

CL135 rack-and-pinion stage

CL135 · CL rack-and-pinion stage series

Gears and racks are available in different specifications and quality options to suit your requirements.



CL135 product illustration

Selection values

Reduction ratio	Maximum speed (mm/s)	Horizontal load (kg)	Vertical load (kg)	Rated thrust (N)
20:1	312	80	20	635
10:1	625	65	15	310
7:1	892	60	12	210
5:1	1250	35	5	155

Reviewed specifications · 400W/750W motor

Parameter	Value
Permissible overhang moment MP	552 Nm
Permissible overhang moment MR	485 Nm
Permissible overhang moment MY	551 Nm
Gear lead	125 mm
Motor power	400W/750W
Rated torque	0.64 Nm
Stroke interval	100 mm
Movement distance	100-3500 mm
Body width	135 mm
Ordering example (reference)	CL135-L125-S3500-I5-P750W-B
Repeatability (as printed)	±0.04" mm

Installation drawings are in the separate dimension atlas.

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Engineering reference

Overhang limits, horizontal

Printed ratio/load condition	0°(mm)	45°(mm)	90°(mm)
ratio 5:1 · 10kg	820 mm	870 mm	1830 mm
ratio 5:1 · 20kg	450 mm	480 mm	1050 mm
ratio 5:1 · 35kg	250 mm	310 mm	650 mm
ratio 6:1 · 30kg	360 mm	470 mm	1100 mm
ratio 6:1 · 50kg	232 mm	315 mm	815 mm
ratio 6:1 · 65kg	159 mm	222 mm	705 mm
ratio 10:1 · 40kg	331 mm	459 mm	1027 mm
ratio 10:1 · 55kg	215 mm	299 mm	797 mm
ratio 10:1 · 70kg	154 mm	219 mm	680 mm
ratio 20:1 · 60kg	185 mm	329 mm	1625 mm
ratio 20:1 · 70kg	154 mm	262 mm	1385 mm
ratio 20:1 · 85kg	134 mm	219 mm	1220 mm

Original distance reference(mm);
 no replacement speed, sellable configuration or angular operating rating is inferred. Blank cells are not zero.

The distance table prints6:1;
 main speed table prints7:1. Their conditions are not merged.

Overhang limits, wall

Printed ratio/load condition	0°(mm)	45°(mm)	90°(mm)
ratio blank · 10kg	935 mm	499 mm	550 mm
ratio blank · 20kg	526 mm	288 mm	290 mm
ratio blank · load blank	305 mm	130 mm	125 mm
ratio blank · load blank	1030 mm	340 mm	272 mm
ratio blank · load blank	659 mm	160 mm	119 mm
ratio blank · load blank	398 mm	40 mm	29 mm
ratio 10:1 · 40kg	525 mm	166 mm	86 mm
ratio 10:1 · 55kg	385 mm	92 mm	13 mm
ratio 10:1 · 70kg	121 mm	6 mm	0 mm
ratio 20:1 · 60kg	725 mm	61 mm	40 mm
ratio 20:1 · 70kg	349 mm	11 mm	7 mm
ratio 20:1 · 80kg	0 mm	0 mm	0 mm

Original distance reference(mm);
 no replacement speed, sellable configuration or angular operating rating is inferred. Blank cells are not zero.

In the first six wall rows ratio labels are blank;
 row3 and rows4-6 also have blank load labels. No labels are copied from the horizontal table.

Overhang limits, vertical

Printed ratio/load condition	0°(mm)	45°(mm)	90°(mm)
ratio 5:1 · 4kg	609 mm		1423 mm

Printed ratio/load condition	0°(mm)	45°(mm)	90°(mm)
ratio 5:1 · 6kg	470 mm		952 mm
ratio 5:1 · 8kg	350 mm		713 mm
ratio 6:1 · 10kg	400 mm		1121 mm
ratio 6:1 · 13kg	270 mm		705 mm
ratio 6:1 · 15kg	201 mm		529 mm
ratio 10:1 · 15kg	149 mm		431 mm
ratio 10:1 · 18kg	115 mm		349 mm
ratio 10:1 · 20kg	95 mm		273 mm
ratio 20:1 · 20kg	166 mm		393 mm
ratio 20:1 · 22kg	127 mm		310 mm
ratio 20:1 · 25kg	73 mm		263 mm

Original distance reference(mm);
no replacement speed, sellable configuration or angular operating rating is inferred. Blank cells are not zero.

45° column is blank. Distance-table6:1 differs from main7:1.

Application notes

Motor installation reference: BD: motor direct position;

BL: motor outside left;

BR: motor outside right;

BM: motor outside lower. These are source ordering/installation references, not a listed configuration.

Operating condition: Stroke over600mm may cause resonance. the overhang tables are printed in mm, not mm/s.

Allowable overhang reference: The 0°/45°/90° headings are overhang/use references, not motor mounting direction or replacement speed ratings.