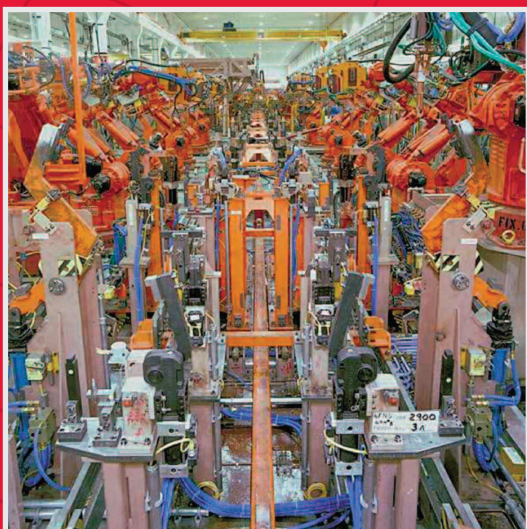
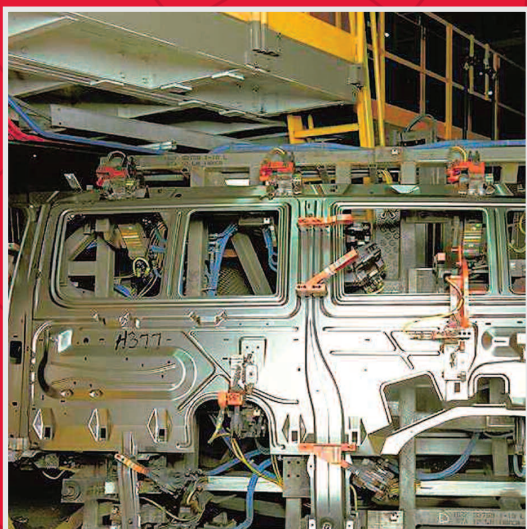




A DOVER COMPANY

82L SERIES POWER CLAMPS

MAY 2008



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CAD FILES
AVAILABLE
ONLINE



Series 82L2-2, 82L3-2, 82L4-2



- Automation Power Clamps, Lightweight Design, Enclosed Model, With And Without Hand Lever

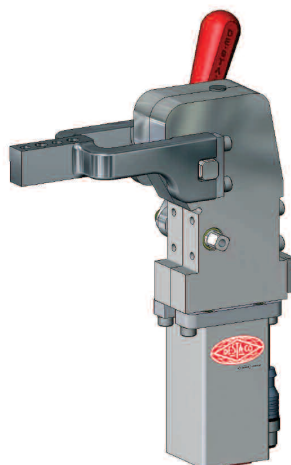
Model: 82L2-2, 82L3-2, 82L4-2

Features:

- Enclosed body
- Dirt-resistant
- Compact design
- High holding torques
- Long life cycle
- Lightweight (Aluminium body)
- Toggle action mechanism
- Inductive sensing module (Optional)



82L3N-203B800
without Hand Lever
Horizontal Clamping Position

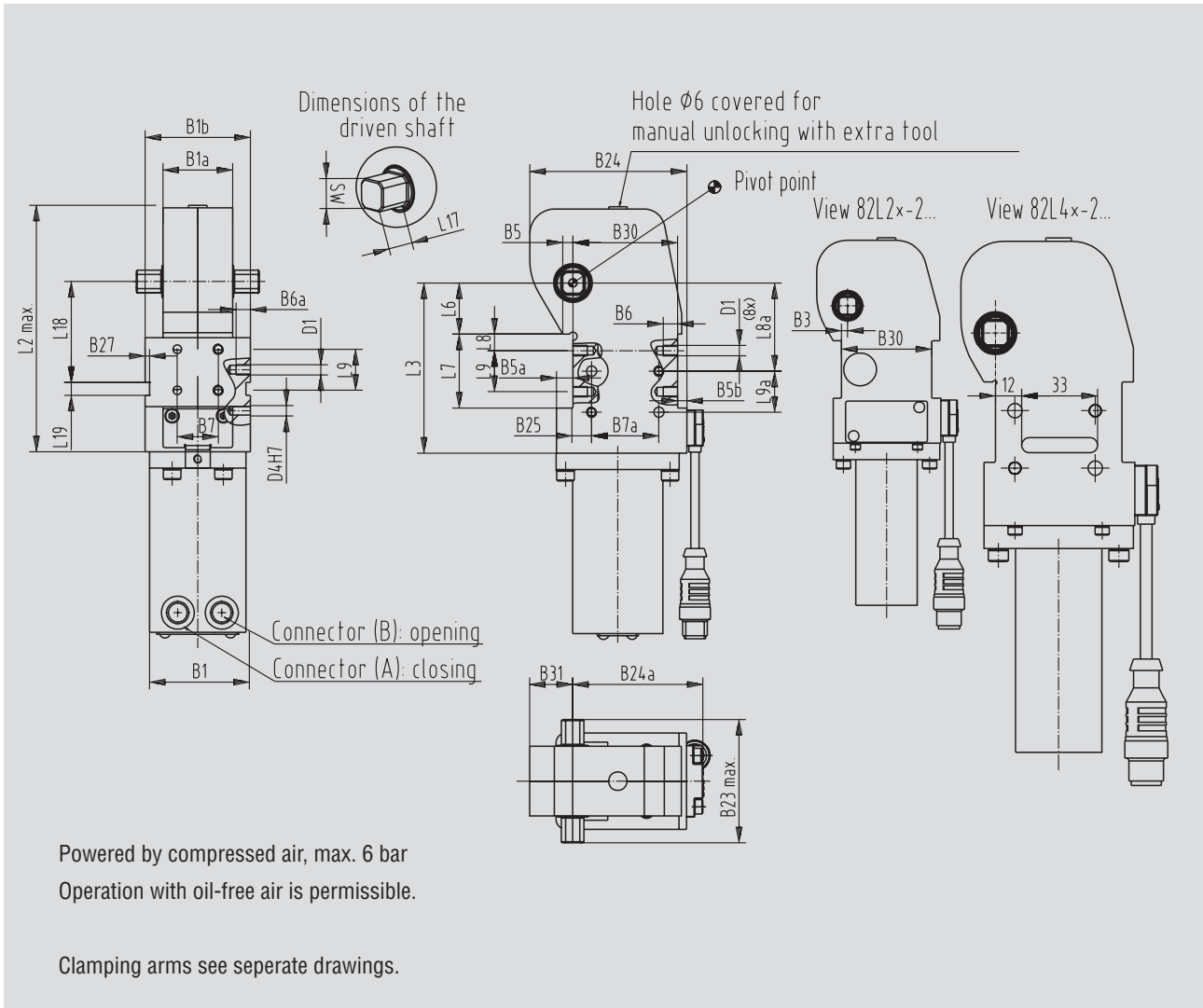


82L3G-203B8H0
with Hand Lever
Horizontal Clamping Position

Order code for 82L...-2.....

Order no. Example: **82L3G - 2 03 B8 H 0 B**

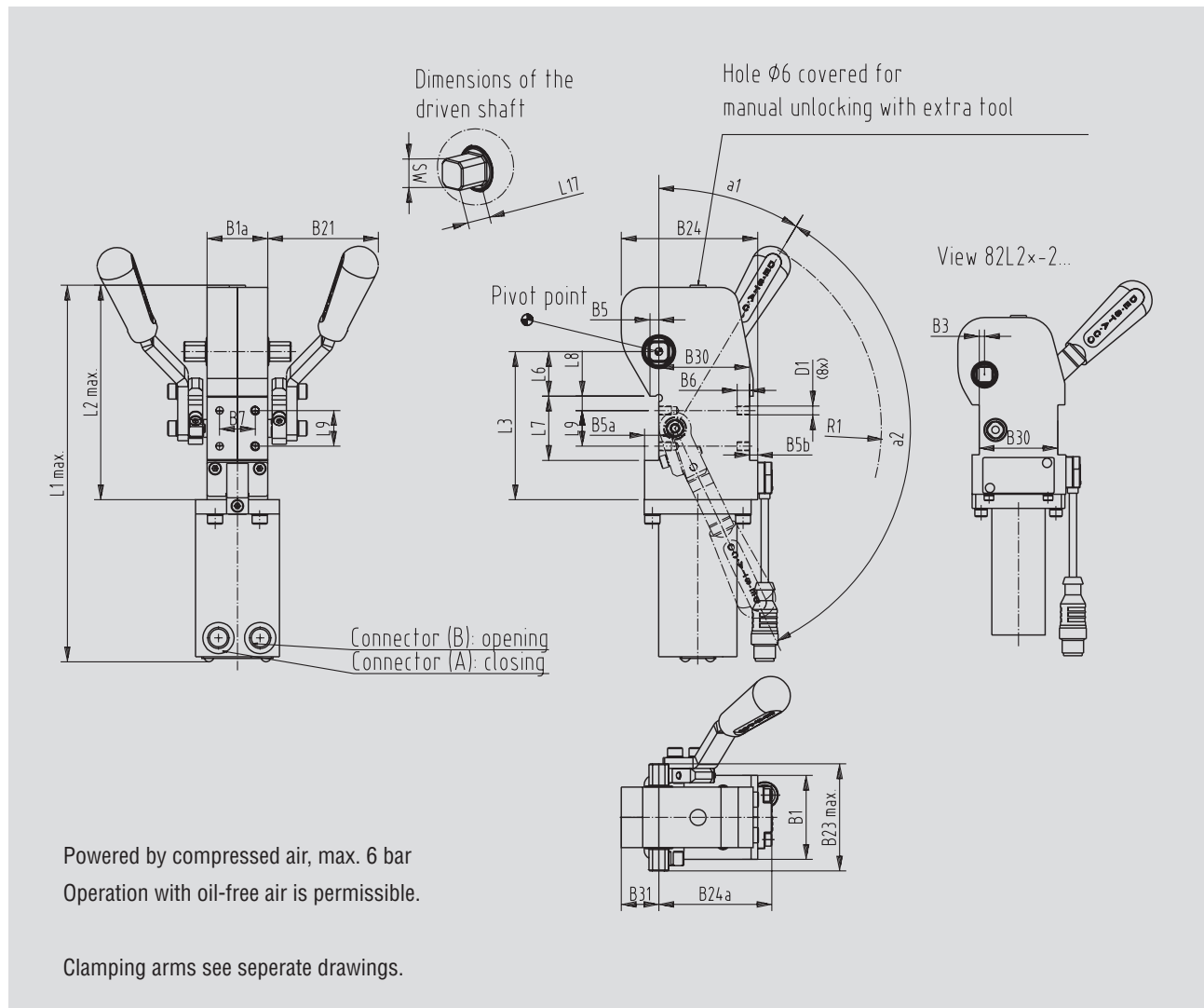
Series	-2 = Version	03 = ordering without clamping arm	00 = without sensing system	0 = without hand lever	0 = standard-opening angle 105°	= base model Power clamp without clamping arm to be marked with an additional "B" Only with clamping arm "03"
2G = pneumatic cylinder Ø25 (G1/8) 3G = pneumatic cylinder Ø32 (G1/8) 3N = pneumatic cylinder Ø32 (1/8 NPT) 4G = pneumatic cylinder Ø40 (G1/4) 4N = pneumatic cylinder Ø40 (1/8 NPT)	 82L2*-2***** 82L3*-2***** 82L4*-2*****	03 = U-clamp arm, central 90° 11 = lateral clamp arm, left 90° 12 = lateral clamp arm, right 90° 23 = 2x lateral clamp arm 90° 38 = H-clamp arm 90° 43 = U-clamp arm, central 180° 51 = lateral clamp arm, left 180° 52 = lateral clamp arm, right 180° 63 = 2x lateral clamp arm 180° 78 = H-clamp arm 180° <small>105° standard opening angle for all models lateral and H-clamping arms not available for 82L2*</small>	C8 = sensing system 8EA-097-1 (M8x1) B7 = sensing system 8EA-096-1 (M12x1) B8 = sensing system 8EA-100-1 (M12x1) 	H = with hand lever 	3 = 90° opening angle 4 = 75° opening angle 5 = 60° opening angle 6 = 45° opening angle 7 = 30° opening angle 8 = 15° opening angle	



Technical Data, Models without Hand Lever

Model no.	Max. Holding Torque (Nm)	Claming Torque at 5 bar (Nm)	Piston Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (litre)	B1 ±	B1a	B1B	B3 ±	B5	B5a	B5b	B6	B6a	B7	B7a ±
82L2-2...	75	25	25	1.0	0.4	0.1	34	-	0.1	4	4	4.5	7	-	25	-
82L3-2...	180	55	32	1.3	0.8	0.1	46	-	0.1	5	8	4.5	7	10	20	30
82L4-2...	380	120	40	1.9	1.2	0.1	40	-	0.1	6.5	6	4.5	10	10	25	35

Model no.	B23 max.	B24	B24a	B25 +0.1	B27	B30	B31	D1	D4 H7	L1 max.	L2 max.	L3	L6 ±0.05	L7 ±0.1	L8 ±0.1	L8a ±0.1	L9 ±0.1	L9a ±0.1	L17	L18	L19 N9	SW h9
82L2-2...	53	60.5	53.5	-	-	44	15	M5	-	179.5	100.5	67	17	28	5	-	18	-	8.5	-	-	9
82L3-2...	60	76.5	63.5	8	3.5	51	21	M5	6	211	120.5	83	25	36	8	42	20	20	12.5	48	8	11
82L4-2...	74	88	69.5	9	3.5	57	26.5	M6	6	242	138.5	92	30	40	10	50	20	25	16	58.5	8	16

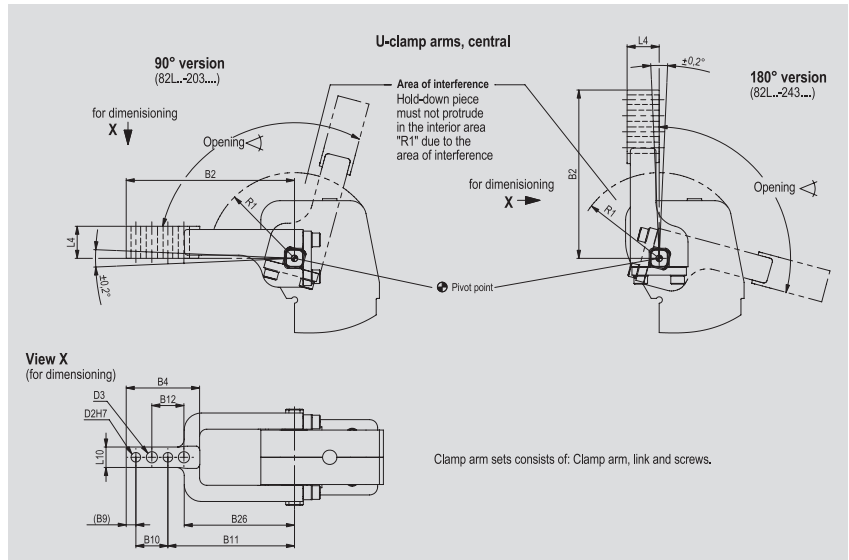
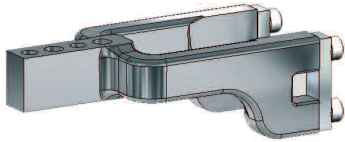


Technical Data, Models with Hand Lever

Model no.	Max. holding torque. [Nm]	Clamping torque at 5 bar [Nm]	Piston \varnothing [mm]	Weight [kg]	Opening-angle	Air consumption per double stroke at 5 bar [litre]	Connection	B1 \pm 0,1	B1a	B3 \pm 0,1	B5	B5a
82L2-2.H.	75	25	25	1,1	105°	0,4	G1/8	32	34	3	4	4
82L3-2.H.	180	55	32	1,5	105°	0,8	G1/8	42	34	-	5	8
82L4-2.H.	380	120	40	2,1	105°	1,2	G1/4	45	40	-	6,5	6

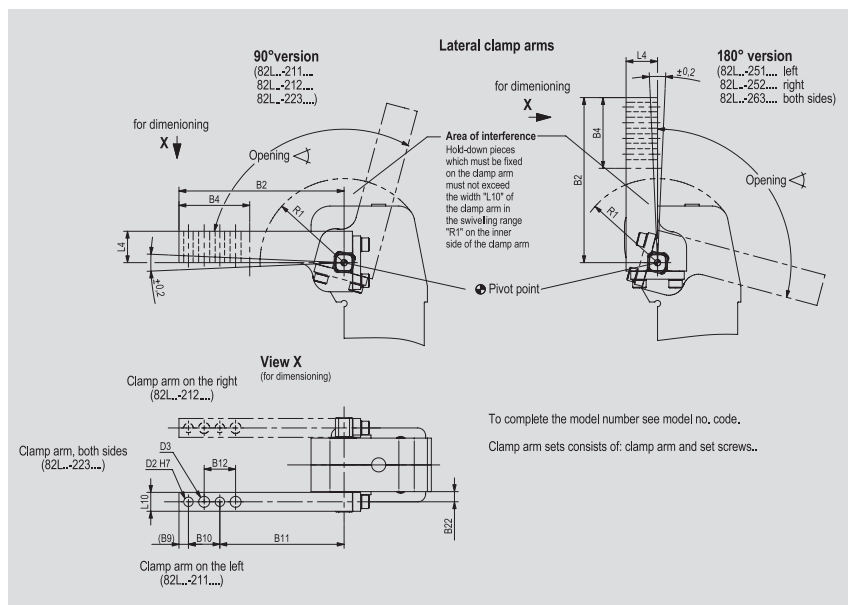
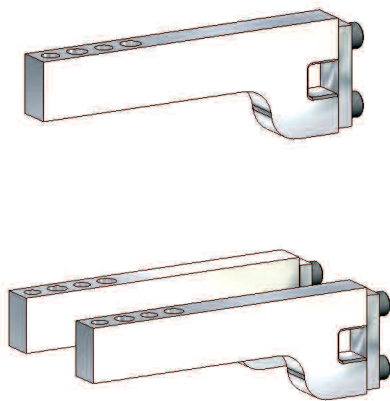
Model no.	B5b	B6	B7 $\pm 0,1$	B21 \sim	B23 max.	B24	B24a	B30	B31	D1	L1 max.	L2 max.	L3	L6 $\pm 0,05$	L7 $\pm 0,1$	L8 $\pm 0,1$	L9 $\pm 0,1$	L17	SW h9	a1 \sim	a2 \sim	R1 \sim
82L2-2.H.	4,5	7	25	62	53	60,5	53,5	44	15	M5	179,5	100,5	67	17	28	5	18	8,5	9	36°	131°	117
82L3-2.H.	4,5	7	20	62	60	76,5	63,5	51	21	M5	211	120,5	83	25	36	8	20	12,5	11	31°	124°	117
82L4-2.H.	4,5	10	25	62	74	88	69,5	57	26,5	M6	242	138,5	92	30	40	10	20	16	16	31°	131°	117

U-Bar



Model no..	Order no. for U-bar	Opening angle for 90°-Version max.	Opening angle for 180°-Version. max.	Weight (kg)	B2	B4	B9	B10 (mm) ±0.02	B11 (mm) ±0.1	B12 (mm) ±0.2	B26	D2 H7	D3 (mm) ±0.1	L4	L10	R1
82L2-2.....	8JG-075-3-01	105°	105°	0.3	93	45	8	20	65	20	58	4	6.5	20	12	45
82L3-2.....	8JG-065-2-01	105°	105°	0.37	105	45	6	20	79	20	69	6	7	20	12	55
82L4-2.....	8JG-067-2-01	105°	105°	0.5	110	45	6	20	84	20	78	6	7	22	15	58

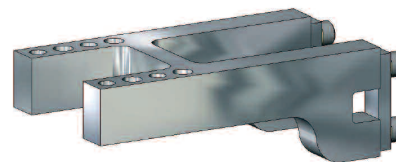
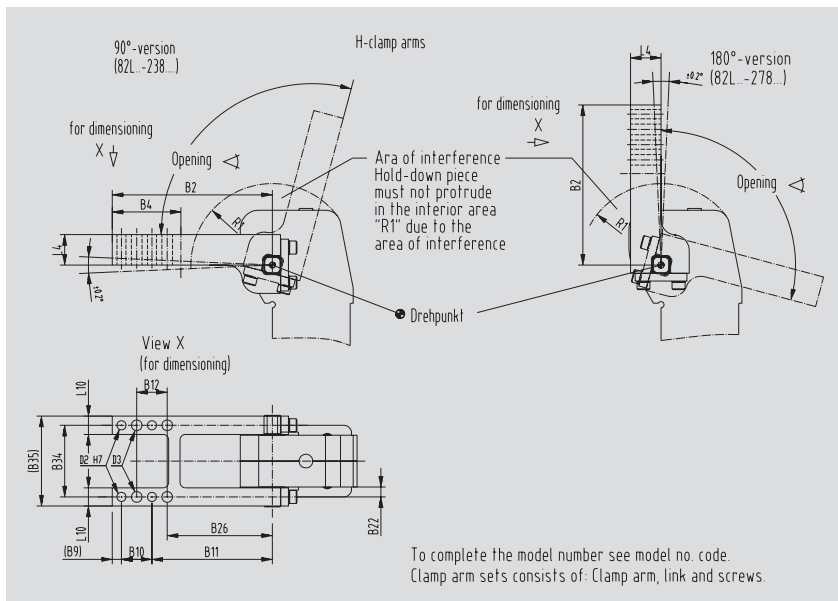
Lateral Arms



Model no..	Order no. for lateral arms	Opening angle for 90°-Version max.	Opening angle for 180°-Version max.	Weight (kg)	B2	B4	B9	B10 (mm) ±0.02	B11 (mm) ±0.1	B12 (mm) ±0.2	B22	D2 H7	D3 (mm) ±0.1	L4	L10	R1
82L3-2...	8JG-066-1-01	105°	105°	0.25	105	45	6	20	79	20	6.5	6	7	20	12	55
82L4-2...	8JG-068-1-01	105°	105°	0.3	92	45	6	20	66	20	8.5	6	7	22	15	58

Series 82L2-2, 82L3-2, 82L4-2

H-clamp arms for 82L_G-2



Model no.	Order no. for set H-Clamp arm	Opening angle 90°-Version max.	Opening angle 180°-Version. max.	Weight [kg]	B2	B4	B9	B10	B11	B12	B26	B34	B35	D2	D3	L4	L10	R1
82L3*-2*8...	8JG-363-1-01	105°	105°	0,52	105	45	6	±0,02	±0,1	±0,2	±0,1	H7	±0,1	6	7	20	12	55
82L4*-2*8...	8JG-364-1-01	105°	105°	0,77	110	45	6	±0,02	±0,1	±0,2	±0,1	H7	±0,1	6	7	22	15	58

Concept Guidelines

82L2-2

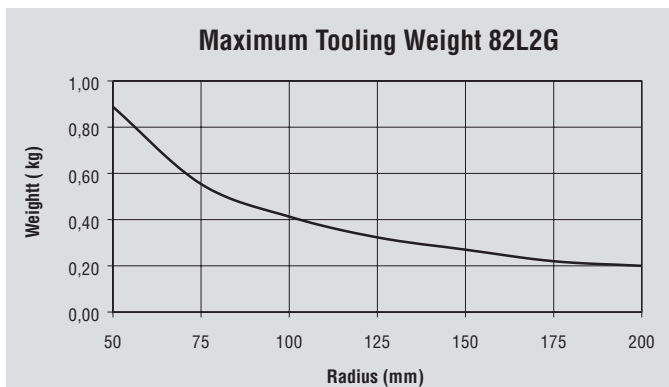
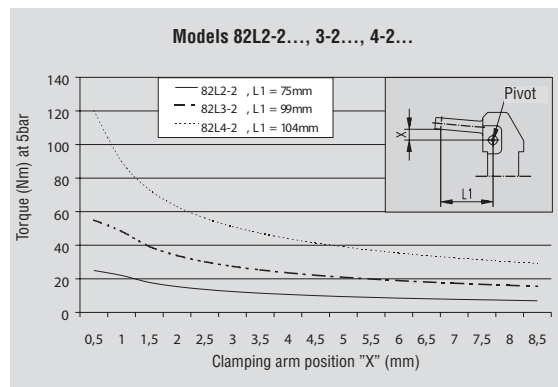
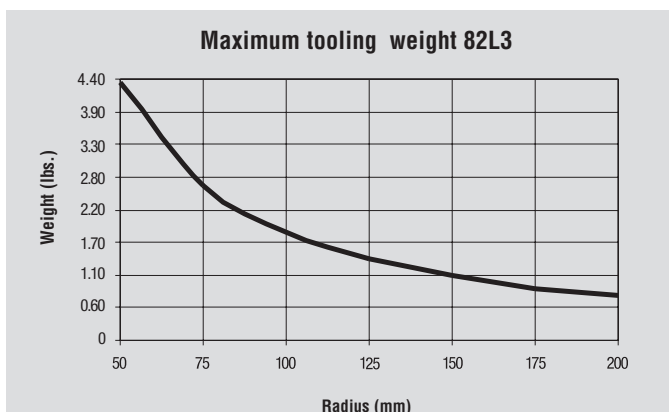


Diagram of Clamping Force (at 5 bar)

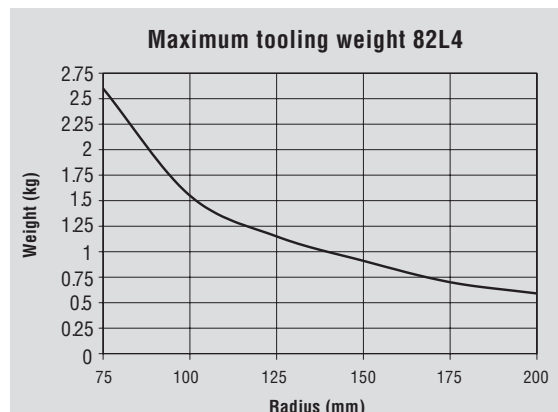
82L2-2 / 82L3-2 / 82L4-2



82L3-2

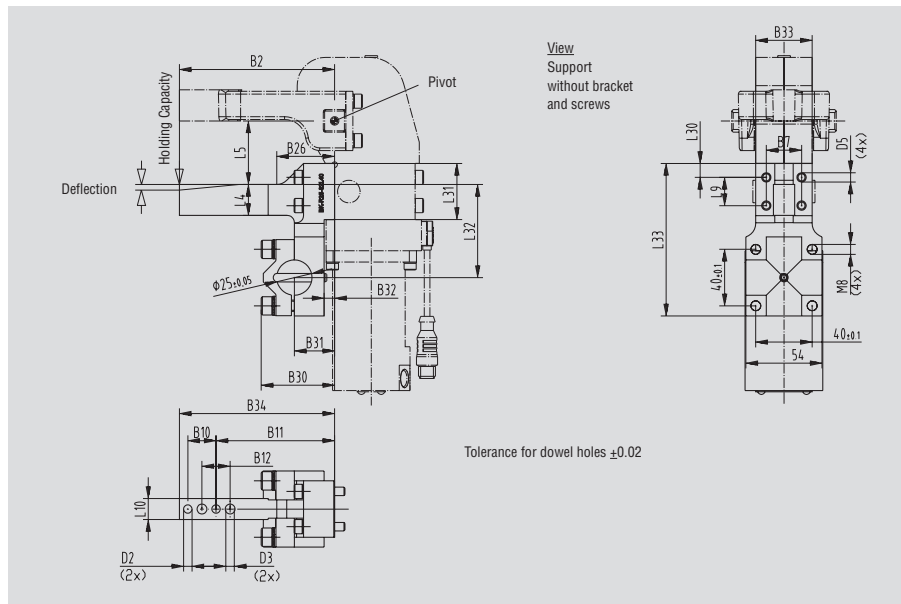
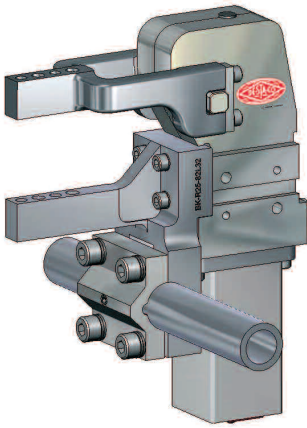


82L4-2



All details apply under an air pressure of 6 bar and opening and closure time of 1 second each.

Accessory (Counter-support)

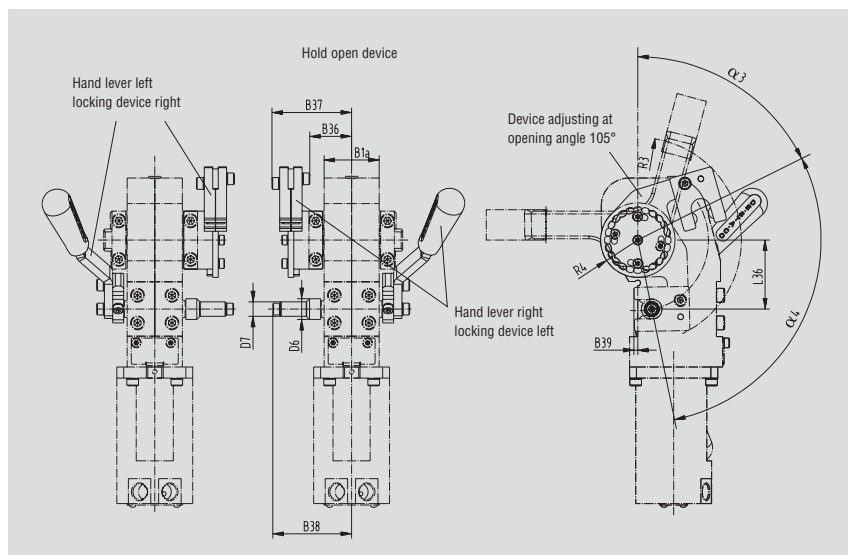
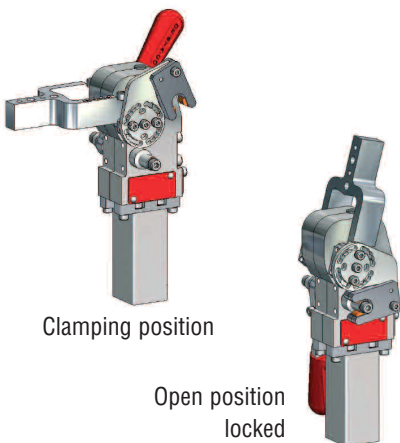


Technical Data

Model no..	fit for model	Holding capacity max. [N]	Deflection [mm]	Weight ~ [kg]	B2	B7	B10	B11	B12	B26	B30	B31	B32
BK-R25-82L25-1	82L2_	914	0,2	0,4	93	±0,1	±0,02			~	55	31,5	11
BK-R25-82L32-1	82L3_	660	0,16	0,5	105	20	20	79	20	44	52	28,5	9
BK-R25-82L40-1	82L3_	2000	0,37	0,56	110	25	20	84	20	41	52	28,5	7,5

Model no.	B33	B34	D2	D3	D5	L4	L5	L9	L10	L30	L31	L32	L33
			Ø H7	Ø	Ø	+0,1		±0,1			-0,1		
BK-R25-82L25-1	35	90	4	6,5	5,5	20	45	18	12	4,95	28	50,9	106
BK-R25-82L32-1	46	105	6	7	5,5	20	45	20	12	7,85	35,7	59	106
BK-R25-82L40-1	40	110	6	7	6,6	22	45	20	15	9,85	39,7	66	108

Accessory (Hold Open Device)

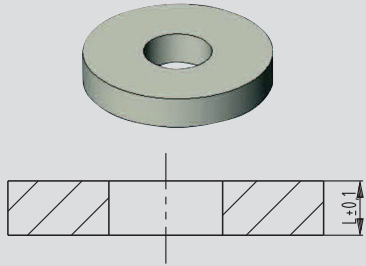


Model no.	fit for model	B1a	B36	B37	B38	B39	D6	D7	L36	R3	R4	a 3	a 4
82ZB-036-1	82L2_	34	25	45	47	3	15	10	31	53	18,5	63°	105°
82ZB-037-1	82L3_	34	28	56	56	4	15	10,5	43	69	25	63°	105°
82ZB-038-1	82L4_	40	30	58	58	3	15	10,5	50	76	27	63°	105°

Series 82L2-2, 82L3-2, 82L4-2

Accessories, With or Without Hand Lever

Specification	82L2-2	82L3-2	82L4-2
Clamping arm			
U-central	8JG-075-3-01	8JG-065-2-01	8JG-067-2-01
lateral	-	8JG-066-1-01	8JG-068-1-01
H-shape	-	8JG-363-1-01	8JG-364-1-01

Opening angle limitation spacer 	Opening-angle	82L2-2		82L3-2		82L4-2	
		Model no.	L ± 0.1mm	Model no.	L ± 0.1mm	Model no.	L ± 0.1mm
	15°	8CE-282-1	28.6	8CE-296-1	33.3	8CE310-1	38.4
	30°	8CE-284-1	23.1	8CE-298-1	26.9	8CE312-1	31
	45°	8CE-286-1	18.5	8CE-300-1	21.5	8CE314-1	24.7
	60°	8CE-288-1	14	8CE-302-1	16.3	8CE316-1	18.6
	75°	8CE-290-1	9.4	8CE-304-1	11	8CE318-1	12.5
	90°	8CE-292-1	4.7	8CE-306-1	5.5	8CE320-1	6.2

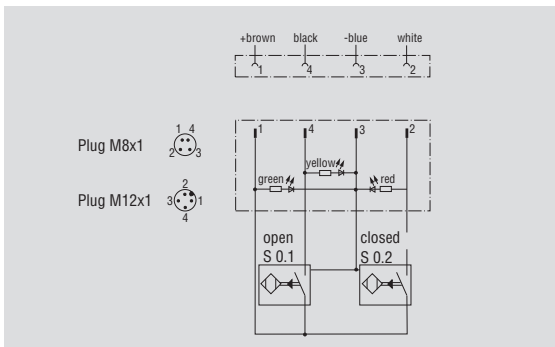
Spare parts for 82L..

Specification	82L2-2	82L3-2	82L4-2
Cylinder			
G Ports	8PW-095-2	8PW-096-2	8PW-097-2
NPT Ports		8PW-102-2	8PW-103-2
Seal-Kit	8PW-095-1-01	8PW-096-1-01	8PW-097-1-01
Sensor Kit			
B8 Connector Socket M12x1 cable		8EA-100-1	
B7 Connector Socket M12x1 fixed		8EA-096-1	
C8 Connector Socket M8x1 fixed		8EA-097-1	
Hand Lever	8KB-031-1	8KB-031-1	8KB-032-1

Wiring Diagram

Sensing system immune to interference from d.c. arc welding and a.c. arc welding

Inductive version: **B8, B7, C8** Pin assignment

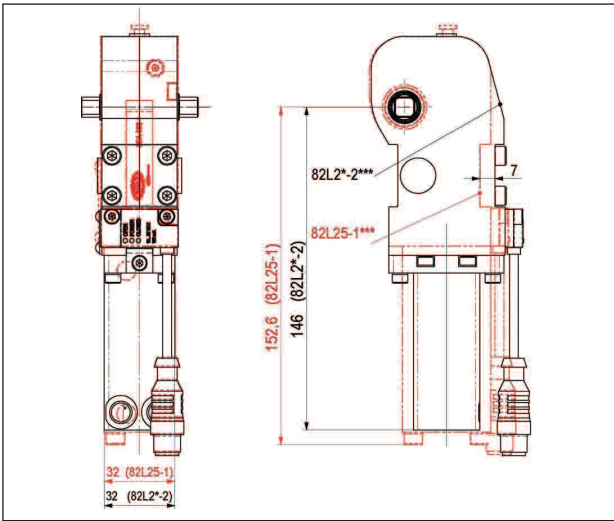


Comparison 82L __-1 to 82L __-2

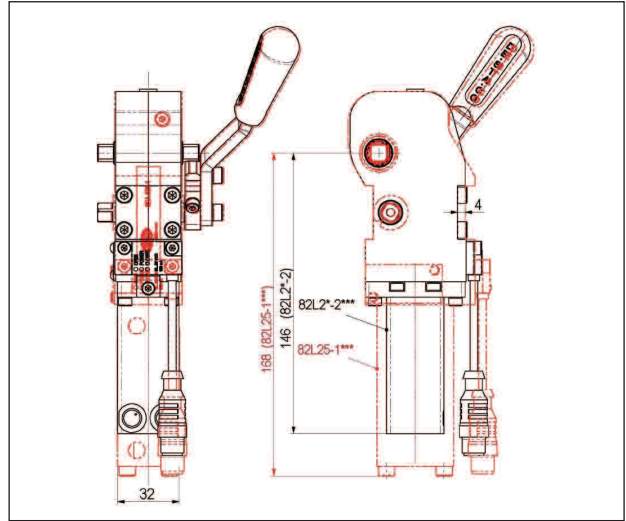
82L __-1 (Version 1) Shown in Red Outlines

82L __-2 (Version 2) Shown in Black Outlines

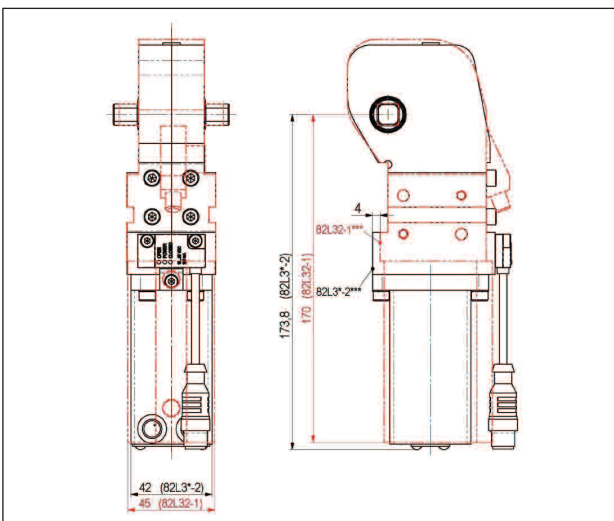
82L2 (without Hand Lever)



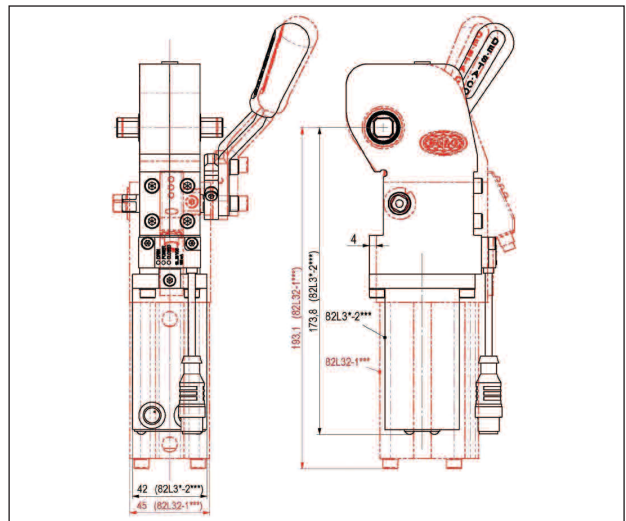
82L2G (with Hand Lever)



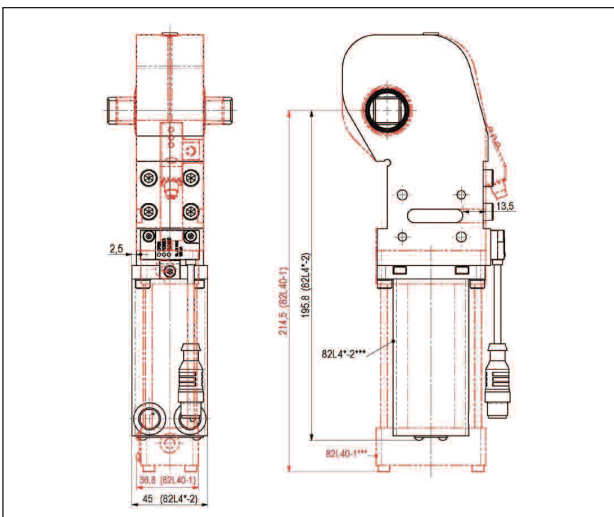
82L3 (without Hand Lever)



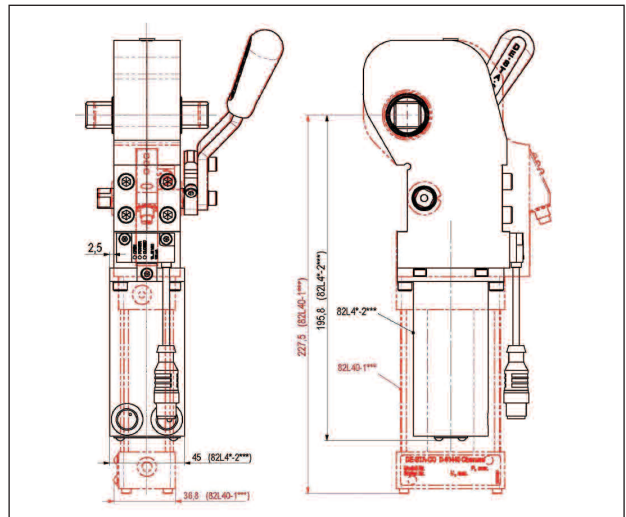
82L3 (with Hand Lever)



82L4 (without Hand Lever)



82L4 (with Hand Lever)



Modular Pneumatic Power Clamps

DE-STA-CO offers Complete System Solutions

Pneumatic Modular Grippers

GR1 Modular Gripper

- Can be flange or cylinder mounted.
- Offered with several different jaw opening and point options.
- Toggle-Locking Mechanism holds the part if air pressure is lost.

GR84 Enclosed Modular Mini Clamp

- Also offers several different jaw and tip options.
- Can also be flange or cylinder mounted.
- Locking Mechanism holds the part if air pressure is lost and is protected from contaminates.



Pneumatic Enclosed Power Clamps

82M Series Clamps

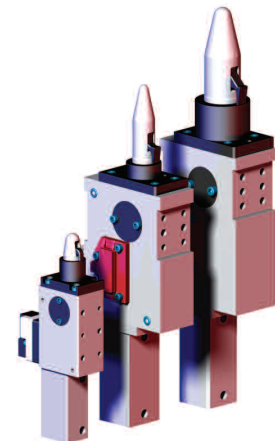
- Offered in two sizes, 50mm and 63mm.
- Angle of arm opening can be adjusted in the field in 15° increments.
- Lightweight - highest weight to power ratio.
- Optional integrated open/closed sensing package will accommodate all major switches.
- Built-in flow controls.
- NAAMS style arms and mounting.
- Sealed roller bearing.
- Toggle-locking mechanism holds the part if air pressure is lost
- Protected from contaminates.



Pneumatic Locating Pin Clamps

82P Series Pin Clamps

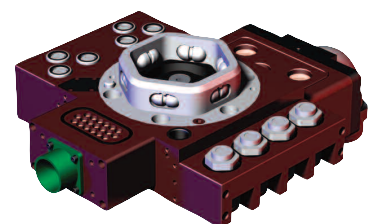
- Optional "Weld-Slag Resistant" offers protection from contamination entering the unit
- Standard rest blocks heights of 25 and 50mm, with others block heights available.
- Hardened and ground precision tool steel locating pin
- Enclosed aluminum body houses a full toggling mechanism that secures the part in place even when air is removed from the tool.
- Protected from contaminates.



Modular Tool Changer

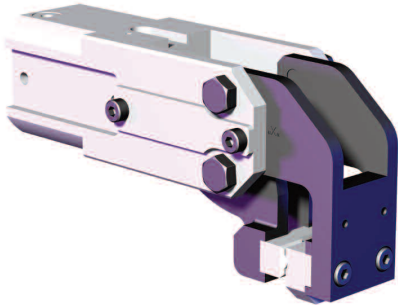
Quick Change 1200 Series

- End effector tooling can be changed quickly and easily to accommodate many different styles of parts on the same robot.



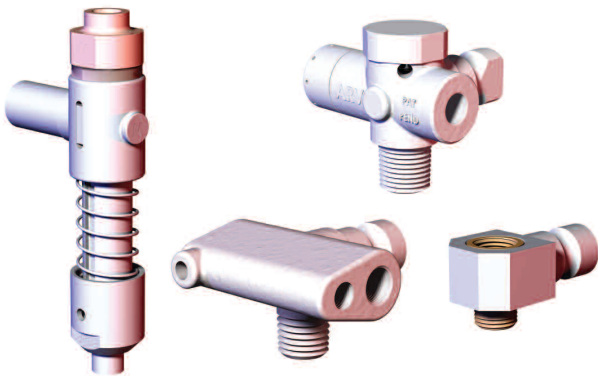
DE-STA-CO offers Complete System Solutions

Pneumatic Modular CAM Grippers



84A2 and 84A3 Modular CAM Gripper

- Two sensing systems are provided along with interchangeable gripper teeth and pads.
- High speed material movement in restricted spaces.
- High clamping force and fast opening and closing action.
- Roller and cam principal, self-locking at end stop position.
- Multiple mounting and jaw opening options.
- Small size, low weight.



Vacuum Cup Mounts and Adapters

CPI-500 and 750 Series Port Only Adapters

- Provides an option for integrating swivel arms and vacuum cups with a remote vacuum source.

CPI-ARV AND VSA Series Venturi Adapters

- Generates vacuum at the cup level.
- Integrated automatic quick panel release (ARV).
- Available with blow-off and low-profile.

CPI-SCM Series Spring Loaded Cup Mounts

- Available in different porting and travel options.
- Works with CPI-750 Series Venturi Adapters.



Pneumatic Actuated Magnets

CPI-TPLP Series Magnets

- Provides instantaneous pick up and release without electricity, maintaining positive hold even when air pressure is lost.
- Supplied with urethane pad which softens the impact of the magnet and avoids damage to delicate surfaces.



Vacuum Cups

Flatfoot Vacuum Cups

- Maximizes lifting capacity and minimizes slip.

Belcup Vacuum Cups

- Picks up material that vary slightly in position.

Traction Vacuum Cups

- For applications with wet or oily surfaces or for destackers.

Deepdish Vacuum Cups

- Works best on materials with convex surfaces.

A TRUE GLOBAL PRESENCE

Through a constant commitment to the Team DE-STA-CO philosophy, we draw from our worldwide pool of information and resources to offer the highest levels of service to each of our customers, regardless of geographic location. Our status as a truly global company empowers us to improve the global competitiveness of your operations. Whatever your automation or workholding need, Team DE-STA-CO has the best possible solution.



ABOUT DE-STA-CO

DE-STA-CO, a Dover Company, was founded in 1915. In 1936 the company designed and manufactured the first manual toggle clamp.

Innovations, quality and acquisitions have made DE-STA-CO the worldwide leader in the design, manufacture and support of clamping, gripping, transferring and robotic tooling solutions for workplace and flexible automation needs.

The family of brands has enabled DE-STA-CO to establish leading productivity improvement and cost-reduction manufacturing solutions for our customers using the breadth of products and value-added services we offer.

Our customer base covers a wide range of industries requiring a global customer service network offering consistent solutions and program support. With over 85 years of experience, DE-STA-CO brings a quality philosophy unsurpassed by its counterparts.

DE-STA-CO LEAN INITIATIVE

The DE-STA-CO family of companies is committed to being a lean resource for its customers, providing ways to eliminate waste in manufacturing processes through the use of optimal clamping and automation solutions that eliminate bottlenecks.

DE-STA-CO's wide range of products allows the company to offer its customers an Automation Continuum™ providing solutions that increase profitability and efficiency, while reducing waste.

PRODUCT WARRANTY

All DE-STA-CO Products are thoroughly inspected and tested. We fully guarantee all materials and workmanship to be free of defects. Any product that is found to be defective in design, material or workmanship in the course of its normal use will be promptly replaced.

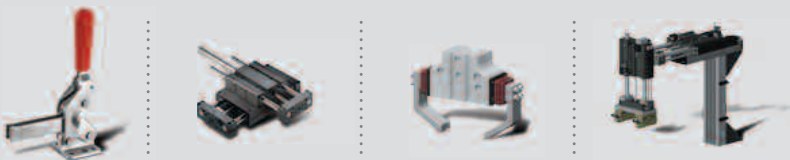
This Warranty does not apply to any product where the failure is a result of misapplication or abuse, nor is there any Warranty expressed or implied as to the merchantability or fitness for a particular purpose of the product and any warranty is limited to the above express warranty.

This Warranty is null and void if the product is repaired, modified or altered in any way.

DE-STA-CO is not liable for labor, special, direct, incidental, or consequential damages and under no circumstances any charges in excess of the invoice amount of the product proven to be defective.



A **DOVER** COMPANY



Positioning our customers for productivity.

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