



# MOTORBASES

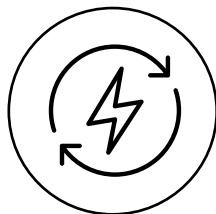
## Self-tensioning motor mounts for friction belt drives

- Prevent belt slippage
- One-time set-up
- Change belts without realignment
- Compensation for load changes
- Constant transfer of force

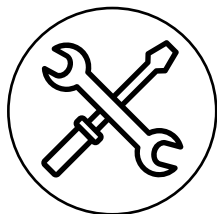
### Product advantages:



cost-saving




energy-saving




maintenance-free

# Selection table motorbases

Illustration	Type	IEC			NEMA			Page
		Motor Frame Size	P [kW] 1000 min <sup>-1</sup> 6-pole motor	P [kW] 1500 min <sup>-1</sup> 4-pole motor	Motor Frame Size	P [HP] 1200 min <sup>-1</sup> 6-pole motor	P [HP] 1800 min <sup>-1</sup> 4-pole motor	
	<b>MB 27 × 120</b>	90S	0.75	1.1	143T	0.75	1	6.3
		90L	1.1	1.5	145T	1	1.5/2	
		100L	1.5	2.2/3	182T	1.5	3	
		112M	2.2	4	184T	2	5	
	<b>MB 38 × 300</b>	132S	3	5.5	213T	3	7.5	6.4
		132M	4/5.5	7.5	215T	5	10	
		160M	7.5	11	254T	7.5	15	
		160L	11	15	256T	10	20	
	<b>MB 50 × 270-1</b>	160M	7.5	11	254T	7.5	15	6.5
		160L	11	15	256T	10	20	
	<b>MB 50 × 270-2</b>	180M	–	18.5	284T	15	25	
		180L	15	22	286T	20	30	
	<b>MB 50 × 400</b>	200L	18.5/22	30	324T	25	40	
		–	–	–	326T	30	50	
	<b>MB 50 × 500</b>	225S	–	37	364T	40	60	
		225M	30	45	365T	50	75	
	<b>MB 75 × 450</b>	250M	37	55	404T	60	100	6.6
		–	–	–	405T	75	100/125	
	<b>MB 75 × 550</b>	280S	45	75	444T	100	125/150	
		280M	55	90	445T	125/150	150/200	
	<b>MB 75 × 700</b>	315S	75	110	447T	150–200	200–250	
		315M	90/110	132–160	–	–	–	
	<b>MB 100 × 750</b>	315M	90/110	132–160	447T	150–200	200–250	6.7
		315L	110–160	160–200	449T	200–300	250–300	
		355S	132–160	200–250	586/7	250–350	300–350	
		355M	200–250	250	–	–	–	
		355L	200–250	250	–	–	–	
	<b>MB 100 × 1000</b>	various	up to 275	up to 400	various	up to 370	up to 540	
<b>MB 100 × 1500</b>	various	up to 350	up to 550	various	up to 650	up to 750	on request	

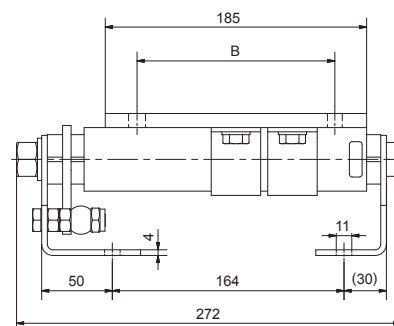
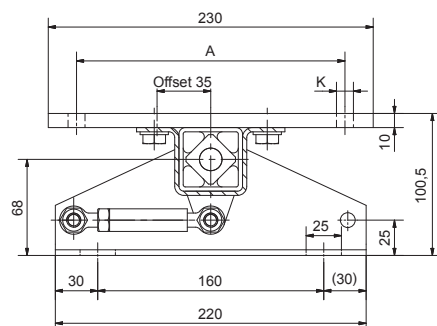
- Attention: Don't use motorbase on floating chassis.
- Contact ROSTA for more frame sizes not listed.
- For the ATEX certified designs category 2 please change the 3rd digit of the part number to 3 (example: 02 200 201 = 02 300 201).
- ATEX label:



II 2G Ex h IIC T6 Gb  
 II 2D Ex h IIC T85°C Db  
 T<sub>amb</sub>: -40°C ÷ +60°C

# Motorbase

## MB 27



Part no.	Type	Motor Frame Size	IEC			Motor Frame Size	NEMA			Weight [kg]
			A	B	K		A	B	K	
02 200 201	MB 27 × 120	90S	140	100	10.5	143T	140	102	10.5	6.9
		90L	140	125	10.5	145T	140	127	10.5	6.9
		100L	160	140	10.5	182T	190	114	10.5	6.9
		112M	190	140	10.5	184T	190	140	10.5	6.9

Details ATEX on page 6.2.

If the tension range is not sufficient, the motor plate can be configured in the offset position.

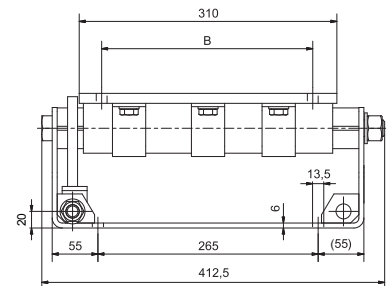
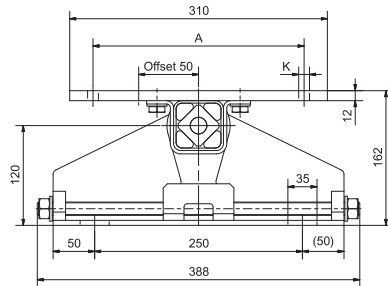
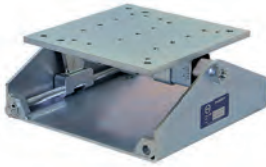
The Motorbase has galvanized surfaces, the blue painted ROSTA rubber suspension element as well as several labels with information for adjustment procedures, product name and traceability. A QR code stands for getting additional product information.

If no other units are specified, the numbers given are in mm.

Please follow our instructions at [www.rosta.com](http://www.rosta.com)

# Motorbase

## MB 38



Part no.	Type	IEC				NEMA				Weight [kg]
		Motor Frame Size	A	B	K	Motor Frame Size	A	B	K	
02 000 301	<b>MB 38 × 300</b>	132S	216	140	M10	213T	216	140	M10	25.4
		132M	216	178	M10	215T	216	178	M10	25.4
		160M	254	210	13	254T	254	210	13	25.4
		160L	254	254	13	256T	254	254	13	25.4

Details ATEX on page 6.2.

If the tension range is not sufficient, the motor plate can be configured in the offset position.

If no other units are specified, the numbers given are in mm.

The Motorbase has galvanized surfaces, the ROSTA rubber suspension element as well as several labels with information for adjustment procedures, product name and traceability. A QR code stands for getting additional product information.

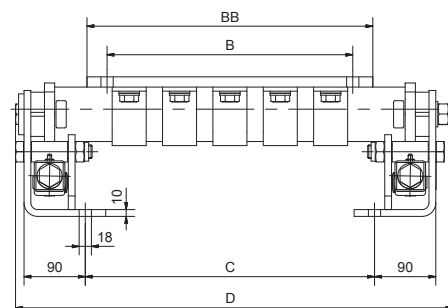
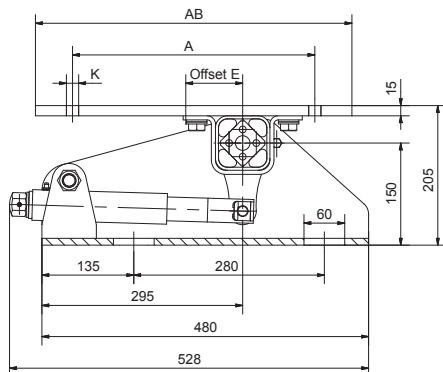
We recommend using the MB 50 for motor frame size 160 in vibrating screen applications.

Please follow our instructions at [www.rosta.com](http://www.rosta.com)



# Motorbase

## MB 50



Part no.	Type	Motor Frame Size	IEC			NEMA			K	AB	BB	C	D	E	Weight [kg]
			A	B	K	Motor Frame Size	A	B							
02 200 526	MB 50 × 270-1	160M	254	210	14	254T	254	210	14	320	315	245	463	25	43.8
		160L	254	254	14	256T	254	254	14	320	315	245	463	25	43.8
02 200 527	MB 50 × 270-2	180M	279	241	14	284T	279	241	14	350	335	245	463	72	46.2
		180L	279	279	14	286T	279	279	14	350	335	245	463	72	46.2
02 200 528	MB 50 × 400	200L	318	305	18	324T	318	267	18	405	390	345	563	55	56.6
		–	–	–	–	326T	318	305	18	405	390	345	563	55	56.6
02 200 529	MB 50 × 500	225S	356	286	18	364T	356	286	18	465	420	425	643	72	63.2
		225M	356	311	18	365T	356	311	18	465	420	425	643	72	63.2

Details ATEX on page 6.2.

The ROSTA Motorbases MB 50 are supplied with the motor plate installed in «off-set» configuration. Depending on the operating angle of the running belts, the motor plate can also be configured «centrally» over the element axis. Corresponding threads are present on the motor plate. For a higher setting angle of the motor plate, the lever can be mounted at 45°.

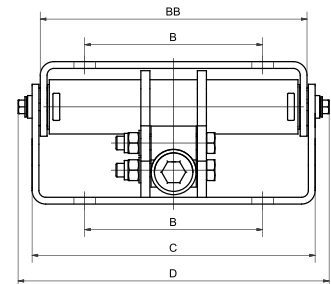
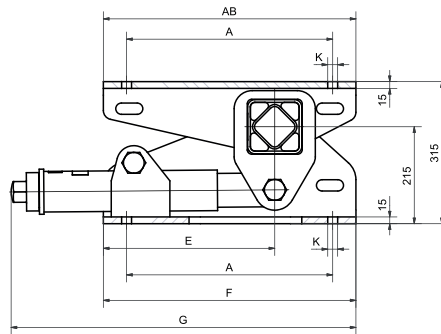
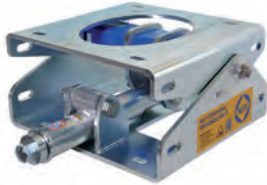
The Motorbases have galvanized surfaces, the blue painted ROSTA rubber suspension element as well as several labels with information for adjustment procedures, product name and traceability. A QR code stands for getting additional product information.

If no other units are specified, the numbers given are in mm.

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# Motorbase

## MB 75



Part no.	Type	Motor Frame Size	IEC			NEMA			AB	BB	C	D	E	F	G	Weight [kg]	
			A	B	K	Motor Frame Size	A	B									K
02 202 701	MB 75 × 450	250M	406	349	22	404T	406	311	22	510	525	561	623	380	560	764	135
		–	–	–	–	405T	406	349	22	510	525	561	623	380	560	764	135
02 202 702	MB 75 × 550	280S	457	368	22	444T	457	368	22	560	590	626	688	380	560	764	150
		280M	457	419	22	445T	457	419	22	560	590	626	688	380	560	764	150
02 202 703	MB 75 × 700	315S	508	406	28	447T	457	508	22	630	740	776	838	400	600	805	190
		315M	508	457	28	–	–	–	–	630	740	776	838	400	600	805	190

Details ATEX on page 6.2.

The MB75 features a single, centred pre-tensioning device for easy handling (like the MB100). The hole pattern of the motor plate is equal to the pattern of the baseplate. This enables a previously fix installed motor onto a MB75 without extra efforts. Furthermore, the side plates of the MB75 incorporate extra openings for easier handling during installation.

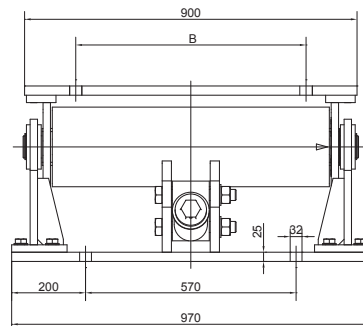
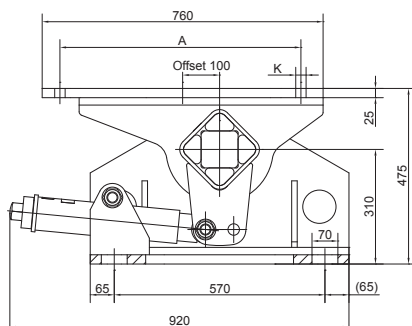
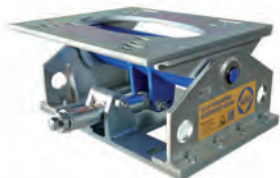
All three sizes of the MB75 have a 100 mm offset position of the motor plate, a compact height of 315 mm, galvanized surfaces, the blue painted ROSTA rubber suspension element as well as several labels with information for adjustment procedures, product name and traceability. A QR code stands for getting additional product information.

If no other units are specified, the numbers given are in mm.

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# Motorbase

## MB 100



Part no.	Type	Motor Frame Size	IEC			Motor Frame Size	NEMA			Weight [kg]
			A	B	K		A	B	K	
02 200 900	<b>MB 100 x 750</b>	315M	508	457	28	447T	457	508	21	490
		315L	508	508	28	449T	457	635	21	490
		355S	610	500	28	586/7	584	560	30	490
		355M	610	560	28	–	–	–	–	490
		355L	610	630	28	–	–	–	–	490

Details ATEX on page 6.2.

For possibly required additional tensioning travel, the pretensioning device can be bolted into the front holes of the fork-head on the rubber suspension element.

The Motorbase has galvanized surfaces, the blue painted ROSTA rubber suspension element as well as several labels with information for adjustment procedures, product name and traceability. A QR code stands for getting additional product information.

If no other units are specified, the numbers given are in mm.

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# MOTORBASES



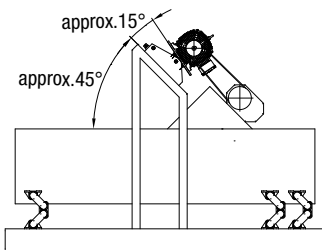
# Motorbases

## Usual positioning of the ROSTA motorbases

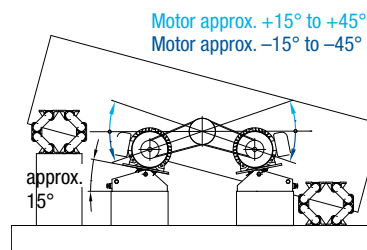
These recommendations are based on practical experience, a test run will show the ideal adjustment.

### Vibrating screen applications

#### «Overhead» configuration

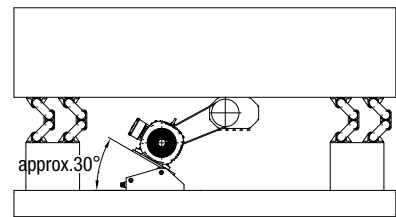


#### «Alongside» configuration



#### «Underneath» drive, feeder

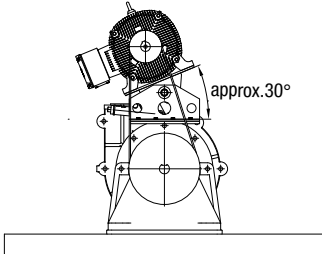
Increased offset and larger Motorbase recommended.



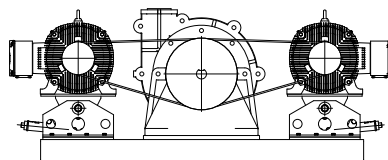
### Pump applications

#### «Overhead» configuration

Motor plate «off-set», towards the pretensioning device.



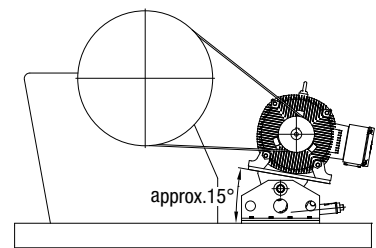
#### «Alongside» configuration



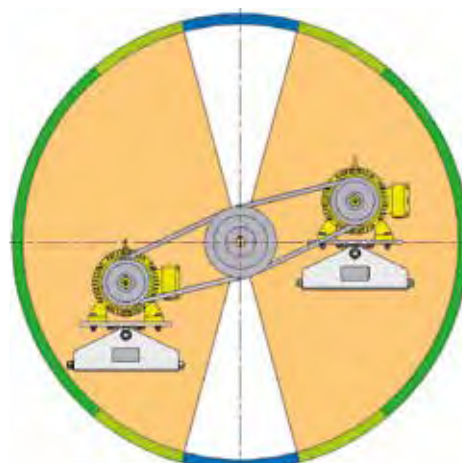
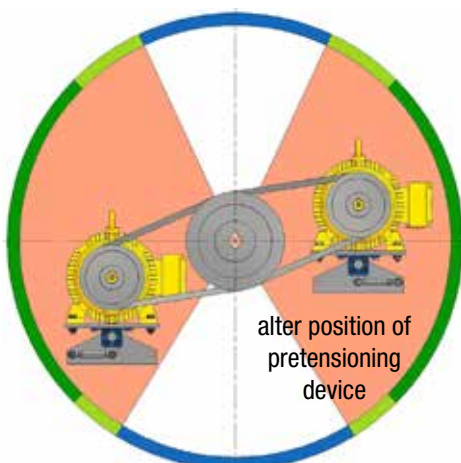
### Crusher applications

#### Variable loads

Motor plate offset, in the direction of the pre-tensioning unit.



## Range of application MB 27 and MB 38



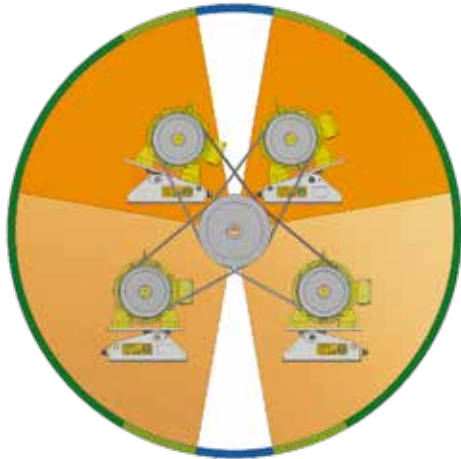
Longest tensioning path, ideal positioning range of the MB

Possible positioning range of the MB

Contact ROSTA

# Motorbases

## Range of application MB 50



**Top drive area:**  
Motor plate is tilted 30°

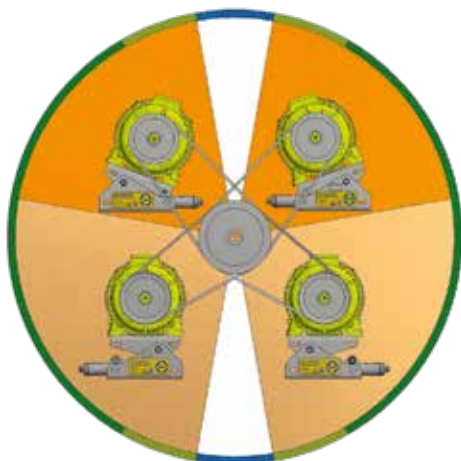
**Drive area below:**  
Motor plate is horizontal

■  
Longest tensioning path, ideal positioning range of the MB

■  
Possible positioning range of the MB

■  
Contact ROSTA

## Range of application MB 75



**Top drive area:**  
Motor plate is tilted 30°

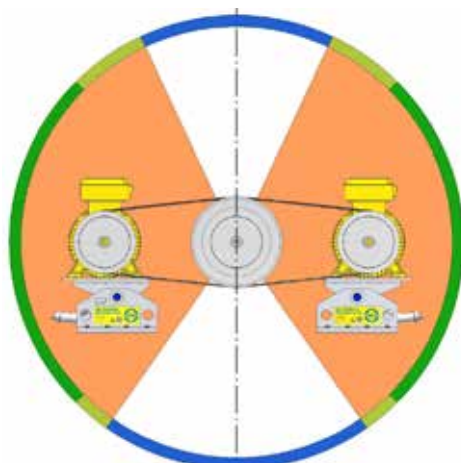
**Drive area below:**  
Motor plate is horizontal

■  
Longest tensioning path, ideal positioning range of the MB

■  
Possible positioning range of the MB

■  
Contact ROSTA

## Range of application MB 100



■  
Longest tensioning path, ideal positioning range of the MB

■  
Possible positioning range of the MB

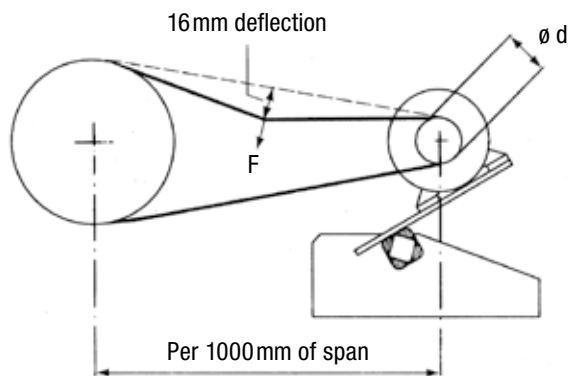
■  
Contact ROSTA

## Test forces for belt tensioning

The ROSTA motorbase MB can be precisely pre-tensioned by means of the mechanical pretensioner in accordance with the test force prescribed by the belt manufacturer. The standard values of the test forces for the most common V-belt profiles are listed in the table. This simplified way to determine the pre-tension is sufficient in most applications.

### Exception

In the case of vibrating screens, only tighten the belts so far as to guarantee they won't slip at the start and when they are running.



\* Required test-force for belt deflection of 16 mm per 1 000 mm of center distance. The relevant deflection by shorter or longer center distance is proportional to 16 mm/m. The values may vary depending on the belt supplier.

The operational test-force (after belt elongation) is around 20% lower than the initial test-force  $F_I$ . Therefore, we recommend to inspect the belt tension after a few days of operation.

### Standard values for the most common types of V-belts

V-belt type	Diameter d of the smaller pulley [mm]	Initial operation test-force $F_I^*$ [N]
SPZ / XPZ 3V / 3VX	< 71	20
	71 – 90	22
	91 – 125	25
SPA / XPA	> 125	28
	< 101	28
	101 – 140	38
SPB / XPB 5V / 5VX	141 – 200	45
	> 200	50
	< 161	50
SPC / XPC	161 – 250	70
	251 – 355	80
	> 355	90
8V	< 251	87
	251 – 355	115
	356 – 560	128
Z / ZX	> 560	145
	< 356	155
	356 – 450	190
A / AX	451 – 560	220
	> 560	230
	< 51	11
B / BX	51 – 70	12
	71 – 100	14
	> 100	17
C / CX	< 113	20
	113 – 200	22
	201 – 300	25
D	> 300	28
	< 161	28
	161 – 250	30
D	251 – 355	33
	> 355	40
	< 213	50
D	213 – 280	55
	281 – 475	60
	> 475	65
D	< 356	80
	356 – 450	95
	451 – 560	110
D	> 560	120