

Service Manual

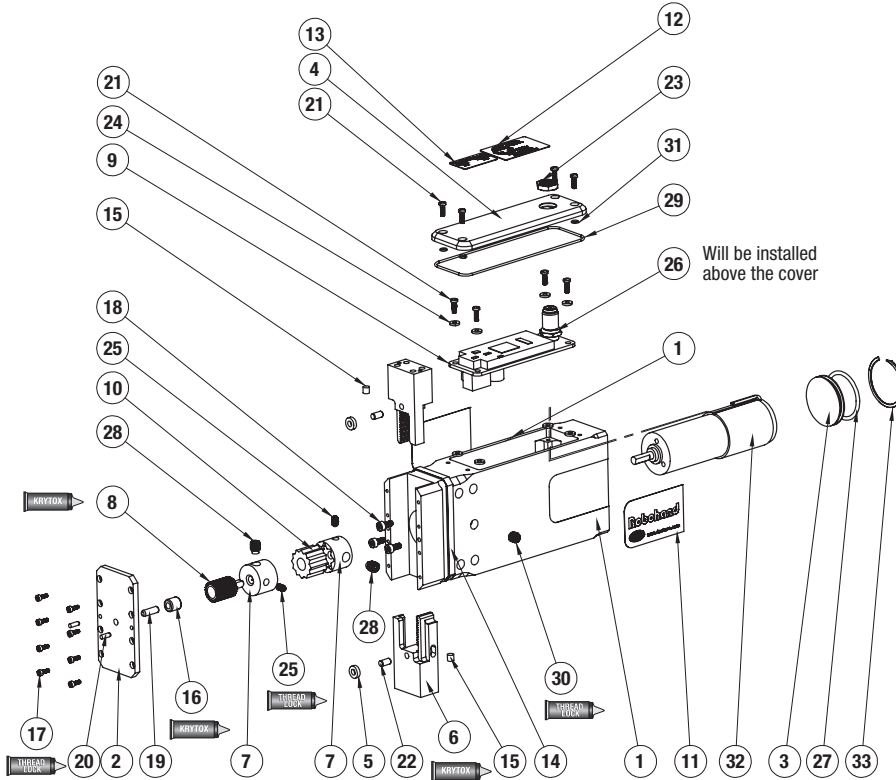
ROBOHAND | DPE-200 Series



WARNING: This is a controlled document. It is your responsibility to deliver this information to the end user of the DESTACO Robohand product. Failure to deliver this could result in your liability for injury to the user or damage to the machine. For copies of this manual, call your Customer Service Representative at 1.248.836.6700

DPE-200 SERIES

Parallel Grippers | Maintenance and Assembly Procedure



Item	Qty	Name
01	1	Body
02	1	Bottom Plate
03	1	Cap
04	1	Cover
05	2	Bumper
06	2	Jaw
07	2	Coupling Pin
08	1	Drive Pin
09	1	Motor Control Board
10	1	Coupling Insert
11	2	Tag-Destaco-Robohand
12	1	Tag-Electric Pin Out
13	1	Tag-Production
14	1	Tag-VBL Collar
15	2	Magnet
16	1	Bearing
17	8	SHCS, M1.6*5mm, Alloy
18	3	SHCS, M2.5*5mm, Alloy
19	1	Dowel Pin: 1/8 Dia X 3/8
20	2	Dowel Pin: 2mm dia*6mm lg
21	8	Screw, Fillister HD, M2x6mm
22	2	Dowel Pin: 3mm dia*6mm lg.
23	0	Jam Nut-Ref Only (Part Of Motor Control Board)
24	8	Washer
25	2	Set Screw
26	0	O-Ring - Ref Only (Comes With Connector)
27	1	O-Ring
28	2	Set Screw
29	1	O-Ring
30	1	Set Screw
31	4	O-Ring, Buna, 70d, 0.026 CS, .097id
32	1	Gear Motor
33	1	Ret. Ring

Assembly Procedure

- 1) Clean all make details free of dirt, oil and other contaminants.
- 2) Insert # 32 motor into the # 1 body, line up the motor holes and assemble motor to the body by using # 18 screws. Make sure that the motor wires are carefully routed to the top for it's connection to the motor control board.
- 3) Assemble # 25 set screws one of the # 7 coupling hubs, but not all the way in. Assemble the coupling to the motor shaft, with flat on the motor shaft facing one of the set screws and adjust the inside face of the coupling, flat with end face of the motor shaft. Tighten the set screw on the motor shaft thru the access hole at set screw # 30 location.
- 4) Assemble the # 10 coupling insert into the # 7 hub, as assembled to the motor shaft, as above.
- 5) Assemble # 8 drive pinion with it's shaft all the way into the second # 7 coupling hub and tighten the set screws. Assemble # 16 bearing and # 19 dowel pin into the drive pinion. Now install this assembly hub / insert assembly installed earlier to the motor shaft.
- 7) Assemble # 15 magnets into # 6 jaws, using lok-tite as recommended.
- 8) Lubricate the pinion, the bearing, the jaws and inside surfaces of jaw-ways with lubricant as recommended.
- 9) Install the jaws into the body, meshed with the pinion and symmetrically positioned w.r.t the pinion.
- 10) Install # 5 stop and # 22 dowel pins into the jaws.
- 11) Assemble # 2 cover to the body, with dowel pins # 19 and # 29 aligned to the corresponding holes in the cover. Install fasteners # 17 to secure the cover to the body.
- 12) Install / connect the motor cable connector the motor control board. Use # 21 & # 24 fasteners and install the motor control board to the body. Note: Remove the hex nut supplied with the connector on the motor control board. This hex nut will be re-installed after # 4 cover is installed.
- 13) Install # 4 cover to the body with # 29 gasket and # 21 screws as shown.
- 14) Installed the previously removed hex nut back to the connector. Caution: Only snug tighten this hex nut.
- 15) Install # 3 cap with O ring and snap ring, as shown.
- 16) Install tags and labels as shown.

NOTE: Contact the DE-STA-CO Customer Service for a complete spare parts list with order numbers and prices.



Seal Kit
Items



Thread
Locker



Krytox™
Lubricant



Lightweight
Machine Oil



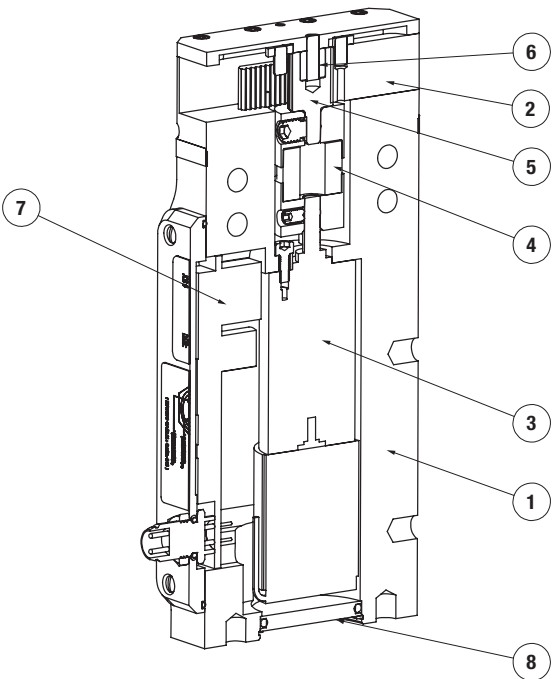
Teflon™ Based
Grease



Super
Bonder



Third Angle
Projection



Item	Qty	Name
01	1	Body
02	2	Jaw
03	1	Motor/Gear ASM
04	1	Coupling Asm
05	1	Pinion
06	1	Bearing
07	1	Motor Control Board
84	1	End Cap

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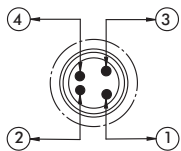
Installation and Operation:

- 1. Mount fingers (customer supplied) to gripper jaws using dowel pins and threaded fasteners. See dimensional drawing for hole sizes. Use Loctite® 242 threadlocker or equivalent.
- 2. Mount gripper using dowel pins and threaded fasteners. Gripper can be mounted and operated in any orientation. See dimensional drawing for mounting hole pattern and sizes. Use Loctite® 242 threadlocker or equivalent.
- 3. To operate the DPE gripper, follow the instructions below:
Apply +24VDC to pin 1 (brown) and Ground to pin 3 (blue) to turn on the gripper. To open the fingers, apply +24VDC to pin 2 (white). To close the fingers, remove +24VDC from pin 2, and apply +24VDC to pin 4 (black). +24VDC signal must remain present on the open / close line to maintain the force output. The gripper will do nothing if a +24VDC signal is present on the open and close lines at the same time.

WARNING:

- Operating gripper outside of power voltages and can cause damage and void warranty
- Disconnect power from gripper before performing maintenance or making adjustments.

ELECTRICAL INTERFACE



PIN OUT (LOOKING INTO HEADER CONNECTOR ON GRIPPER)

- 1 BROWN (+ 24 VDC)
- 2 WHITE (OPEN GRIPPER) +24 VDC = ACTIVE
- 3 BLUE (GROUND)
- 4 BLACK (CLOSE GRIPPER) +24 VDC = ACTIVE

CABLE # CABL-046

Seal Kit Items

Thread Locker

Krytox™ Lubricant

Lightweight Machine Oil

Teflon™ Based Grease

Super Bonder

Third Angle Projection

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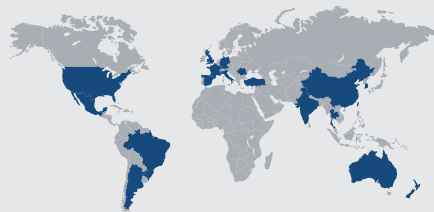
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Industries



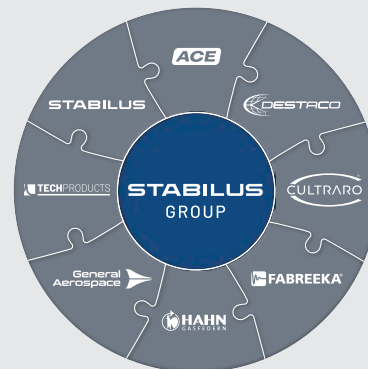
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