DESTACO Custom Catalog

12/07/2020

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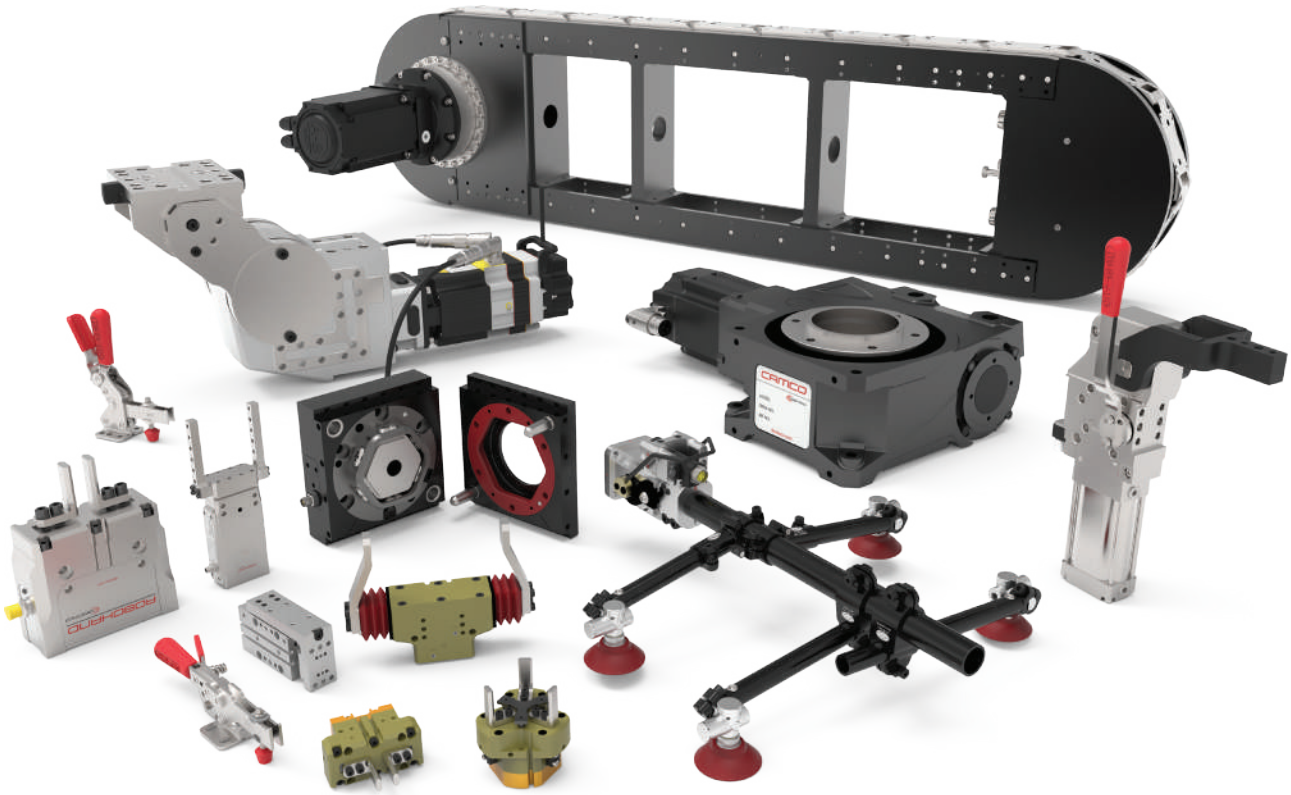

DESTACO Custom Catalog

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This catalog is a custom document and the products included is based on your unique selection from portions of complete catalogs that already exist. Please refer to our full catalogs for more information on products not included in this customized document.

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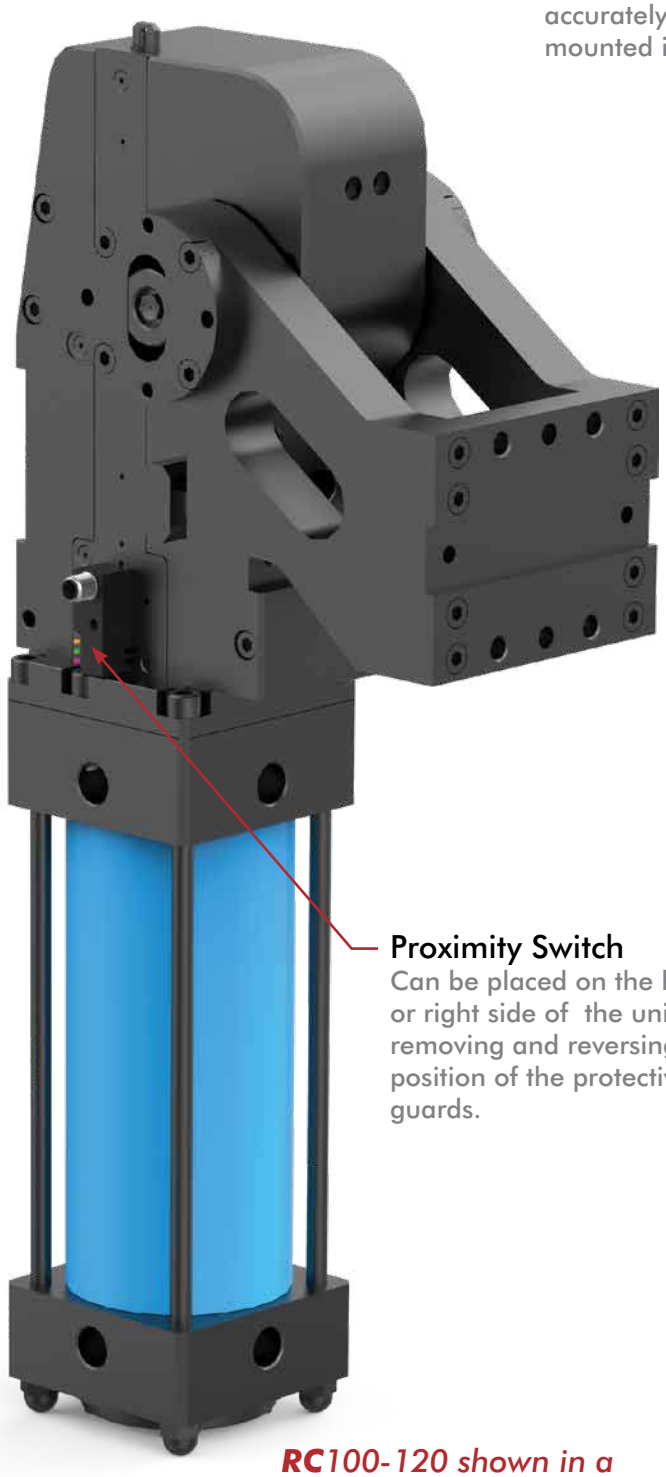
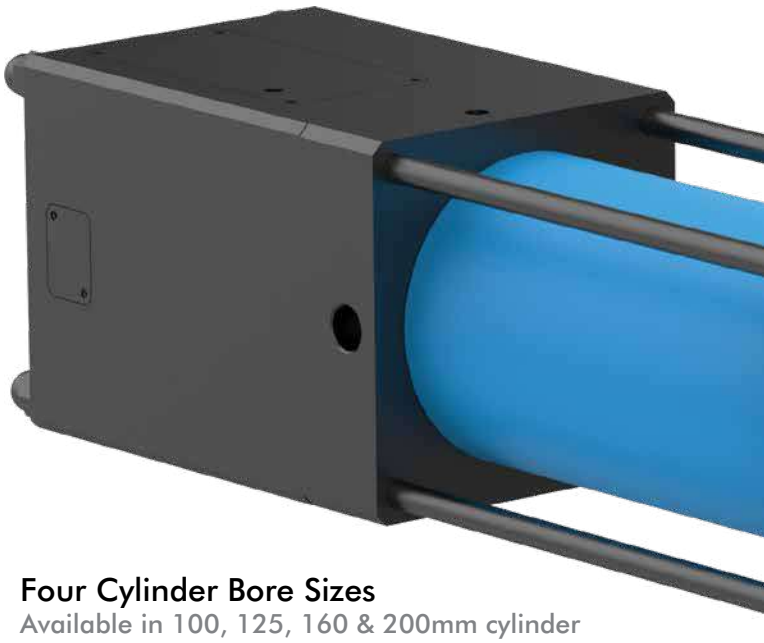
GR/RC

Pneumatic Pivot Units | Product Overview

GR and **RC** Series Pneumatic Pivot Units

are used in welding applications or anywhere it is necessary to accurately position tooling. Both the RC and GR series can be mounted in an upright vertical or horizontal position.





Four Cylinder Bore Sizes

Available in 100, 125, 160 & 200mm cylinder bore sizes. Cylinders are offered with NPT or ISO G ports.

Proximity Switch

Can be placed on the left or right side of the unit by removing and reversing the position of the protective guards.

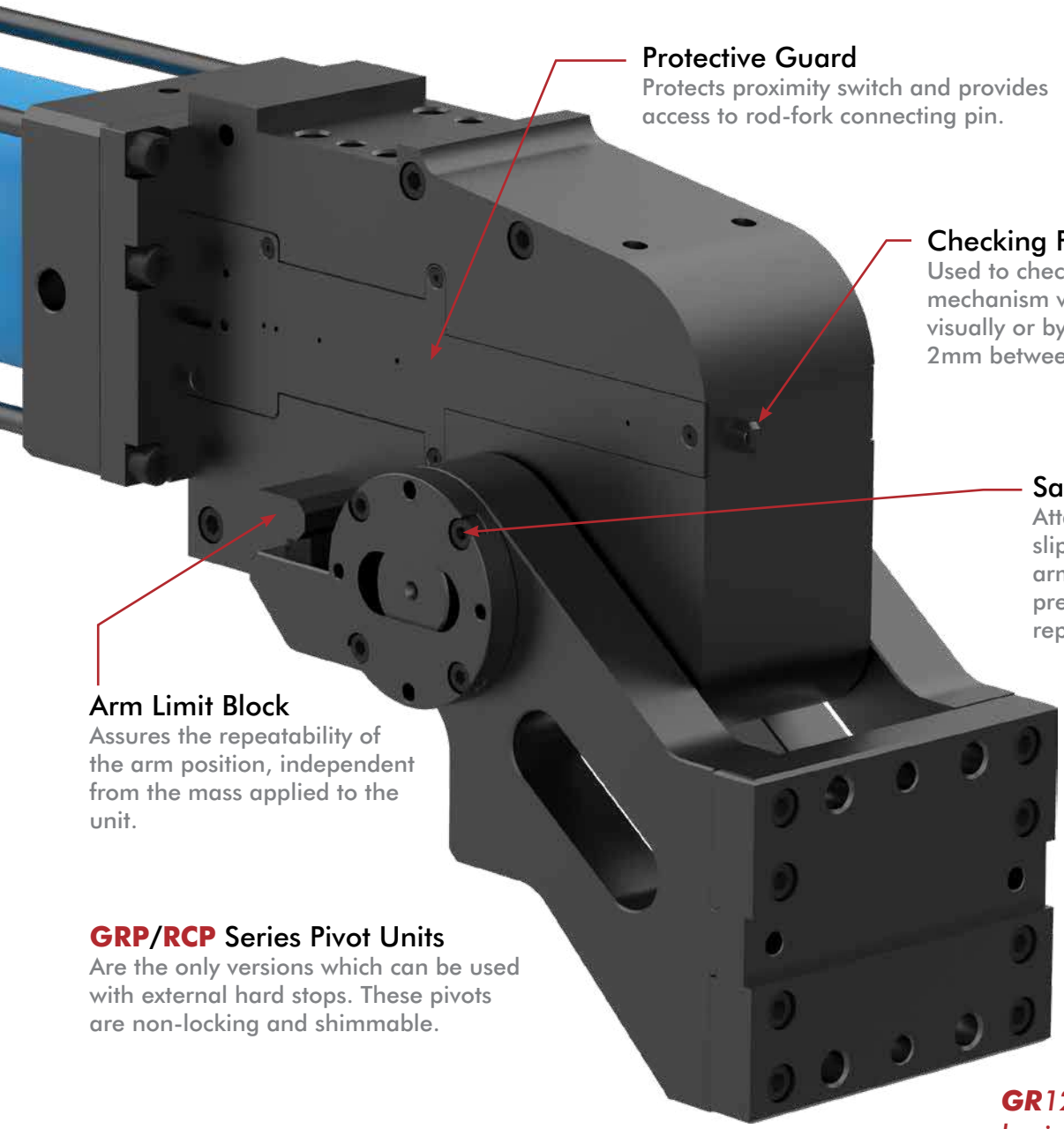
Cut Off Valve (GR Series Only)

Stops movement when air pressure is lost.

***RC**100-120 shown in a vertical "**V**" orientation*

Available in three different arm opening angles

45°, 90° and 120° arm opening angles are available in both the horizontal and vertical mount orientation. Both mounting orientations can also be ordered with an inverted mounting bracket.



Protective Guard

Protects proximity switch and provides access to rod-fork connecting pin.

Checking Pin

Used to check the locking mechanism which can be done visually or by feeling for a gap of 2mm between the base and the pin.

Safety Ring Nuts

Attached to the arms, prevent slipping effect between the arms and hubs, assuring precise positioning and repeatability.

Arm Limit Block

Assures the repeatability of the arm position, independent from the mass applied to the unit.

GRP/**RCP** Series Pivot Units

Are the only versions which can be used with external hard stops. These pivots are non-locking and shimmable.

__GR__125-120 shown in a horizontal "__O__" orientation

GR/RC

Pneumatic Pivot Units | Ordering Information

GR 160 - 120 V PX 0 N X

Cylinder	Description
100	100 mm Bore
125	125 mm Bore
160	160 mm Bore
200	200 mm Bore

Base Model	Pneumatic Pivot Unit with Hydraulic Motion Control
GR	with Braking
GRP*	Non-locking with Braking
RC	without Braking
RCP*	Non-locking without Braking

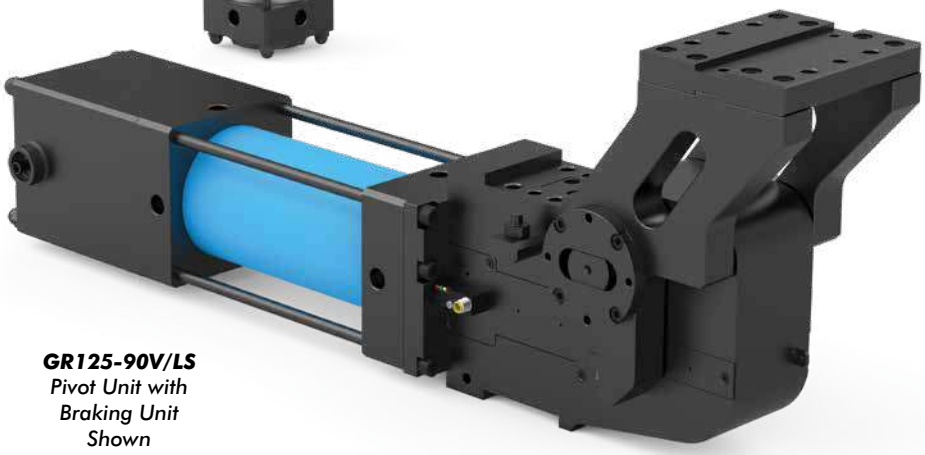
*Only GRP and RCP pivot units can be used with external hard stops and shimming.

Opening Angle	Description
45	45° Angle
90	90° Angle
120	120° Angle

Note: Cylinder length is driven by the selected opening angle.

Connections	Description
O	Horizontal
V	Vertical
O/LS	Inverted Horizontal
V/LS	Inverted Vertical

RC100-90O
Pivot Unit without Braking Unit Shown



GR125-90V/LS
Pivot Unit with Braking Unit Shown

GR Series

RC Series

Cylinder Bore Size:		100	125	160	200
Max. Torque for Weight <90°:	Nm [in-lb]	190 [1682]	290 [2567]	500 [4425]	800 [7081]
Max. Torque for Weight >90°:	Nm [in-lb]	120 [1062]	230 [2036]	400 [3540]	620 [5488]
Max. Torque for Weight Side Load:	Nm [in-lb]	80 [708]	200 [1770]	200 [1770]	200 [1770]

Pneumatic Pivot Units | Ordering Information

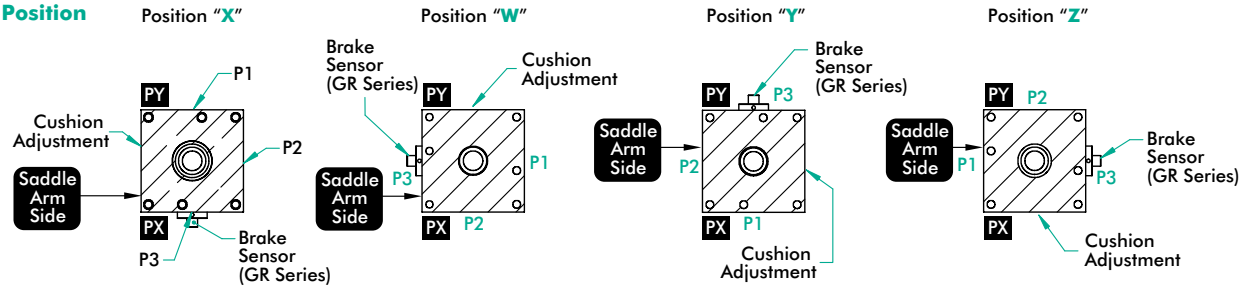
Cylinder Position	(see Diagram below)
X	Cylinder Position X
Y	Cylinder Position Y
W	Cylinder Position W
Z	Cylinder Position Z

Ports	Description
N	NPT Ports
G	G Port

Proximity Switch Type	Description
0	No Proximity Switch
T	Turck Proximity Switch
P	Pepperl+Fuchs Proximity Switch
PM	Pepperl+Fuchs Proximity Switch (White LED)

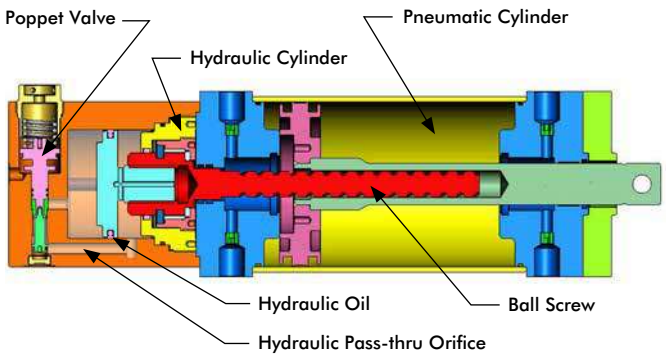
Proximity Switch Location	(see Diagram below)
P0	No Proximity Switch
PX	Proximity Switch on "X" Side
PY	Proximity Switch on "Y" Side

Cylinder Position



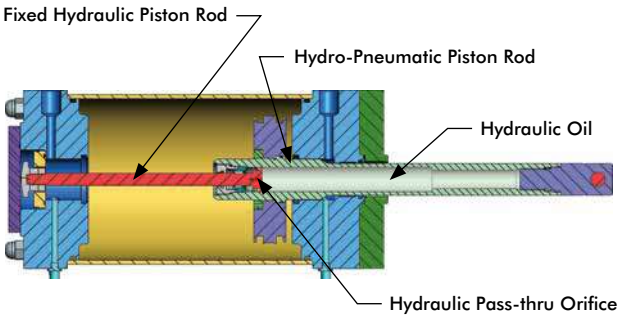
Cylinder Operating Principle

GR Series



The **GR Series** uses a system which is divided into two cylinders; a pneumatic and a hydraulic cylinder. The pneumatic cylinder controls actuation of the pivot and the hydraulic cylinder controls motion and braking.

RC Series

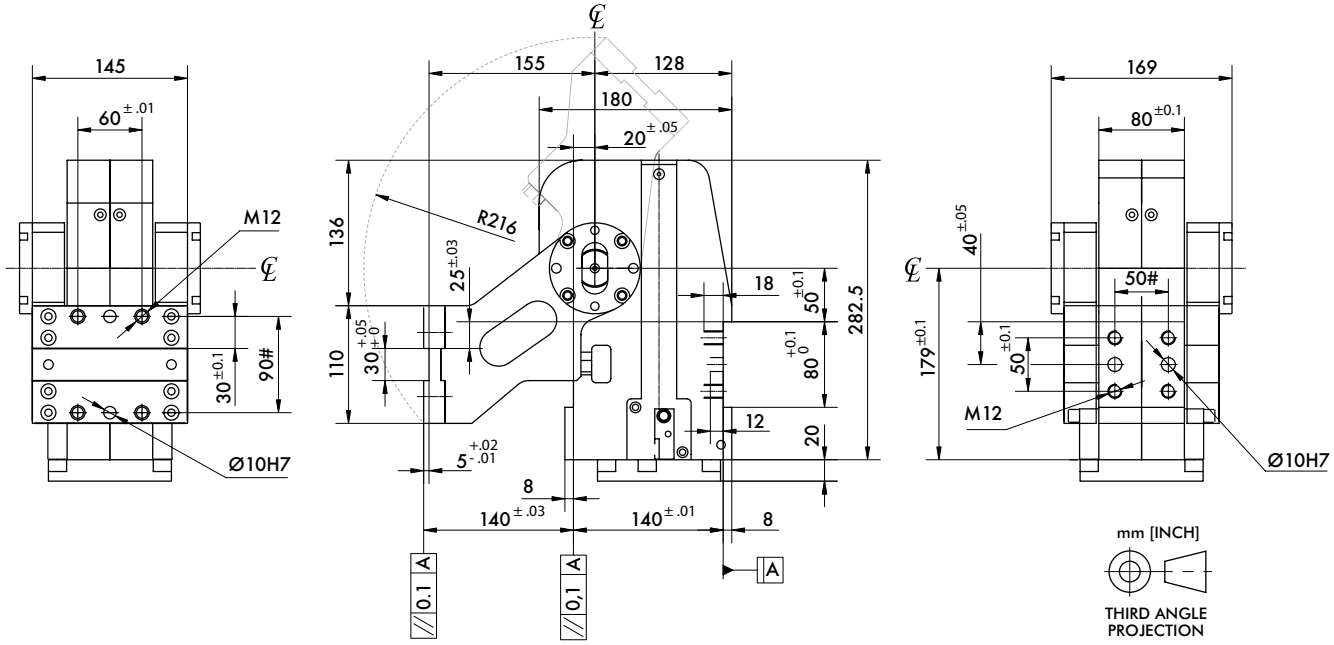


The **RC Series** pivot unit utilizes a hydraulic rod system completely contained within the pneumatic cylinder rod to control the mass moved by the pivot unit.

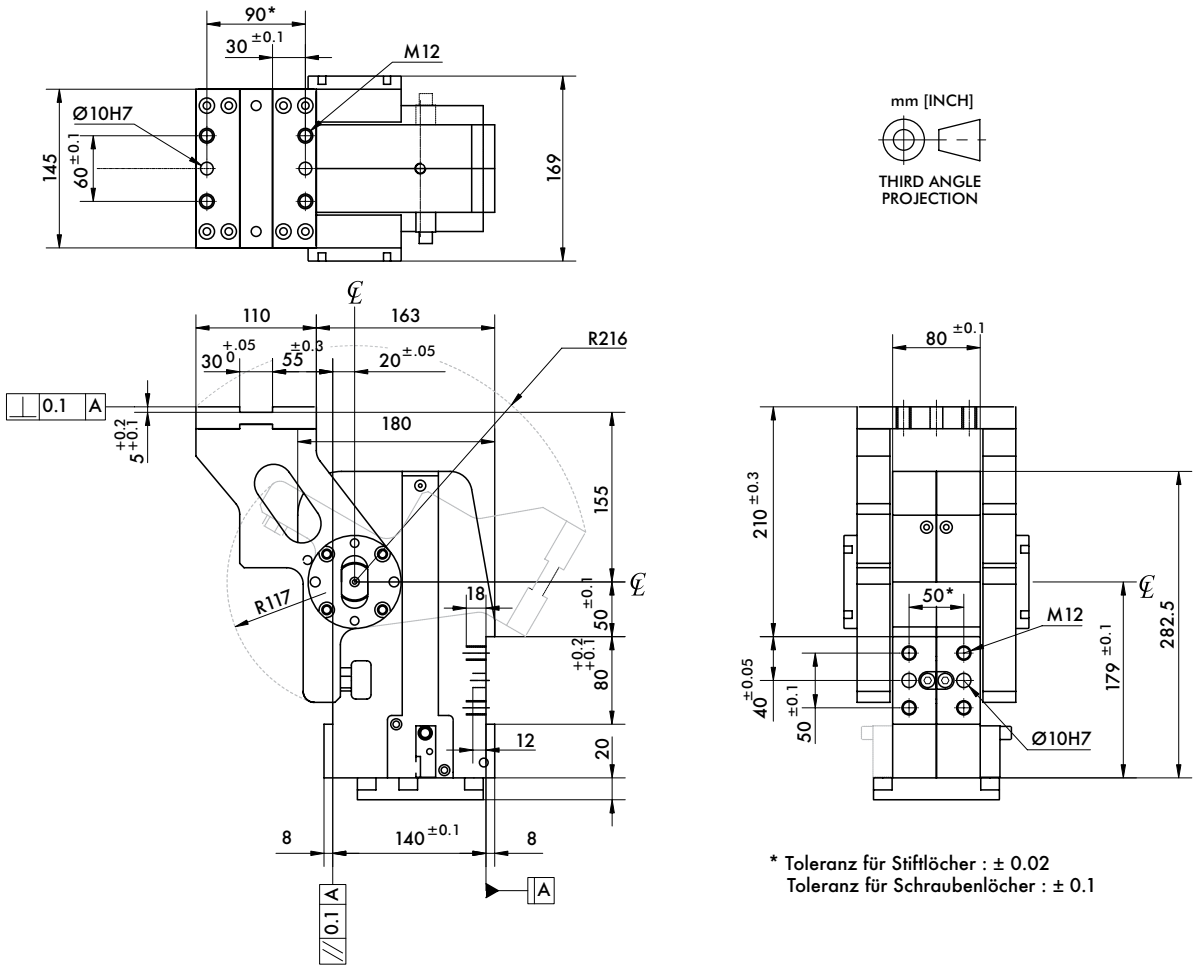
GR/RC

Pneumatic Pivot Units | Dimensions

GR-RC 100 Vertical Orientation Pivot Dimensions

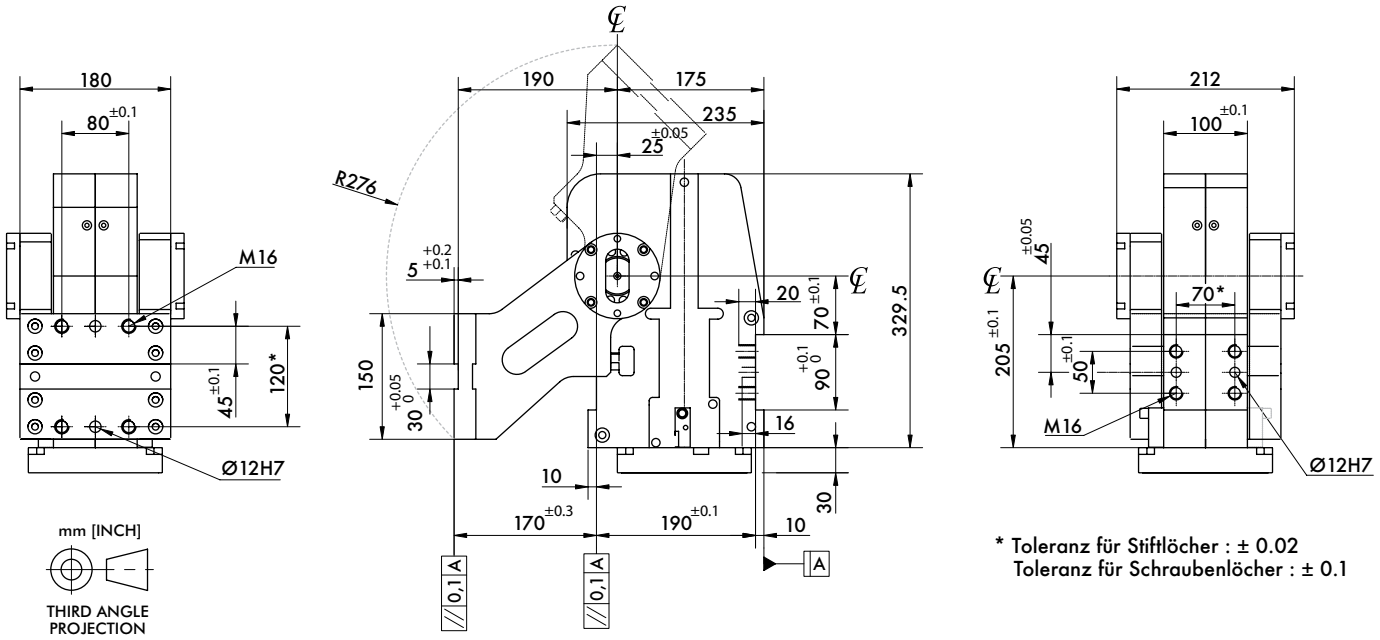


GR-RC 100 Horizontal Orientation Pivot Dimensions



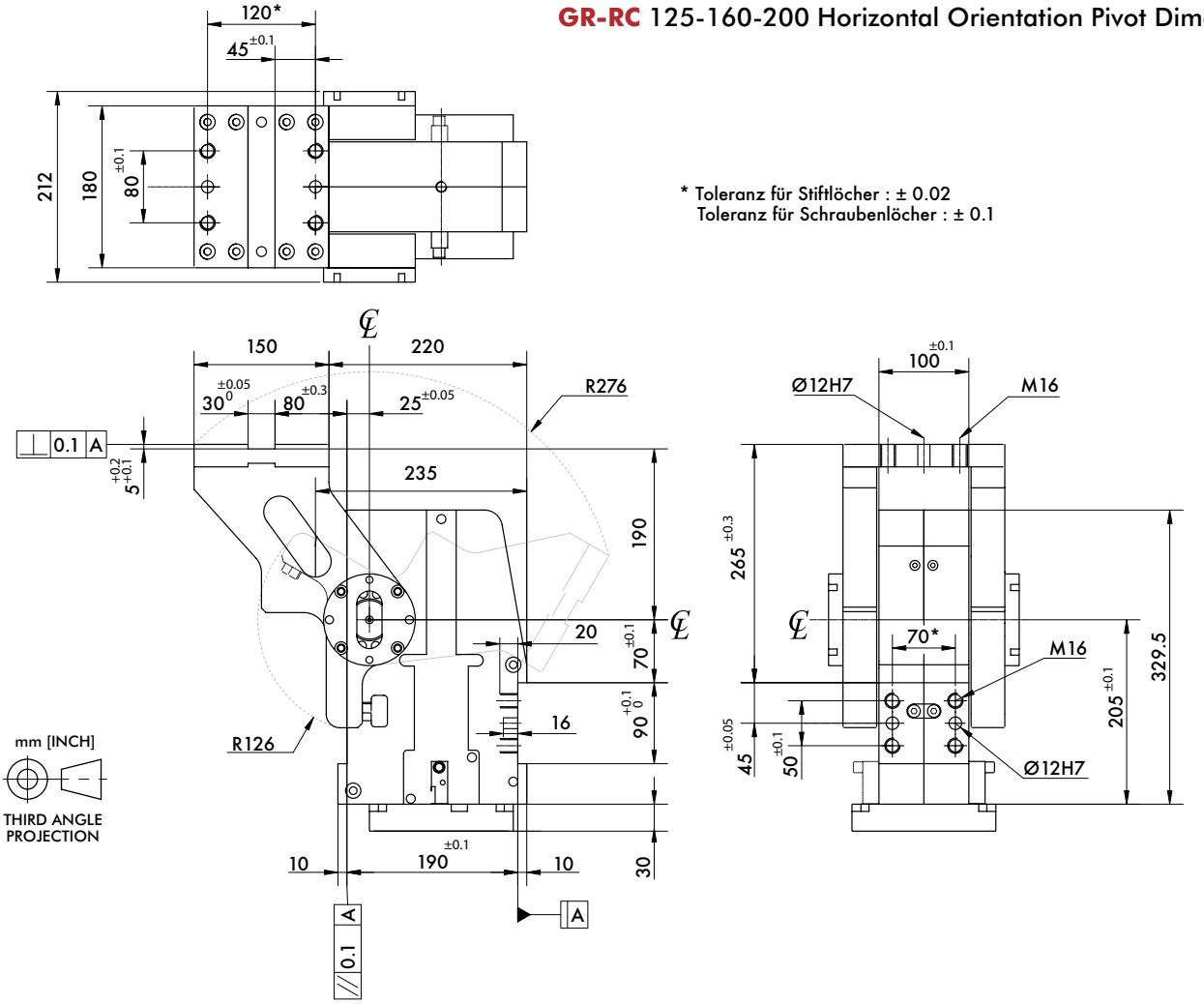
* Toleranz für Stiftlöcher : ± 0.02
Toleranz für Schraubenlöcher : ± 0.1

GR-RC 125-160-200 Vertical Orientation Pivot Dimensions



* Toleranz für Stiftlöcher : ± 0.02
Toleranz für Schraubenlöcher : ± 0.1

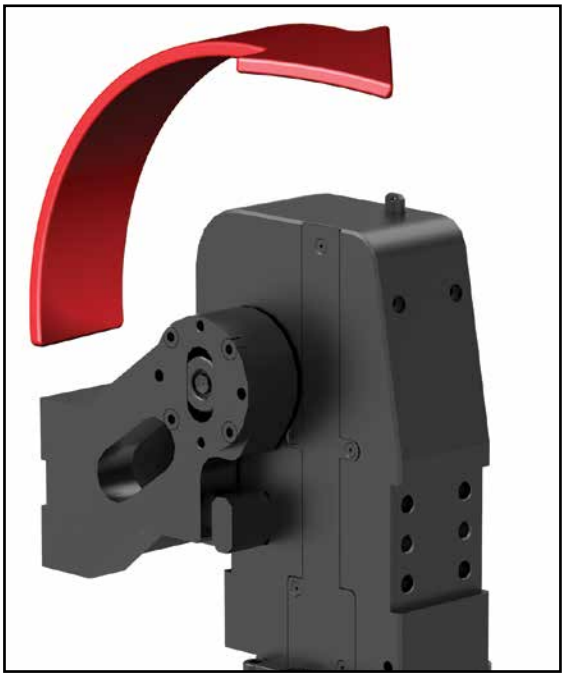
GR-RC 125-160-200 Horizontal Orientation Pivot Dimensions



* Toleranz für Stiftlöcher : ± 0.02
Toleranz für Schraubenlöcher : ± 0.1

GR/RC

Pneumatic Pivot Units | Arm Opening Angle and Saddle Movement

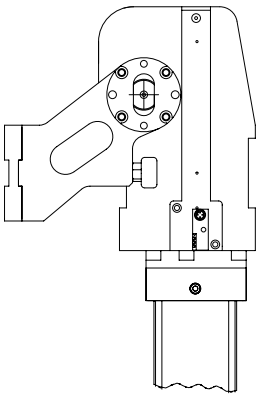


Vertical Saddle Orientation

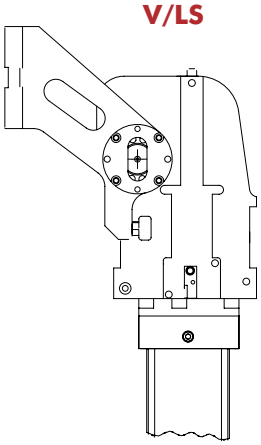
Arm opening angles offered:
45° Arm Opening Angle
90° Arm Opening Angle
120° Arm Opening Angle

Swivel Arm Position

V



V/LS

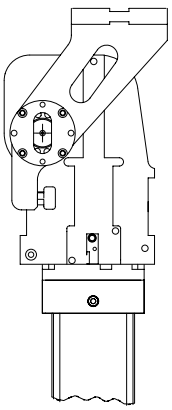


Horizontal Saddle Orientation

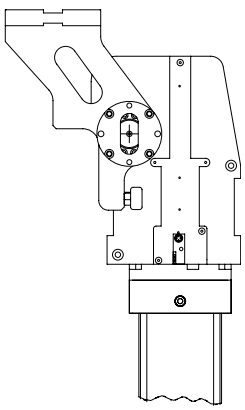
Arm opening angles offered:
45° Arm Opening Angle
90° Arm Opening Angle
120° Arm Opening Angle

Swivel Arm Position

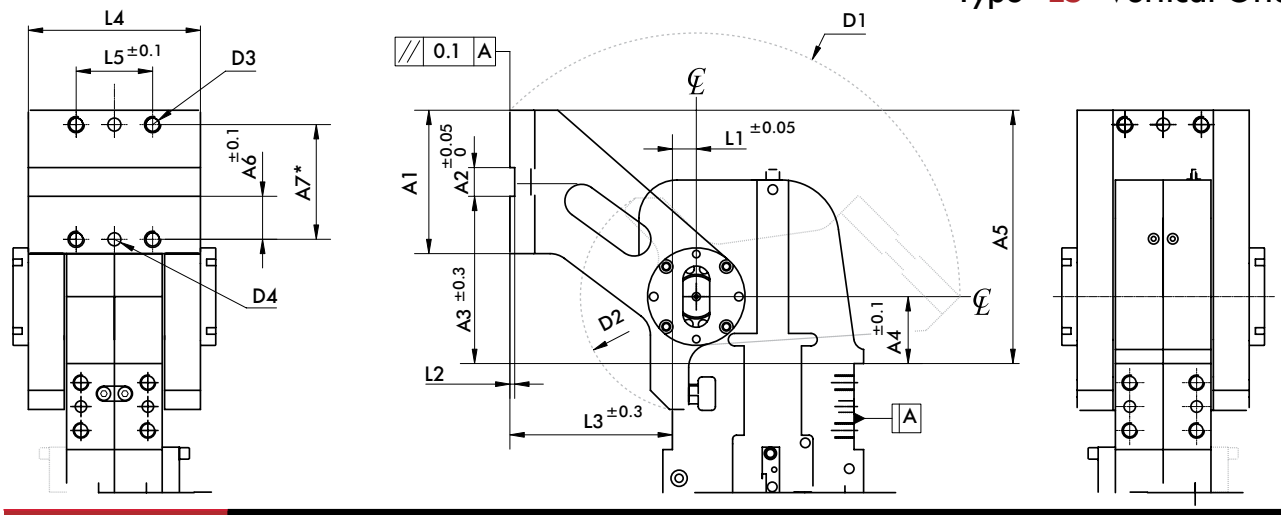
O/LS



O

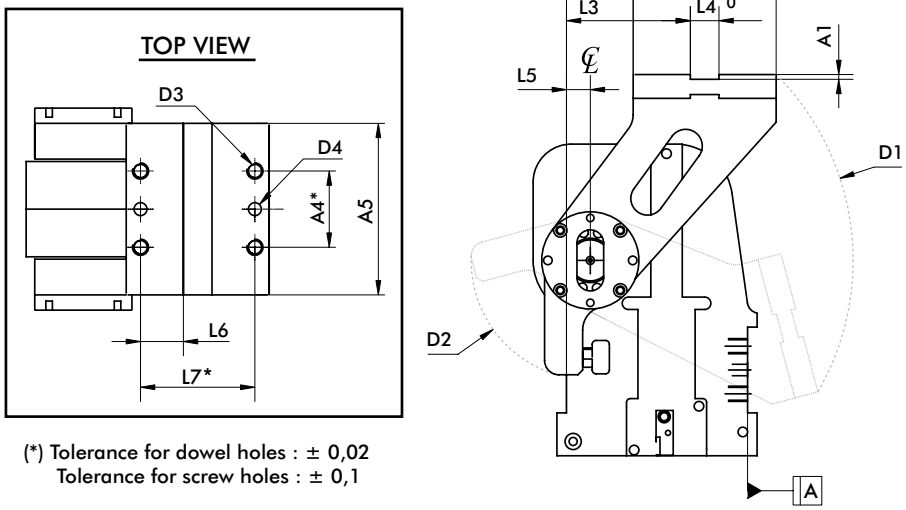


Type "LS" Vertical Orientation

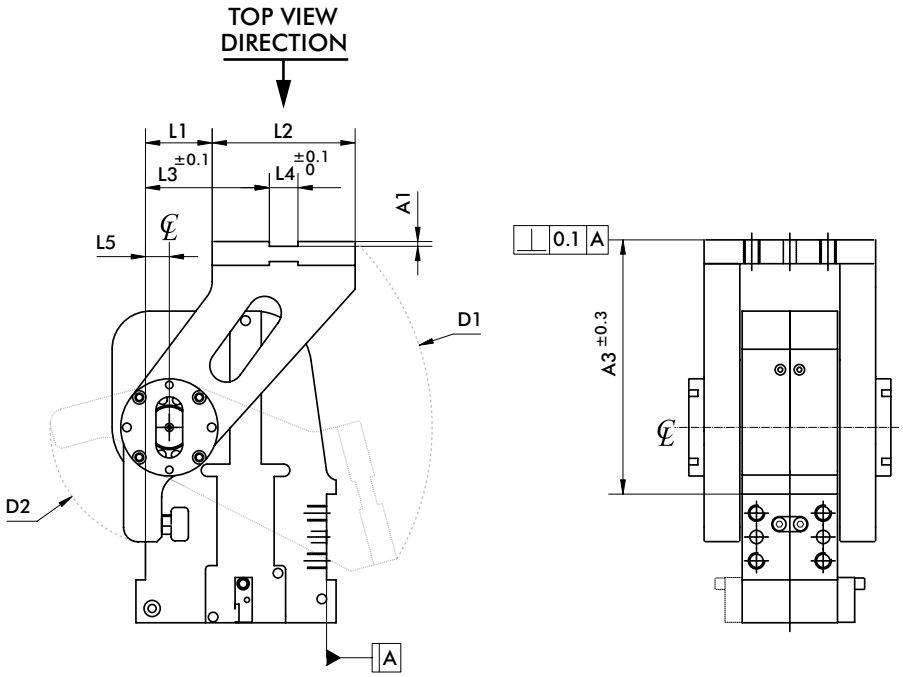


MODEL	A1	A2	A3	A4	A5	A6	A7	L1	L2	L3	L4	L5	D1	D2	D3	D4	Max. opening angle
	mm												~	~		H7	
GR/RC100-...V/LS	110	30	125	50	195	30	90	20	5	140	145	60	216	117	M12	Ø10	120°
GR/RC125-...V/LS																	
GR/RC160-...V/LS	150	30	175	70	265	45	120	25	5	170	180	80	276	126	M16	Ø12	
GR/RC200-...V/LS																	

Type "LS" Horizontal Orientation



(*) Tolerance for dowel holes : ± 0,02
Tolerance for screw holes : ± 0,1

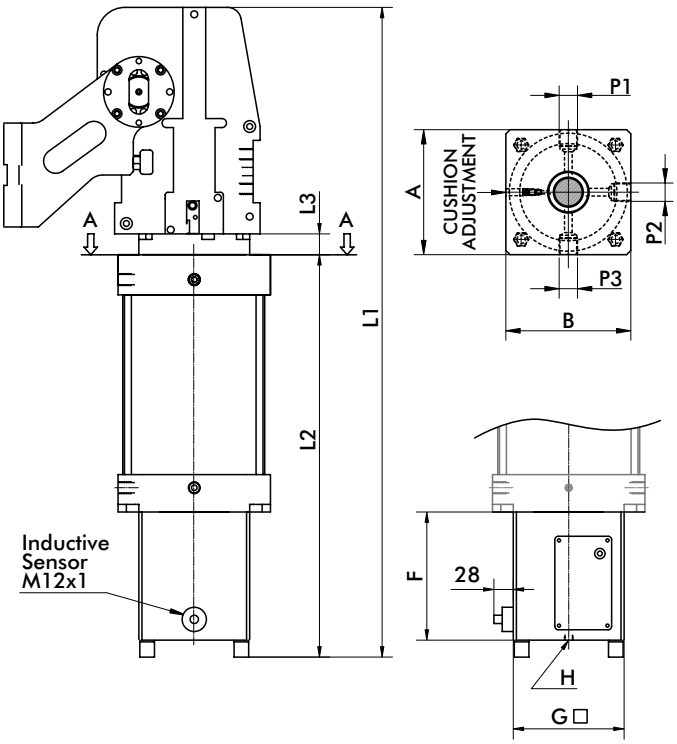


MODEL	A1	A2	A3	A4	A5	L1	L2	L3	L4	L5	L6	L7	D1	D2	D3	D4	Max. opening angle
	mm												~	~		H7	
GR/RC100-...O/LS	5	50	210	60	145	55	110	95	30	20	30	90	216	117	M12	Ø10	90°
GR/RC125-...O/LS																	
GR/RC160-...O/LS	5	70	265	80	180	70	150	130	30	25	45	120	276	126	M16	Ø12	80°
GR/RC200-...O/LS																	

GR/RC

Pneumatic Pivot Units | Cylinder Dimensions and Technical Specifications

GR Series Cylinder Dimensions

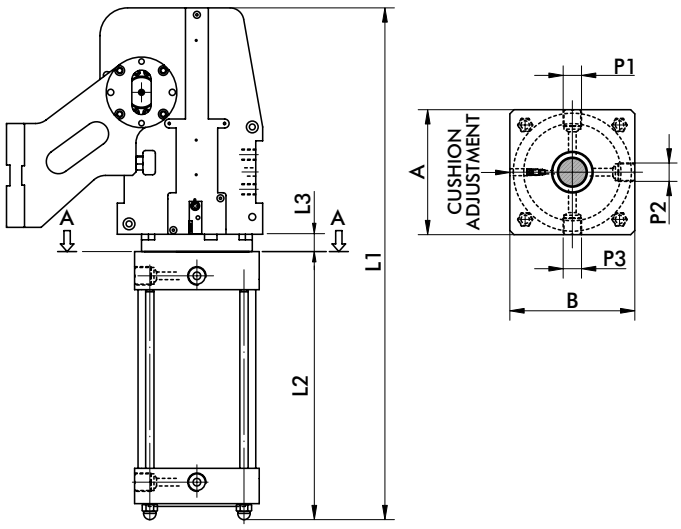


GR MODEL	L1 mm	L2 mm	L3 mm	A - B mm	P3	P1-P2	Weight kg [lb]
GR100-45°	705.0	402.5	20	115	1/2" G	1/2" G or 1/2" NPT	36 [80]
GR100-90°	750.0	447.5					
GR100-120°	779.5	477.0					
GR125-45°	844.0	490.5	25	160	1/2" G		80 [176]
GR125-90°	893.0	539.0					
GR-125-80°	882.0	528.5					
GR125-120°	920.5	567.0					
GR160-45°	853.5	496.5	28	180	3/4" G	3/4" G or 3/4" NPT	95 [209]
GR160-90°	902.5	545.5					
GR-160-80°	891.5	534.5					
GR160-120°	930.0	573.0					
GR200-45°	862.0	502.0	30	220	3/4" G		103 [226]
GR200-90°	911.0	551.0					
GR200-80°	900.0	541.0					
GR200-120°	939.0	579.0					

Note: "P1-P2" dependant on ordering code.

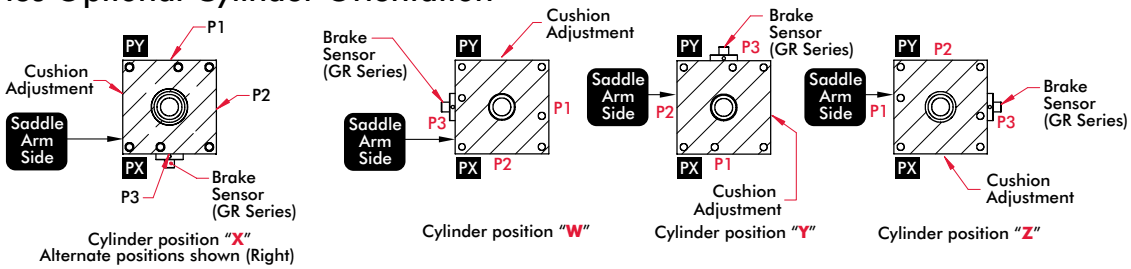
GR MODEL	F [mm]	G [mm]	H [mm]
GR100	136	115	1/4"
GR125	185	160	
GR160			
GR200			

RC Series Cylinder Dimensions



RC MODEL	L1 [mm]	L2 [mm]	L3 [mm]	A-B	P3	P1-P2	Weight kg [lb]
RC100-45°	569.0	20	115	1/2" G		1/2" G or 1/2" NPT	29 kg [64 lb]
RC100-90°	614.0						
RC100-120°	654.0						
RC100-135°							
RC125-45°	695.0	25	160				62 kg [137 lb]
RC125-80°							
RC125-90°	708.5						
RC125-120°	743.5						
RC125-135°							
RC160-45°	668.5	28	180	3/4" G		3/4" G or 3/4" NPT	77 kg [170 lb]
RC160-80°							
RC160-90°	717.5						
RC160-120°	753.0						
RC200-45°	672.5	30	220				85 kg [187 lb]
RC200-80°							
RC200-90°	721.5						

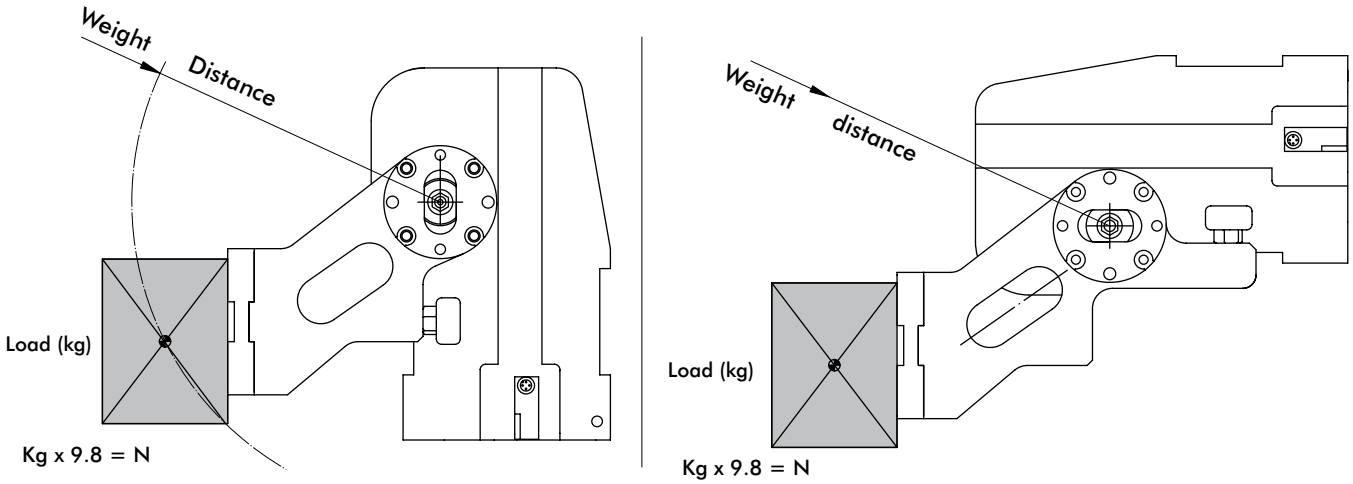
GR & RC Series Optional Cylinder Orientation



Notes

GR/RC

Pneumatic Pivot Units | Maximum Torque for Weight



Model	Maximum Torque for Weight - ≤ 90° opening					
	58psi / 4 Bar		72psi / 5 Bar		87psi / 6 Bar	
	lbf*in	N*m	lbf*in	N*m	lbf*in	N*m
GR/RC100	1062	120	1328	150	1682	190
GR/RC125	1563	180	2124	240	2567	290
GR/RC160	2832	320	3629	410	4425	500
GR/RC200	4514	510	5841	660	7081	800

Model	Maximum Torque for Weight - > 90° opening					
	58psi / 4 Bar		72psi / 5 Bar		87psi / 6 Bar	
	lbf*in	N*m	lbf*in	N*m	lbf*in	N*m
GR/RC100	620	70	797	90	1062	120
GR/RC125	1239	140	1593	180	2036	230
GR/RC160	2124	240	2744	310	3540	400
GR/RC200	3629	410	4602	520	5488	620

Model	Maximum Torque with Side Load for Weight					
	58psi / 4 Bar		72psi / 5 Bar		87psi / 6 Bar	
	lbf*in	N*m	lbf*in	N*m	lbf*in	N*m
GR/RC100	708	80	708	80	708	80
GR/RC125	1770	200	1770	200	1770	200
GR/RC160	1770	200	1770	200	1770	200
GR/RC200	1770	200	1770	200	1770	200

Center of Gravity to Pivot (distance in Meters [Inches]) X Tooling Weight (N [lb] = Torque for weight (N°m [lbf*in])

Distance from Center of Gravity to pivot is measured parallel to the floor

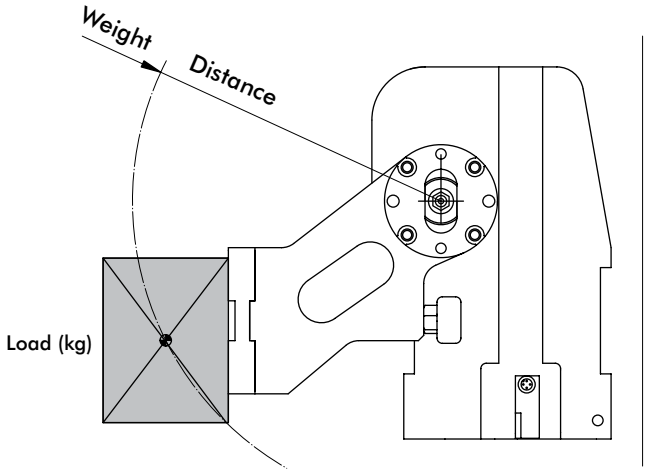
Notes

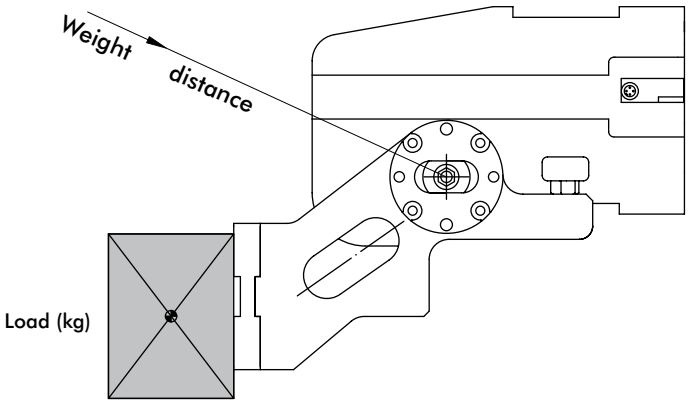
The total torque for the application must be less than the Maximum Torque for a given pressure in the Maximum Torque for Weight charts above.

Based on cycle time of 7-8 seconds. Flow controls must be used to provide this cycle time. Cushions must also be adjusted to provide deceleration to the load. Failure to control movement will severely damage unit and cause premature failure.

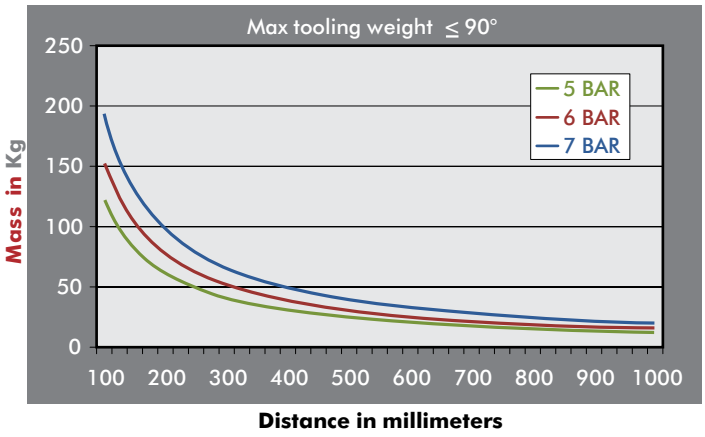
Use the following graphs to determine the maximum amount of tooling weight that is allowed. The tooling load should be placed as close to the center line of the unit as possible.

Pneumatic Pivot Units | Maximum Added Tooling Weight Greater than 90°

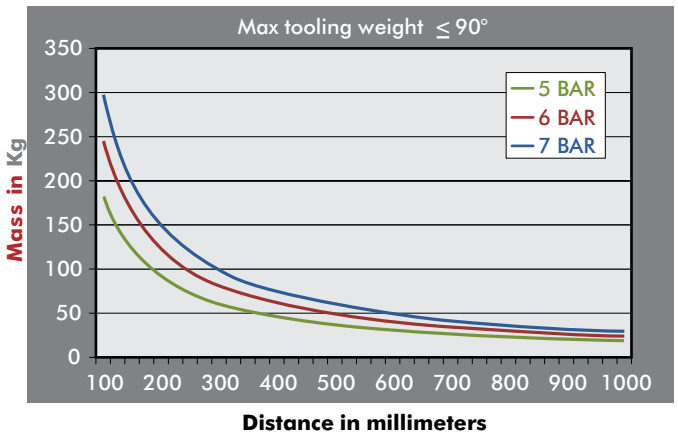




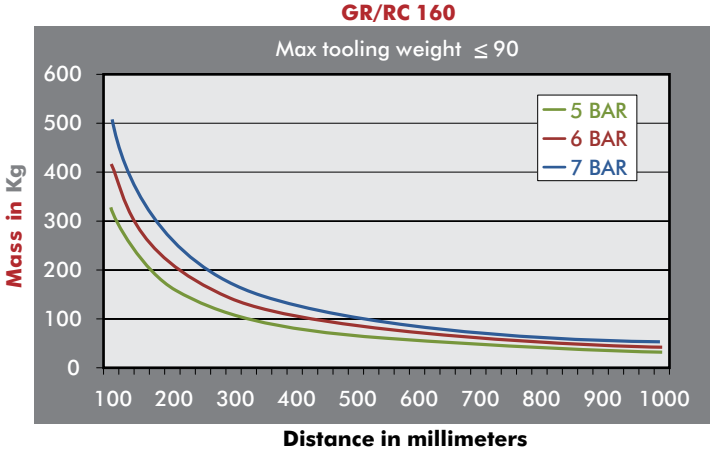
GR/RC 100



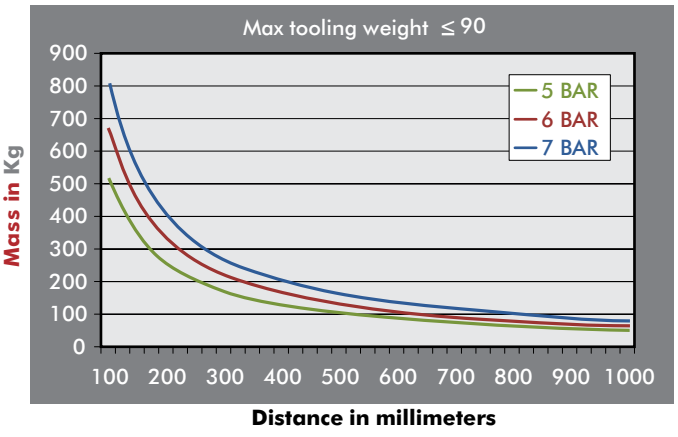
GR/RC 125



GR/RC 160

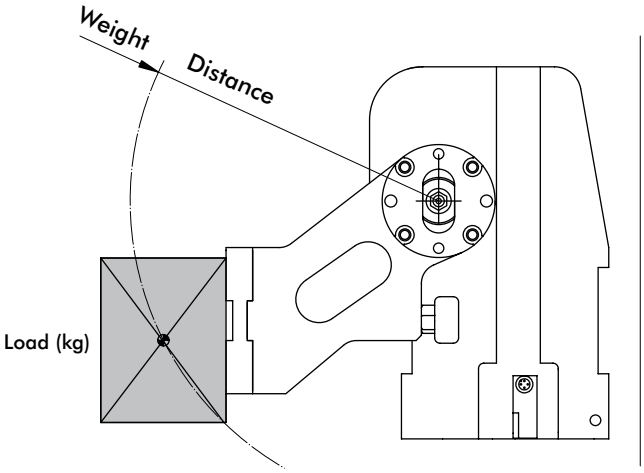


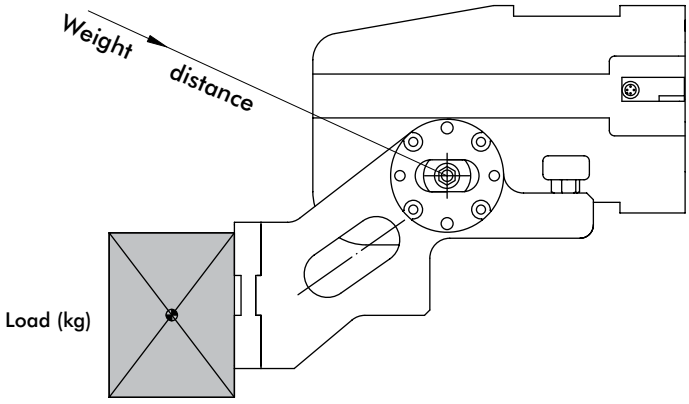
GR/RC 200



GR/RC

Pneumatic Pivot Units | Maximum Added Tooling Weight Greater than 90°





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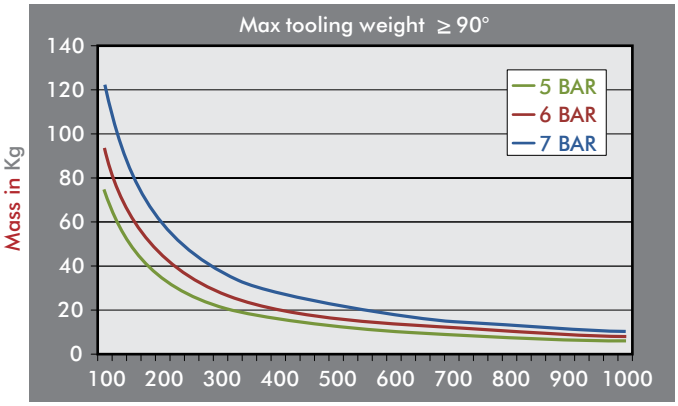
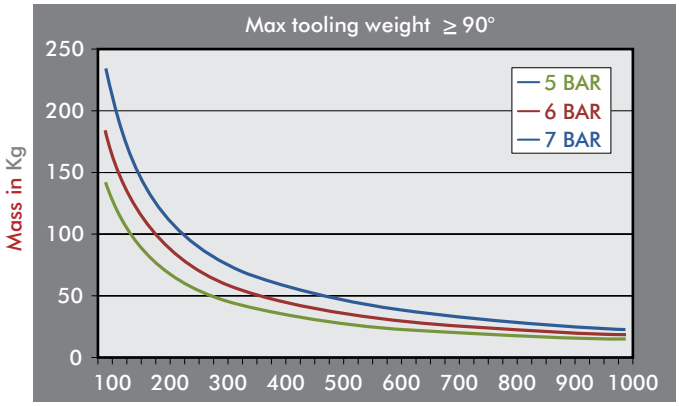
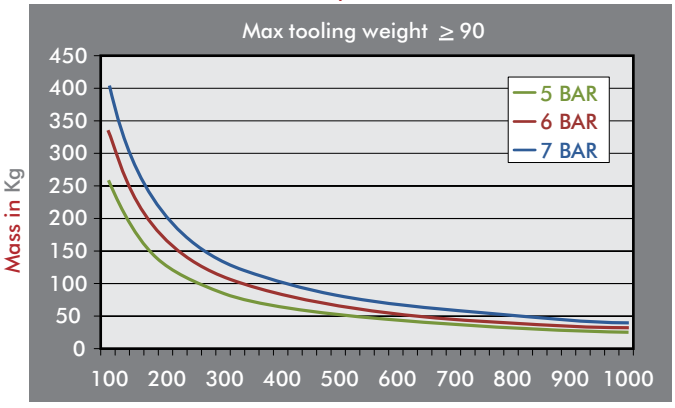


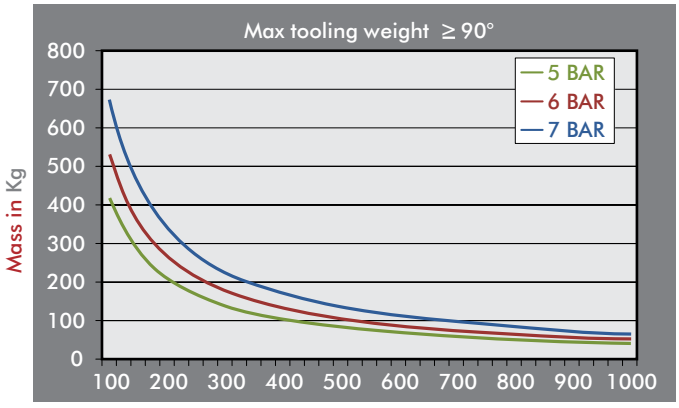
GR/RC 125

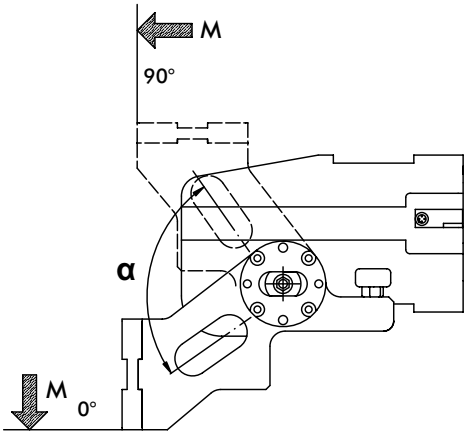


GR/RC 160

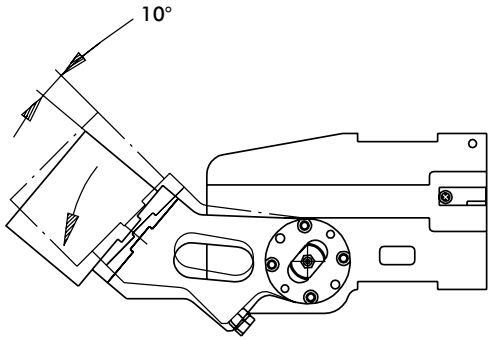


GR/RC 200





(Values calculated at 1 m from center of rotation)

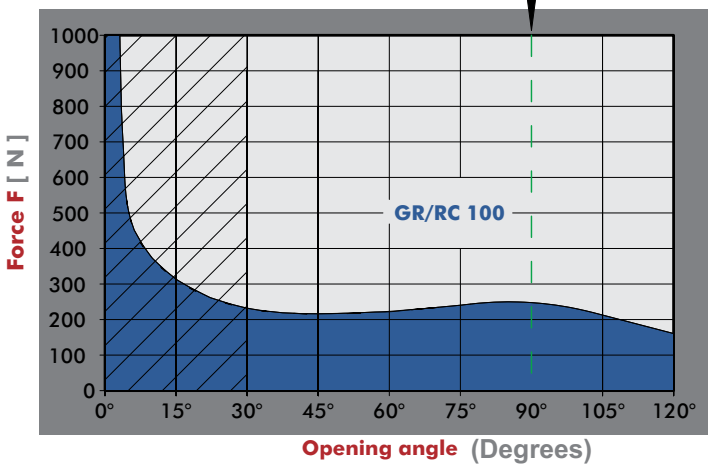


Play of swing arm while closed emergency stop value

Conditions:

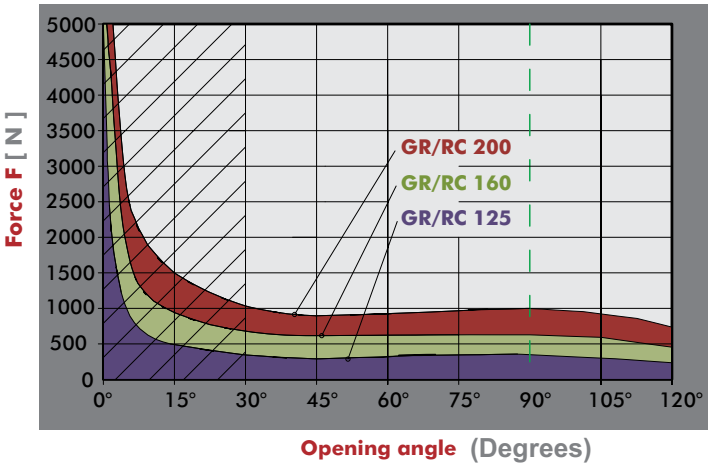
– Emergency stop in operaton
– Cylinder depressurized
– Max. load

Max. play 10°



MODEL	TORQUE WITH ARM AT 90°
GR/RC 100	240 Nm
GR/RC 125	370 Nm
GR/RC 160	630 Nm
GR/RC 200	1000 Nm

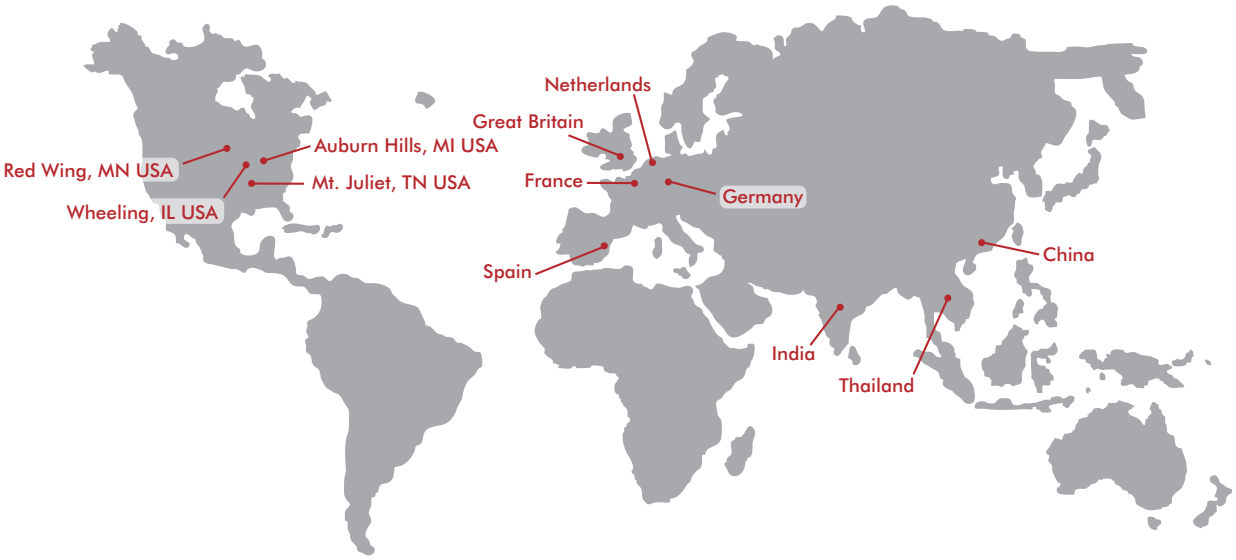
NOTE: Values at 6 bar



WARNING: Make sure that the tilting device runs a complete working cycle and reaches the angle position at 0°. (Any interference in the highlighted angle area may seriously damage both the tooling and the tilting device, as the result of the very high forces developed, as shown in the chart).

Do not use external stops with GR/RC Series Pivot Units!

NOTES



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