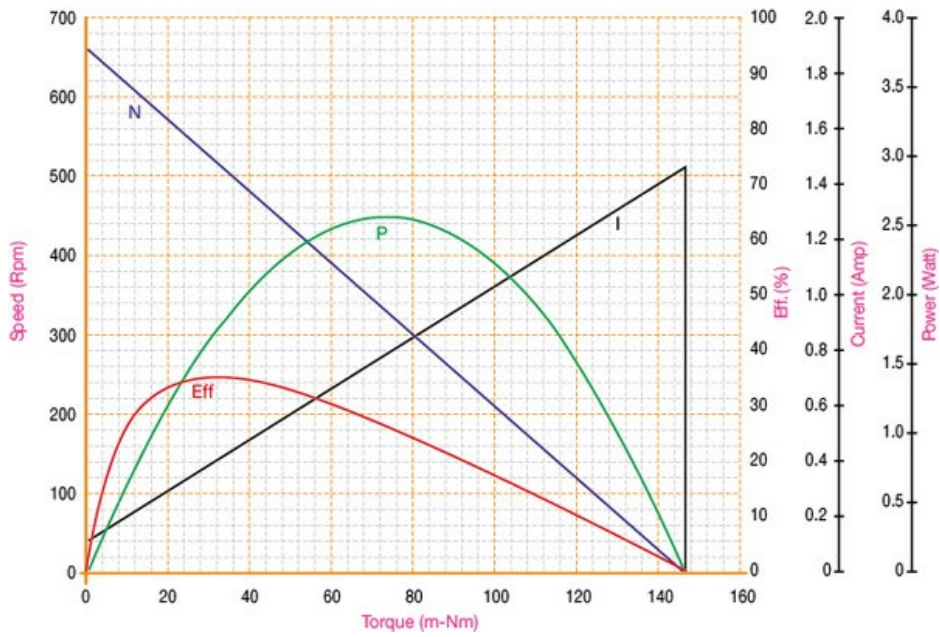
Application Examples:

Stacking and Transferring, Note Positioning and Handling, ATM

Outline Drawing:



Performance Curves:



Units in Metric

Characteristics:

High Torque, High Efficiency

Specifications:

Dimensions	: 25.0 x 25.0 x 62.2 mm
Shaft Diameter	: Ø 3.980 mm
Input Voltage	: 12.0 V DC
Torque	: 4.17 cNm
Operating Temperature Range	: -10 to 55 °C
Storage Temperature Range	: -20 to 85 °C
Gearbox Ratio	: 17.94

**Performance Data:**

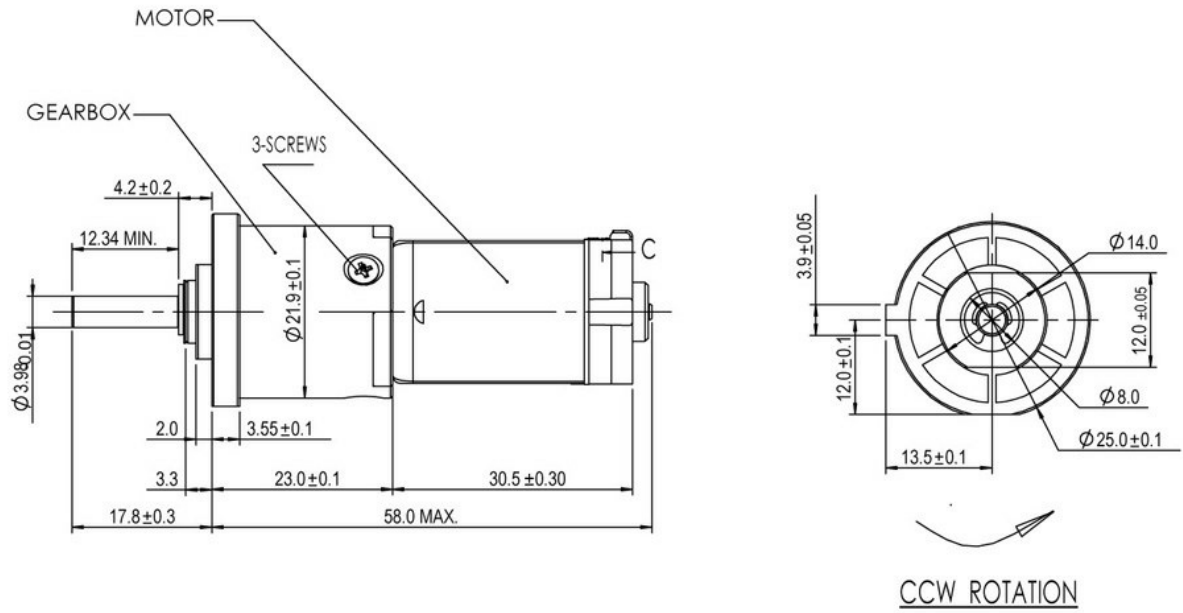
Typical Loading

Current (A)	0.43
Efficiency (%)	-
Output Power (W)	-
Speed (rpm)	430
Torque (mNm)	3.00

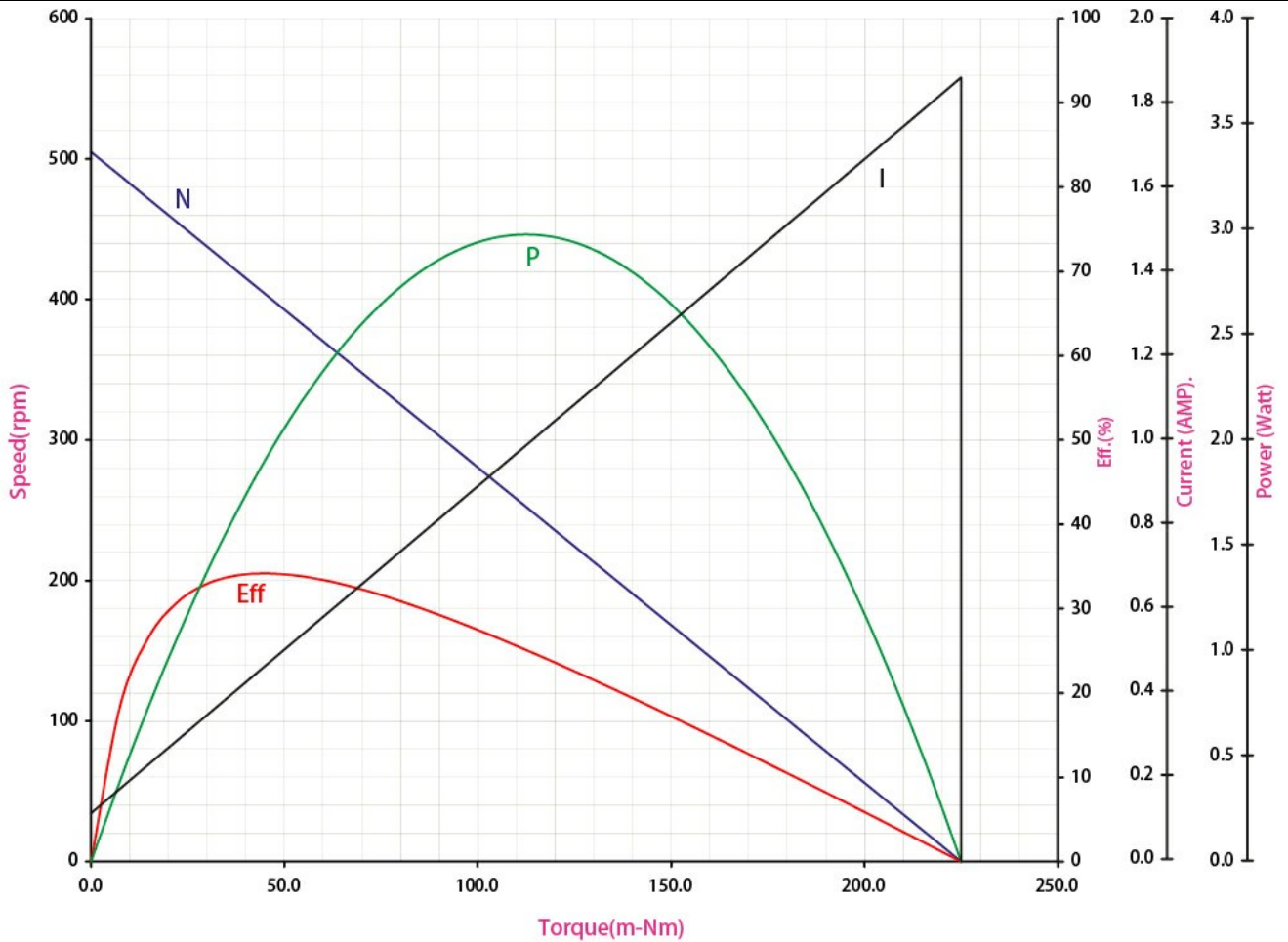
Application Examples:

Electric Disconnect

Outline Drawing:



Performance Curves:



Units in Metric

R100EC-020

DC Gearmotors

Characteristics:

Low Noise, Long Life, High Efficiency



Specifications:

Dimensions	: Ø 36.30 x 110.00 mm
Shaft Diameter	: Ø 8.000 mm
Voltage	: 18.0 VDC
Maximum Efficiency	: 45%
Torque	: 1700 mNm
Noise Level	: 55 dBA
Noise Level Condition (ref.)	: 10 cm
Life (typical)	: 5000 hours
Weight	: 480 g
Operation Temperature	: 0 to 65 °C
Storage Temperature	: -20 to 65°C
Gearbox Ratio	: 100

Performance Data:

Typical Loading

Current (A)	0.9
Efficiency (%)	45
Output Power (W)	6.70
Torque (mNm)	1700
Speed (rpm)	38

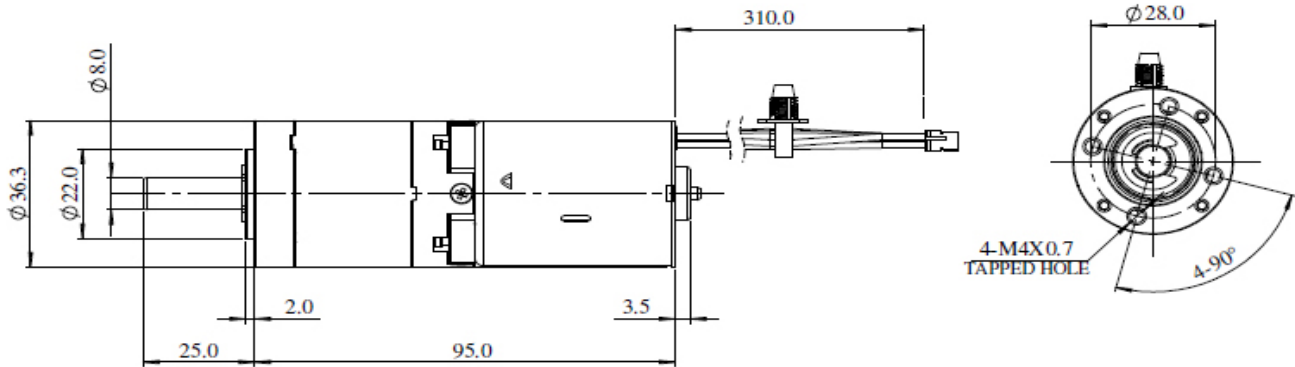
Application Examples:

Robotic Mower , Traction Drive

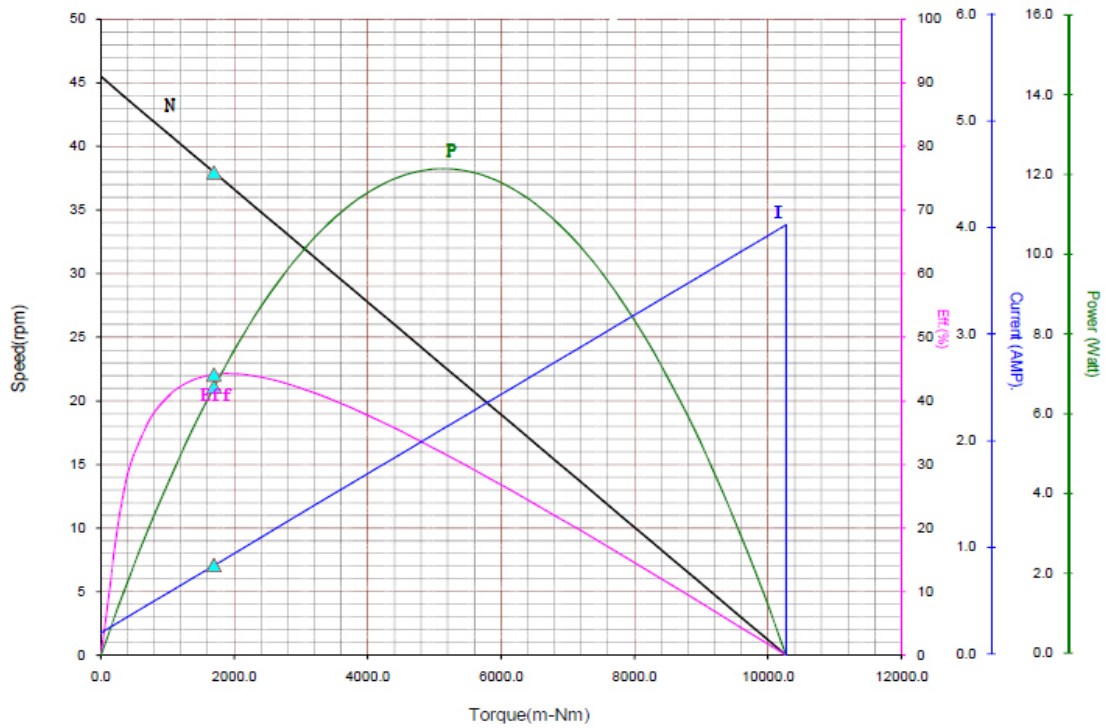
R100EC-020

DC Gearmotors

Drawing:



Performance Curves:



R200EC-021

EC Gearmotors

Characteristics:

Low Noise, High Efficiency, Long Life



Specifications:

Dimensions	: Ø 43.0 X 116.2 mm
Shaft Diameter	: Ø 8.000 mm
Input Voltage	: 18.0 V DC
Maximum Efficiency	: 55%
Torque at Maximum Efficiency	: 3785 mNm
Speed at Maximum Efficiency	: 49 rpm
Noise Level	: 58 dBA
Noise Level Condition	: 10 cm
Life (typical)	: 5000 hr
Weight	: 633 g
Operation Temperature	: 0 to 65 °C
Storage Temperature	: -20 to 65 °C
Gearbox Ratio	: 98

Performance Data:

Typical Loading

Current (A)	1.84
Efficiency (%)	48.00
Output Power (W)	16.10
Speed (rpm)	51
Torque (mNm)	3000.00

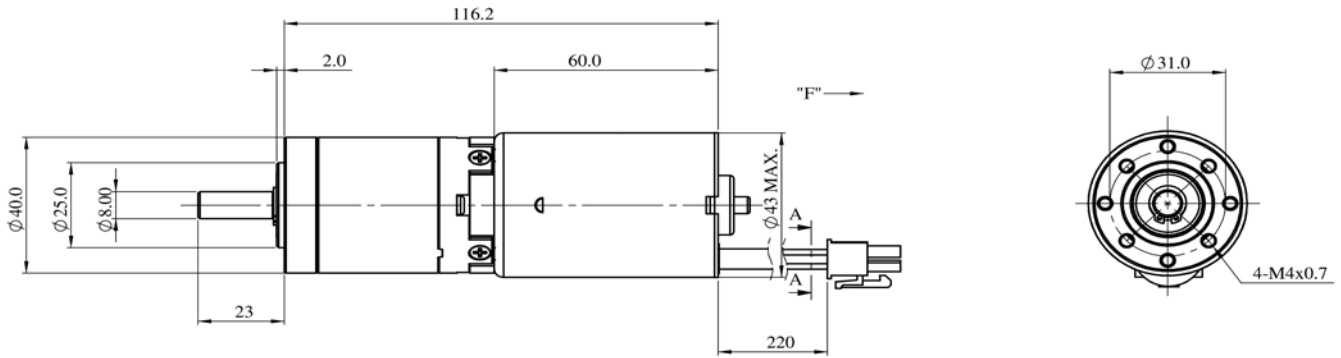
Application Examples:

Robotic Mowers, Traction Drive

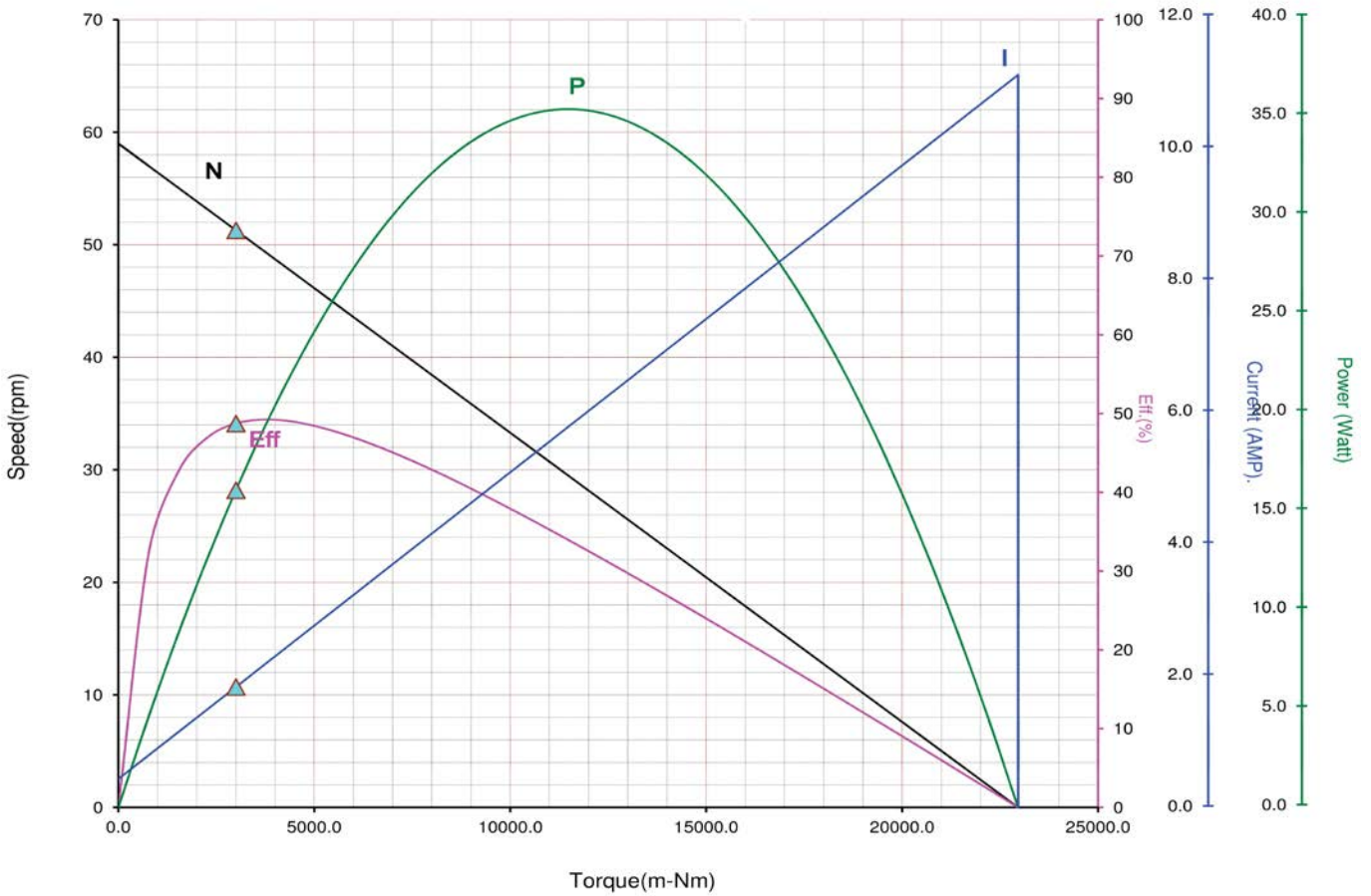
R200EC-021

EC Gearmotors

Drawing:



Performance Curves:



Characteristics:

High Torque Gearmotor

Specifications:

Dimensions	: 27.0 x 27.0 x 42.5 mm
Shaft Diameter	: Ø 4.000 mm
Input Voltage	: 4.5 V DC
Torque	: 8.00 cNm
Noise Level	: 60 dB(A)
Noise Level Condition	: Measured at 10cm from microphone
Weight	: 72 g
Operating Temperature Range	: 0 to 65 °C
Storage Temperature Range	: -20 to 65 °C
Gearbox Ratio	: 250.00

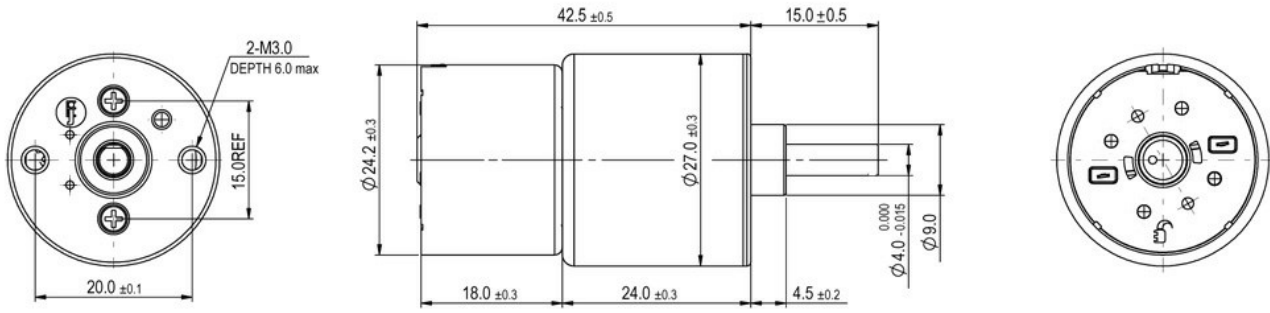
**Performance Data:**

	Typical Loading
Current (A)	0.25
Efficiency (%)	20
Output Power (W)	0.15
Speed (rpm)	18
Torque (mNm)	80.00

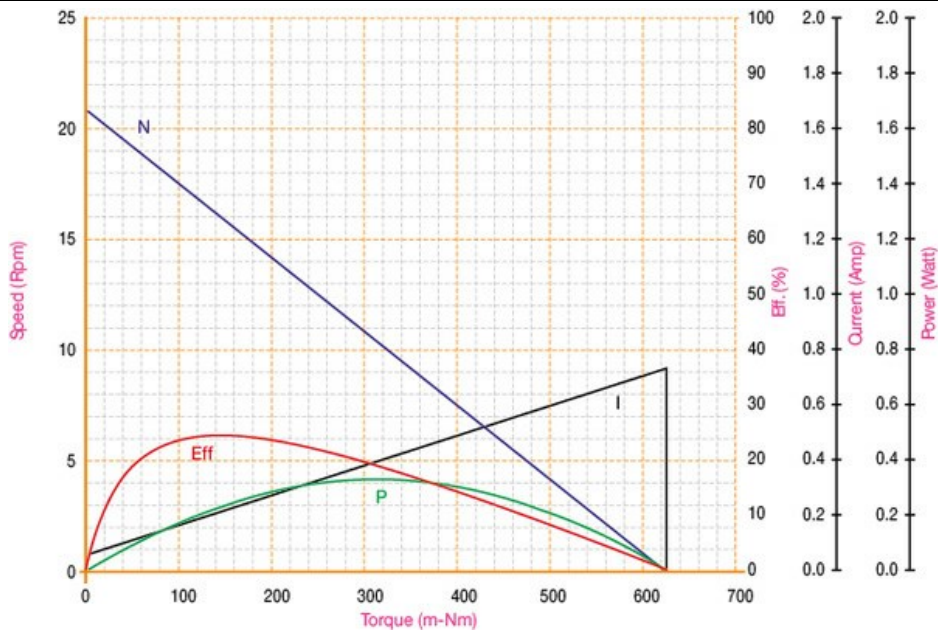
Application Examples:

Stacking and Transferring, Note Positioning and Handling, Robotic Vacuum Cleaners

Outline Drawing:



Performance Curves:



Units in Metric

Characteristics:

High Torque Gearmotor

Specifications:

Dimensions	: 24.4 x 24.4 x 47.2 mm
Shaft Diameter	: Ø 4.000 mm
Input Voltage	: 12.0 V DC
Torque	: 3.80 cNm
Noise Level	: 50 dB(A)
Noise Level Condition	: Measured at 10cm from microphone
Weight	: 85 g
Operating Temperature Range	: 0 to 65 °C
Storage Temperature Range	: -20 to 65 °C
Gearbox Ratio	: 35.00

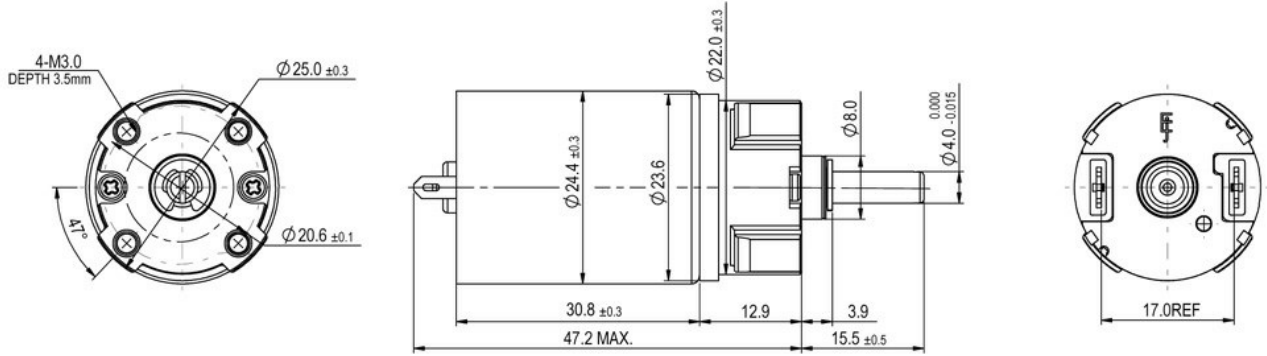
**Performance Data:**

	Typical Loading
Current (A)	0.06
Efficiency (%)	25
Output Power (W)	0.15
Speed (rpm)	39
Torque (mNm)	38.00

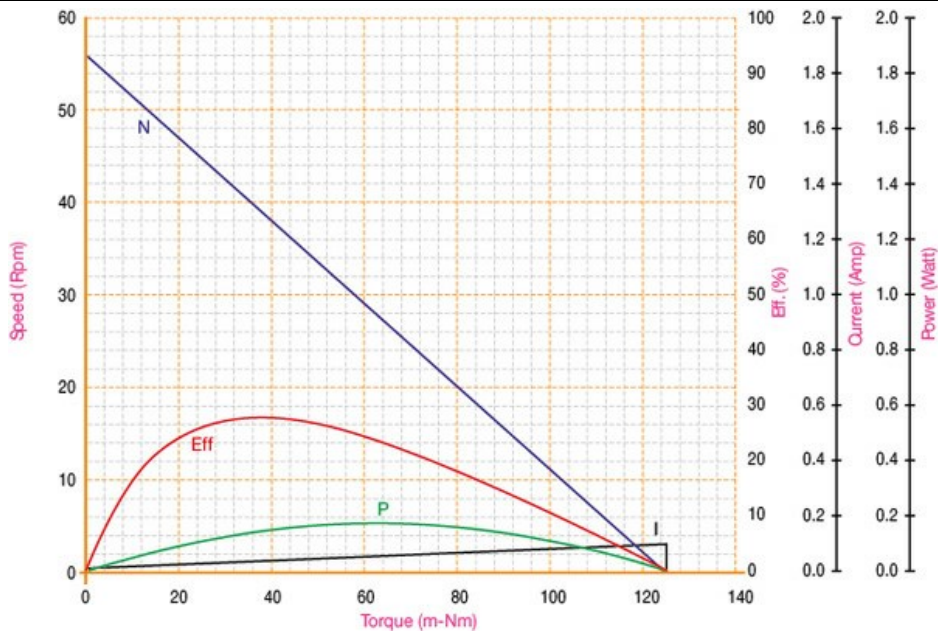
Application Examples:

Stacking and Transferring, Note Positioning and Handling, ATM

Outline Drawing:



Performance Curves:



Units in Metric