

# WSG-09

## GEARLESS SYNCHRONOUS TRACTION MACHINE

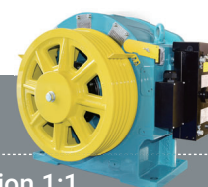


## WSG-09 series overview



S3-40%, 240st/h	WSG-09B									
	Suspension 2:1					Suspension 1:1				
Rated loads up to (kg)	630	800	900	1000/1050	1100	315	400	450	500/525	550
Rated torque(N.m)	420	503 ... 520	601	603 ... 670	674	420	503 ... 520	601	603 ... 670	674
Traction sheave $\Phi$ (mm)	400	400	400	400	400	400	400	400	400	400
Rated speed (m/s)	1.0 ... 2.0	1.0 ... 2.5	0.5 ... 0.8	1.0 ... 2.5	0.5 ... 1.0	2.0 ... 4.0	2.0 ... 5.0	1.0 ... 1.6	2.0 ... 5.0	1.0 ... 2.0
Motor Type	Gearless PM synchronous					Gearless PM synchronous				
* Net weight (kg)	275	275 ... 280	285	280 ... 285	285	275	275 ... 280	285	280 ... 285	285
MRL solution	Applicable									

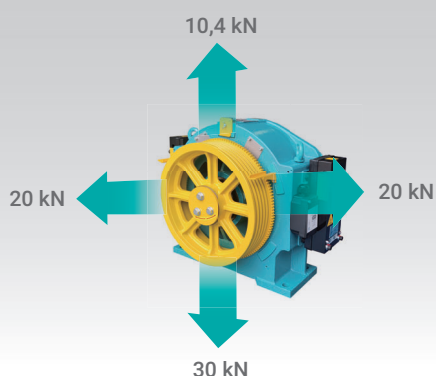
\*The mechanical evacuation system isn't included, when we measure its weight and thickness.



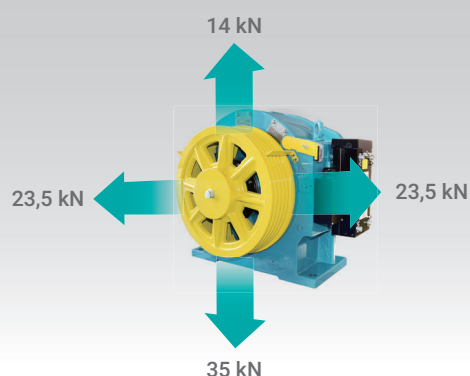
S3-40%, 240st/h	WSG-09					
	Suspension 2:1			Suspension 1:1		
Rated loads up to (kg)	630	1150	1260	315	575	630
Rated torque(N.m)	420	740	755	420	740	755
Traction sheave $\Phi$ (mm)	400	400	400	400	400	400
Rated speed (m/s)	1.0 ... 2.0	1.0 ... 2.5	0.5 ... 1.0	2.0 ... 4.0	2.0 ... 5.0	1.0 ... 2.0
Motor Type	Gearless PM synchronous			Gearless PM synchronous		
* Net weight (kg)	330	350	350	330	350	350
MRL solution	Applicable					

\*The mechanical evacuation system isn't included, when we measure its weight and thickness.

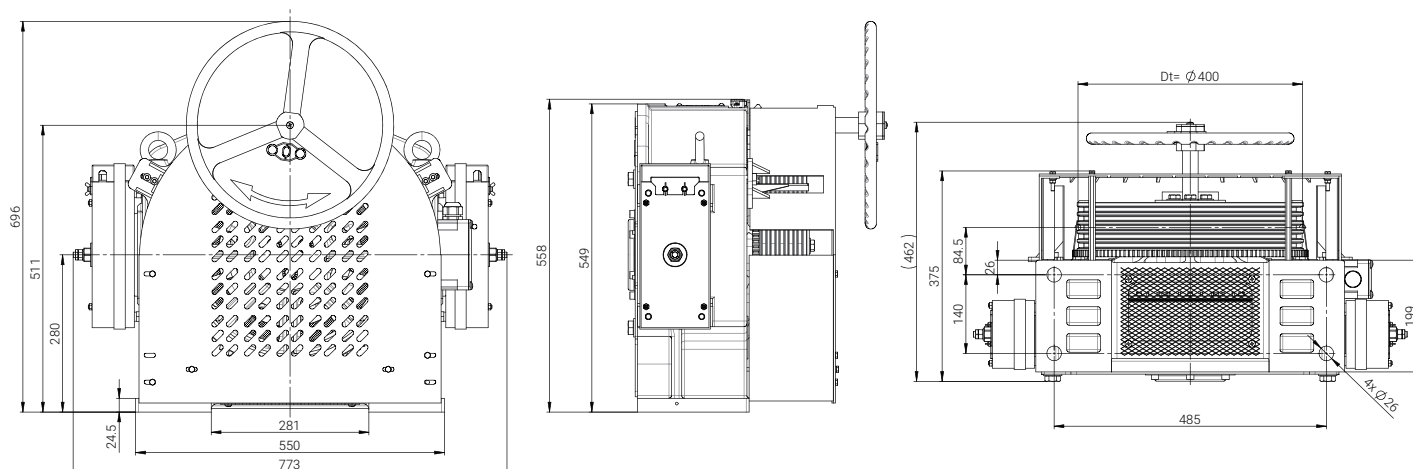
Shaft Load of WSG-09B



Shaft Load of WSG-09



## Fixing dimension



## Technical data for traction machine

Suspension 2:1

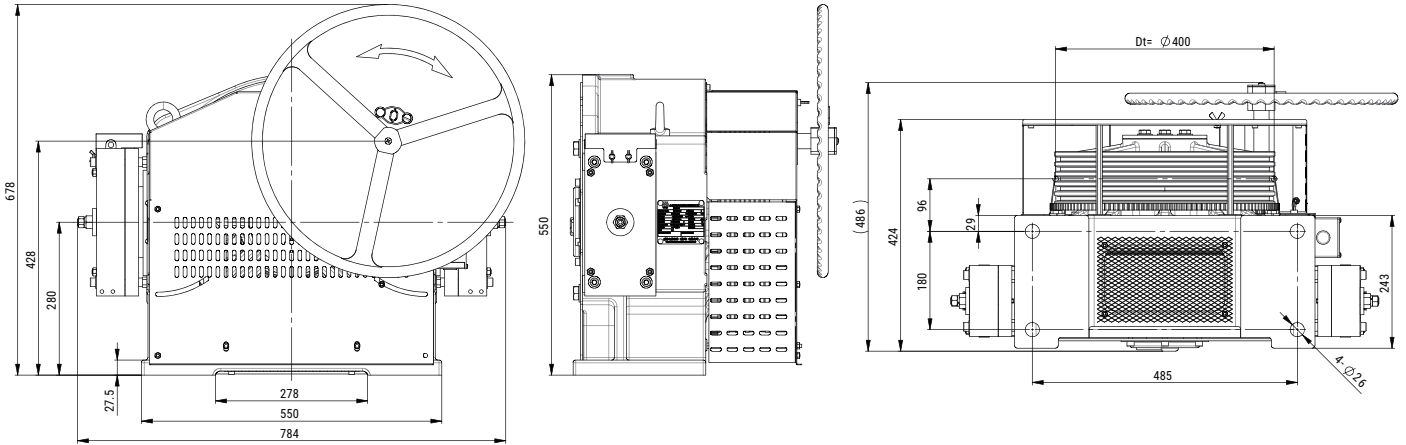
WSG-09B		Synchronous														32-pole															
Sheave	ØDt (mm)	400				400				400				400				400													
Loads	Q (kg)	630				800				900				1000/1050				1100													
Groove profile (N x ØD-P)		5×Φ8 -15 / 5×Φ10 -15 / 4×Φ10 -15 / 4×Φ10 -17; 45°; V-groove; Groove hardened																													
Continuous-operation system		S3-40%, 240st/h																													
Motor current applicable to 380V link voltage	V (m/s)	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]
	0.5	-	-	-	-	-	-	-	-	-	-	-	-	48	3.0	9.0	380	12.8	601	-	-	-	-	-	-	48	3.4	9.4	380	12.8	674
	0.75	-	-	-	-	-	-	-	-	-	-	-	-	72	4.5	11.5	380	19.2	601	-	-	-	-	-	-	-	-	-	-	-	-
	0.8	-	-	-	-	-	-	-	-	-	-	-	-	76	4.8	11.5	380	20.3	601	-	-	-	-	-	-	-	-	-	-	-	-
	1.0	95	4.2	9.0	380	25.3	420	95	5.0	11.5	380	25.3	503	-	-	-	-	-	-	95	6.0	14.5	380	25.3	603	95	6.7	14.5	380	25.3	674
	1.5	143	6.3	14.7	380	38.1	420	143	7.8	18.6	380	38.1	520	-	-	-	-	-	-	143	10.0	21.8	380	38.1	670	-	-	-	-	-	-
	1.6	153	6.7	15.2	380	40.8	420	153	8.3	19.3	380	40.8	520	-	-	-	-	-	-	153	10.7	24.9	380	40.8	670	-	-	-	-	-	-
	1.75	167	7.3	15.2	380	44.5	420	167	9.0	19.3	380	44.5	520	-	-	-	-	-	-	167	11.7	24.9	380	44.5	670	-	-	-	-	-	-
	2.0	191	8.4	18.5	380	50.9	420	191	10.4	23	380	50.9	520	-	-	-	-	-	-	191	13	30	380	50.9	650	-	-	-	-	-	-
2.5	-	-	-	-	-	-	240	13	28	380	64	520	-	-	-	-	-	-	240	16.3	37	380	64	650	-	-	-	-	-	-	

Suspension 1:1

WSG-09B		Synchronous														32-pole															
Sheave	ØDt (mm)	400				400				400				400				400													
Loads	Q (kg)	315				400				450				500/525				550													
Groove profile (N x ØD-P)		5×Φ8 -15 / 5×Φ10 -15 / 4×Φ10 -15 / 4×Φ10 -17; 45°; V-groove; Groove hardened																													
Continuous-operation system		S3-40%, 240st/h																													
Motor current applicable to 380V link voltage	V (m/s)	n [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]	n [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]	n [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]	n [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]	n [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]
	1.0	-	-	-	-	-	-	-	-	-	-	-	-	48	3.0	9.0	380	12.8	601	-	-	-	-	-	-	48	3.4	9.4	380	12.8	674
	1.5	-	-	-	-	-	-	-	-	-	-	-	-	72	4.5	11.5	380	19.2	601	-	-	-	-	-	-	-	-	-	-	-	-
	1.6	-	-	-	-	-	-	-	-	-	-	-	-	76	4.8	11.5	380	20.3	601	-	-	-	-	-	-	-	-	-	-	-	-
	2.0	95	4.2	9.0	380	25.3	420	95	5.0	11.5	380	25.3	503	-	-	-	-	-	-	95	6.0	14.5	380	25.3	603	95	6.7	14.5	380	25.3	674
	3.0	143	6.3	14.7	380	38.1	420	143	7.8	18.6	380	38.1	520	-	-	-	-	-	-	143	10.0	21.8	380	38.1	670	-	-	-	-	-	-
	3.2	153	6.7	15.2	380	40.8	420	153	8.3	19.3	380	40.8	520	-	-	-	-	-	-	153	10.7	24.9	380	40.8	670	-	-	-	-	-	-
	3.5	167	7.3	15.2	380	44.5	420	167	9.0	19.3	380	44.5	520	-	-	-	-	-	-	167	11.7	24.9	380	44.5	670	-	-	-	-	-	-
	4.0	191	8.4	18.5	380	50.9	420	191	10.4	23	380	50.9	520	-	-	-	-	-	-	191	13	30	380	50.9	650	-	-	-	-	-	-
	5.0	-	-	-	-	-	-	240	13	28	380	64	520	-	-	-	-	-	-	240	16.3	37	380	64	650	-	-	-	-	-	-

\*Standard configuration (in stock), non-standard configurations may affect lead time.

## Fixing dimension



## Technical data for traction machine

Suspension 2:1

WSG-09		Synchronous										32-pole							
Sheave	ØDt (mm)	400					400					400							
Loads	Q (kg)	630					1150					1260							
Groove profile (N x ØD-P)		6×Φ10 -15 / 5×Φ10 -15; 45°; V-groove; Groove hardened																	
Continuous-operation system		S3-40%, 240st/h																	
Motor current applicable to 380V link voltage	V (m/s)	nN [rpm]	PN [kW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]	nN [rpm]	PN [kW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]	nN [rpm]	PN [kW]	IN [A]	UN [V]	FN [Hz]	MN [N.m]
	0.5	-	-	-	-	-	-	-	-	-	-	-	-	48	3.8	9.6	380	12.8	755
	0.75	-	-	-	-	-	-	-	-	-	-	-	-	72	5.7	13.0	380	19.2	755
	0.8	-	-	-	-	-	-	-	-	-	-	-	-	76	6.0	13.7	380	20.3	755
	1.0	95	4.2	11.2	380	25.3	420	95	7.5	17.6	380	25.3	740	95	7.5	17.1	380	25.3	755
	1.5	143	6.3	15	380	38.1	420	143	11.2	25	380	38.1	740	-	-	-	-	-	-
	1.6	153	6.7	15.4	380	40.8	420	153	12	27	380	40.8	740	-	-	-	-	-	-
	1.75	167	7.4	16.9	380	44.5	420	167	13.2	28	380	44.5	740	-	-	-	-	-	-
	2.0	191	8.4	18.9	380	50.9	420	191	15	32	380	50.9	740	-	-	-	-	-	-
	2.5	-	-	-	-	-	-	240	18.6	39	380	64	740	-	-	-	-	-	-

Suspension 1:1

WSG-09		Synchronous										32-pole							
Sheave	ØDt (mm)	400						400						400					
Loads	Q (kg)	315						575						630					
Groove profile (N x ØD-P)		6×Φ10 -15 / 5×Φ10 -15; 45°; V-groove; Groove hardened																	
Continuous-operation system		S3-40%, 240st/h																	
Motor current applicable to 380V link voltage	V (m/s)	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]	nN [rpm]	PN [KW]	IN [A]	UN [V]	FN [Hz]	Mn [N.m]
	1.0	-	-	-	-	-	-	-	-	-	-	-	-	48	3.8	9.6	380	12.8	755
	1.5	-	-	-	-	-	-	-	-	-	-	-	-	72	5.7	13.0	380	19.2	755
	1.6	-	-	-	-	-	-	-	-	-	-	-	-	76	6.0	13.7	380	20.3	755
	2.0	95	4.2	11.2	380	25.3	420	95	7.5	17.6	380	25.3	740	95	7.5	17.1	380	25.3	755
	3.0	143	6.3	15	380	38.1	420	143	11.2	25	380	38.1	740	-	-	-	-	-	-
	3.2	153	6.7	15.4	380	40.8	420	153	12	27	380	40.8	740	-	-	-	-	-	-
	3.5	167	7.4	16.9	380	44.5	420	167	13.2	28	380	44.5	740	-	-	-	-	-	-
	4.0	191	8.4	18.9	380	50.9	420	191	15	32	380	50.9	740	-	-	-	-	-	-
	5.0	-	-	-	-	-	-	240	18.6	39	380	64	740	-	-	-	-	-	-

\*Standard configuration (in stock), non-standard configurations may affect lead time.

## Technical data for Brake

Motor Type	Brake Type	Certificate Type	Pull in Voltage (V)	Holding Voltage (V)	Rate Current (A)	Brake Torque (Nm)
WSG-09B/WSG-09	WB4600A	CE	DC 110	DC 110	2×1.37	≥2×950

## Features

Special housing design provides stable and high structural rigidity. Design is verified FEM and physical mechanical test.

Designed by outer rotor. Possible to generate bigger torque with low noise and vibration. Provides comfortable ride.

Safety brake system with electro-magnetical release, provides min. 2×950Nm

Groove profiles according to lift system

Perfect rated motor, use of high - performance permanent magnet, degree of protection IP40, insulation class 155°C (F), temperature control

Motor with 2 times overload capacity ; max. travelling height up to 120m

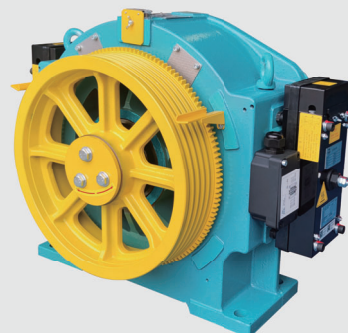
EC type-examination certificate according to EN 81-20/50, can be used for UCMP solution

Inverter compatible measuring device, rigid coupling or intergrated. (e.g. ECN 1313; ERN 1387)

Variable options regarding voltage, speed and torque

## Content of supply

- \* Gearless synchronous external rotor drive with
  - Traction sheave
  - Braking system
  - Measuring and feedback system (encoder)
- \* Mechanical evacuation system (option)
- \* Manual release device for brake (option)
- \* Remotely controlled bowden cable for brake (option)
- \* Connection cable for encoder (option)
- \* All technical documents necessary for approval and detail operation manual







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