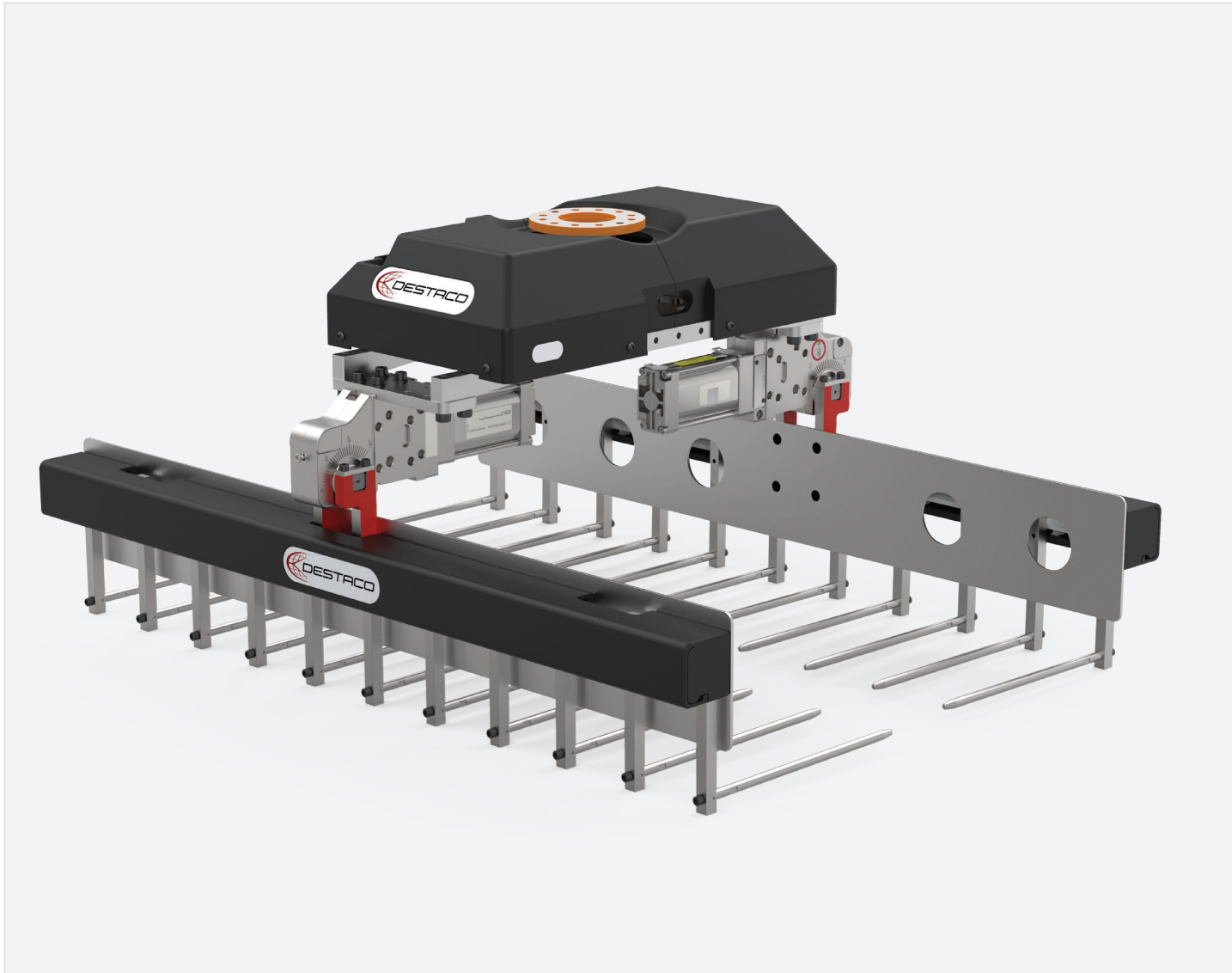


Service Manual

DPS50 Bag Gripper | Installation Instructions



WARNING: This is a controlled document. It is your responsibility to deliver this information to the end user of the DESTACO 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

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DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

HAZARD SYMBOLS	
SYMBOL	DEFINITION
 CAUTION	Indicates a situation which, if not avoided, could result in damage to the <u>unit</u> , equipment, or environment.
 WARNING	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Personal Protective Equipment (PPE)

The personal protective equipment (PPE) described below must be provided by the unit owner and be worn by the responsible operating personnel when working with the unit.

Wear protective gloves



Wear safety shoes



Wear ear protectors



Wear a safety helmet



Wear safety goggle



Electric Shock Hazard



DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

Required tools

Straight Edge



Metric Allen key set



Torque wrench



Socket wrench set (sockets & Metric Allen key)



Ratchet



Snap ring pliers



Mallet hammer



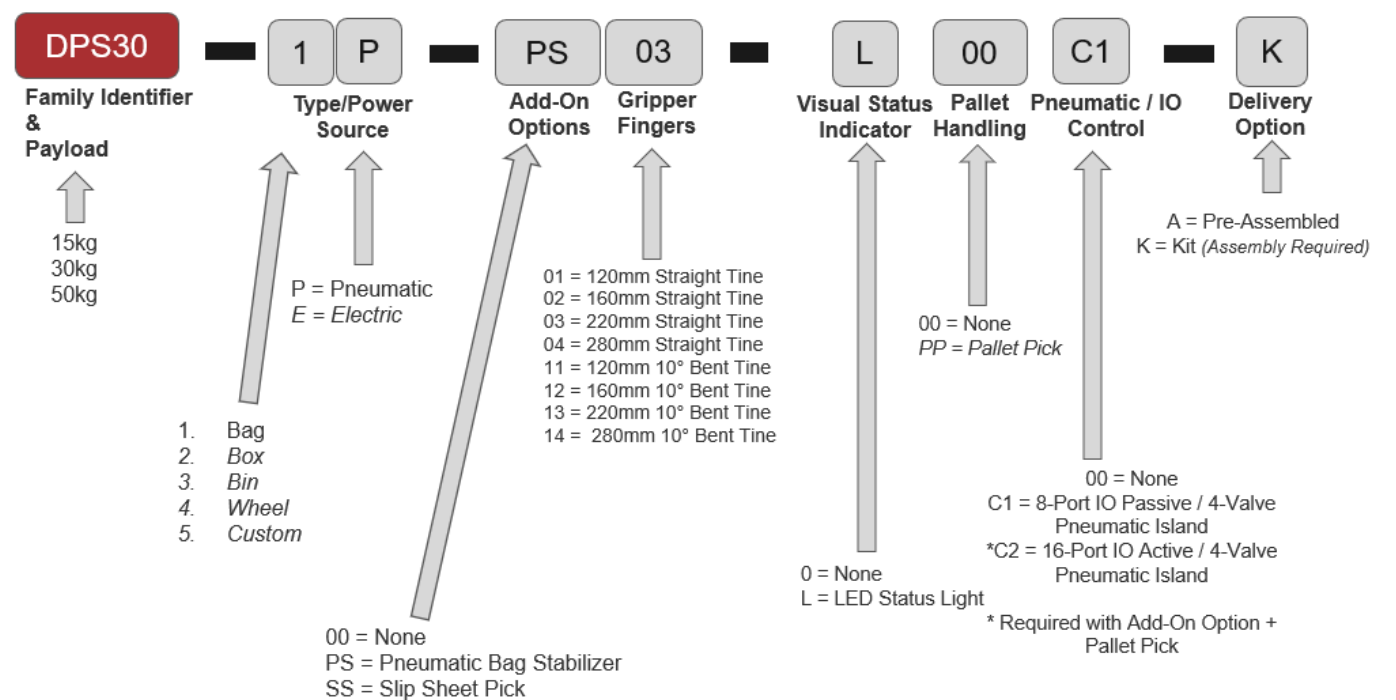
Thread Tape



DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

1. DESTACO PALLETIZING SYSTEM (DPS): BUILD SKU & ORDERABLE KITS

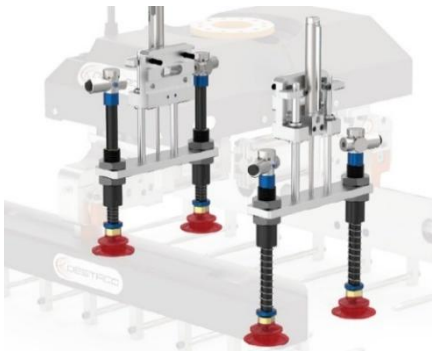


Note: Robot Stand-Off's (Sold Separately)

PNEUMATIC STABILIZER
(DPS-1P-PS-00-KIT)



SLIP-SHEET
(DPS-1P-SS-00-KIT)



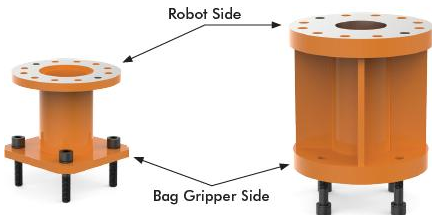
INDICATOR LIGHTING
(DPS-1P-00-L-00-KIT)



TINE-KITS
(DPS-T-XX-KIT)
(DPS-T-XX-KIT-E)



ROBOT STAND-OFF
(DPS-RS-LD-XX-KIT)
(DPS-RS-HD-XX-KIT)



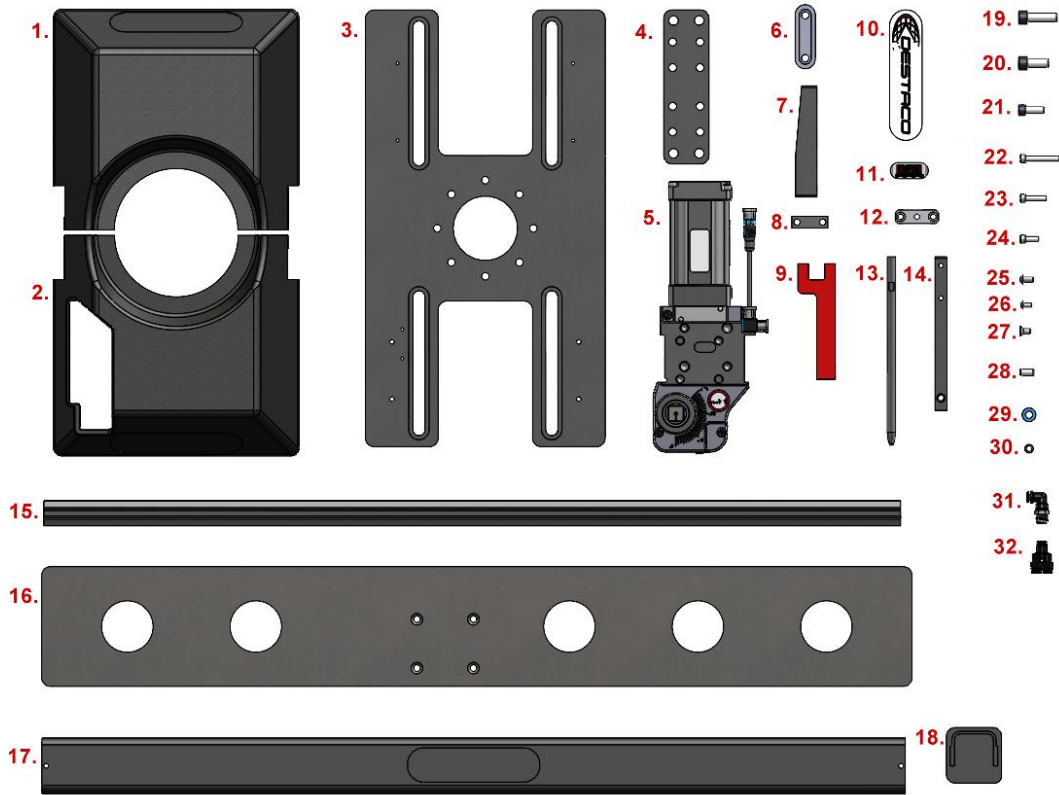
CONTROLS PACKAGES
(DPS-1P-00-C1-KIT)
(DPS-1P-00-C2-KIT)



DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

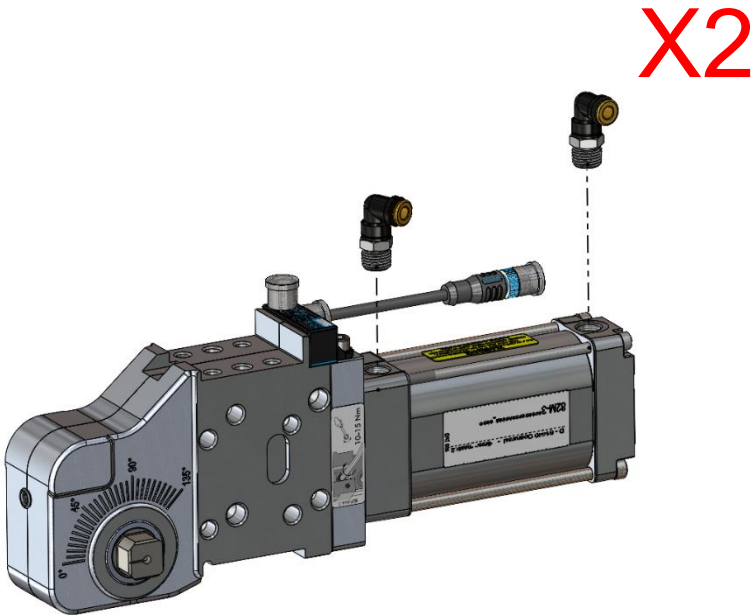
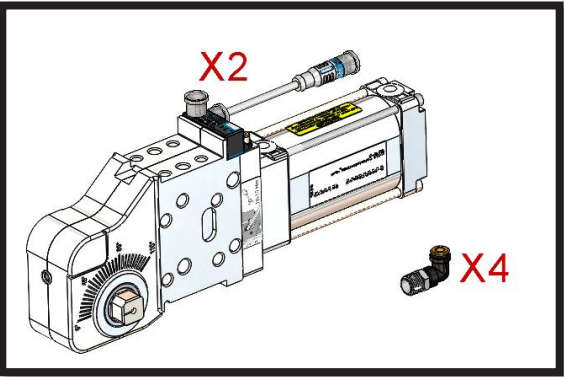
2. DPS50-1P-XX: 50kg payload



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	DPS30-1P-01-005	TOP COVER LS	1
2	DPS30-1P-01-006	TOP COVER RS	1
3	DPS30-1P-01-001	TOP PLATE	1
4	DPS30-1P-01-002	PC MOUNT PLATE	2
5	82M-3E230050K8	POWER CLAMP 82M-3E (50)	2
6	DPS30-1P-01-004	SLIDE STUD	4
7	DPS30-1P-01-003	RAISER	4
8	DPS30-1P-02-006	PC ARM PLATE	4
9	DPS30-1P-02-001	POWER CLAMP ARM	4
10	DSC6X15OVLSIL-LBL	DESTACO BRAND LABEL	4
11	DSC-DPS075X175-OVLSIL-LBL	DESTACO DPS LABEL	2
12	CLM-30-30-C	MICRO CLAMP BLOCK CAP	26
13	DPS-1P-T-02-004-XX	FINGER (220mm)	22
14	DPS50-1P-02-003	FINGER ARM	22
15	B-30-1000-0	30MM EXTRUSION	2
16	DPS50-1P-02-002	GUIDE PLATE	2
17	DPS50-1P-02-005	SIDE COVER 50KG PL	2
18	DPS15-1P-02-006	SIDE COVER END CAP	4
19	SHAM10C35	SHCS,M10*35MM,ALLOY	8
20	SHAM10C25	SHCS,M10*25MM,ALLOY	8
21	SHAM08C22	SHCS,M8*22MM,ALLOY	8
22	SHSM06C40	SHCS,M6*40MM,STAINLESS	60
23	SHSM06C25	SHCS,M6*25MM,SS	22
24	SHSM06C16	SHCS,M6*16MM,SS	8
25	BHAM06C12	BUTTON HEAD SCREW	8
26	BHAM05C10	BUTTON HEAD SCREW	8
27	FHSM06C12	M3x15MM FHSCS STAINLESS	8
28	DPSM08S16	DOWEL PIN,8MMDIA*16MMLG,STAINLESS,316	4
29	329-M8F	FLAT WASHER, M8 NOM.	8
30	329-M6S	M6 SPLIT LOCK WASHER	22
31	347-PL06-U02	PNEUFORCE 1/4 UNIVERSAL X 6MM TUBE ELBOW	4
32	347-PY06	PNEUFORCE 06mm UNION Y	2

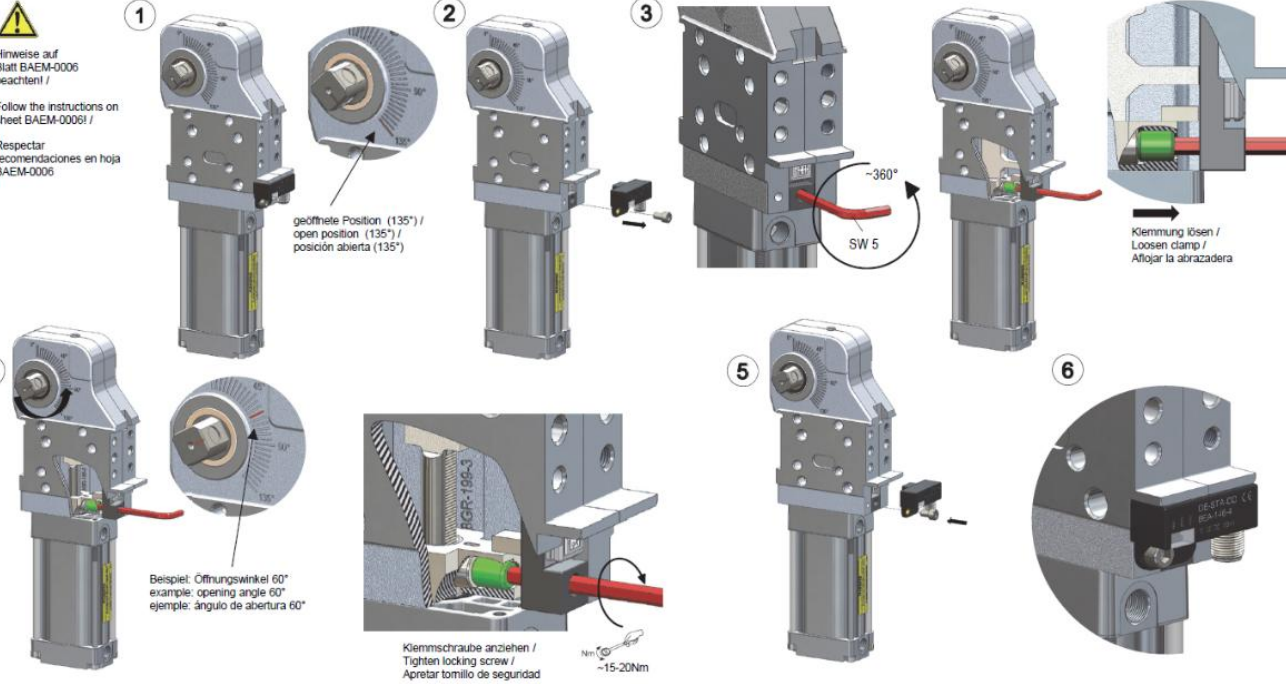
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction



	DESTACO - Montageanleitung / Assembly instructions / Instrucciones de montaje Einstell- und Montagehinweise / Adjustment and assembly instructions / Instrucciones de ajuste y de montaje	BAEM-0047	
		Blatt 1/1	Rev.4
		Ersetzt Rev.3	

Einstellung Öffnungswinkel / Setting of the opening angle / Graduación del ángulo de apertura

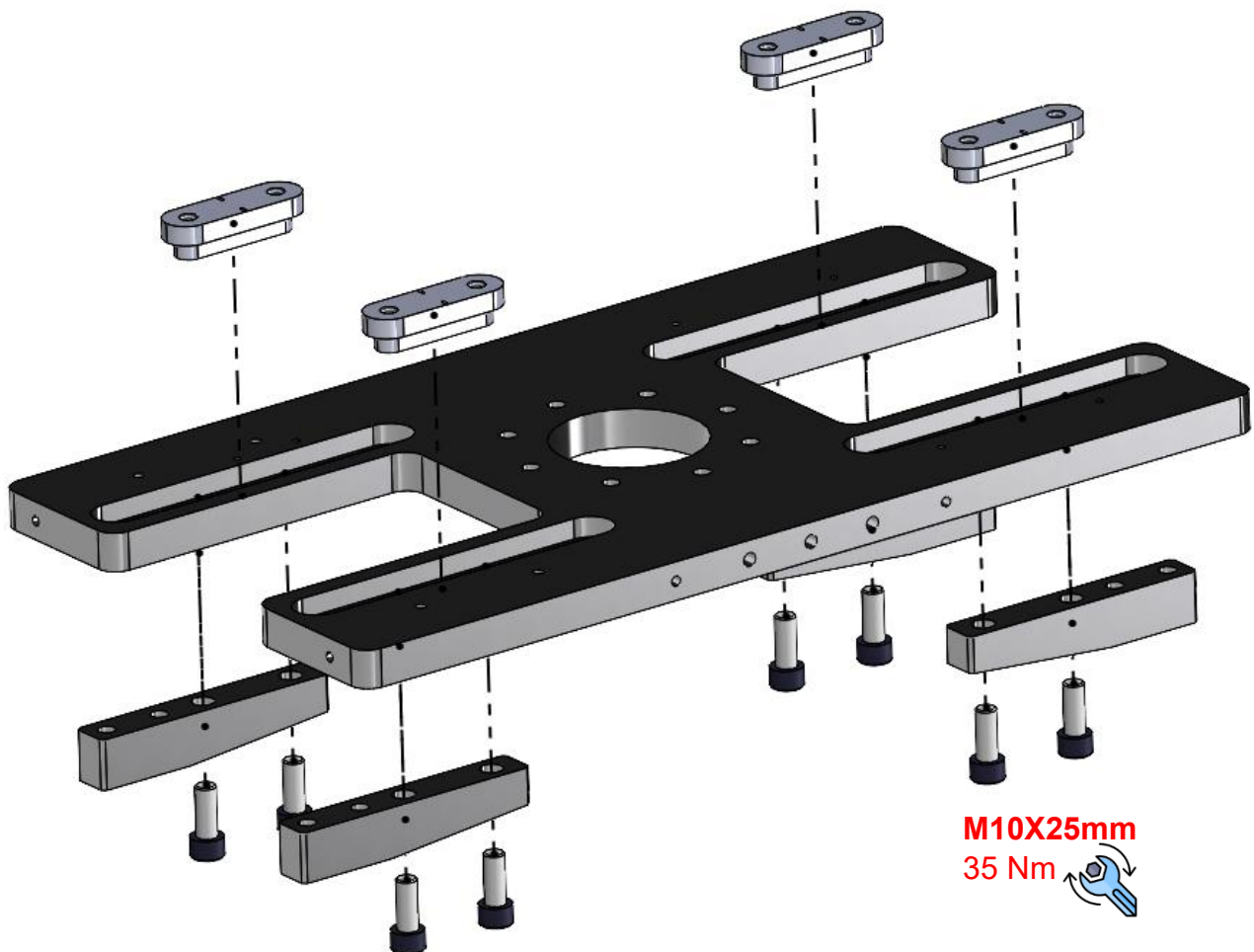
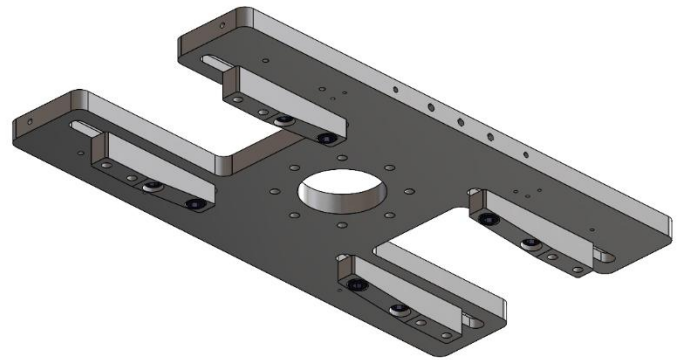
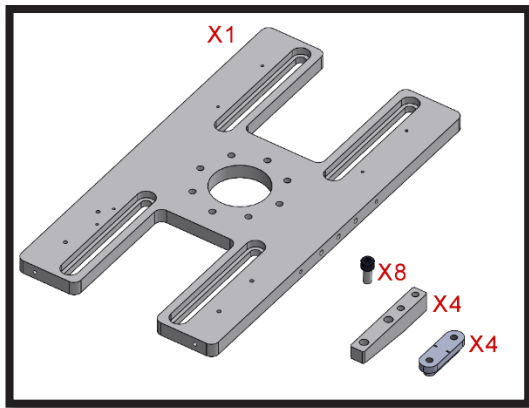


Schmierfett / Lubricant / Lubricante: ARAL-Longzeitfett H DIN-51502 KP2K-20 ARAL-Long-time grease H DIN-51502 KP2K-20 ARAL-Grasa de larga duración H DIN-51502 KP2K-20	Loctite	Montageanleitung Assembly instructions Instrucciones de montaje	siehe Ersatzteilliste see spare parts list véase lista de piezas de recambio	Anziehdrehmoment tightening torque par de apriete	Öffnen bei Druckluftausfall open in case of pressure failure abrir en caso de falta de presión
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Copyright by DESTACO

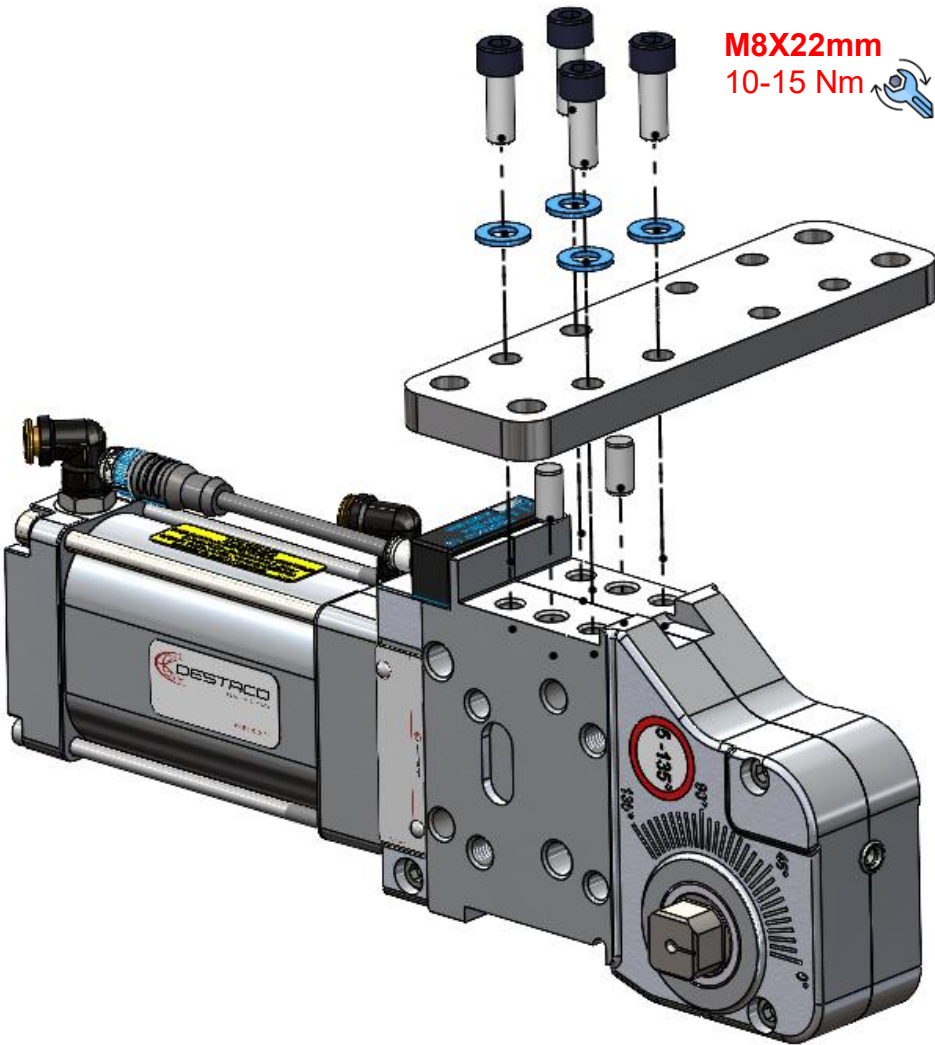
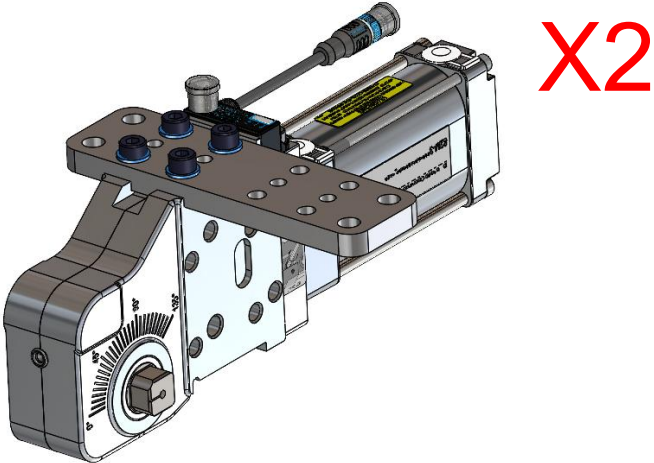
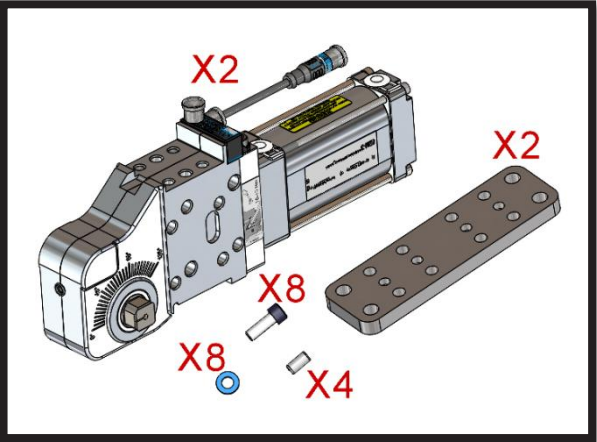
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction



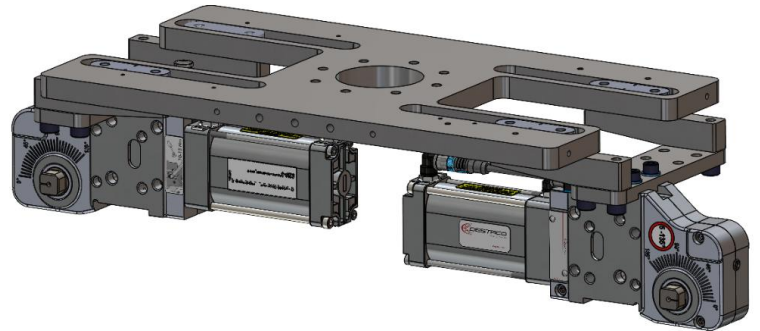
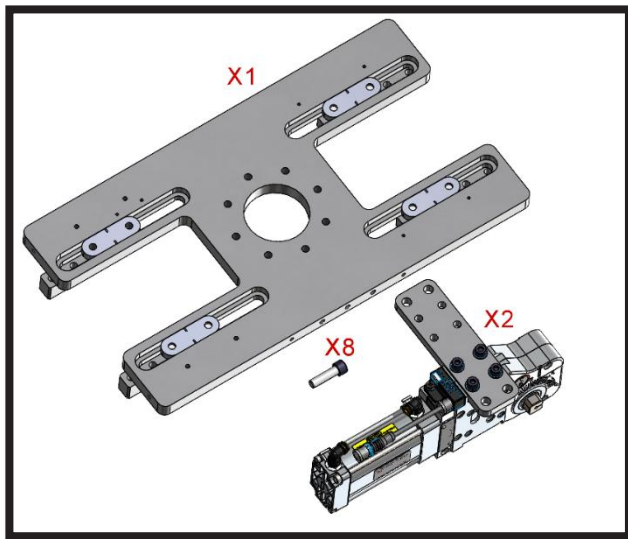
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

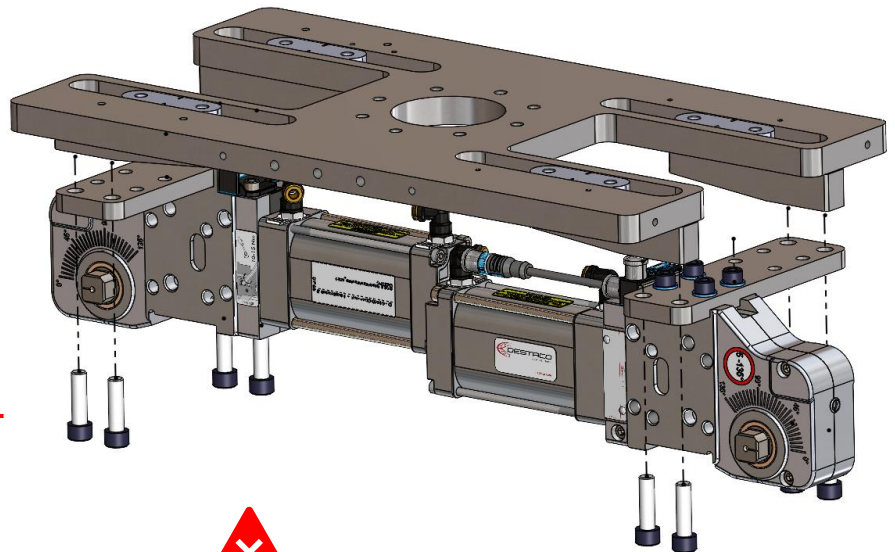


DPS50 BAG GRIPPER

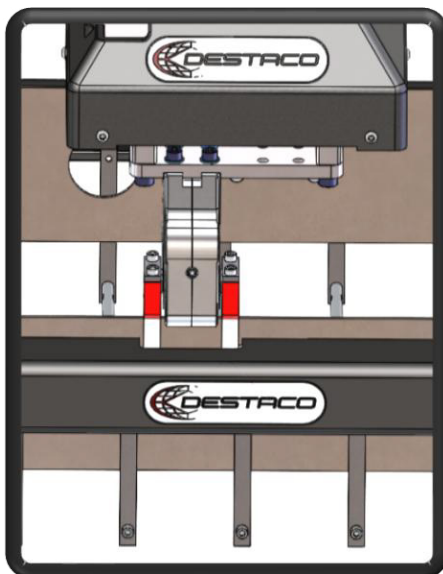
Bag Grippers | Assembly Instruction



**POWER CLAMP ASSEMBLY
MUST BE INSTALLED ON LEFT
SIDE TO INSTALL SIDE
COVERS**

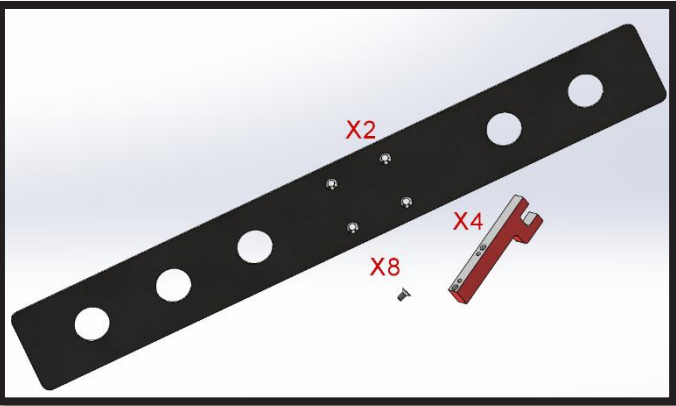


**M10X35mm
35 Nm**

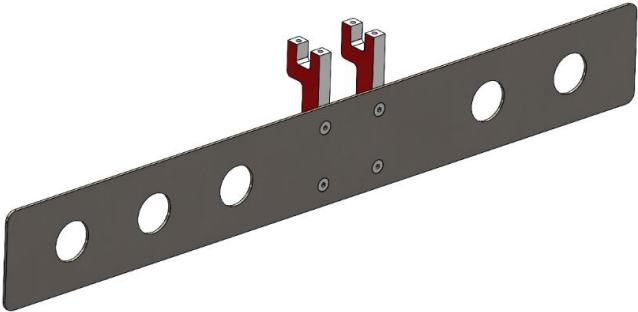


DPS50 BAG GRIPPER

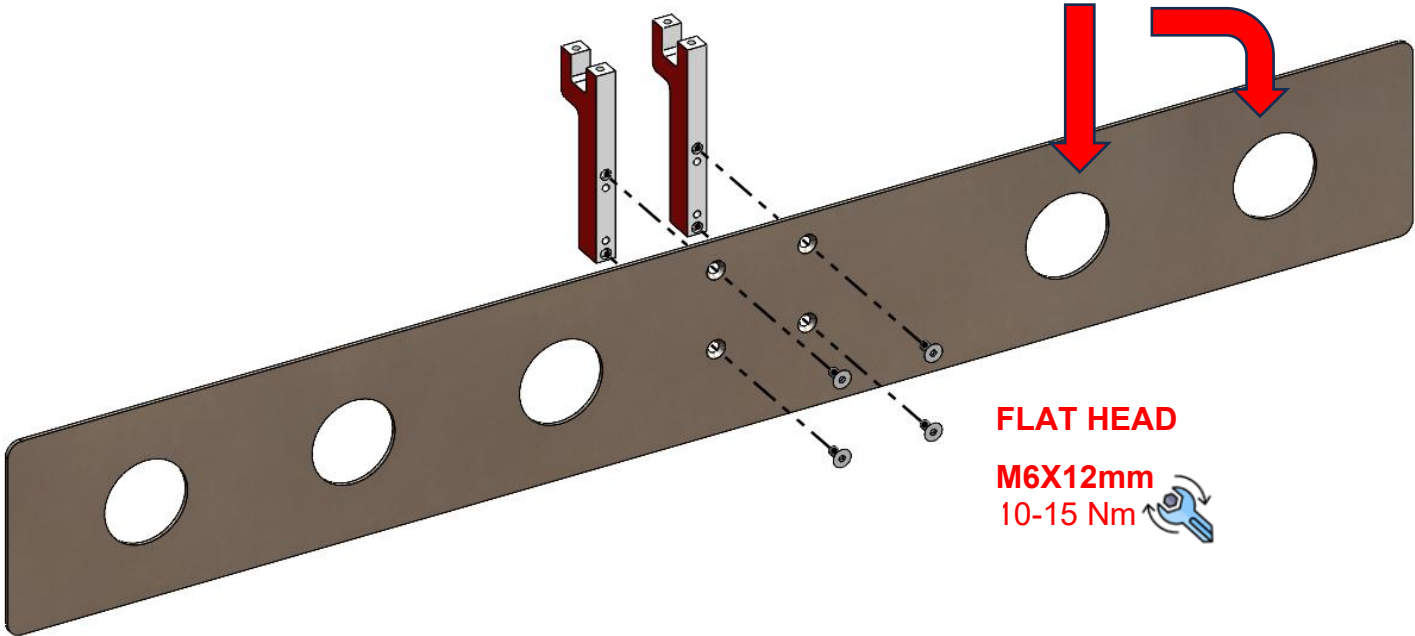
Bag Grippers | Assembly Instruction



X2



TWO HOLES TO THE RIGHT WITH
COUNTER SINKS FACING YOU



FLAT HEAD

M6X12mm

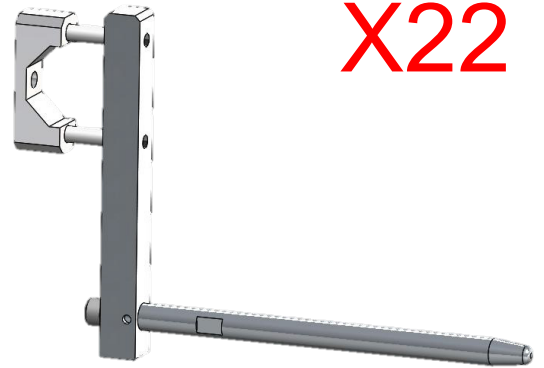
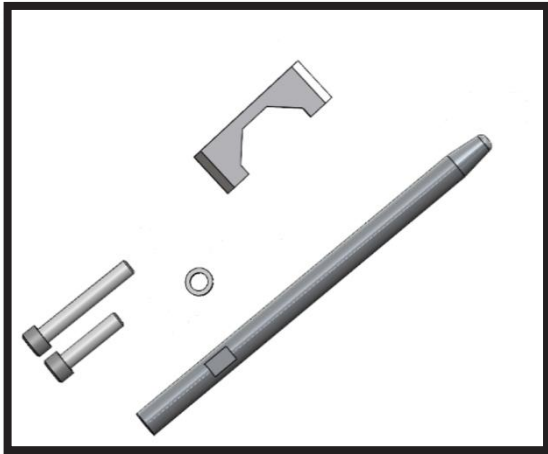
10-15 Nm



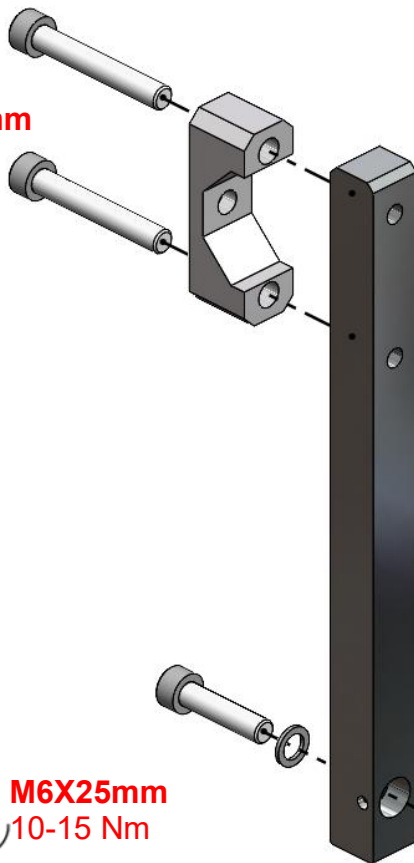
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

X22



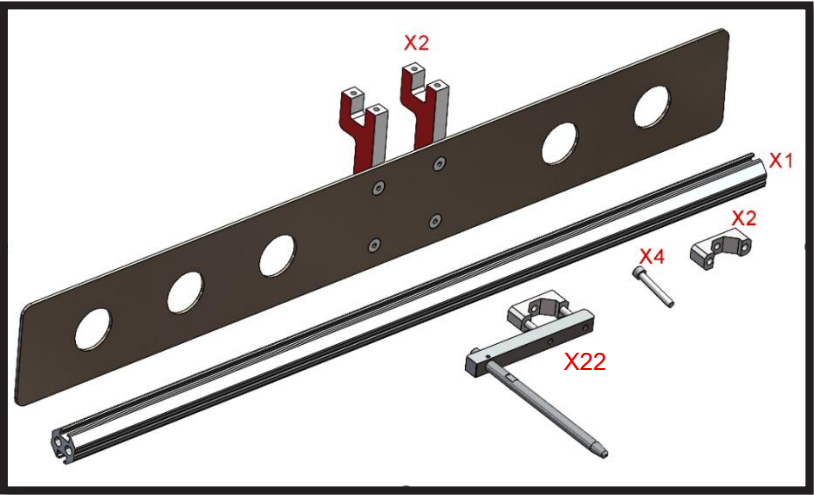
M6X40mm



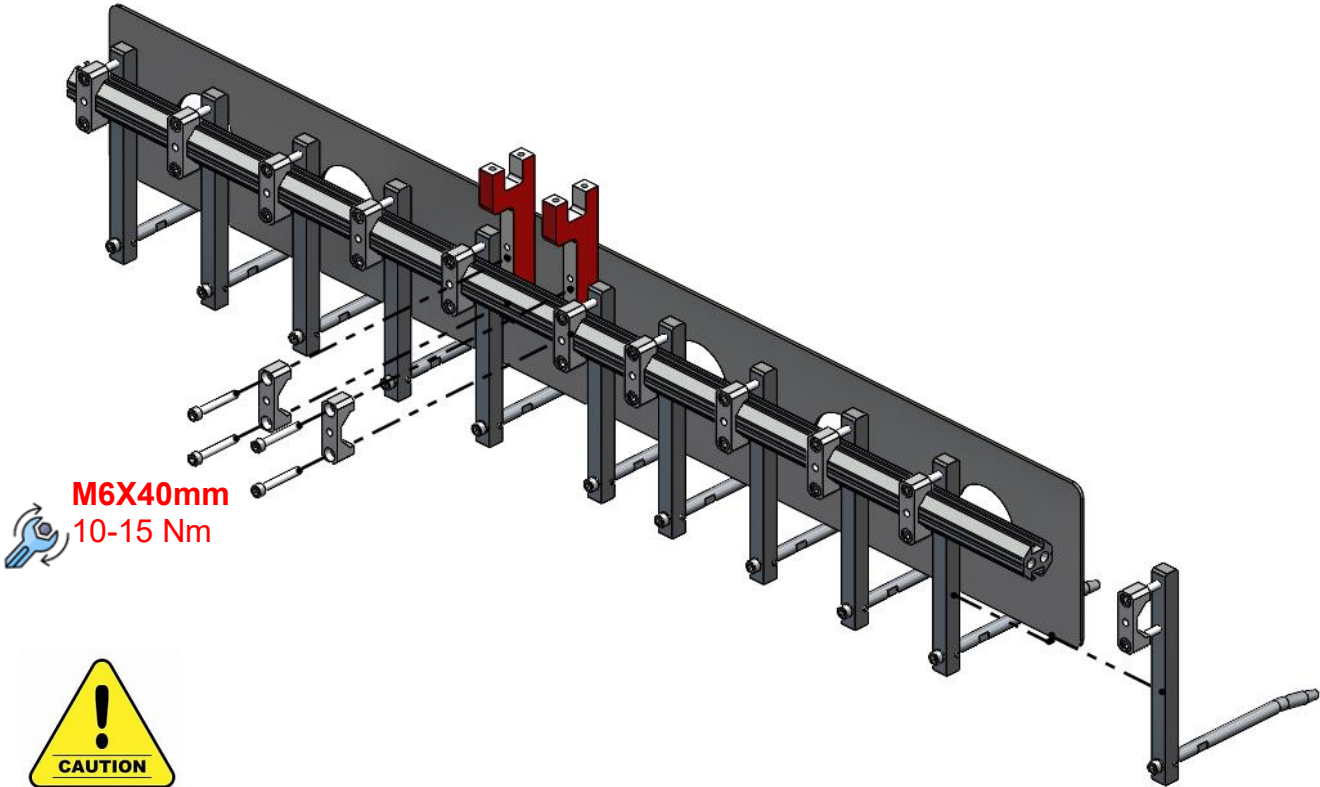
M6X25mm
10-15 Nm

DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction



X2



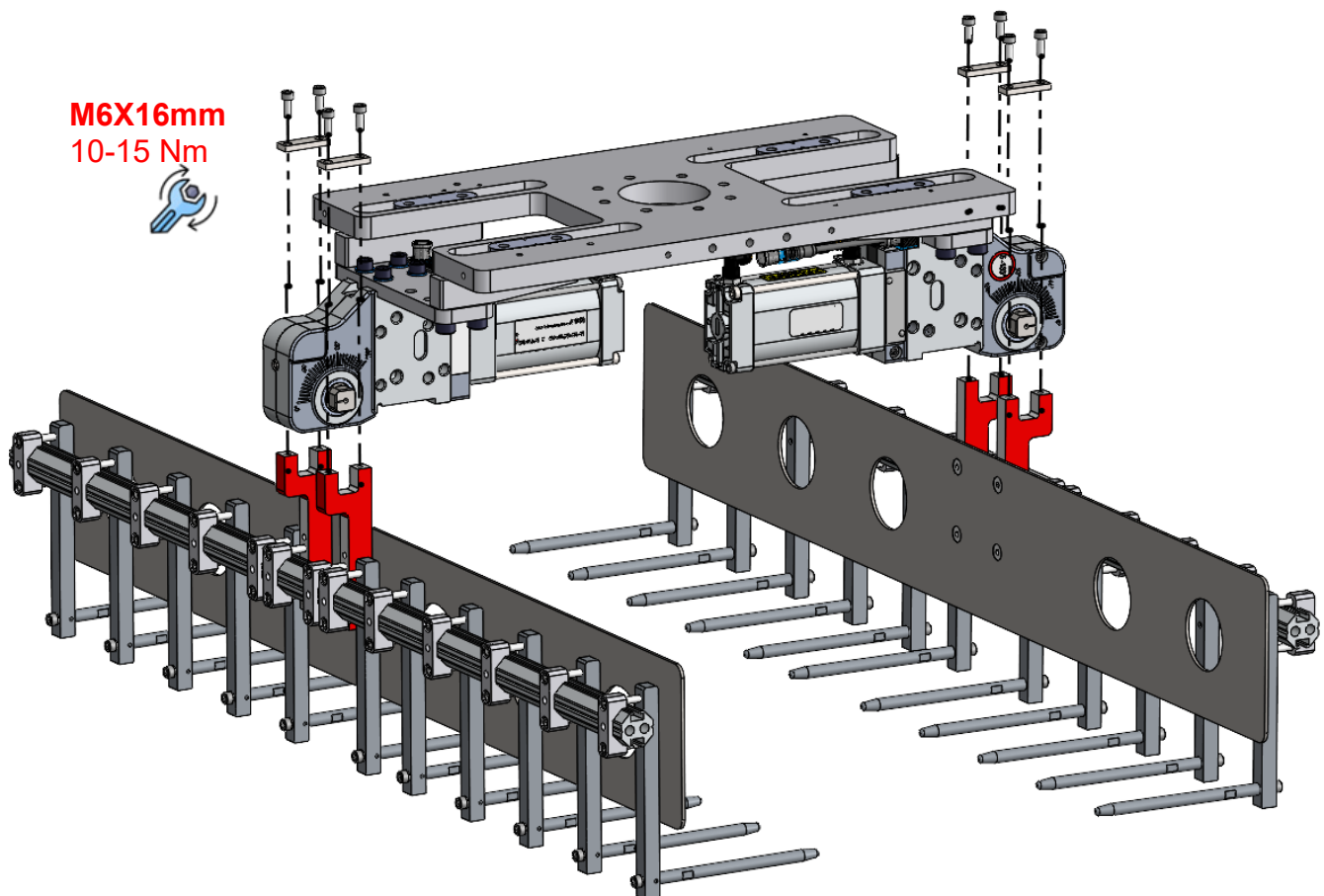
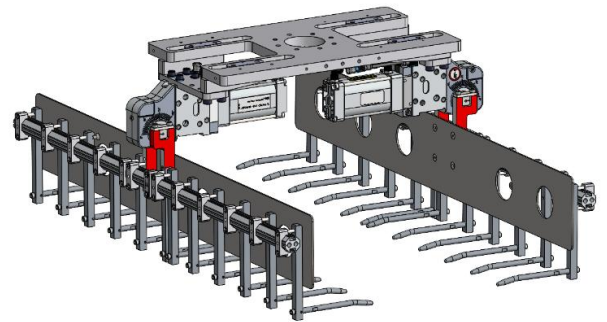
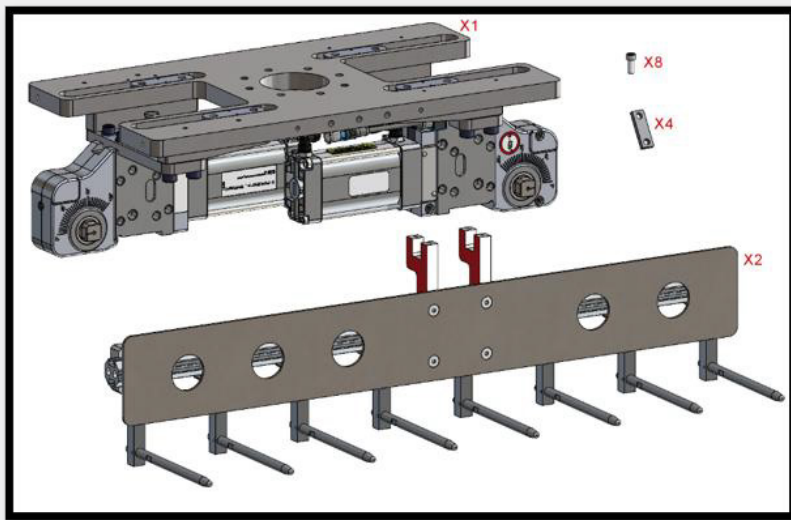
M6X40mm
10-15 Nm



Leave Bolts Loose for adjustment to
Conveyor
Recommend 2" spacing on 3" rollers

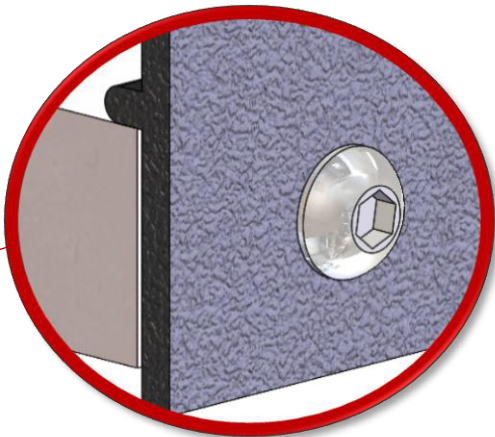
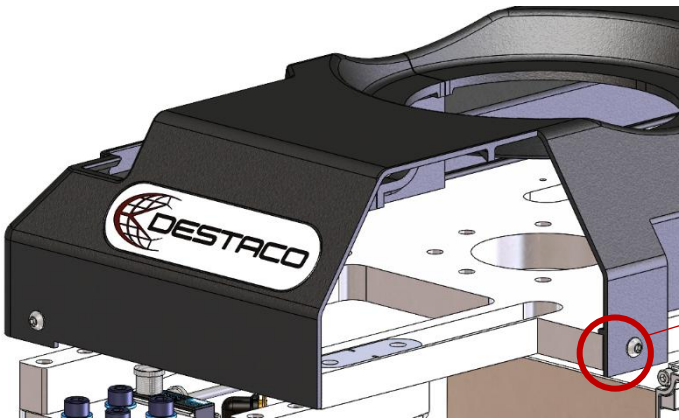
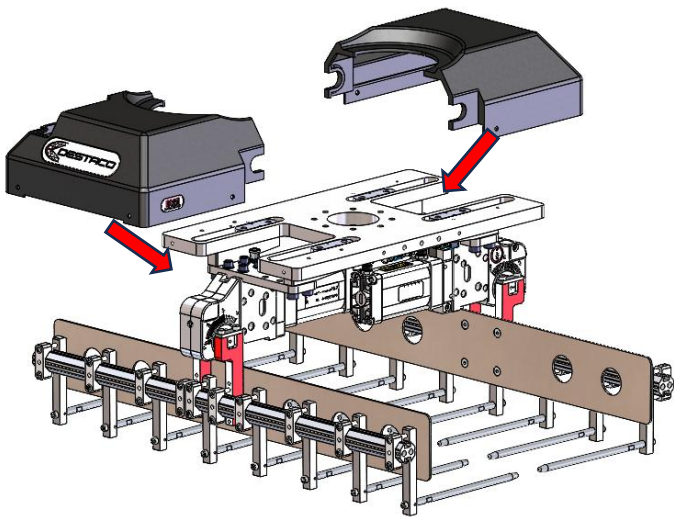
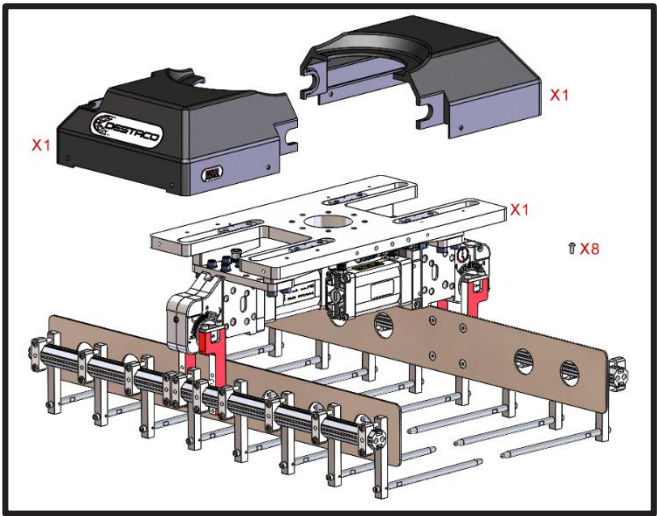
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction



DPS50 BAG GRIPPER

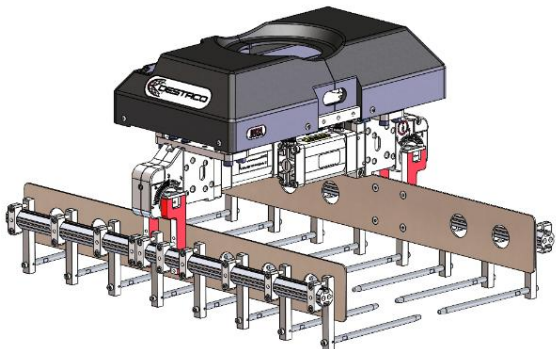
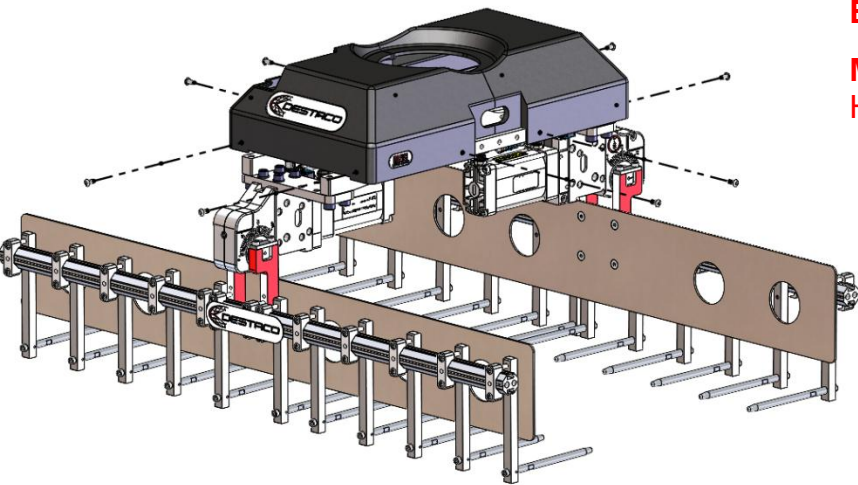
Bag Grippers | Assembly Instruction



Button Head

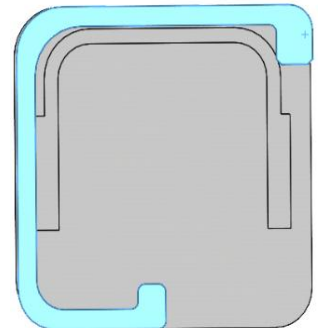
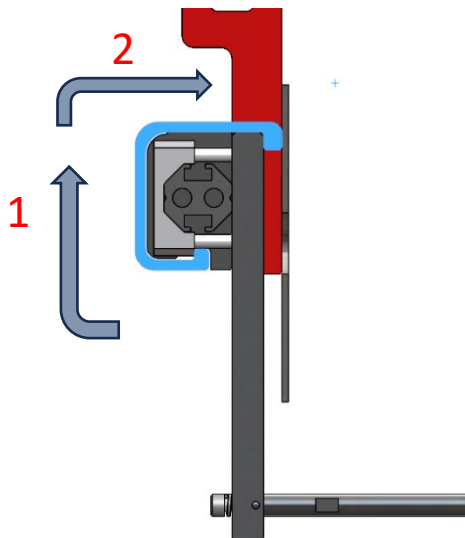
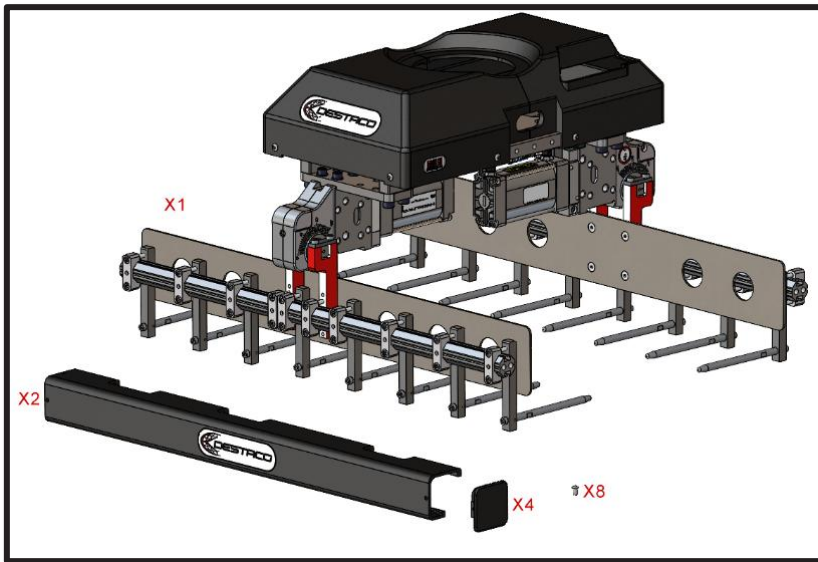
M6X12mm

Hand tight 



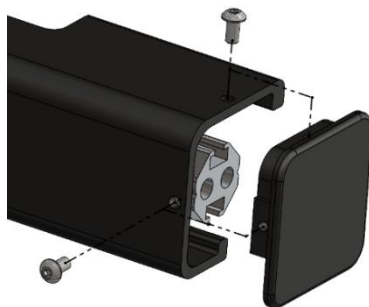
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction



Button Head

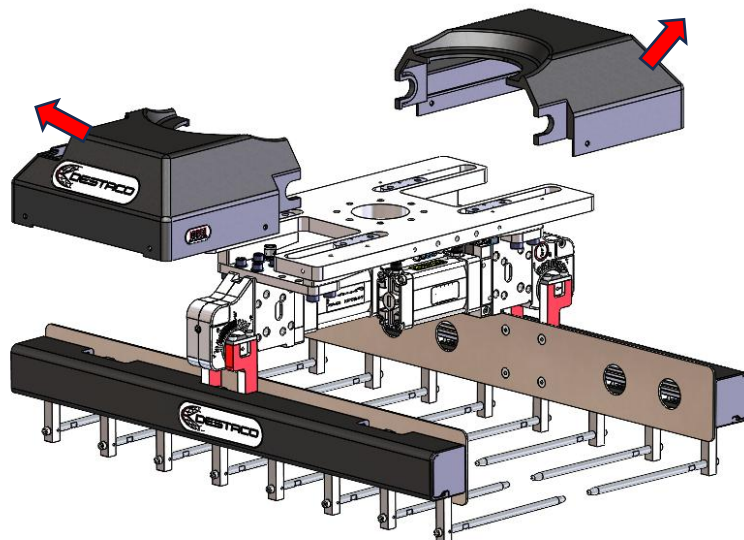
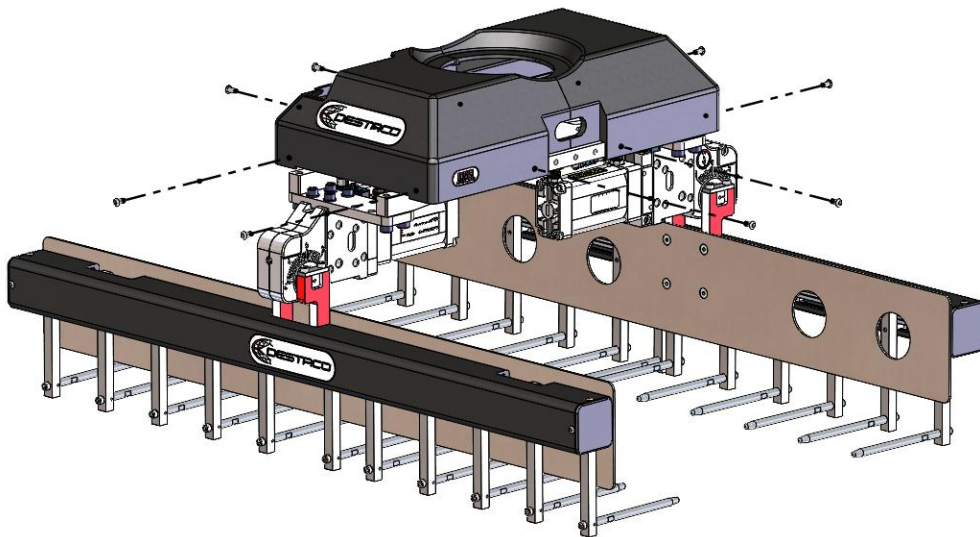
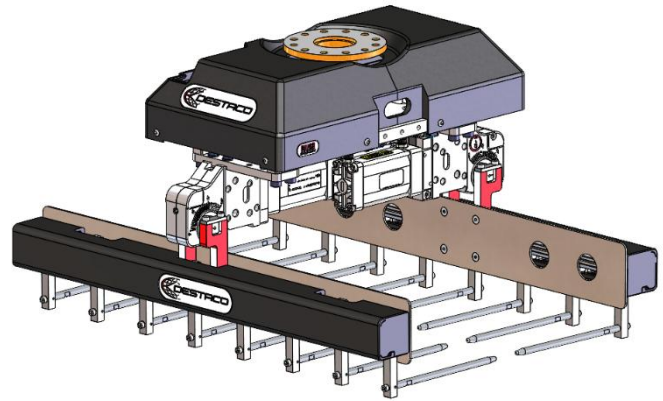
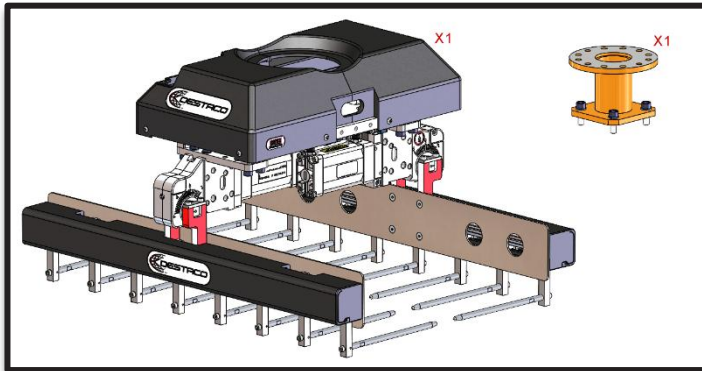
M5X10mm
Hand tight



DPS50 BAG GRIPPER

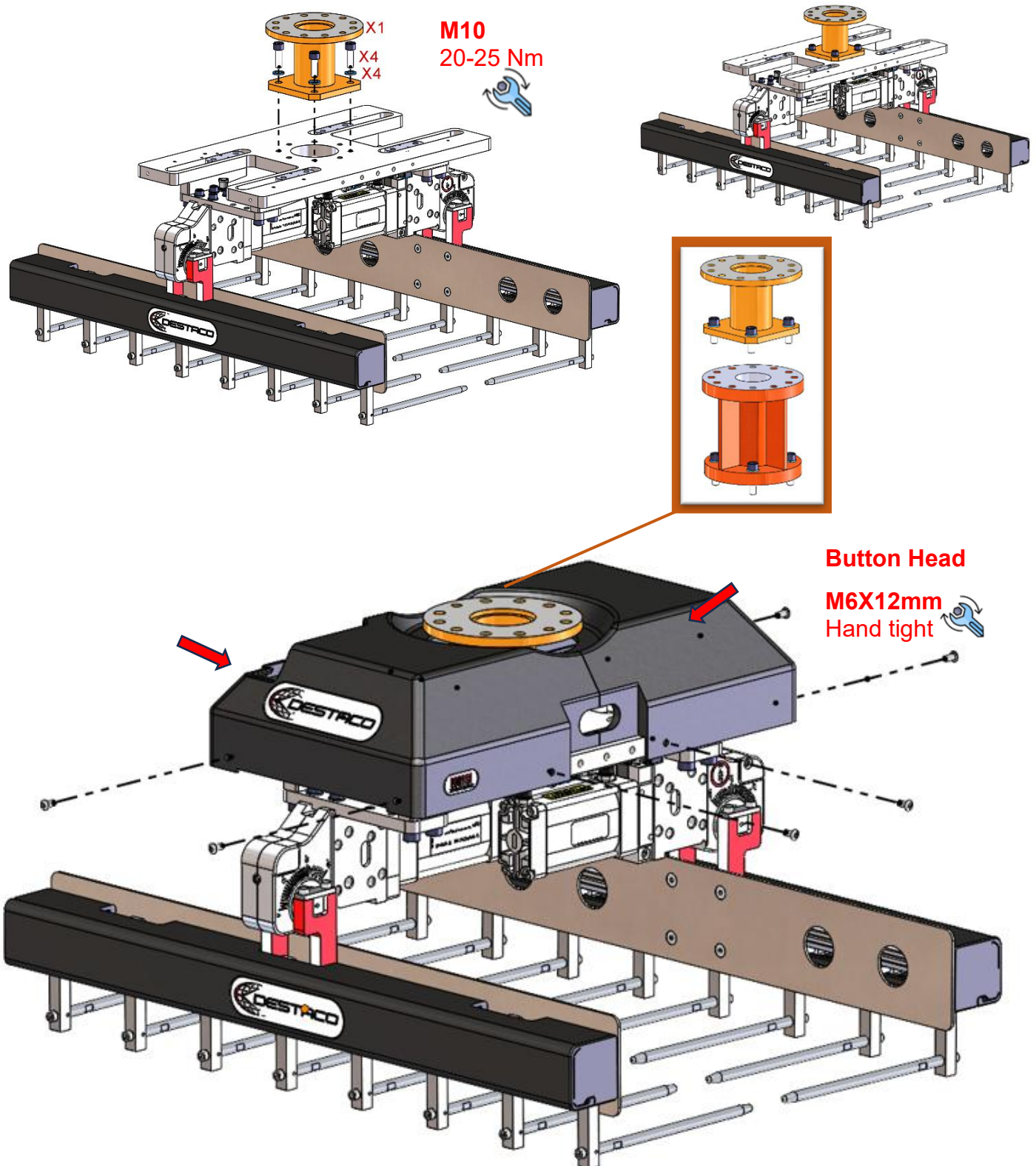
Bag Grippers | Assembly Instruction

3. ROBOT STAND OFF



DPS50 BAG GRIPPER

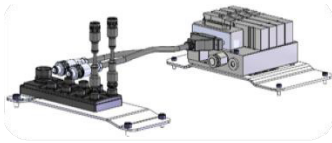
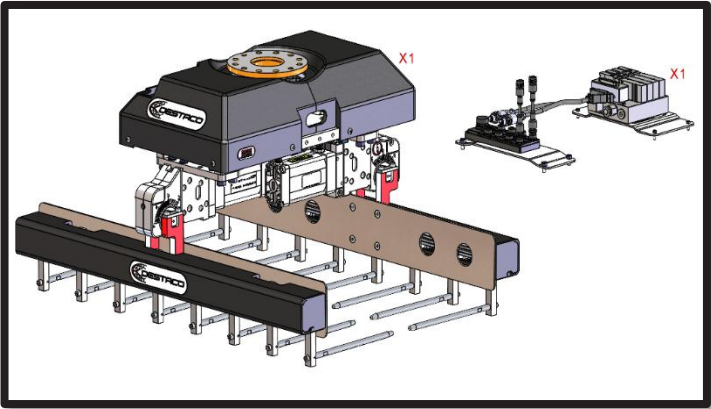
Bag Grippers | Assembly Instruction



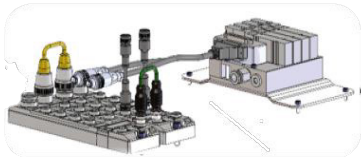
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

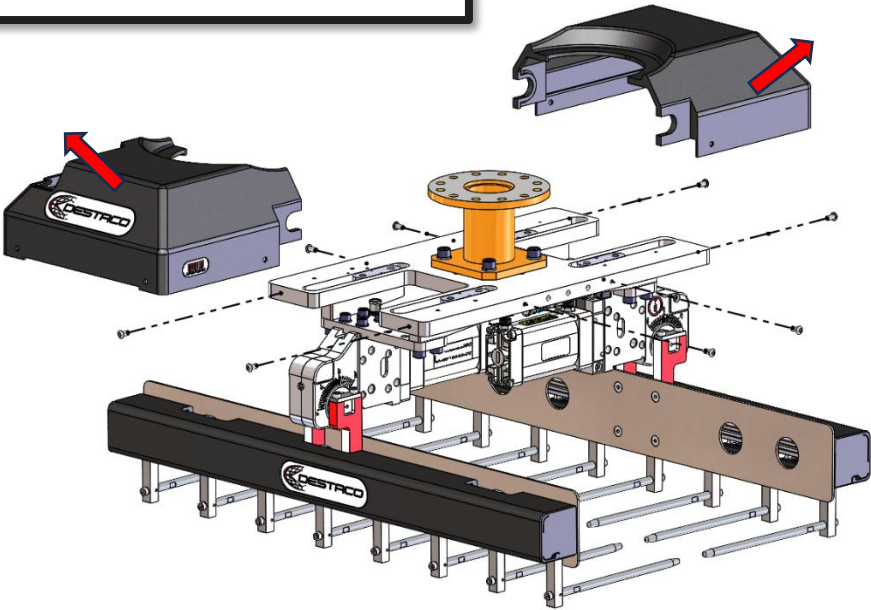
4. CONTROL UNITS



C1

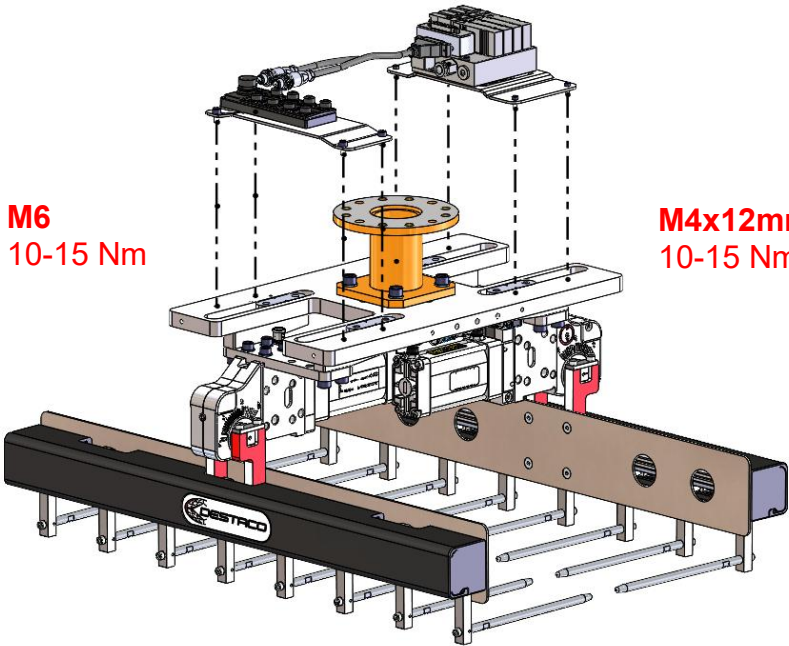


C2



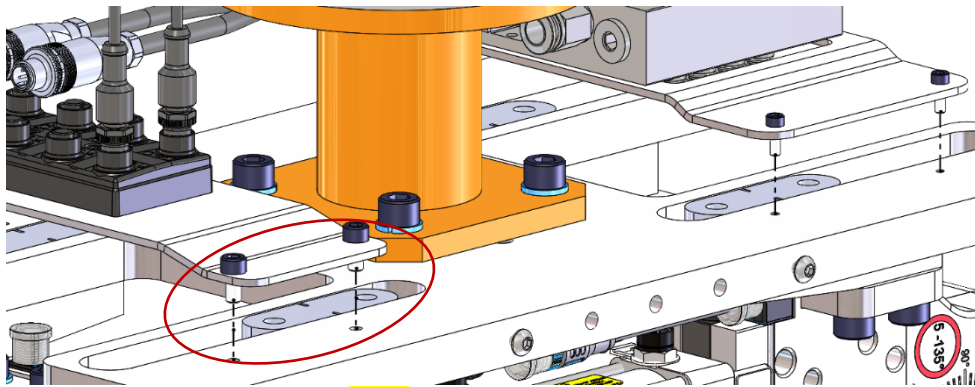
 **M6**
10-15 Nm

M4x12mm
10-15 Nm 

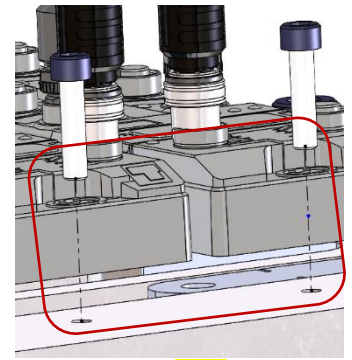


DPS50 BAG GRIPPER

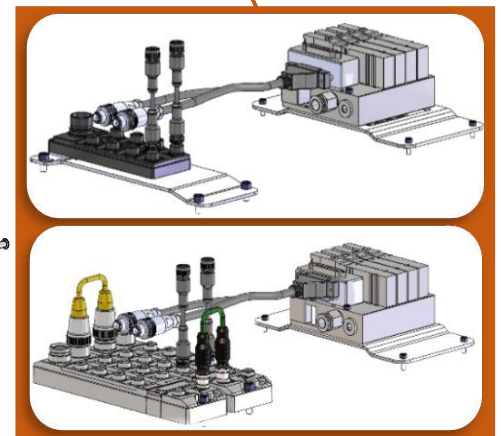
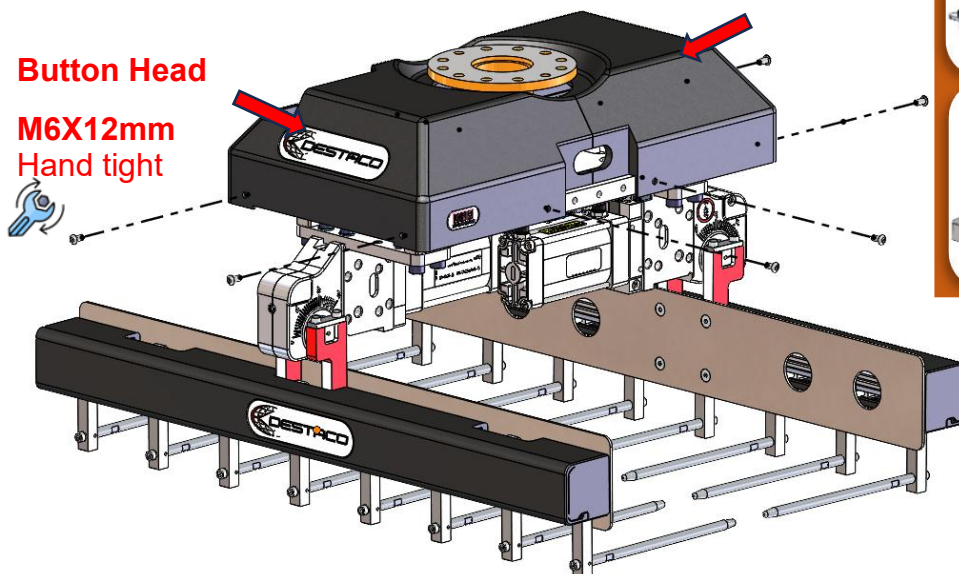
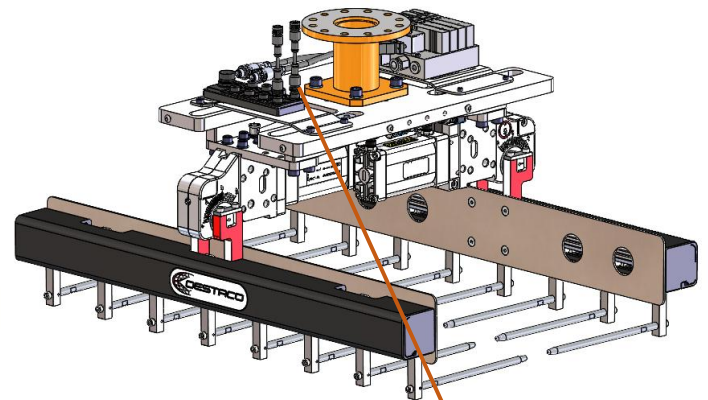
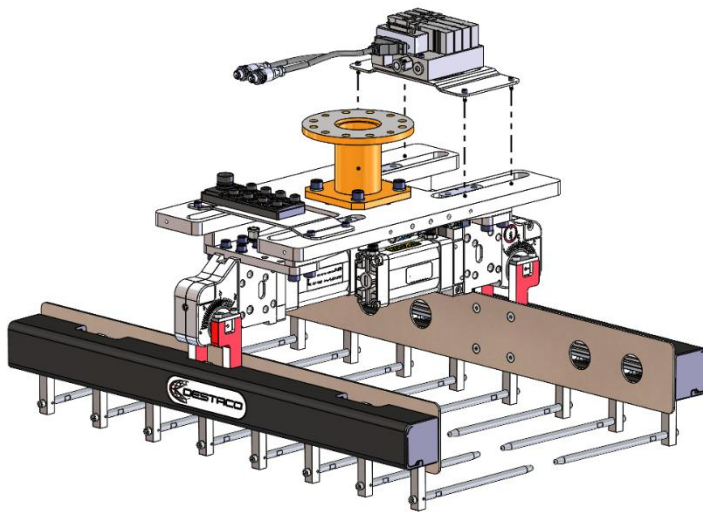
Bag Grippers | Assembly Instruction



(C1)



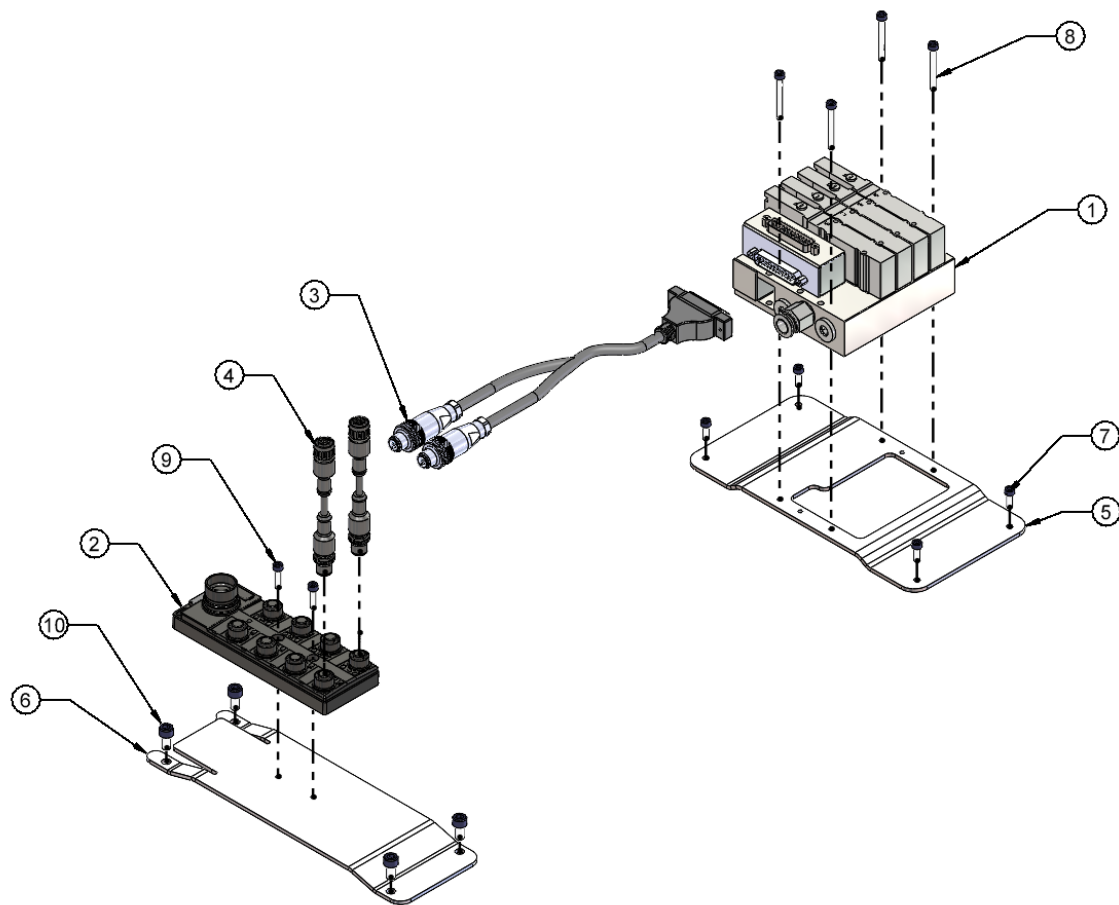
(C2)



DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

C1 CONTROL UNIT (For Base model)



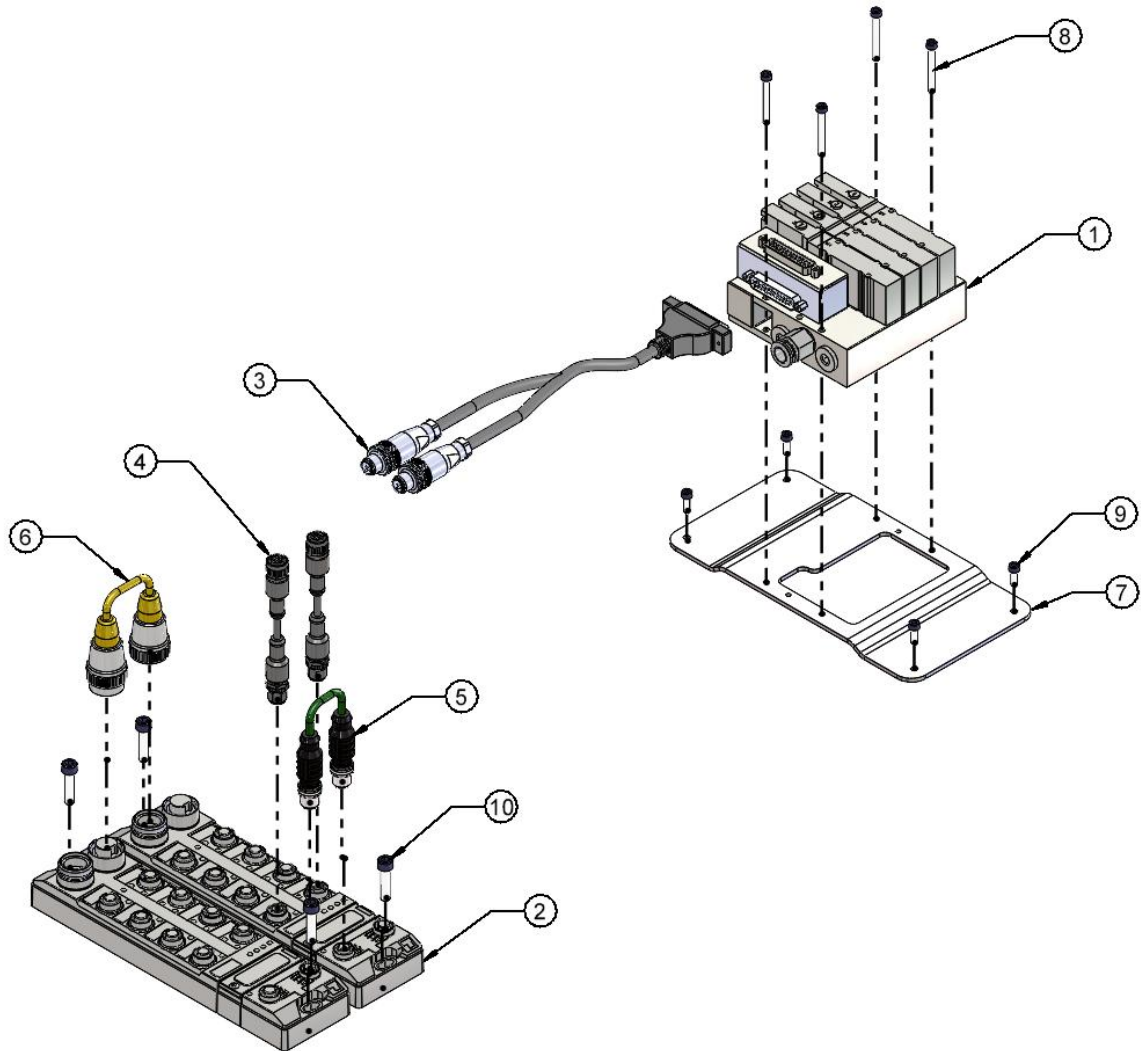
- Use PLUGS (347-8028-02) for open / not used port in Valve pack (VP-4-0-6)

11	347-8028-02	PLUG 1/8 BSPP-NICKEL PLATED	6
10	SHAM06C12	SHCS,M6*12MM, ALLOY	4
9	SHAM04C16	SHCS,M4*16MM, ALLOY	2
8	SHAM04C35	SHCS,M4*35MM, ALLOY	4
7	SHAM04C12	SHCS,M4*12MM, ALLOY	4
6	DPS-1P-00-004	IO MOUNT	1
5	DPS-1P-00-C-00-003	PNEUMATIC VALVE MOUNT	1
4	360-773430342933004-0100	CABLE, M12, 4 PIN CONNECTOR (STRAIGHT)	2
3	CABL-DPS-25	25 PIN D-SUB to M12 4 PIN CABLE	1
2	360-8MB12Z-5P3-CS19	TURCK 19 PIN IO BLOCK	1
1	VP-4-0-6	PNEUMATIC VALVE PACK	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

C2 CONTROL UNIT (For Base model)



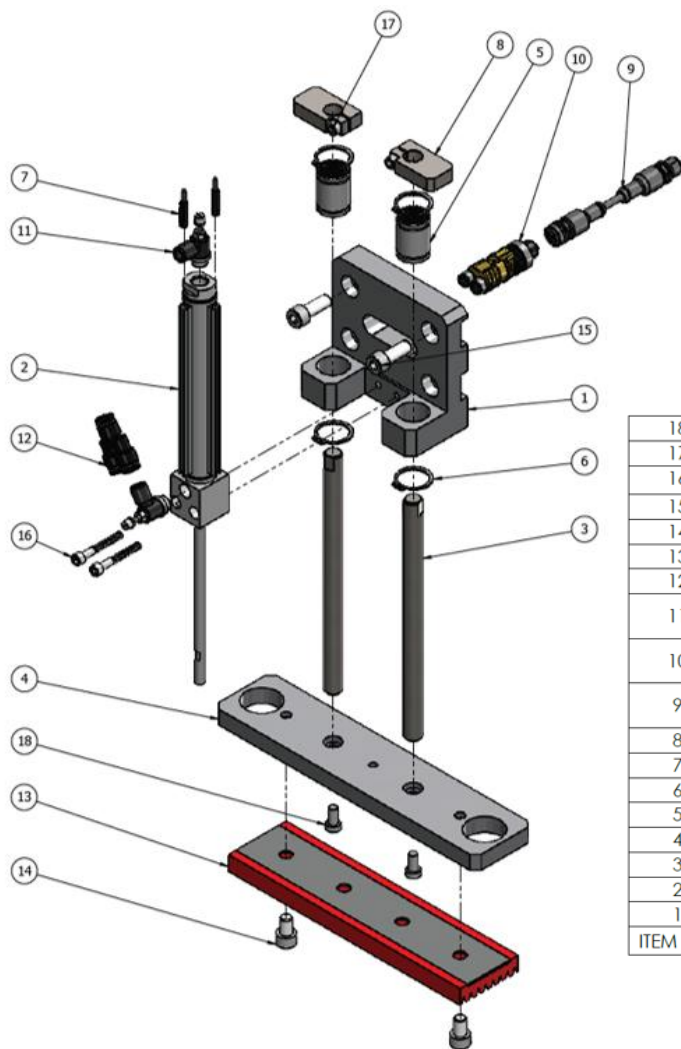
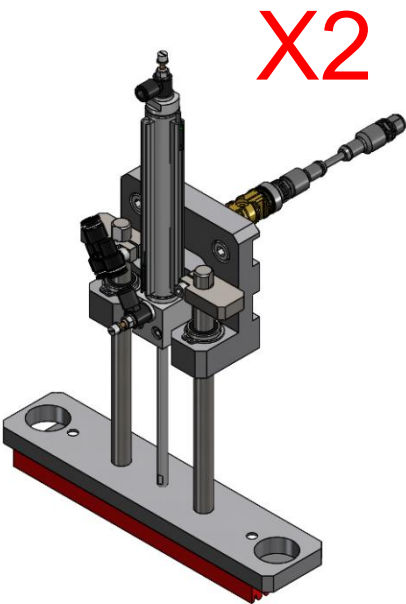
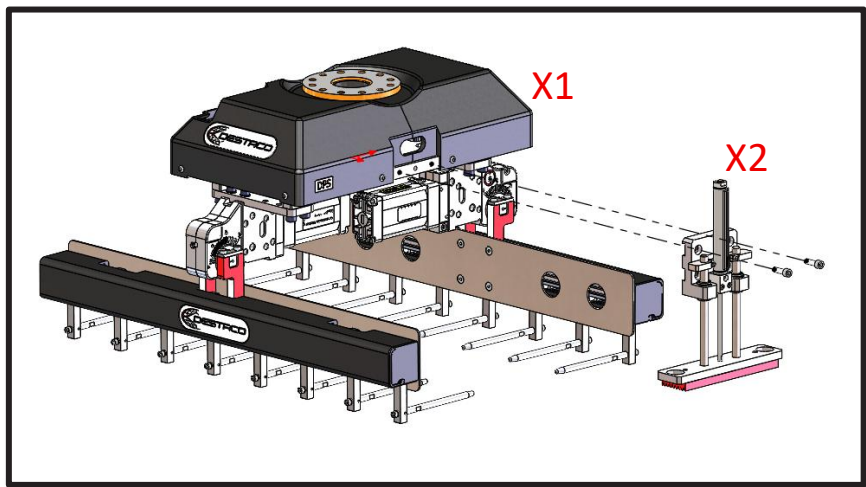
- Use PLUGS (347-8028-02) for open / not used port in Valve pack (VP-4-0-6)

11	347-8028-02	PLUG /8 BSPP-NICKEL PLATED	6
10	SHAM06C25	SHCS,M6*25MM,ALLOY	4
9	SHAM04C12	SHCS,M4*12,ALLOY	4
8	SHAM04C35	SHCS,M4*35,ALLOY	4
7	DPS-1P-00-C-00-003	PNEUMATIC VALVE MOUNT	1
6	360-RSM-RKM-40-0.5M	POWER CABLE	1
5	360-RSSD-RSSD-441-0.5M	ETHERNET CABLE	1
4	360-773430342933004-0100	CABLE, M12, 4 PIN CONNECTOR (STRAIGHT)	2
3	CABL-DPS-25	25 PIN D-SUB to M12 4 PIN CABLE	1
2	360-TBEN-L4-8DIP-8DOP	TURCK I/O BLOCK, PNP, 8x8	2
1	VP-4-0-6	PNEUMATIC VALVE PACK	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

5. PNEUMATIC STABILIZER OPTION



18	LHAM06C12	LHCS, M6*12MM, ALLOY	2
17	SHSM05C16	SHCS,M5*16MM,SS	2
16	SHA#10F22	10-32 x 1-3/8" Long SHS	2
15	SHSM08C22	SHCS,M8*22MM,SS	2
14	SHSM08C12	M8 x 12mm SHCS	2
13	CPI-RT-0_5-8-60	NEOPRENE RIBBED PAD	1
12	347-PY06	PNEUFORCE 06mm UNION Y	1
11	VLVF-005	1/8 NPT FLOW CONTROL PUSH FITTING 6MM TUBE	2
10	VBR5_4.4-2SKM-3	MICRO TO PICO SPLITTER FOR VERTICLE PROX SWITCH	1
9	360-77-3430-3429- 33004-0100	CABLE, M12, 4 PIN CONNECTOR (STRAIGHT)	1
8	DLT-1220	IMPACT FLAG, 12mm	2
7	OHSP-017_OHSN-017	SENSOR	2
6	328-STWN21	RETAINING RING	4
5	340-LMUF12	LINEAR BUSHING SS	2
4	DPS-1P-PS-01-002	PS PAD / SS SPRING MOUNTING PLATE	1
3	DPS-1P-PS-01-003	PS/SS GUIDE ROD 12mm	2
2	352-BFM-044-DBT1T2W	AIR CYLINDER	1
1	DPS-1P-PS-01-001	CYLINDER MOUNT PLATE	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

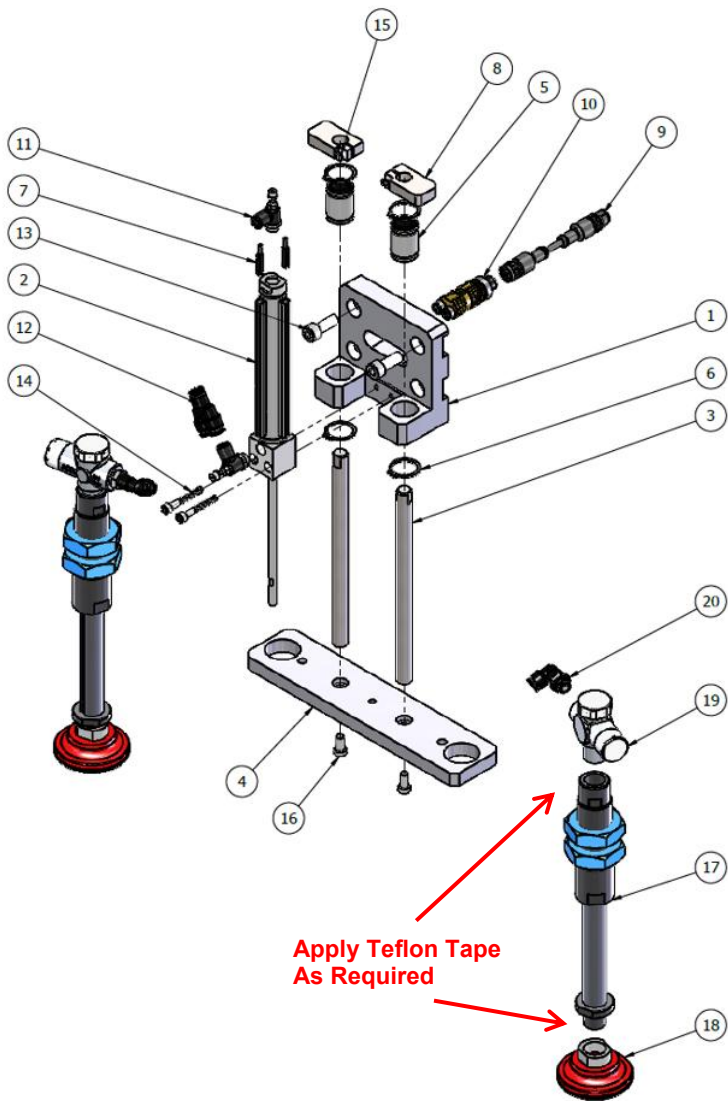
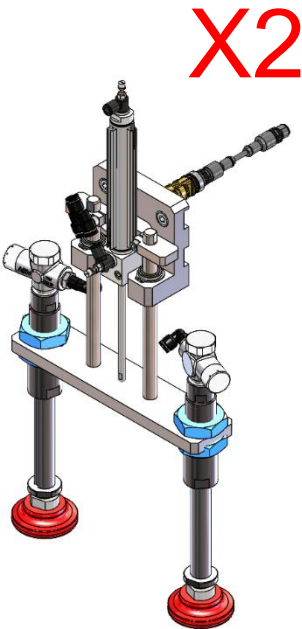
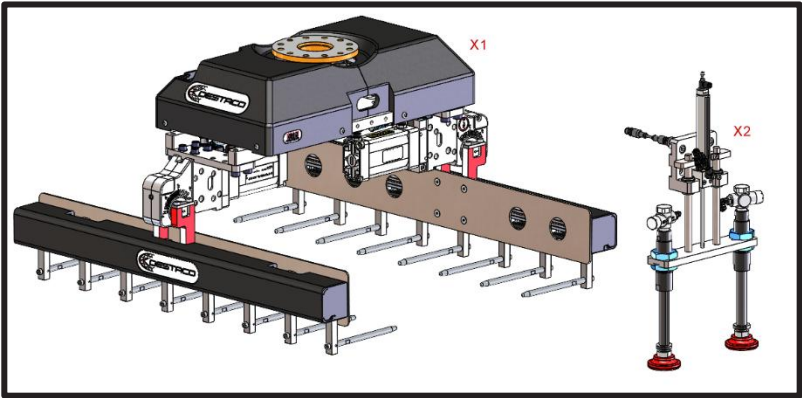
Bag Grippers | Assembly Instruction



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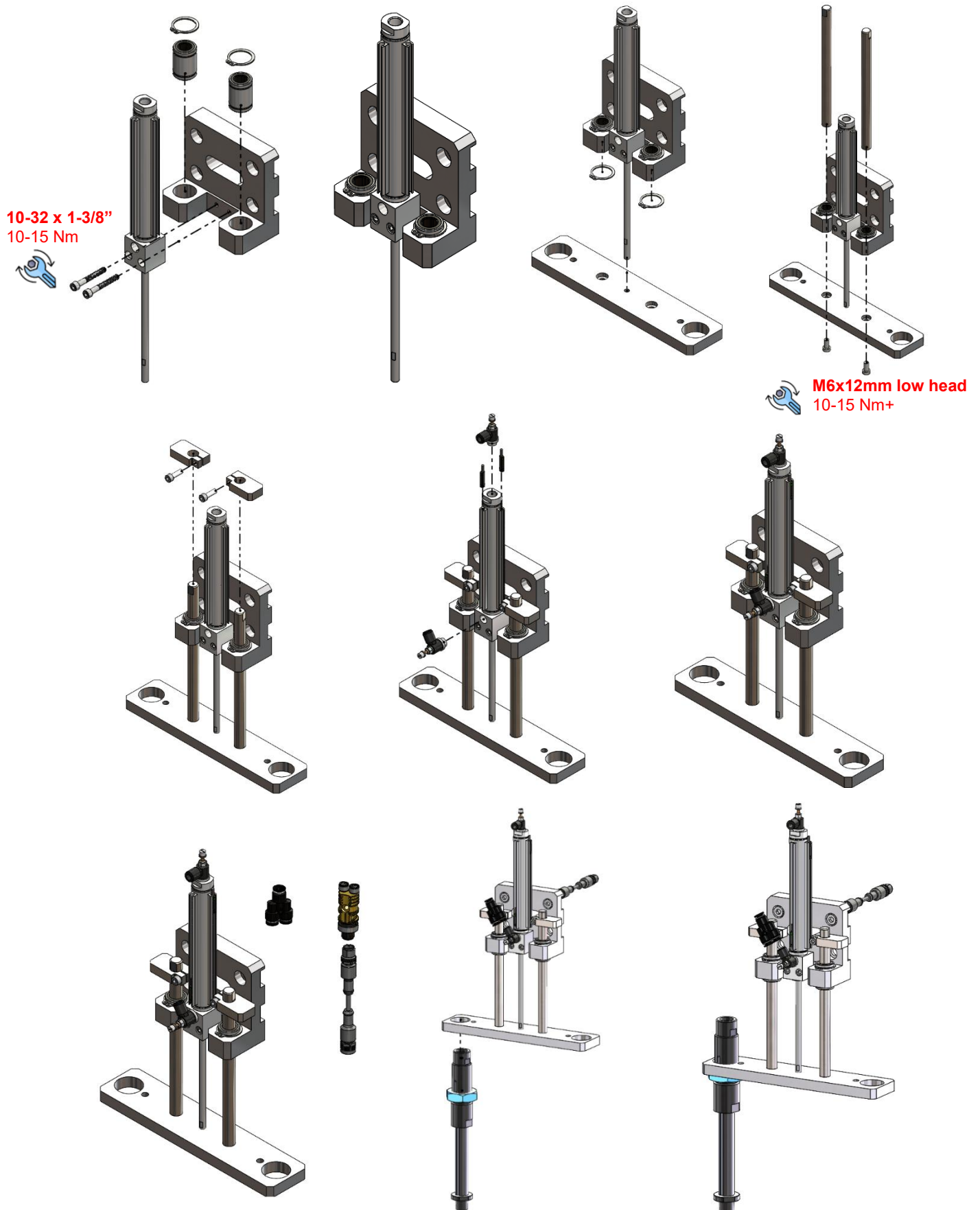
6. SLIP SHEET OPTION



20	347-PL06-U01	PNEUFORCE 1/8 UNIVERSAL X 6MM TUBE ELBOW	2
19	CPI-VSA-ARVR-000-U38	3/8" NPT VENTURI BLOWOFF	2
18	CPI-20AC-B-45	2" BELCUP	2
17	LW-SCMB-100-U38-A	LIGHTWEIGHT SPRING CUP MOUNTS	2
16	LHAM,06C12	LHCS,M6*12MM,ALLOY	2
15	SHSM05C16	SHCS,M5*16MM,SS	2
14	SHA#10F22	10-32 x 1-3/8" Long SHS	2
13	SHSM08C22	SHCS,M8*22MM,SS	2
12	347-PY06	PNEUFORCE 06mm UNION Y	1
11	VLVF-005	1/8 NPT FLOW CONTROL PUSH FITTING 6mm TUBE	2
10	VBRS_4.4-2SKM-3	MICRO TO PICO SPLITTER FOR VERTICLE PROX SWITCH	1
9	360-77-3430-3429-33004-0100	CABLE, M12, 4 PIN CONNECTOR (STRAIGHT)	1
8	DLT-1220	IMPACT FLAG, 12mm	2
7	OHSP-017_OHSN-017	SENSOR	2
6	328-STWN21	RETAINING RING	4
5	340-LMUF12	LINEAR BUSHING SS	2
4	DPS-1P-PS-01-002	PS PAD / SS SPRING MOUNTING PLATE	1
3	DPS-1P-PS-01-003	PS/SS GUIDE ROD, 12mm	2
2	352-BFM-044-DBT1T2W	AIR CYLINDER	1
1	DPS-1P-PS-01-001	CYLINDER MOUNT PLATE	1
ITEM NO.	PART NUMBER	Description	QTY.

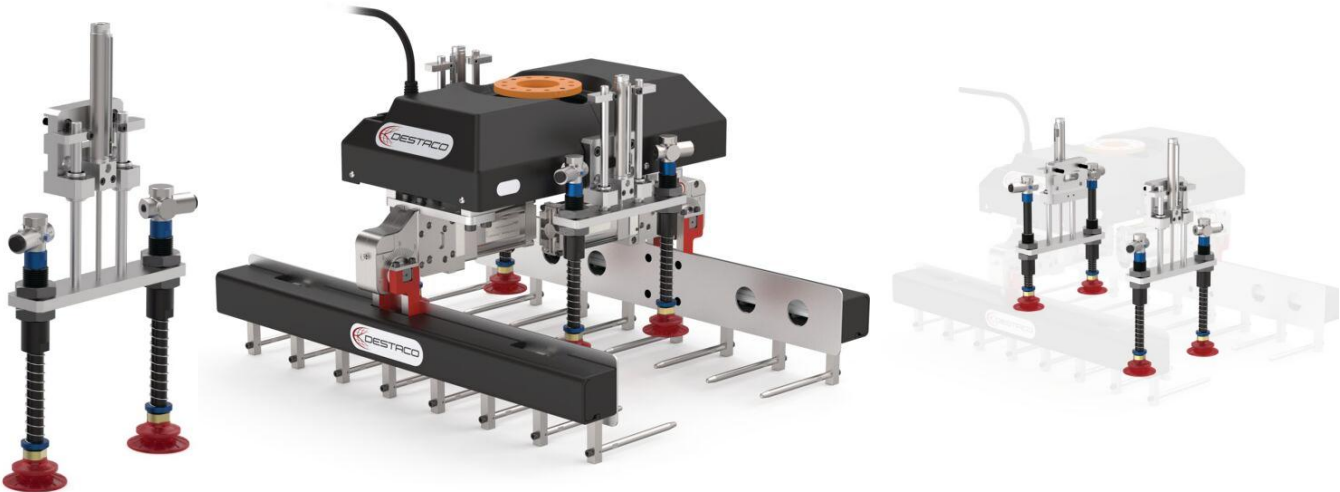
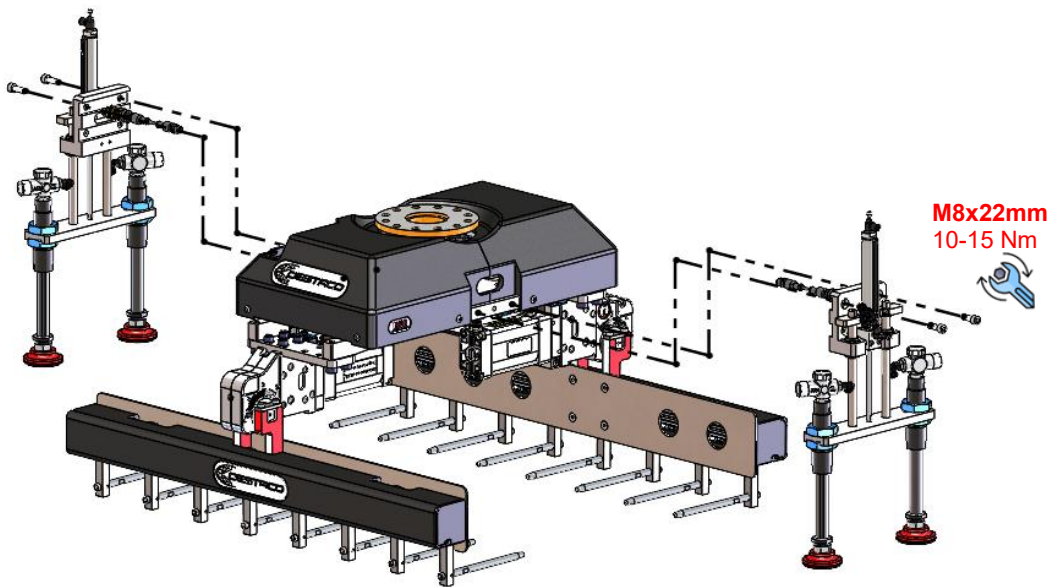
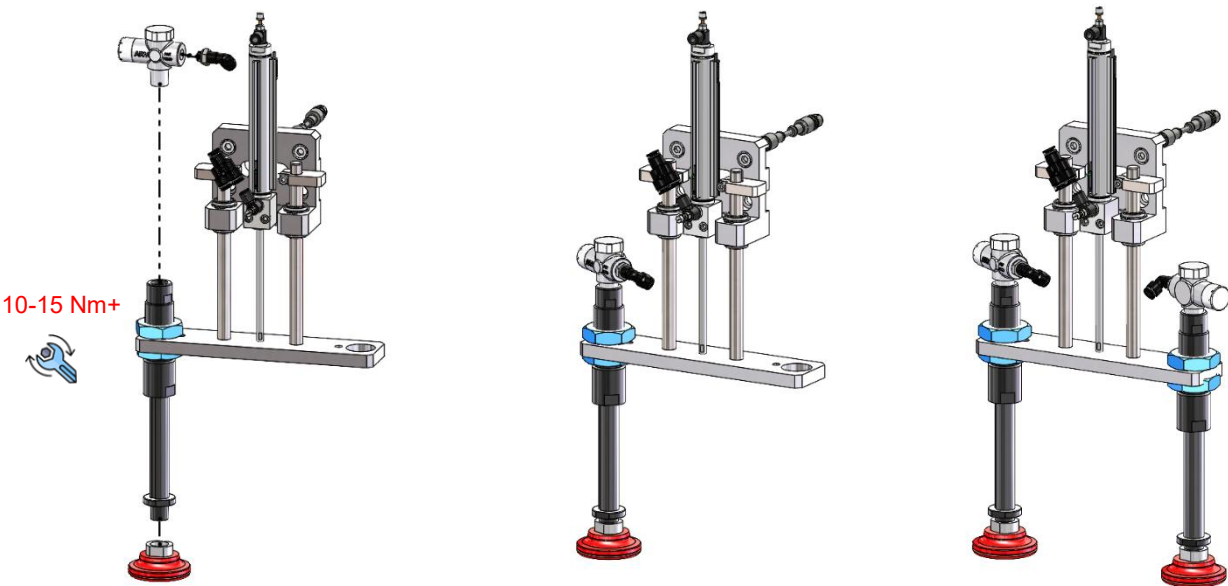
DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction



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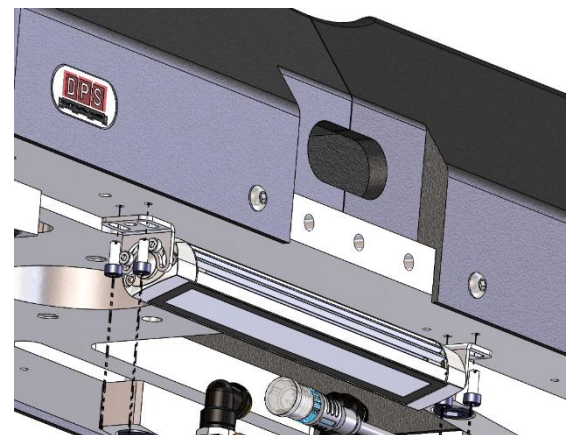
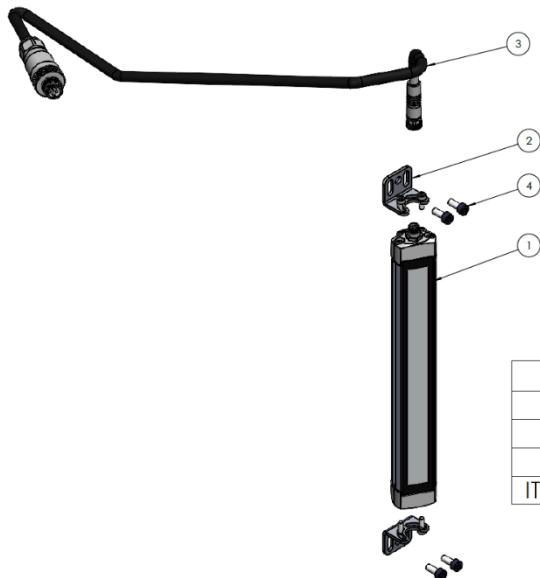
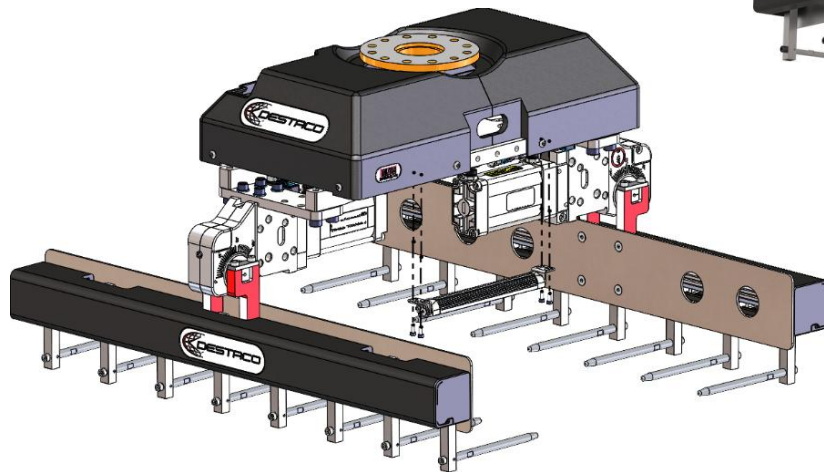
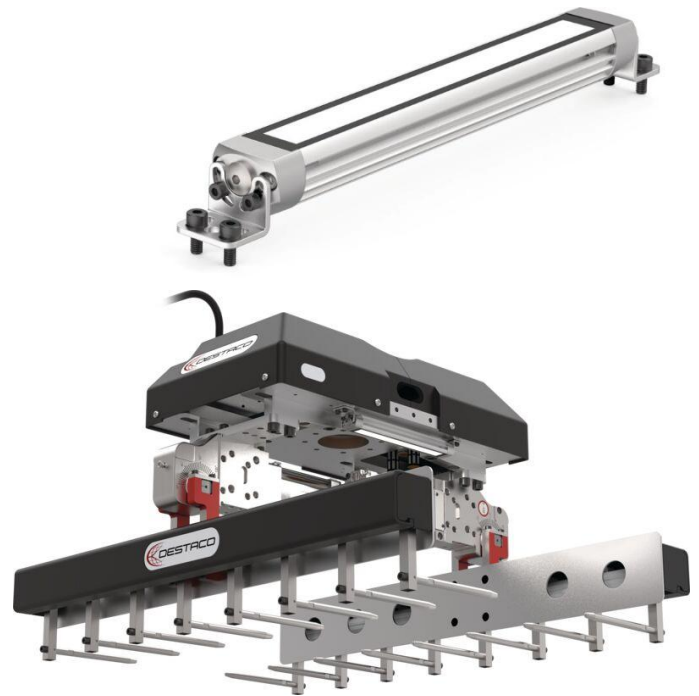
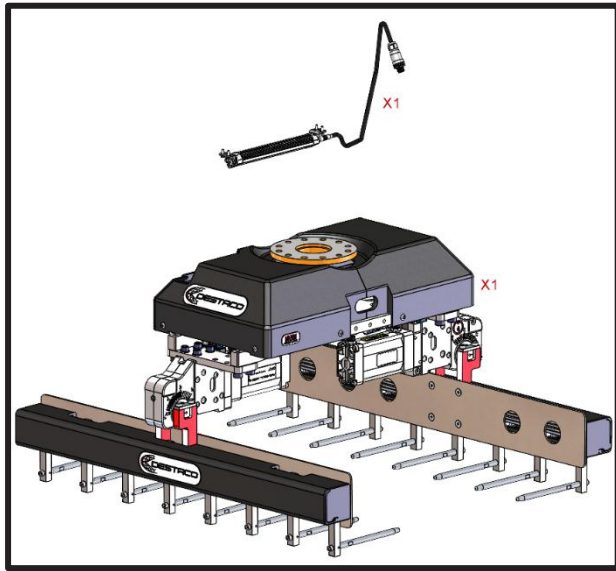
Bag Grippers | Assembly Instruction



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7. LED LIGHT UNIT



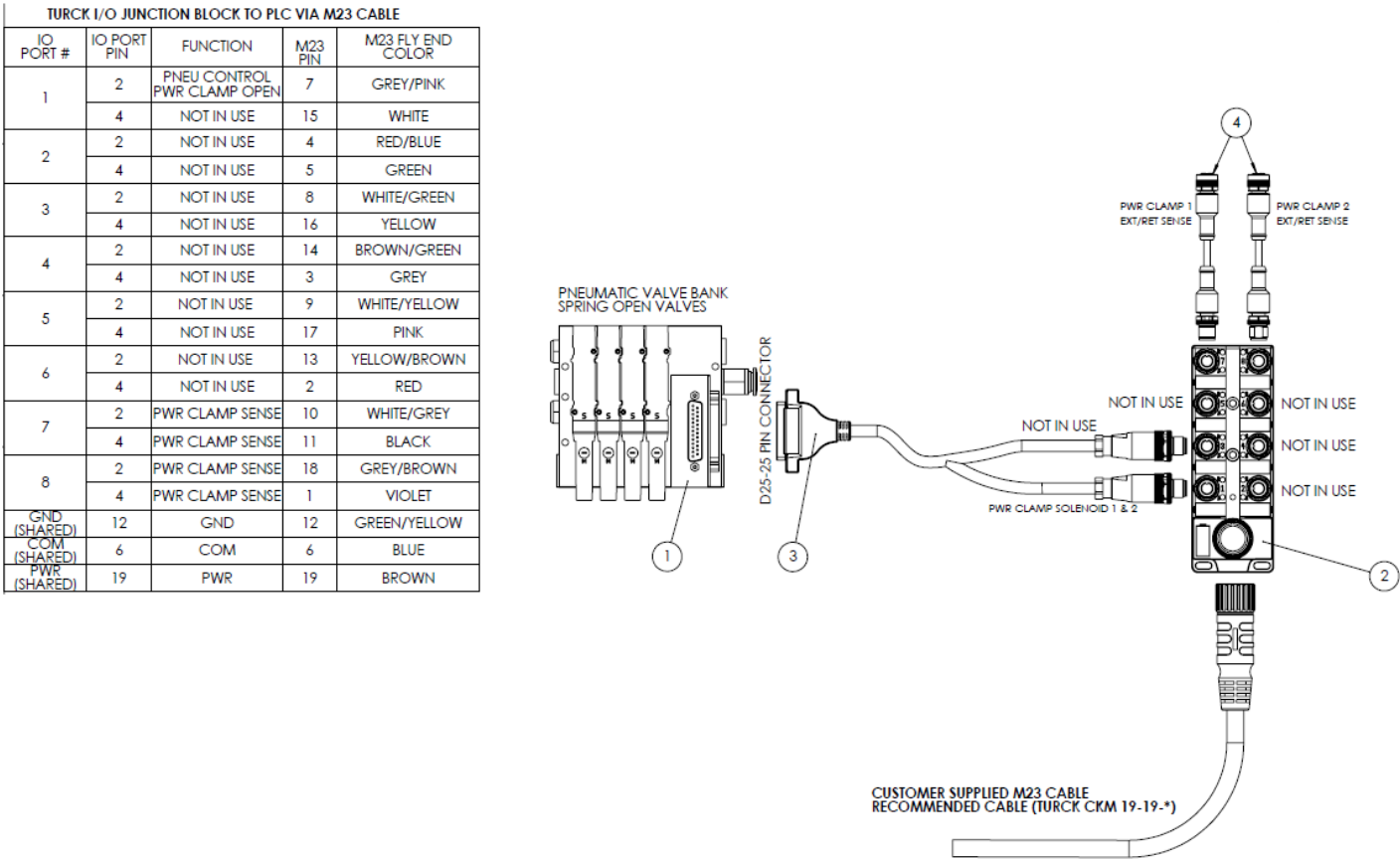
M4x10
10-15 Nm

4	SHAM04C10	SHCS,M4*10MM,ALLOY	4
3	DPS-1P-00-L-00-003	M12 A-CODE TO M8 B-CODE CABLE	1
2	DPS-1P-00-L-00-002	TUBELED_MOUNT_BRACKET	2
1	DPS-1P-00-L-00-001	TUBE LED	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

DPS50 BAG GRIPPER

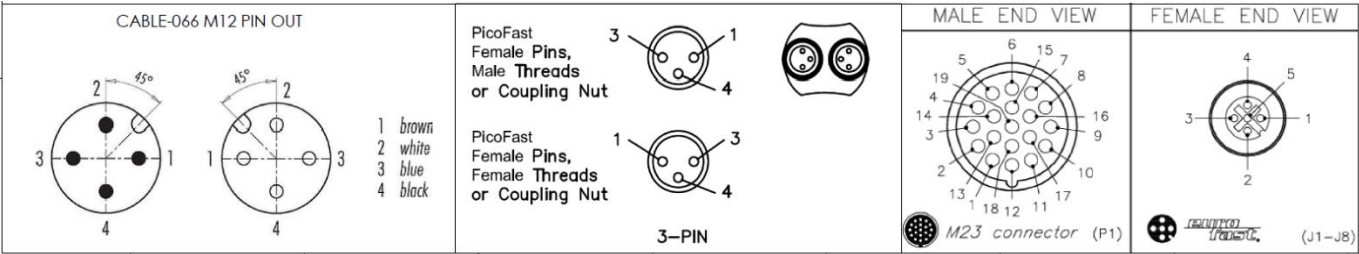
Bag Grippers | Assembly Instruction

8. CONTROL UNIT C1 SCHEMATIC (BASE MODEL)

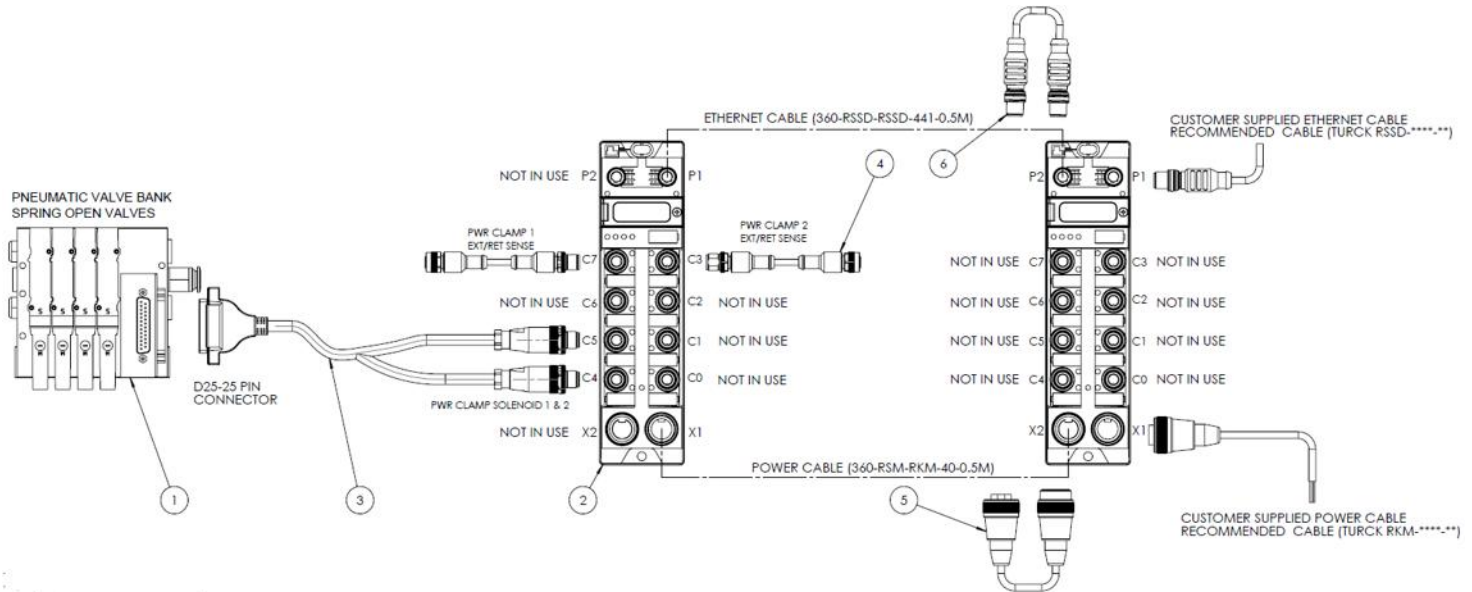


- Use PLUGS (347-8028-02) for open / not used port in Valve pack (VP-4-0-6)

5	347-8028-02	PLUG 1/8 BSPP-NICKEL PLATED	6
4	360-773430342933004-0100	CABLE, M12, 4 PIN CONNECTOR (STRAIGHT)	2
3	CABL-DPS-25	25 PIN D-SUB to M12 4 PIN CABLE	1
2	360-8MB12Z-5P3-CS19	TURCK 19 PIN IO BLOCK	1
1	VP-4-0-6	PNEUMATIC VALVE PACK	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

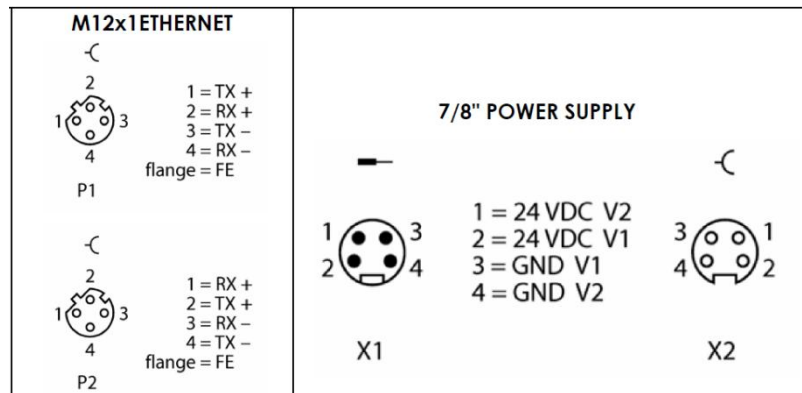
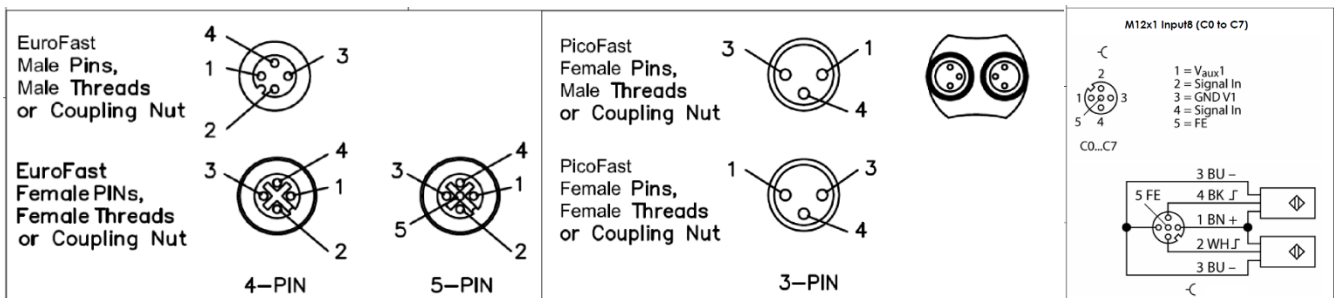


9. CONTROL UNIT C2 SCHEMATIC (BASE MODEL)



- Use PLUGS (347-8028-02) for open / not used port in Valve pack (VP-4-0-6)

7	347-8028-02	PLUG 1/8 BSPP-NICKEL PLATED	6
6	360-RSSD-RSSD-441-0.5M	ETHERNET CABLE	1
5	360-RSM-RKM-40-0.5M	POWER CABLE	1
4	360-773430342933004-0100	CABLE, M12, 4 PIN CONNECTOR (STRAIGHT)	2
3	CABL-DPS-25	25 PIN D-SUB to M12 4 PIN CABLE	1
2	360-TBEN-L4-8DIP-8DOP	TURCK I/O BLOCK, PNP, 8x8	2
1	VP-4-0-6	PNEUMATIC VALVE PACK	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.



DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

Troubleshooting Problem:

SL No	Problem	Possible Cause
1	Gripper has lower grip force than normal	• Supply air pressure below specified operating pressure • Air leak at power clamp, tubing, or firing • Power clamp not reaching full clamped position • Worn or damaged power clamp mechanism • Bent, damaged, or incorrectly installed tines • Bag is positioned incorrectly between the tines • Mechanical obstruction preventing full clamp travel • Width adjustment is too large compared to bag size
2	Power clamp will not actuate	• No compressed air supplied to gripper • Valve island not receiving electrical command • Solenoid valve not switching • Air line kinked, blocked, or disconnected • Power clamp mechanism is mechanically jammed • PLC output or wiring fault • Emergency stop or machine interlock preventing actuation
3	Power clamp only moves partially	• Low air pressure or insufficient airflow • Mechanical interference with tine or linkage • Bent or damaged tine • Contamination inside power clamp mechanism • Flow control adjusted too far closed • Valve not fully shifting • Power clamp requires service
6	One side of gripper actuates but other side does not	• Individual power clamp or valve fault • Power clamp pneumatic plumbing not routed to single valve • Disconnected, damaged or leaking air line • Electrical connection to valve island loose or damaged • Failed position sensor on power clamp • Power clamp mechanism damaged or jammed
7	Gripper will not release the bag	• Power clamp does not receive unclamp command • Valve Island solenoid is stuck or not switching • Exhaust port or muffler is restricted • Residual pneumatic pressure trapped in clamp circuit • PLC sequence is waiting for another interlock or sensor to be met.

DPS50 BAG GRIPPER

Bag Grippers | Assembly Instruction

8	Gripper opens or closes slower than normal	• Low air pressure at gripper • Restricted or kinked pneumatic tubing • Flow control valve incorrectly adjusted • Contaminated valve or pneumatic circuit • Restricted valve exhaust or muffler • Power clamp mechanism contaminated or binding • Excessive load on tines
9	Gripper Motion is harsh or too quick	• Flow control valve adjusted to far in the open position • Supply pressure is above the rated operating pressure • Exhaust flow control is missing or incorrectly installed • Incorrect valve configuration
10	Gripper width adjustment jammed	• Width adjustment lugs are still torqued • Lower clamping assembly is binding or twisted • Debris jamming slot for width adjustment
11	Gripper makes abnormal noise during operation	• Power clamp or linkage is dry or contaminated • Loose mounting of hardware • Tines are bend warped or otherwise not in proper position • Pneumatic exhaust restriction causing abnormal clamp operation • Pneumatic island leaking or bleeding air • Covers are loose or actuation is too fast causing vibration
12	Gripper unexpectedly drops or loses the bag or fails to close	• Insufficient clamping force • Bag orientation is wrong • Incorrect tine placement • Bag is undersized for width adjustment • Tine surface and guide plates contaminated or coated in oil like substances • Bag is undersized, improperly positioned, or damaged
13	Excessive air leakage from gripper	• Loose pneumatic fittings • Damaged or cut tubing • Push to connect fittings not fully seated • Damage to pneumatic fitting threads

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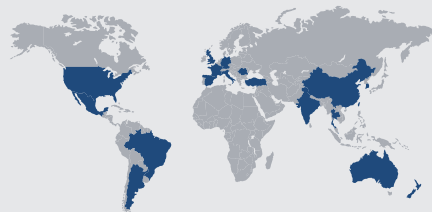
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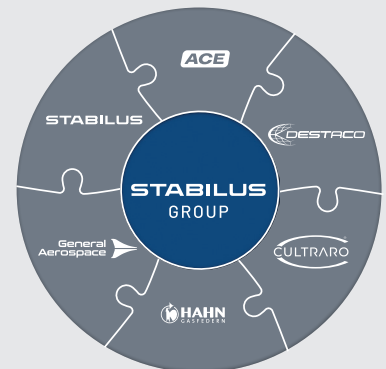
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8K Employees



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