

# Single-phase asynchronous motor

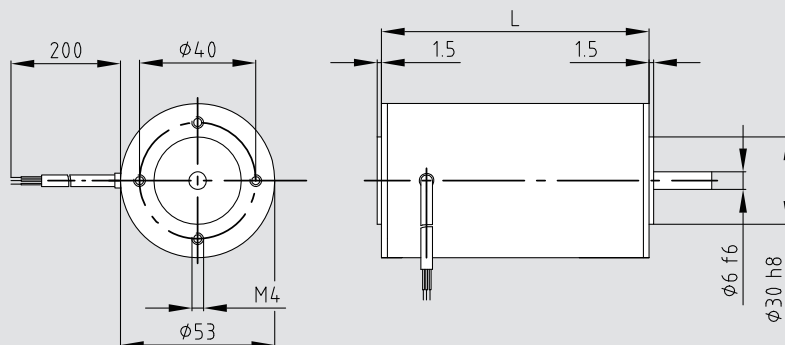
**Properties:** Connection: 230 V / 50 Hz AC system , optional designs for 110 V / 60 Hz or other voltages / frequencies  
 Running capacitor required  
 Cable connection, optional plug-in connector  
 Service life: 20,000 hours, S1 duty  
 Insulation mat. class: B, optional F  
 System of protection: IP 40, optional up to IP 65  
 Special model: Design for short-time duty with high performance  
 Options: Thermal protection, special gears, special flanges, custom designed



Type	Name	U	AC voltage	K 542	K 562		
	Nominal voltages			230	230		
<b>Specification</b>	Nominal power	$P_2$	W	9.5	13.1		
	Nominal speed	$n_{nom}$	rpm	2600	2600		
	Nominal torque	$T_{nom}$	Ncm	3.5	4.8		
	Starting torque	$T_S$	Ncm	2.5	2.6		
	Nominal current	$I_{nom}$	mA	146	110		
	No-load current	$I_0$	mA	136	165		
<b>Characteristics</b>	Locked rotor speed	$n_{break}$	rpm	2150	2200		
	Locked rotor torque	$T_{braek}$	Ncm	6	7		
	Nominal efficiency	$\eta$	%	35.5	47.0		
<b>Connection</b>	Terminal resistance	R	Ohm	395	530		
	Input power	$P_1$	W	28	25		
	Running capacitor	C	$\mu$ F	1.5	1.5		
<b>Dynamics</b>	Weight	m	kg	0.7	1.0		
	Moment of inertia	J	$gcm^2$	128	200		
<b>Thermal</b>	Adm. ambient temperature	$T_a$	$^{\circ}$ C	-20 to +40	-20 to +40		
	Max. adm. stator temperature	$T_{max}$	$^{\circ}$ C	+120	+120		
<b>Coupling</b>	Shaft diameter	d	mm	6	6		
	Max. axial force	$F_a$	N	8	8		
	Max. radial force	$F_r$	N	100	100		

## Dimensions

Type	L / mm
K 542	92
K 562	112



## System technology (table next page)

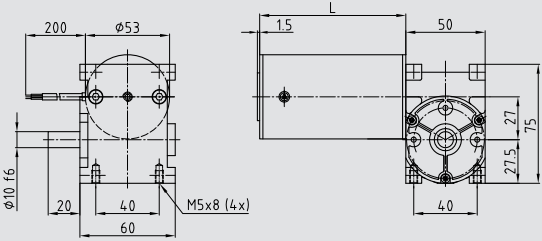
<b>Recommended combinations</b>	Worm gearing	S 567
	Spur gear	Z 5 Z 6
	Planetary gear	PM 40
Rotary encoder	RV 20 RI 20	
Brake	B 35	

# Gear unit combinations

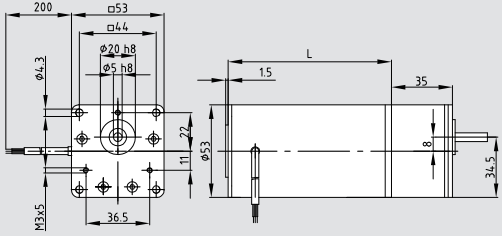
- All torques are calculated with an duty factor of 1!



Additional recommended combinations upon request

Type	Name Nominal voltage / AC voltage	K 542 230		K 562 230			
		n rpm	M Nm	n rpm	M Nm		
<b>S 567 Worm gear 1-stage</b>  							
	i=3.625	717	0.1	717	0.1		
	i=5	520	0.1	717	0.2		
	i=10	260	0.2	260	0.3		
	i=20	130	0.4	130	0.5		
	i=24	108	0.4	108	0.6		
	i=30	87	0.5	87	0.6		
	i=40	65	0.6	65	0.8		
	i=50	52	0.6	52	0.9		
	i=60	43	0.8	43	1.2		
i=80	33	0.4	33	0.6			

Additional reductions upon request.

Type	Name Nominal voltage / AC voltage	K 542 230		K 562 230			
		n rpm	M Nm	n rpm	M Nm		
<b>Z 5 Spur gear 2-4 stage</b>  							
	i=4.55	571	0.1	571	0.2		
	i=8.9	292	0.3	292	0.4		
	i=13	200	0.4	200	0.6		
	i=17.4	149	0.5	149	0.8		
	i=25	104	0.7	104	1.0		
	i=35.5	73	1.1	73	1.4		
	i=46.2	56	1.3	56	1.8		
	i=82	32	2.3	32	3.2		
	i=110	24	3.1	24	4.3		
i=145	18	4.1	18	5.6			

Additional reductions upon request.

Type	Name Nominal voltage / AC voltage	K 542 230		K 562 230			
		n rpm	M Nm	n rpm	M Nm		
<b>PM/P 40 Planetary gear 1-3 stage</b>							
	i=3.7	703	0.1	703	0.1		
	i=5.2	500	0.1	500	0.2		
	i=6.8	382	0.2	382	0.3		
	i=13.7	190	0.4	190	0.5		
	i=18.4	141	0.5	141	0.7		
	i=28.9	90	0.8	90	1.0		
	i=45.6	57	1.2	57	1.6		
	i=78.7	33	1.9	33	2.6		
	i=115	23	2.8	23	3.9		
i=169	15	4.1	15	5.7			

Additional reductions upon request.

# Single-phase asynchronous motor

**Properties:** Connection: 230 V / 50 Hz AC system , optional designs for 110 V / 60 Hz or other voltages / frequencies  
 Running capacitor required  
 Cable connection, optional plug-in connector

Service life: 20,000 hours, S1 duty

Insulation mat.class: B, optional F

System of protection: IP 40, optional up to IP 65

Special model: Design for short-time duty with high performance

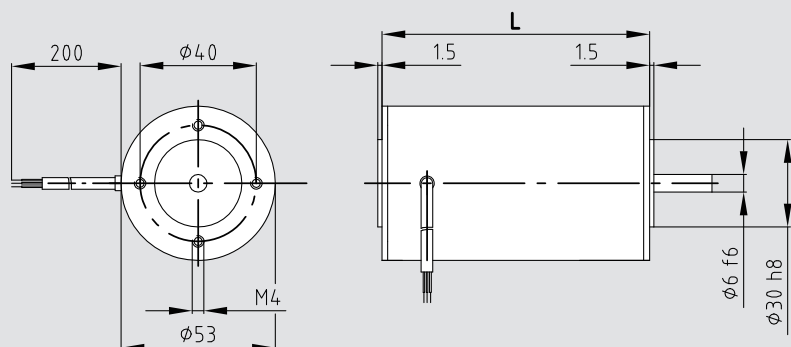
Options: Thermal protection, special shafts, special flanges, custom designed



Type	Name	U	AC voltage	K 544	K 564		
	Nominal voltages			230	230		
<b>Specification</b>	Nominal power	$P_2$	W	3.0	4.8		
	Nominal speed	$N_{nom}$	rpm	1200	1200		
	Nominal torque	$T_{nom}$	Ncm	2.4	3.8		
	Starting torque	$T_A$	Ncm	2.6	3.4		
	Nominal current	$I_{nom}$	mA	67	100		
	No-load current	$I_0$	mA	64	90		
<b>Characteristics</b>	Locked rotor speed	$n_{break}$	rpm	1000	1050		
	Locked rotor torque	$T_{break}$	Ncm	3.4	5.1		
	Nominal efficiency	$\eta$	%	20.0	21.5		
<b>Connection</b>	Terminal resistance	R	Ohm	1615	1110		
	Input power	$P_1$	W	15	22		
	Running capacitor	C	$\mu$ F	1.0	1.5		
<b>Dynamics</b>	Weight	m	kg	0.7	1.0		
	Moment of inertia	J	gcm <sup>2</sup>	128	200		
<b>Thermal</b>	Adm. ambient temperature	$T_a$	°C	-20 to +40	-20 to +40		
	Max. adm. stator temperature	$T_{max}$	°C	+120	+120		
<b>Coupling</b>	Shaft diameter	d	mm	6	6		
	Max. axial force	$F_a$	N	8	8		
	Max. radial force	$F_r$	N	100	100		

## Dimensions

Type	L / mm
K 544	92
K 564	112



## System technology (tables next page)

<b>Recommended combinations</b>	Worm gear	S 567
	Spur gear	Z 5 Z 6
	Planetary gear	PM 40
Rotary encoder	RV 20 RI 20	
Brake	B 35	

# Gear unit combinations

- All torques are calculated with an duty factor of 1!



Additional recommended combinations upon request

Type	Name Nominal voltage / AC voltage	K 544 230		K 564 230			
<b>S 567 Worm gear 1-stage</b>  		n rpm	M Nm	n rpm	M Nm		
	i=3.625	331	0.1	331	0.1		
	i=5	240	0.1	240	0.1		
	i=10	120	0.1	120	0.1		
	i=20	60	0.3	60	0.3		
	i=24	50	0.3	50	0.3		
	i=30	40	0.3	40	0.3		
	i=40	30	0.4	30	0.4		
	i=50	24	0.4	24	0.4		
	i=60	20	0.6	20	0.6		
i=80	15	0.3	15	0.3			

Additional reductions upon request.

<b>Z 5 Spur gear 2-4 stage</b>  		n rpm	M Nm	n rpm	M Nm		
	i=4.55	264	0.1	264	0.2		
	i=8.9	135	0.2	135	0.3		
	i=13	92	0.3	92	0.4		
	i=17.4	69	0.4	69	0.6		
	i=25	48	0.5	48	0.8		
	i=35.5	34	0.7	34	1.1		
	i=46.2	26	0.9	26	1.4		
	i=82	15	1.6	15	2.5		
	i=110	11	2.1	11	3.4		
i=145	8	2.8	8	4.5			

Additional reductions upon request.

<b>PM/P 40 Planetary gear 1-3 stage</b>		n rpm	M Nm	n rpm	M Nm		
	i=3.7	324	0.1	324	0.1		
	i=5.2	231	0.1	231	0.2		
	i=6.8	176	0.1	176	0.2		
	i=13.7	88	0.2	88	0.4		
	i=18.4	65	0.3	65	0.5		
	i=28.9	42	0.5	42	0.8		
	i=45.6	26	0.8	26	1.3		
	i=78.7	15	1.3	15	2.1		
	i=115	10	1.9	10	3.1		
i=169	15	4.1	15	5.7			

Additional reductions upon request.