

## RCM/RFM Series (Replaces RC & GR Series Pivot Units)

### Adjustable Pneumatic Pivot Units

DESTACO's RCM and RFM Series toggle action mechanism delivers reliable power to position large fixtures in place for welding and assembly applications, while also offering the flexibility of in-the-field opening angle adjustment.

These pivot units can be easily set to different opening angles without the need for additional parts. Changing opening angles does not effect the length of the pivot unit.











The RFM series features an integrated locking system within the body of the pivot unit for safe and secure braking and holding during operations or in case of air pressure loss. The integrated locking system includes a dual air connection and independent sensor for operation and engagement of internal braking.



### Product Highlights/Options

- Field adjustable opening angle
- Integrated (SBI) Lock System (RFM Series)
- Fixed inductive sensor
- Four cylinder bore sizes, one cylinder length
- Pneumo-hydraulic motion control

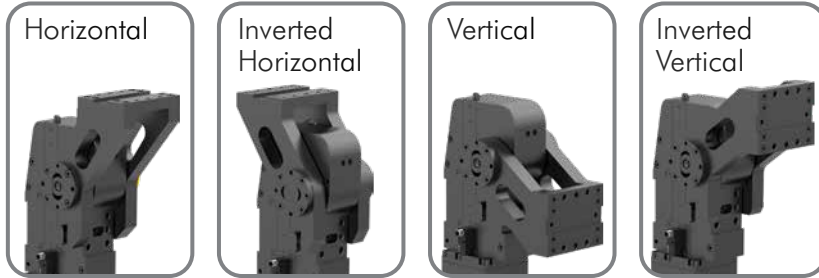
### Features, Markets and Applications

 <b>PERFORMANCE</b>	<ul style="list-style-type: none"> <li>• One pivot unit can be set for different opening angle for setup and interference avoidance</li> <li>• Integrated locking mechanism for secure braking and holding</li> <li>• Hydraulic motion control integrated into the pneumatic cylinder</li> </ul>	 AUTOMOTIVE   INDUSTRIAL   AEROSTRUCTURE   CONSUMER GOODS	 ASSEMBLY   WELDING   FIXTURE/TESTING
 <b>LOW/NO MAINTENANCE</b>	<ul style="list-style-type: none"> <li>• Arm opening angles can be easily adjusted in the field without the need for additional parts</li> <li>• New Inductive sensor does not need adjustment when changing the pivot opening angle</li> </ul>		
 <b>INTERCHANGEABLE</b>	<ul style="list-style-type: none"> <li>• Same saddle arm types as previous models</li> <li>• One cylinder length for all opening angles</li> <li>• Standard front and rear mounting pattern for installation into existing applications (same as legacy GR and RC series)</li> </ul>		

# RCM/RFM SERIES

## Pneumatic Adjustable Pivot Unit | Features and Options

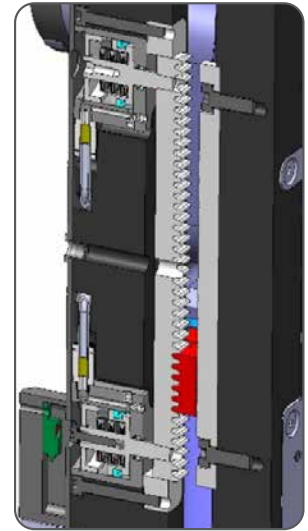
The **RCM and RFM Series Pneumatic Pivot Units** are used in any applications where it is necessary to accurately position tooling for the next process including assembly and welding applications. These pivot units can be mounted in an upright vertical or horizontal orientation depending on saddle ordered.



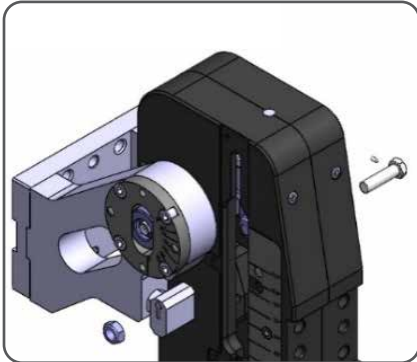
**Integrated External Hard Stop:**  
for increased repeatability and accuracy of arm position independent from mass applied to the unit

**(SBI) Integrated Locking Mechanism:**  
For safe, secure and reliable braking (RFM Series Only)

PATENTED



**Field Adjustable Opening Angle:**  
For easy opening angle changes without the need for additional parts



RFM Series total length is shorter than the legacy GR series

**Front and Rear Mounting Pattern:**  
Same as legacy GR and RC Series

**Dual Air Connections and Independent Sensor:**  
Used with (SBI) integrated locking system for operation and sensing of internal braking engagement

**Pneumatic-Hydraulic Cylinder:**  
Provides motion control during heavy duty positioning

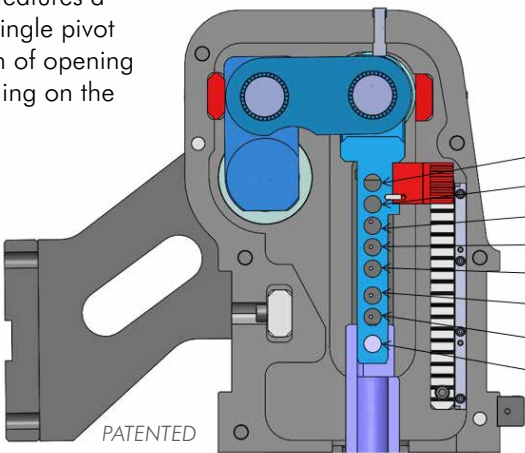
**One Cylinder Length:**  
Which ever opening angle is configured, the pivot unit uses the same cylinder for every opening angle.

One Pivot Unit - Multiple Opening Angles

The RCM and RFM series features a mechanism that allows a single pivot unit to be set to a selection of opening angles in the field, depending on the size of the pivot unit.

Non-adjustable pivot units or customized opening angles/cylinder lengths are available upon request.

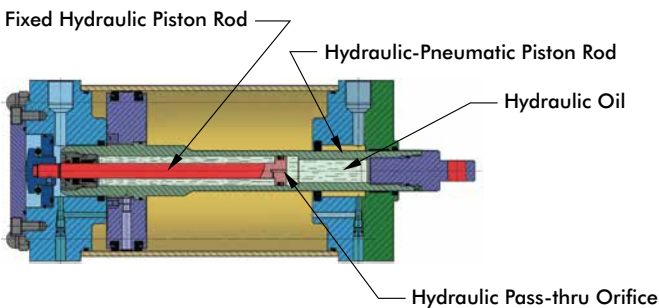
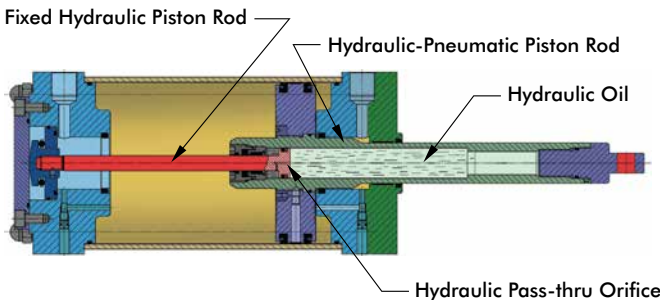
Contact DESTACO sales to learn more.



100				125, 160, 200			
O	O/LS	V	V/VS	O	O/LS	V	V/VS
121°	N/A	121°		N/A		129°	
104°	N/A	104°		107°	N/A	129°	
92°	N/A	92°		91°	N/A	92°	
77°				76°			
61°				61°			
45°				43°			
29°				30°			
N/A				15°			

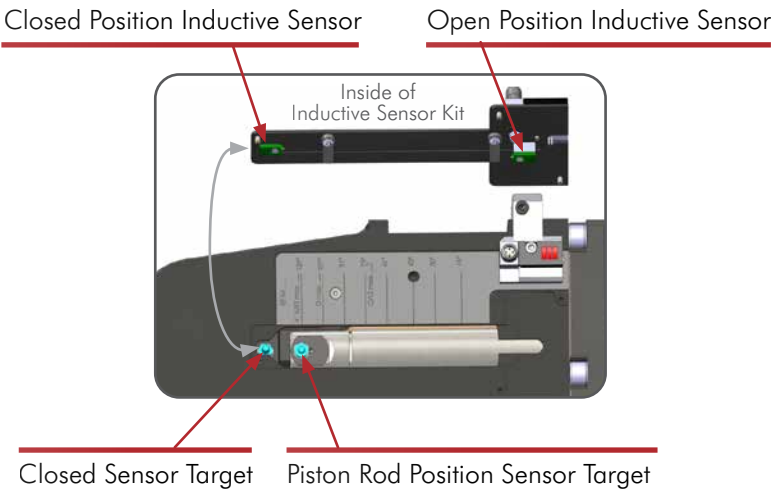
Cylinder Operating Principle

The RCM and RFM series pivot units uses a combined pneumatic and hydraulic cylinder, using a hydraulic-pneumatic piston rod within the standard pneumatic cylinder structure. This will allow for standard pneumatic operation while providing shock absorption or dampening in heavy duty applications during opening and closing positioning.



Inductive Pivot Position Sensor Kit

The improved fixed inductive sensor kit allows for a more accurate detection of the open/closed position of the pivot units and does not need to be adjusted when opening angle is changed.



## RCM/RFM Series Adjustable Pneumatic Pivot Units (Replaces RC & GR Series Pivot Units)

- Field adjustable opening angles
- Fixed inductive sensor for improved accuracy
- One cylinder length for all opening angles
- Standard pneumatic-hydraulic cylinder
- External arm/saddle hard stops
- Toggle action mechanism
- Standard front and rear mounting pattern
- End stroke pneumatic cushioning available
- ISO G and NPT Ports

### RCM Series Pneumatic Pivot Units (without Integrated Locking System)



RCM100-O    RCM125-O    RCM160-O    RCM200-O

### RFM Series Pneumatic Pivot Units (with Integrated Locking System)

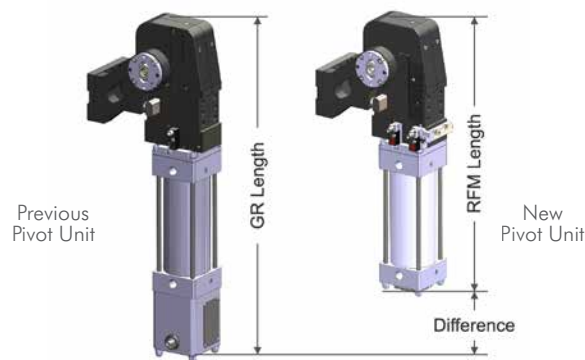


RFM100-V    RFM125-V    RFM160-V    RFM200-V

### RCM/RFM Series Specifications

RCM/RFM Specifications	Units	100	125	160	200
Max Torque by Load [5 bar] Opening Angle $\leq 92^\circ$	Nm [ft-lbs]	150 [111]	240 [117]	410 [302]	660 [487]
Max Torque by Load [5 bar] Opening Angle $> 92^\circ \leq 121^\circ$	Nm [ft-lbs]	110 [81]	180 [133]	300 [211]	480 [354]
Max Torque by Load [5 bar] Opening angle $> 121^\circ$	Nm [ft-lbs]	55 [41]	65 [48]	100 [74]	175 [129]
Holding Moment	Nm [ft-lbs]	2000 [1475]	3500 [2581]		
RCM Weight	kg [lbs]	27 [60]	61 [134]	74 [163]	81 [178]
RFM Weight	kg [lbs]	30 [66]	64 [141]	77 [169]	84 [185]

GR100.1-120 V PX P G X    RFM100.2-121 V PX P G X



LENGTH COMPARISON BETWEEN GR100.1 AND RFM100.1

Unit Codes	GR100.1-30 V	RFM100.2-29 V	GR100.1-45 V	RFM100.2-45 V	GR100.1-60 V	RFM100.2-61 V	GR100.1-75 V	RFM100.2-77 V	GR100.1-90 V	RFM100.2-92 V	GR100.1-105 V	RFM100.2-104 V	GR100.1-120 V	RFM100.2-121 V
Angles	30°	29°	45°	45°	60°	61°	75°	77°	90°	92°	105°	104°	120°	121°
Unit Length (mm)	690,0	645,5	705,0	645,5	719,5	645,5	735,0	645,5	750,0	645,5	766,0	645,5	779,5	645,5
Differences (mm)		-44,5		-59,5		-74,0		-89,5		-104,5		-120,5		-134,0

Dimensions and technical information are subject to change without notice.

GERMANY  
+49-6171-705-0  
europe@destaco.com

FRANCE  
Tel: +33-4-7354-5001  
france@destaco.com

UNITED KINGDOM  
+44-1902-797980  
uk@destaco.com

SPAIN  
+34-936361680  
spain@destaco.com

NETHERLANDS  
+31-297285332  
benelux@destaco.com

CHINA  
+86-21-6081-2888  
china@destaco.com

THAILAND  
+66-2-326-0812  
asia@destaco.com

INDIA  
+91-80-41123421-426  
india@destaco.com

USA  
+1-888-DESTACO  
+1-248-836-6700  
northamerica@destaco.com