

PRODUCT SPECIFICATION

TSL-R-370-COSR

Brushed DC Vibration Motor Series

6 V, 12 V and 24 V options

6000 and 8500 r/min variants

Single copper head configuration

6 V

12 V

24 V

6000 r/min

8500 r/min

Clean design. Reliable performance. Custom configurations available.



R-370 COSR Brushed DC Vibration Motor

Performance Specifications

Motor Model	TSL-R-370-COSR-24122	TSL-R-370-COSR-2688	TSL-R-370-COSR-17234	TSL-R-370-COSR-20175	TSL-R-370-COSR-12475	TSL-R-370-COSR-14350
Operating Voltage Range (V)	3.0-6.0	3.0-6.0	9.0-14.0	9.0-14.0	14.5-26	14.5-26
Nominal Voltage (V)	6	6	12	12	24	24
No-load Speed (r/min)	6000	8500	6000	8500	6000	8500
No-load Current (A)	0.1	0.17	0.042	0.062	0.025	0.04
Max Efficiency Speed (r/min)	5038	7244	5090	7371	5059	7099
Max Efficiency Current (A)	0.524	0.982	0.235	0.405	0.134	0.203
Max Efficiency Torque (g.cm)	39.1	51.4	39.3	43.6	45.9	42.4
Max Efficiency Output Power (W)	1.54	2.89	1.38	2.38	1.58	2.38
Max Power Speed (r/min)	3226	4512	3198	4452	3215	4595
Max Power Current (A)	1.32	2.75	0.64	1.29	0.35	0.49
Max Power Torque (g.cm)	122.1	174.1	129	164.4	146.5	128.6
Max Power Output Power (W)	3.83	8	3.69	7.58	4	5.69
Stall Torque (g.cm)	244.4	348.4	259.6	328.9	293.1	257.2
Stall Current (A)	2.75	5.66	1.31	2.651	0.723	1.027

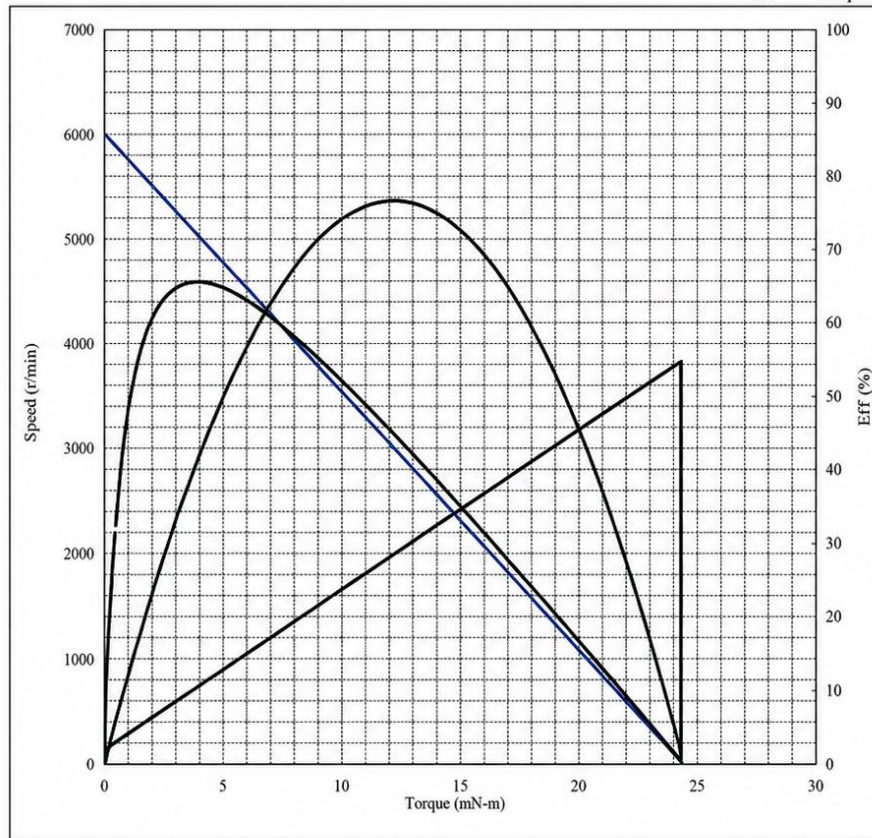
Specifications are for reference only. Products can be customized according to customer requirements.

Performance Curve - 6 V / 6000 r/min

Model: R-370-24122

Date : 05/02/22

Full scale : ----- 100 % Eff
----- 5.0 Watts
----- 5.0 Amp.



Performance (in an ambient temperature of 25-30 ° C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 6.0 Volts

Direction : CCW

At No Load

Speed : 5999 r/min
Current : 0.1 AMPS

At stall (Extrapolated)

Torque : 24.44 mN-m
Current : 2.750 AMPS

At maximum efficiency

Efficiency: 49.0 %
Torque : 3.914 mN-m
Speed : 5038 r/min
Current : 0.524 AMPS
Output : 1.54 Watts

At maximum Power output

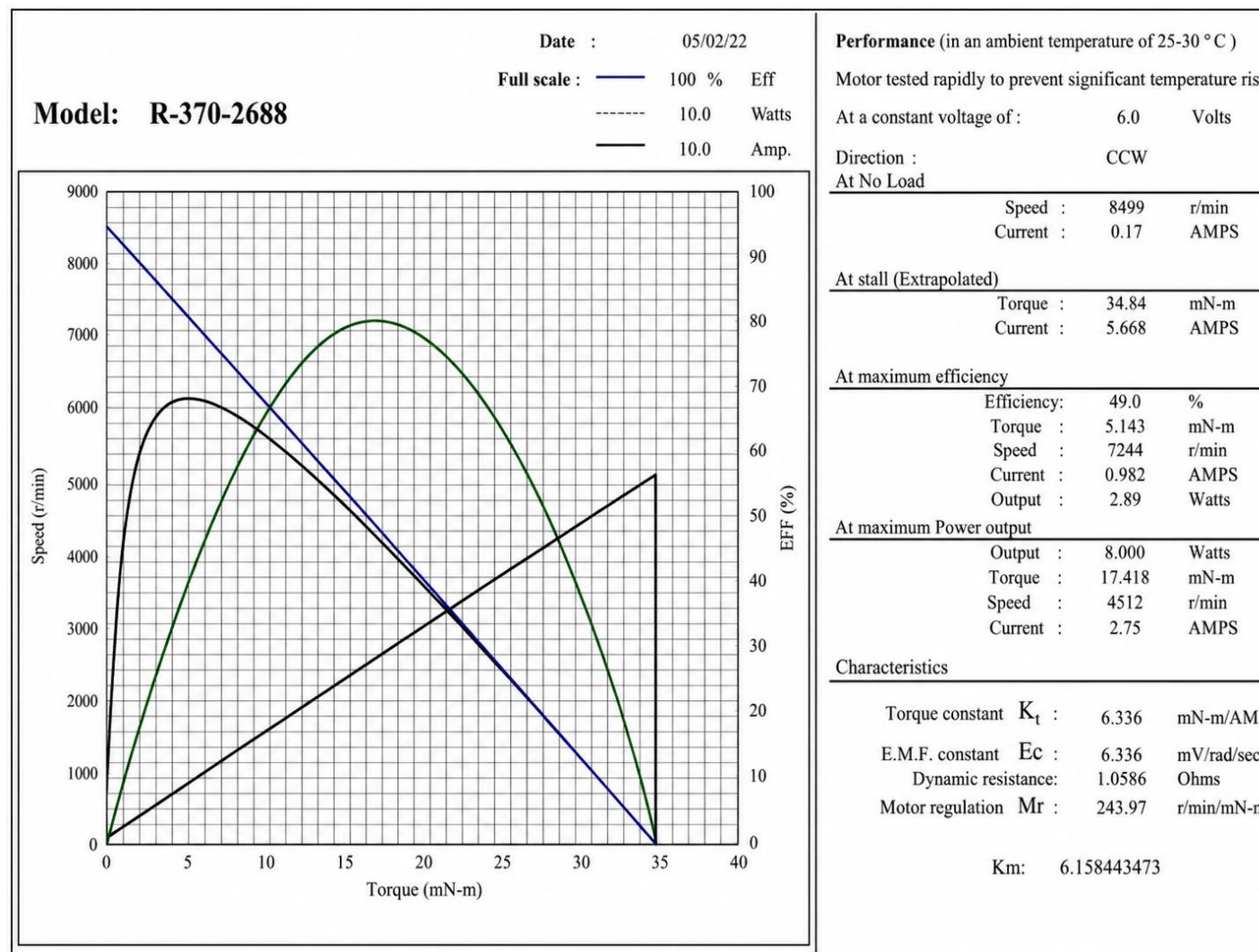
Output : 3.830 Watts
Torque : 12.219 mN-m
Speed : 3226 r/min
Current : 1.32 AMPS

Characteristics

Torque constant K_t : 9.222 mN-m/AMP
E.M.F. constant E_c : 9.222 mV/rad/sec
Dynamic resistance: 2.1819 Ohms
Motor regulation M_r : 245.47 r/min/mN-m

Km: 6.243363365

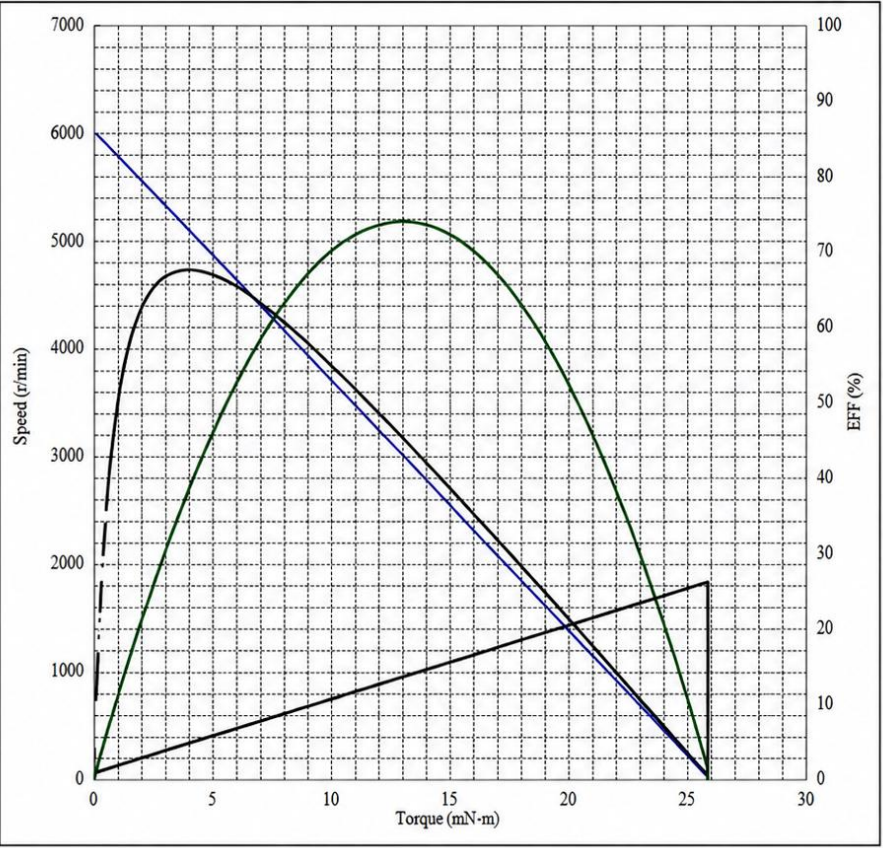
Performance Curve - 6 V / 8500 r/min



Performance Curve - 12 V / 6000 r/min

Model: R-370-17234

Date : 03/01/22
Full scale : --- 100 % Eff
 --- 5.0 Watts
 --- 5.0 Amp.

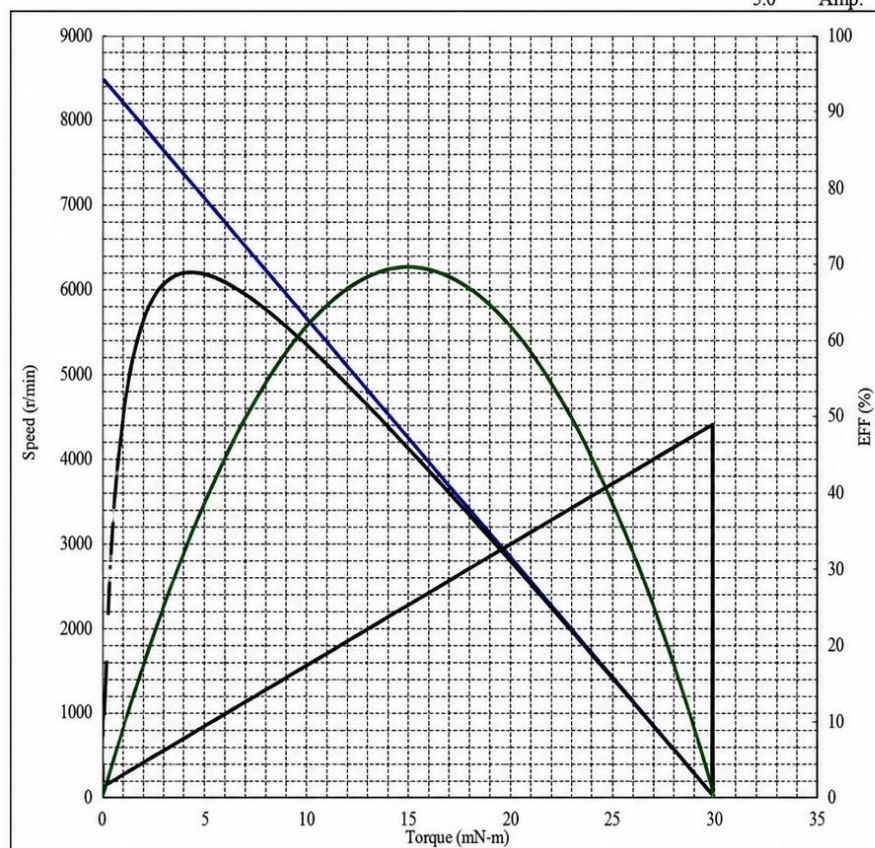


Performance (in an ambient temperature of 25-30 ° C)		
Motor tested rapidly to prevent significant temperature rise.		
At a constant voltage of :	12.0	Volts
Direction :	CCW	
At No Load		
Speed :	6000	r/min
Current :	0.042	AMPS
At stall (Extrapolated)		
Torque :	25.96	mN-m
Current :	1.314	AMPS
At maximum efficiency		
Efficiency:	49.0	%
Torque :	3.938	mN-m
Speed :	5090	r/min
Current :	0.235	AMPS
Output :	1.38	Watts
At maximum Power output		
Output :	3.693	Watts
Torque :	12.981	mN-m
Speed :	3198	r/min
Current :	0.64	AMPS
Characteristics		
Torque constant K_t :	20.417	mN-m/AMP
E.M.F. constant E_c :	20.417	mV/rad/sec
Dynamic resistance:	9.1355	Ohms
Motor regulation M_r :	231.12	r/min/mN-m
K_m	6.754965245	

Performance Curve - 12 V / 8500 r/min

Model: R-370-20175

Date : 04/27/22
 Full scale : 100 % Eff
 10.0 Watts
 5.0 Amp.



Performance (in an ambient temperature of 25-30 ° C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 12.0 Volts

Direction : CCW

At No Load

Speed :	8497	r/min
Current :	0.071	AMPS

At stall (Extrapolated)

Torque :	30.00	mN-m
Current :	2.458	AMPS

At maximum efficiency

Efficiency:	49.0	%
Torque :	4.357	mN-m
Speed :	7263	r/min
Current :	0.418	AMPS
Output :	2.46	Watts

At maximum Power output

Output :	6.955	Watts
Torque :	14.998	mN-m
Speed :	4501	r/min
Current :	1.19	AMPS

Characteristics

Torque constant K_t : 12.564 mN-m/AMP

E.M.F. constant E_c : 12.564 mV/rad/sec

Dynamic resistance: 4.8812 Ohms

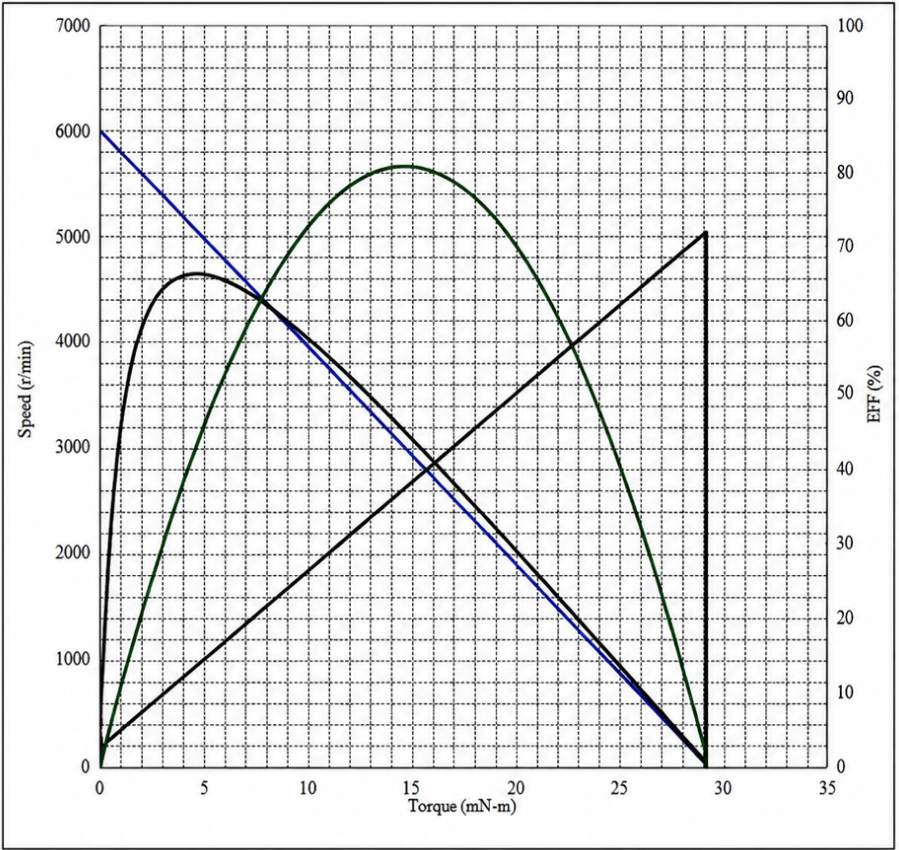
Motor regulation M_r : 283.27 r/min/mN-m

K_m 5.686866248

Performance Curve - 24 V / 6000 r/min

Model: **R-370-12475**

Date : 03.01.22
Full scale : ----- 100 % Eff
----- 5.0 Watts
----- 1.0 Amp.



Performance (in an ambient temperature of 25-30 ° C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 24.0 Volts

Direction : CCW

At No Load

Speed :	6000	r/min
Current :	0.025	AMPS

At stall (Extrapolated)

Torque :	29.31	mN-m
Current :	0.723	AMPS

At maximum efficiency

Efficiency:	49.0	%
Torque :	4.596	mN-m
Speed :	5059	r/min
Current :	0.134	AMPS
Output :	1.58	Watts

At maximum Power output

Output :	4.042	Watts
Torque :	14.653	mN-m
Speed :	3215	r/min
Current :	0.35	AMPS

Characteristics

Torque constant K_t :	42.000	mN-m/AMP
E.M.F. constant E_c :	42.000	mV/rad/sec
Dynamic resistance:	33.2070	Ohms
Motor regulation M_r :	204.75	r/min/mN-m

K_m 7.288494781

Performance Curve - 24 V / 8500 r/min

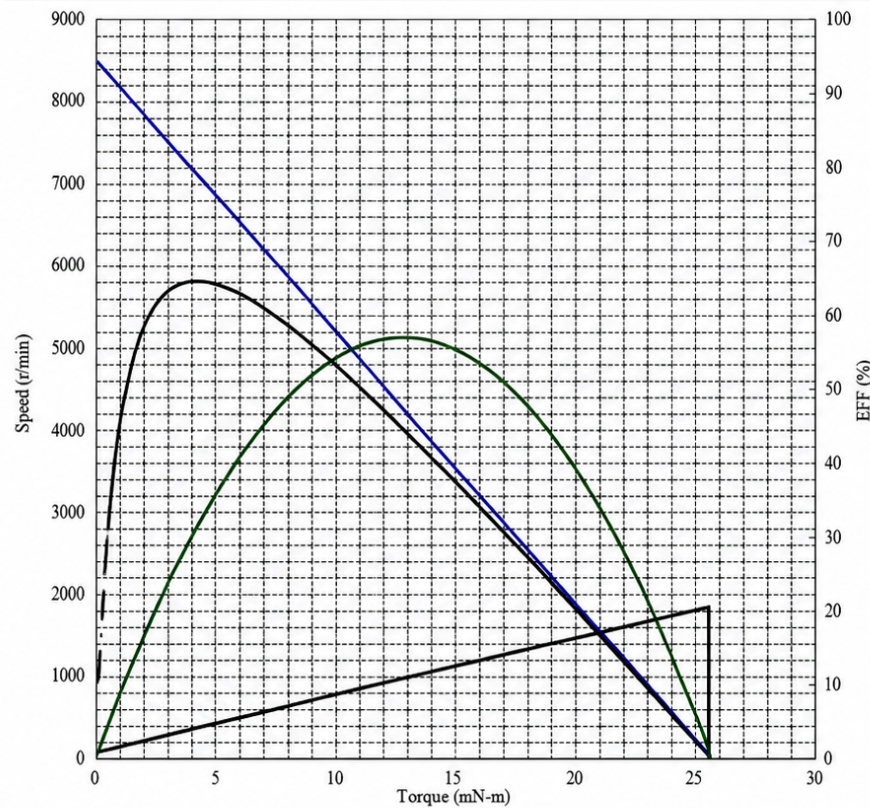
Model: R-370-14350

Date : 04/27/22

Full scale : — 100 % Eff

----- 10.0 Watts

— 5.0 Amp.



Performance (in an ambient temperature of 25-30 °C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 24.0 Volts

Direction : CCW

At No Load

Speed :	8500	r/min
Current :	0.04	AMPS

At stall (Extrapolated)

Torque :	25.72	mN-m
Current :	1.027	AMPS

At maximum efficiency

Efficiency:	49.0	%
Torque :	4.240	mN-m
Speed :	7099	r/min
Current :	0.203	AMPS
Output :	2.38	Watts

At maximum Power output

Output :	5.690	Watts
Torque :	12.861	mN-m
Speed :	4595	r/min
Current :	0.49	AMPS

Characteristics

Torque constant K_t :	26.064	mN-m/AMP
E.M.F. constant E_c :	26.064	mV/rad/sec
Dynamic resistance:	23.3725	Ohms
Motor regulation M_r :	330.47	r/min/mN-m

K_m 5.391243006

Outline Dimensions - Single Copper Head

R-370 Single Copper Head Motor 13*4.9MM

