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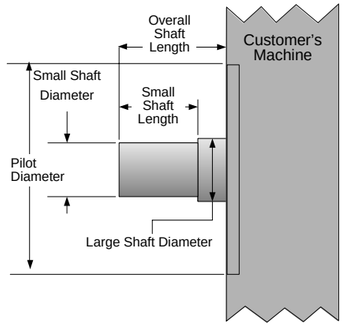
# CARTRIDGE DDR™
## Small Frame Motor Mounting Instructions

## Step 1 Check Machine Mounting Dimensions




CAUTION

***Incorrect mounting dimensions can damage Motor and/or Machine.***

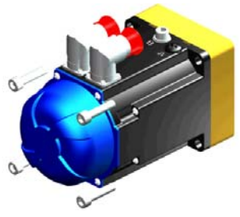
| Model | Pilot Diameter | Shaft Diameter | | Shaft Length | | Check Here |
|---|---|---|---|---|---|---|
| | | Small Shaft | Large Shaft | Small Shaft | Overall | |
| C041 | 92.040 mm – 92.090 mm [3.6237 in – 3.6255 in] | 31.985 mm – 32.000 mm [1.2593 in – 1.2598 in] | 32.985 mm – 33.000 mm [1.2987 in – 1.2992 in] | 17.0 mm ±0.4 [0.67 in ±0.015] | 61.3 mm ±1.5 [2.41 in ±0.059] | ☐ |
| C042 | 92.040 mm – 92.090 mm [3.6237 in – 3.6255 in] | 31.985 mm – 32.000 mm [1.2593 in – 1.2598 in] | 32.985 mm – 33.000 mm [1.2987 in – 1.2992 in] | 48.0 mm ±0.4 [1.89 in ±0.015] | 92.3 mm ±1.5 [3.63 in ±0.059] | ☐ |
| C043 | 92.040 mm – 92.090 mm [3.6237 in – 3.6255 in] | 31.985 mm – 32.000 mm [1.2593 in – 1.2598 in] | 32.985 mm – 33.000 mm [1.2987 in – 1.2992 in] | 79.0 mm ±0.4 [3.11 in ±0.015] | 123.3 mm ±1.5 [4.85 in ±0.059] | ☐ |
| C044 | 92.040 mm – 92.090 mm [3.6237 in – 3.6255 in] | 31.985 mm – 32.000 mm [1.2593 in – 1.2598 in] | 32.985 mm – 33.000 mm [1.2987 in – 1.2992 in] | 110.0 mm ±0.4 [4.33 in ±0.015] | 154.3 mm ±1.5 [6.07 in ±0.059] | ☐ |
| C051 | 118.040 mm – 118.090 mm [4.6473 in – 4.6492 in] | 44.985mm – 45.000 mm [1.7715 in – 1.772 in] | 45.985 mm – 46.000 mm [1.8105 in – 1.811 in] | 35.0 mm ±0.4 [1.38 in ±0.015] | 82.0 mm ±1.5 [3.23 in ±0.059] | ☐ |
| C052 | 118.040 mm – 118.090 mm [4.6473 in – 4.6492 in] | 44.985 mm – 45.000 mm [1.7715 in – 1.772 in] | 45.985 mm – 46.000 mm [1.8105 in – 1.811 in] | 60. mm ±0.4 [2.36 in ±0.015] | 107.0 mm ±1.5 [4.21 in ±0.059] | ☐ |
| C053 | 118.040 mm – 118.090 mm [4.6473 in – 4.6492 in] | 44.985 mm – 45.000 mm [1.7715 in – 1.772 in] | 45.985 mm – 46.000 mm [1.8105 in – 1.811 in] | 85.0 mm ±0.4 [3.35 in ±0.015] | 132.0 mm ±1.5 [5.20 in ±0.059] | ☐ |
| C054 | 118.040 mm – 118.090 mm [4.6473 in – 4.6492 in] | 44.985 mm – 45.000 mm [1.7715 in – 1.772 in] | 45.985 mm – 46.000 mm [1.8105 in – 1.811 in] | 110.0 mm ±0.4 [4.33 in ±0.015] | 157.0 mm ±1.5 [6.18 in ±0.059] | ☐ |
| C061 | 164.040 mm – 164.090 mm [6.4583 in – 6.4602 in] | 70.985 mm – 71.000 mm [2.7945 in – 2.795 in] | 71.985 mm – 72.000 mm [2.8345 in – 2.835 in] | 49.0 mm ±0.4 [1.93 in ±0.015] | 104.0 mm ±1.5 [4.09 in ±0.059] | ☐ |
| C062 | 164.040 mm – 164.090 mm [6.4583 in – 6.4602 in] | 70.985 mm – 71.000 mm [2.7945 in – 2.795 in] | 71.985 mm – 72.000 mm [2.8345 in – 2.835 in] | 83.0 mm ±0.4 [3.27 in ±0.015] | 138.0 mm ±1.5 [5.43 in ±0.059] | ☐ |
| C063 | 164.040 mm – 164.090 mm [6.4583 in – 6.4602 in] | 70.985 mm – 71.000 mm [2.7945 in – 2.795 in] | 71.985 mm – 72.000 mm [2.8345 in – 2.835 in] | 117.0 mm ±0.4 [4.61 in ±0.015] | 172.0 mm ±1.5 [6.77 in ±0.059] | ☐ |

**With a dial indicator, measure shaft runout 0.13 mm (0.005 in) TIR** ☐

**With a dial indicator mounted to the shaft, measure Pilot Concentricity 0.10 mm (0.004 in) TIR** ☐

**With a dial indicator mounted to the shaft, measure Mounting Suurface Perpendicularity 0.10 mm (0.004 in) TIR** ☐

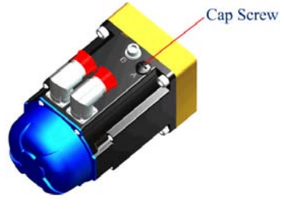
## Step 2 Secure Motor to Machine Frame



Wipe down shaft and motor's rotor hub bore. Light oil residue is acceptable, but remove grease and other contaminates. ☐

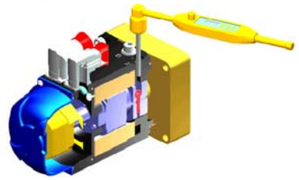
Slide motor onto the shaft. Install four (4) mounting screws (customer supplied). Tighten screws in an alternating pattern to fully secure motor to machine frame. ☐

## Step 3 Access Compression Coupling




Remove the Black Phillips Screw from the hole labeled "A" to access the compression coupling. ☐

## Step 4 Tighten Compression Coupling



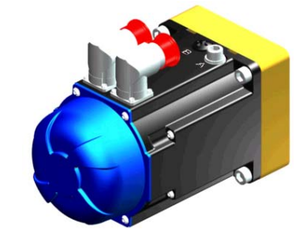
Insert a hex bit attached to a torque wrench into the hole labeled "A" and tighten the compression coupling:

**C04x**: Use a 5 mm hex bit and torque to 12.4 N-m [110 lb-in].
**C05x & C06x**: Use a 6 mm hex bit and torque to 30 N-m [264 lb-in]. ☐

CAUTION

***Failure to properly torque the compression coupling can allow the shaft to slip in the hub. This relative motion can generate enough heat to permanently weld the hub and shaft together!***

## Step 5 Secure Hardware for Run Configuration



Remove Silver Hex Alignment Screw from the hole labeled "B" and secure it into the hole labeled "A".

**C04x**: Use a 6mm hex bit and torque to 9 N-m [80 lb-in]. ☐
**C05x & C06x**: Use a 8mm hex bit and torque to 18 N-m [160 in-lb].

CAUTION

***Torque specification in Step 5 must be followed to ensure IP-65 compliance.***

Secure the Black, Phillips Screw into the hole labeled "B". Torque the Phillips head screw to 3.4 N-m [30 lb-in]. ☐

## Step 6 Confirm Free Rotation

Rotate shaft or load by hand to ensure free rotation. ☐

**Congratulations!**
**Your CARTRIDGE DDR™ motor is ready for operation.**

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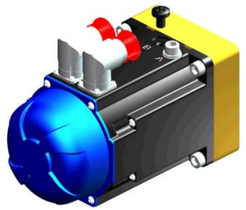
# CARTRIDGE DDR™
# Small Frame Motor Removal Instructions

## Step 1 Align Rotor

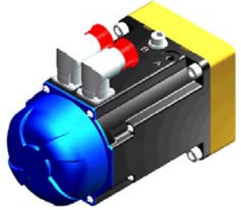


Remove the Black Phillips Screw from the hole labeled "B" ☐

Insert a 5 mm hex bit (C04X) or 6 mm hex bit (C05X/C06X) into the hole labeled “B” and rotate the shaft until the hex bit falls into the alignment hole in the rotor. Rotate shaft gently by hand. Rotating the shaft under the motor's power or forcibly rotating a large inertia may damage the rotor hub, housing, or hex bit when the bit drops into place. ☐

Remove the hex bit without rotating the shaft.

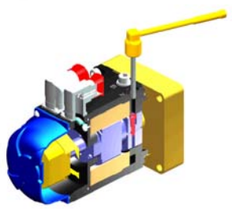
## Step 2 Install Alignment Screw



Remove Silver Hex Alignment Screw from the hole labeled "A" and secure it into the hole labeled "B". The Alignment screw must fully engage the rotor such that the shoulder of the Alignment screw is against the motor housing Motor rotor will not rotate once this pin is properly engaged. ☐

**C04X**: Use a 6 mm hex bit.
**C05X & C06X**: Use a 8 mm hex bit.

## Step 3 Loosen Compression Coupling



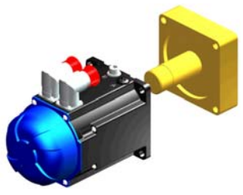
Insert a hex bit attached to a wrench into the hole labeled "A" and loosen the compression coupling. To insure the compression coupling is released, loosen the bolt one complete revolution passed finger tight. ☐

**C04X**: Use a 5 mm hex bit.
**C05X & C06X**: Use a 6 mm hex bit.

## Step 4 Install Phillips Head Screw

Secure the Black, Phillips Screw into the hole labeled "A". ☐

## Step 5 Remove Motor from Machine



Remove the (4) mounting bolts securing the motor frame to the machine and slide the motor off the shaft. ☐

***The notches at the mounting face in the top and bottom surfaces of the housing provide a means of GENTLY prying the motor loose from the machine using a screw driver tip.***

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