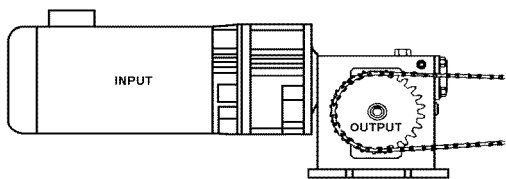
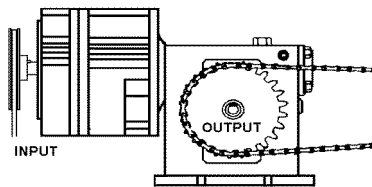


Modules

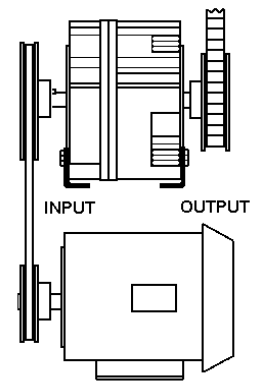
56C / 145TC



C-Face



Shaft Input



Shaft Input
with Base

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GENERAL INFORMATION

INSPECTION

Check for damage that may have occurred during shipping. Included in this carton (1) module package, (1) set of tie bolts if C-Face style and this manual. If anything is missing, contact your distributor or Dynacorp.

OPERATION

Modules are power applied and require a DC voltage to operate.

Brakes: To stop the load; DC voltage is applied to the brake coil.

Clutches: To start the load; DC voltage is applied to the clutch coil.

Clutch-Brakes: To start and stop the load; DC voltage is switched between the clutch-brake coils.

All Dynacorp packages have been tested at motor speed (1800 RPM) with an inertia load attached to the output shaft. This test and run-in period will insure full rated torque "Out of the Box" and consistent starts and / or stops. All are self adjusting.

NOMENCLATURE

Prefix

BP = Brake Package – Power applied to stop loads.

CP = Clutch Package – Power applied to start loads.

CBP = Clutch-Brake Package – Power applied brake to stop and power applied clutch to start.

Middle

56-22 = 56C 22 Ft-Lbs (264 In-Lbs) static torque

145-22 = 145TC, 22 Ft-Lbs (264 In-Lbs) static torque

56-32 = 56C, 32 Ft-Lbs (384 In-Lbs) static torque

145-32 = 145TC, 32 Ft-Lbs (384 In-Lbs) static torque

Suffix

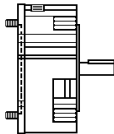
E = Enclosed

SI = Shaft Input

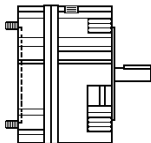
SIB = Shaft Input with Base

Examples

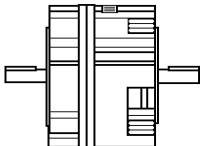
BP-145-22, Brake Package, 145TC, 22 Ft-Lbs static torque.



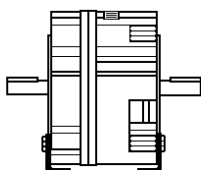
CBP-56-22, Clutch-Brake Package, 56C, 22 Ft-Lbs static torque.



CBP-56-22-SI, Clutch-Brake Package, 56C Shaft input, 22 Ft-Lbs static torque.



CBP-145-32-SIB, Clutch-Brake Package, Shaft input with base, 32 Ft-Lbs static torque.



INSTALLATION

INSTALLATION C-FACE PACKAGES

REQUIRED TOOLS

6 inch long 5/32 hex allen wrench, 5/8 socket and ratchet set and 300 In-Lb (minimum) torque wrench.

MOTOR INSPECTION AND PREPARATION

Examine motor shaft and remove any nicks, burrs or gum type anti-rust compositions that are on the motor shaft. You may coat the motor shaft with a non-seize compound.

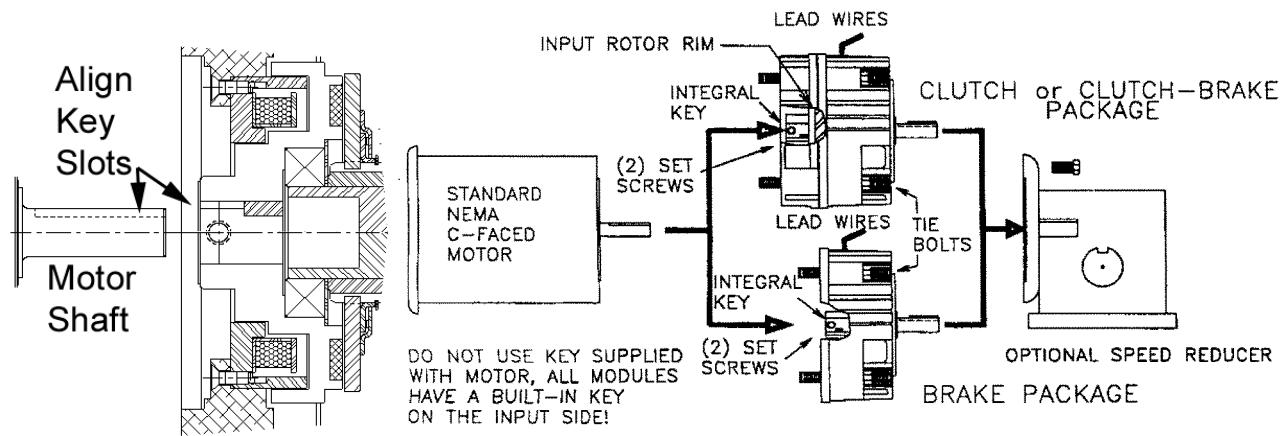
DISCARD ANY KEY SUPPLIED WITH THE MOTOR; KEY IS INTEGRAL, BUILT-IN TO THE C-FACE PACKAGE INPUT.

****MOTOR SHAFT - DO NOT PLACE ANY KEYS ON THE MOTOR SHAFT.****

MOUNTING C-FACE PACKAGE TO MOTOR

Align the key slots of the motor and the C-Face package's input.

Slide the units together. The two C-Face housings should be in contact with each other; **DO NOT FORCE TOGETHER**. If there is a gap between the two housings - **DO NOT DRAW THE UNITS TOGETHER WITH THE TIE BOLTS**. Damage will occur to the package and your warranty will be void. If the C-Faces are not touching each other the motor shaft is binding inside the C-Face packages input. This is usually caused by the key slots not being aligned or the motor shaft needs to be checked for burrs etc. When the key slots are properly aligned and the motor/clutch-brake is held vertically the CBP should fall by gravity to the motor's face.



C-Face package vent opening should be positioned down (lead wires up), rotate the unit to accomplish this. Install and alternately tighten tie bolts provided by Dynacorp. Torque the four tie bolts to 200 In-Lbs each. Set screws are accessed through the side of the housing, Tighten the two 5/32 input set screws to 80 In-Lbs.

Set screw access

Clutch (CP) or Clutch-Brake (CBP)

Brake (BP)

Turn the rim of the input rotor to locate the set screws.

Turn the output shaft to locate the set screws

ALL C-FACE PACKAGES: TORQUE THE TWO 5/32 INCH SET SCREWS TO 80 In-Lbs.

MOUNTING MOTOR/C-FACE PACKAGE ASSEMBLY TO SPEED REDUCER

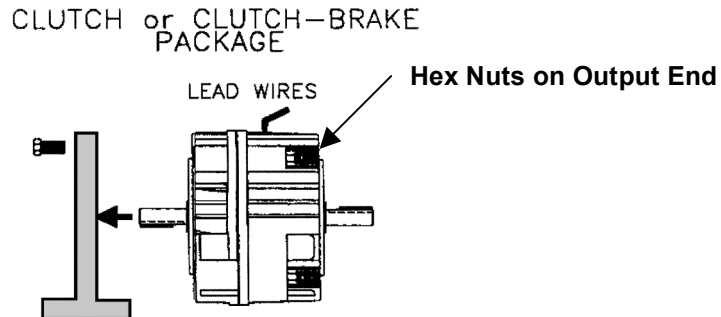
Dynacorp provides a key for its output shaft, if the speed reducer manufacturer recommends use of their key, use it. Align the key slots of the motor/package assembly and speed reducer's input. Slide the units together, the flanges should be in contact with each other, do not force together. Tighten the reducer mounting bolts to the specifications provided by the reducer manufacturer or 200 In-Lbs.

INSTALLATION SHAFT INPUT PACKAGES

MOUNTING SHAFT INPUT PACKAGE ASSEMBLY TO MACHINE BASE PLATES

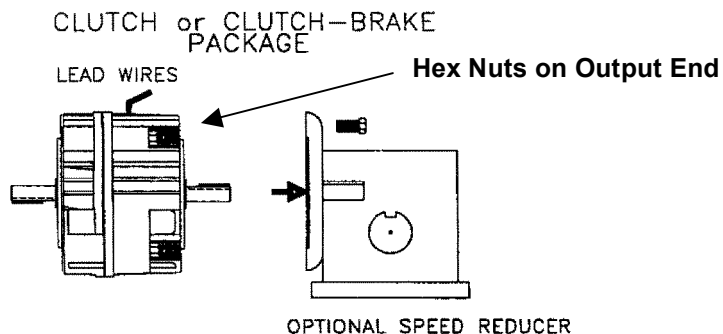
The input (clutch end) and output (brake end) have C-flanges to allow mounting to either end. THE OUTPUT END (BRAKE SIDE) CONTAINS THE STEEL HEX NUTS.

Package can also be mounted horizontal or vertical, if horizontal vent opening should be positioned down (lead wires up), rotate the unit to accomplish this. Torque mounting bolts to 200 In-Lbs each.



MOUNTING MOTOR/C-FACE PACKAGE ASSEMBLY TO SPEED REDUCER

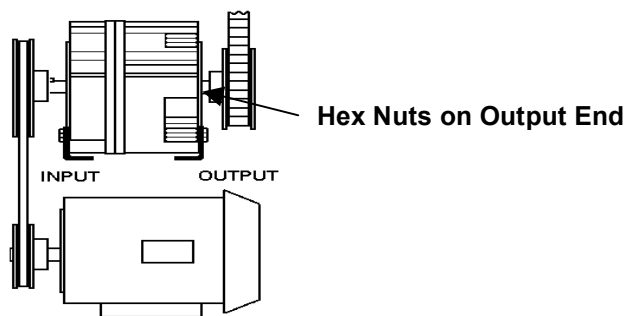
Dynacorp provides a key for its output shaft, if the speed reducer manufacturer recommends use of their key, use it. Align the key slots of the package and speed reducer's input. Slide the units together, the flanges should be in contact with each other, do not force together. Package vent opening should be positioned down (lead wires up), rotate the unit to accomplish this. Tighten the reducer mounting bolts to the specifications provided by the reducer manufacturer or 200 In-Lbs.



INSTALLATION BASE MOUNTED PACKAGES

The input (clutch end) and output (brake end) are similar. THE OUTPUT END (BRAKE SIDE) CONTAINS THE STEEL HEX NUTS. Package can also be mounted horizontal or vertical, if horizontal vent opening should be positioned down (lead wires up), rotate the unit to accomplish this.

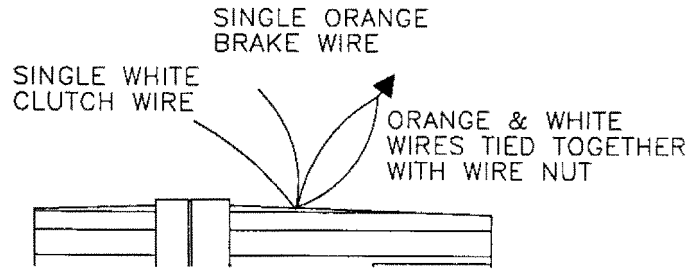
Bolt package base to your mounting surface.



WIRING

OPTIMUM WIRING FOR CLUTCH-BRAKE PACKAGES.
DO NOT REMOVE WIRE NUT FROM ORANGE AND WHITE WIRE

WIRE COLOR CODES:
ORANGE WIRES = BRAKE
WHITE WIRES = CLUTCH.



This clutch-brake package will perform best when the clutch and brake magnetic fields are of the opposite polarity. The clutch field build up will assist the decay for the brakes magnetic field and the opposite it true when the brake is energized. This helps eliminate clutch-brake overlap and lengthens the life of the clutch-brake. Your drive system will receive less shock. Wiring as follows maintains opposite coil polarization.

CONNECTING TO DYNACORP CLUTCH-BRAKE CONTROLS

CBP Clutch-Brake Package

Single orange wire =
Single white wire =
White & orange wire tied together

D2550, D2650, D2750 and D2950

Terminal B (brake)
Terminal C (clutch)
Terminal A

CBP Clutch-Brake Package

Single orange wire =
Single white wire =
White & orange wire tied together

D2100 and D2110

Terminal 8 (brake)
Terminal 3 (clutch)
Terminal 4

CBP Clutch-Brake Package

Single orange wire =
Single white wire =
White & orange wire tied together

D2101 (D6001-448-004) AND

D2111 (D6001-448-006)

Terminal 8 (brake)
Terminal 3 (clutch)
Terminal 2 or terminal 6

OTHER CLUTCH-BRAKE POWER SUPPLIES:

CBP Clutch-Brake Package

Single orange wire =
Single white wire =
White & orange wire tied together =

DC Power Supply

Brake power supply positive (+)
Clutch power supply positive (+)
Power supply common (-)

Individual clutches (CP) and brakes (BP) are not polarity sensitive and should be wired following the instructions included with the DC power supply.

TROUBLE SHOOTING

This product has been tested prior to shipment. It has passed torque and dynamic cycling tests. It is self adjusting and does not require maintenance during its life.

MOST PROBLEMS ARE A RESULT OF IMPROPER INSTALLATION.

- Did the C-Face package easily slide onto the motor shaft?
- Were the (2) set screws tightened?

CLUTCH OR BRAKE DOES NOT ENGAGE

Modules are power applied; check to see if the required voltage is present at the packages lead wires.

- No voltage present: Check the control's output voltage, torque pot settings if it has them, wiring and switching circuits
- Voltage present: Check resistance for the clutch or brake coils (see chart below) if coils are not within specifications, replace them or return to Dynacorp for repair.
- Coils good: C-Face internals are out of position due to improper installation or extreme shocks during shipment. Remove and re-install, if this does not correct problem unit requires repair.

CLUTCH OR BRAKE ENGAGES AND DOES NOT START OR STOP LOAD

- Clutch or Brake undersized, check selection procedure.
- Possible jam or binding in machine. Monitor motors running current draw versus name plate to see if the load has increased or is larger than anticipated.

CLUTCH OR BRAKE OPERATES PROPERLY WHEN COOL BUT NOT AFTER RUNNING FOR A PERIOD OF TIME.

- Clutch or brake undersized, when starts and or stops are greater than 15 CPM the units thermal capabilities must be considered along with calculated torque for proper selection. High inertia loads at low cycle rates also require that the unit selection is based on heat and torque capacities.
- Motor shaft did not slide easily into unit during installation usually caused by motor / module being pulled together by the tie bolts. Module input rotor is pushed forward into armature plate and will try to drive the load. Unit will over heat.

NOISE WHEN DRIVING THE LOAD

- Set screws not tightened, torque the (2) set screws to 80 In-Lbs
- Lightly loaded single phase and or variable speed motors can create an oscillating motion that will cause chatter between the splined armature and stainless steel hub. Make sure set screws are tight, may not be correctable since it is a function of 2 metal surfaces and the oscillations from the drive source.

NOISE WHEN LOAD IS STOPPED

- Motor shaft did not slide easily into unit during installation usually caused by motor / module being pulled together by the tie bolts. Module input rotor is pushed forward into armature plate and will try to drive the load. Unit will over heat or pilot bearing will fail. Remove and reinstall, unit may require repair.

C-FACE CLUTCH DRIVES LOAD – NO POWER APPLIED TO COIL

- C-Face clutches only – Friction of pilot bearing in center of unit will drive output at 7 to 10 In-lbs. Add brake to system.

COIL DATA for Clutch or Brake on BP, CP, AND CBP

VOLTAGE	RESISTANCE	CURRENT DRAW
6 VDC	2.60 OHMS	2.30 AMPS
12 VDC	7.75 OHMS	1.54 AMPS
24 VDC	30.8 OHMS	.78 AMPS
90 VDC	486 OHMS	.18 AMPS

VALUES ±10% AT 70 DEGREES F