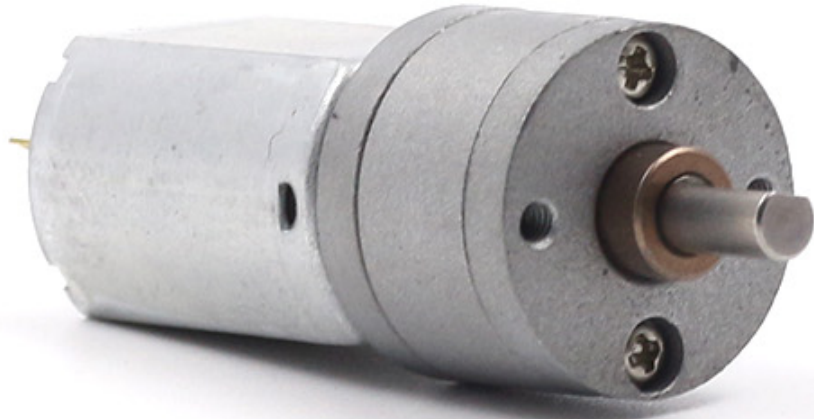


# TSL-GA20-130

Brushed DC Motor with Spur Gearbox



<b>Product Type</b>	Brushed DC Motor with Spur Gearbox
<b>Voltage Options</b>	6 V / 2.7 W; 12 V; 24 V
<b>Gear Ratios</b>	12:1, 22:1, 29:1, 56:1, 72.9:1, 78:1, 107:1, 140:1, 182:1, 205:1, 268:1, 349:1, 456:1, 488:1
<b>Gearbox Diameter</b>	20 mm
<b>Motor Diameter</b>	20 mm
<b>Output Shaft</b>	Ø4 mm
<b>Gearbox Length L</b>	15.5 mm, 17 mm, 18.5 mm, or 20 mm, depending on ratio

## Compact Design

20 mm motor and gearbox diameter for compact mechanisms.

## Multiple Ratios

Fourteen reduction ratios for different speed and torque requirements.

## OEM Customization

Voltage, shaft, lead wire, and performance can be customized.

## Performance Parameters - 6 VDC, 2.7 W

Ratio	No Load		Rated Load			Stall	
	Speed	Current	Speed	Current	Torque	Torque	Current
i:1	RPM $\pm$ 10%	A	RPM $\pm$ 10%	A	g.cm	g.cm	A
12	833	0.14	640	0.45	0.2	0.6	2
22	454	0.14	350	0.45	0.35	1.2	2
29	344	0.14	265	0.45	0.5	1.5	2
56	178	0.14	137	0.45	0.9	3	2
72.9	137	0.14	105	0.45	1.2	4	2
78	128	0.14	98	0.45	1.3	4.3	2
107	93	0.14	71	0.45	1.7	5.5	2
140	71	0.14	55	0.45	2.3	7.5	2
182	55	0.14	42	0.45	3	10	2
205	48	0.14	37	0.45	3.3	11	2
268	37	0.14	28	0.45	4.4	14	2
349	28	0.14	22	0.45	5.7	19	2
456	21	0.14	16	0.45	7.5	25	2
488	20	0.14	15	0.45	8	26	2

Note: Performance parameters are for reference only and can be customized according to customer requirements.

## Performance Parameters - 12 VDC

Ratio	No Load		Rated Load			Stall	
	Speed	Current	Speed	Current	Torque	Torque	Current
i:1	RPM $\pm$ 10%	A	RPM $\pm$ 10%	A	g.cm	g.cm	A
12	833	0.09	640	0.21	0.2	0.6	1.1
22	454	0.09	350	0.21	0.35	1.2	1.1
29	344	0.09	265	0.21	0.5	1.5	1.1
56	178	0.09	137	0.21	0.9	3	1.1
72.9	137	0.09	105	0.21	1.2	4	1.1
78	128	0.09	98	0.21	1.3	4.3	1.1
107	93	0.09	71	0.21	1.7	5.5	1.1
140	71	0.09	55	0.21	2.3	7.5	1.1
182	55	0.09	42	0.21	3	10	1.1
205	48	0.09	37	0.21	3.3	11	1.1
268	37	0.09	28	0.21	4.4	14	1.1
349	28	0.09	22	0.21	5.7	19	1.1
456	21	0.09	16	0.21	7.5	25	1.1
488	20	0.09	15	0.21	8	26	1.1

Note: Performance parameters are for reference only and can be customized according to customer requirements.

## Performance Parameters - 24 VDC

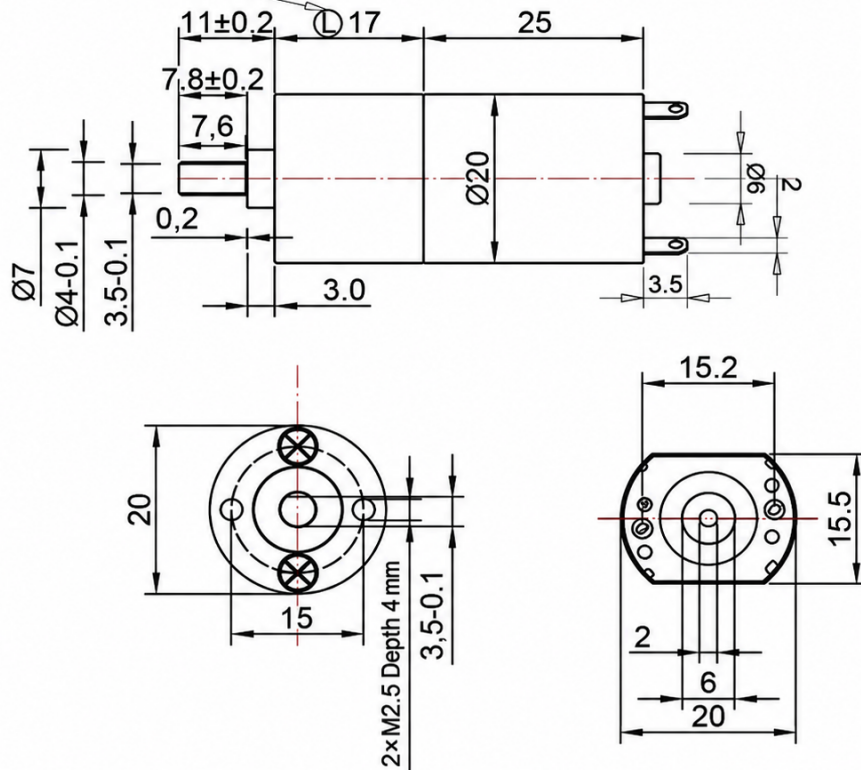
Ratio	No Load		Rated Load			Stall	
	Speed	Current	Speed	Current	Torque	Torque	Current
i:1	RPM $\pm$ 10%	A	RPM $\pm$ 10%	A	g.cm	g.cm	A
12	833	0.05	640	0.2	0.2	0.6	0.75
22	454	0.05	350	0.2	0.35	1.2	0.75
29	344	0.05	265	0.2	0.5	1.5	0.75
56	178	0.05	137	0.2	0.9	3	0.75
72.9	137	0.05	105	0.2	1.2	4	0.75
78	128	0.05	98	0.2	1.3	4.3	0.75
107	93	0.05	71	0.2	1.7	5.5	0.75
140	71	0.05	55	0.2	2.3	7.5	0.75
182	55	0.05	42	0.2	3	10	0.75
205	48	0.05	37	0.2	3.3	11	0.75
268	37	0.05	28	0.2	4.4	14	0.75
349	28	0.05	22	0.2	5.7	19	0.75
456	21	0.05	16	0.2	7.5	25	0.75
488	20	0.05	15	0.2	8	26	0.75

Note: Performance parameters are for reference only and can be customized according to customer requirements.

# Mechanical Dimensions

All dimensions are in millimetres.

L Value Corresponding to Different Gear Ratios														
Gear Ratio	12	22	29	56	73	78	107	140	182	205	268	349	456	488
L Dimension (mm)	15.5			17			18.5			20				



Gear Ratio	12 / 22 / 29	56 / 72.9 / 78	107 / 140
L Dimension	15.5 mm	17 mm	18.5 mm

Item	Dimension
Gearbox diameter	$\varnothing 20$ mm
Motor body length	25 mm
Motor diameter	$\varnothing 20$ mm
Output shaft	$\varnothing 4$ mm
Mounting thread	2 x M2.5, depth 4 mm
Rear body width	15.2 mm

The dimension drawing is for reference only. Output shaft, mounting details, and lead wire configuration can be customized according to customer requirements.