

82M AND TCC



Enclosed Pneumatic Power Clamps | Heavy-Duty, Tolerance Compensation | Product Overview

82M Series Enclosed Power Clamp

Shown with optional U-Arms and Cylinders with Internal Hold Open Device



"B" Front Mount available for 82M and TCC size 40mm

Same mounting pattern as size 50 and 63mm



NAAMS Lateral Mounting available on 82M and TCC in addition to narrow, wide and NAAMS Clamp Arm Shafts

80mm

Max Holding Torque
3000 Nm
Max Clamping Torque
850 Nm at 5bar

63mm

Max Holding Torque
1800 Nm
Max Clamping Torque
420 Nm at 5bar

50mm

Max Holding Torque
1300 Nm
Max Clamping Torque
270 Nm at 5bar

40mm

Max Holding Torque
380 Nm
Max Clamping Torque
120 Nm at 5bar

TCC Tolerance Compensating Power Clamp

Shown with optional U-Arms and Cylinders with Internal Hold Open Device



63mm

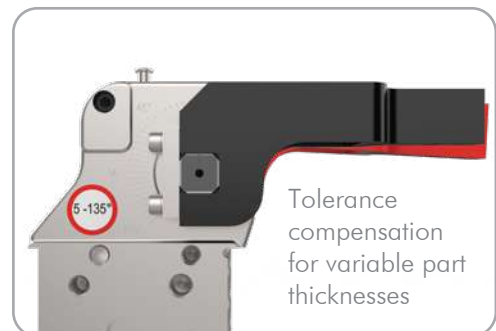
Max Holding Torque
295 Nm
Max Clamping Torque
295 Nm at 5bar

50mm

Max Holding Torque
175 Nm
Max Clamping Torque
175 Nm at 5bar

40mm

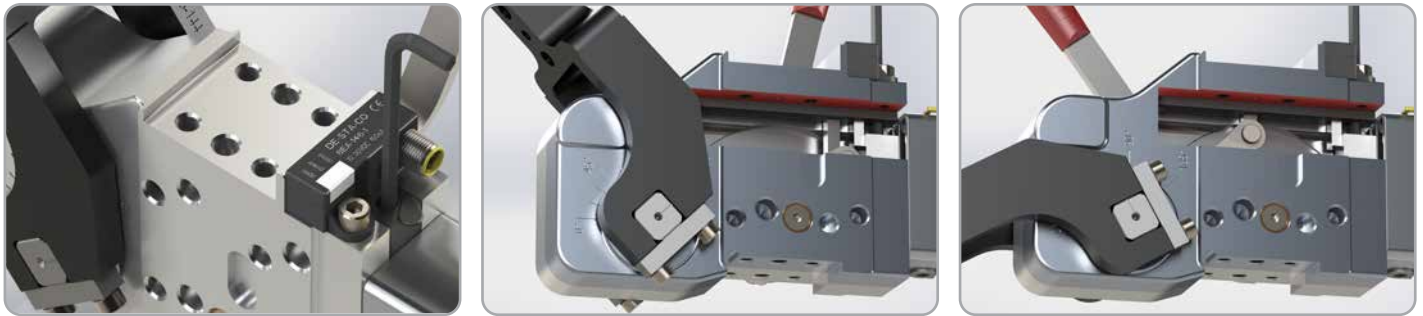
Max Holding Torque
85 Nm
Max Clamping Torque
85 Nm at 5bar



Tolerance compensation for variable part thicknesses

- Tolerance compensation for variable sheet metal thicknesses within three degrees of arm movement
- There is no need for shimming

Adjusting the Arm Opening Angle

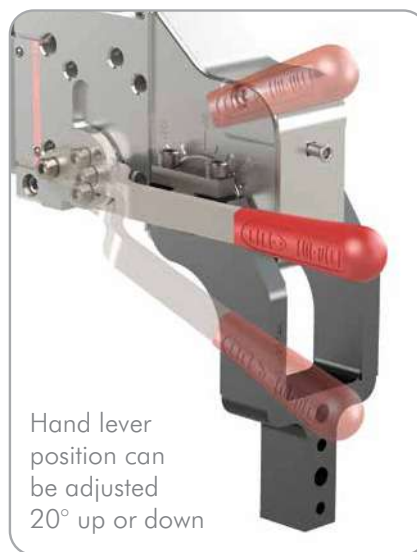


Easily adjust arm opening angle with an M5 Allen wrench.

- Move clamp arm to full open position.
- Using Allen wrench, release mechanism (leave Allen wrench in place).
- Move clamp arm to desired opening.
- Tighten to 20 Nm.

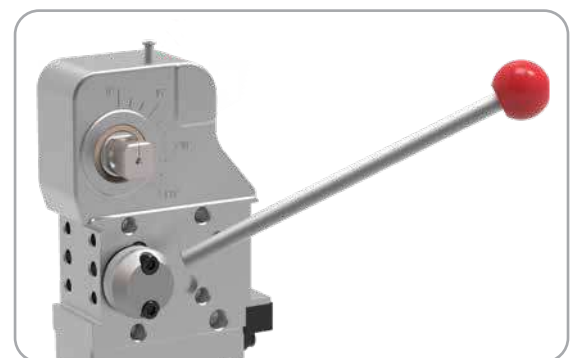
Enclosed Power Clamp Hand Lever (82M-3E Models Only)

Standard Adjustable Hand Lever



- Hand lever position is adjustable for improved ergonomics
- Handle can be mounted on the left or right side

Weldable Hand Lever



- Hand lever can be welded into a permanent position.
- Handle can be mounted on the left or right side

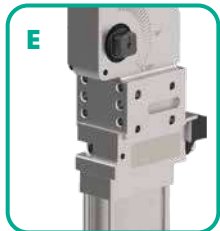
TCC-2

Enclosed Pneumatic Power Clamps | Heavy-Duty, Tolerance Compensation | Ordering Information

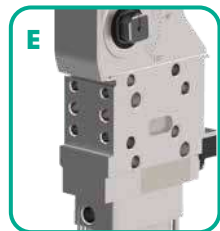
TCC-2 **E** **03** **00** **6A** **L8**

Mounting	Description	Clamp Arm Shaft	Description	Handle	Description
E	Standard Mounting	03	for U-Arms	00	No Hand lever
B	Common Front Mount for Size 40 only (same mount pattern as size 50 & 63)	23	for Lateral Arms		
N	NAAMS Side Mounting for Size 63 only		<i>See below for further details</i>		

Mounting



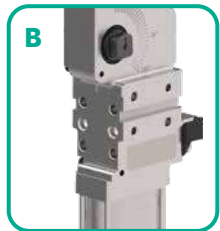
Size 40



Size 50



Size 63



Size 40 Only

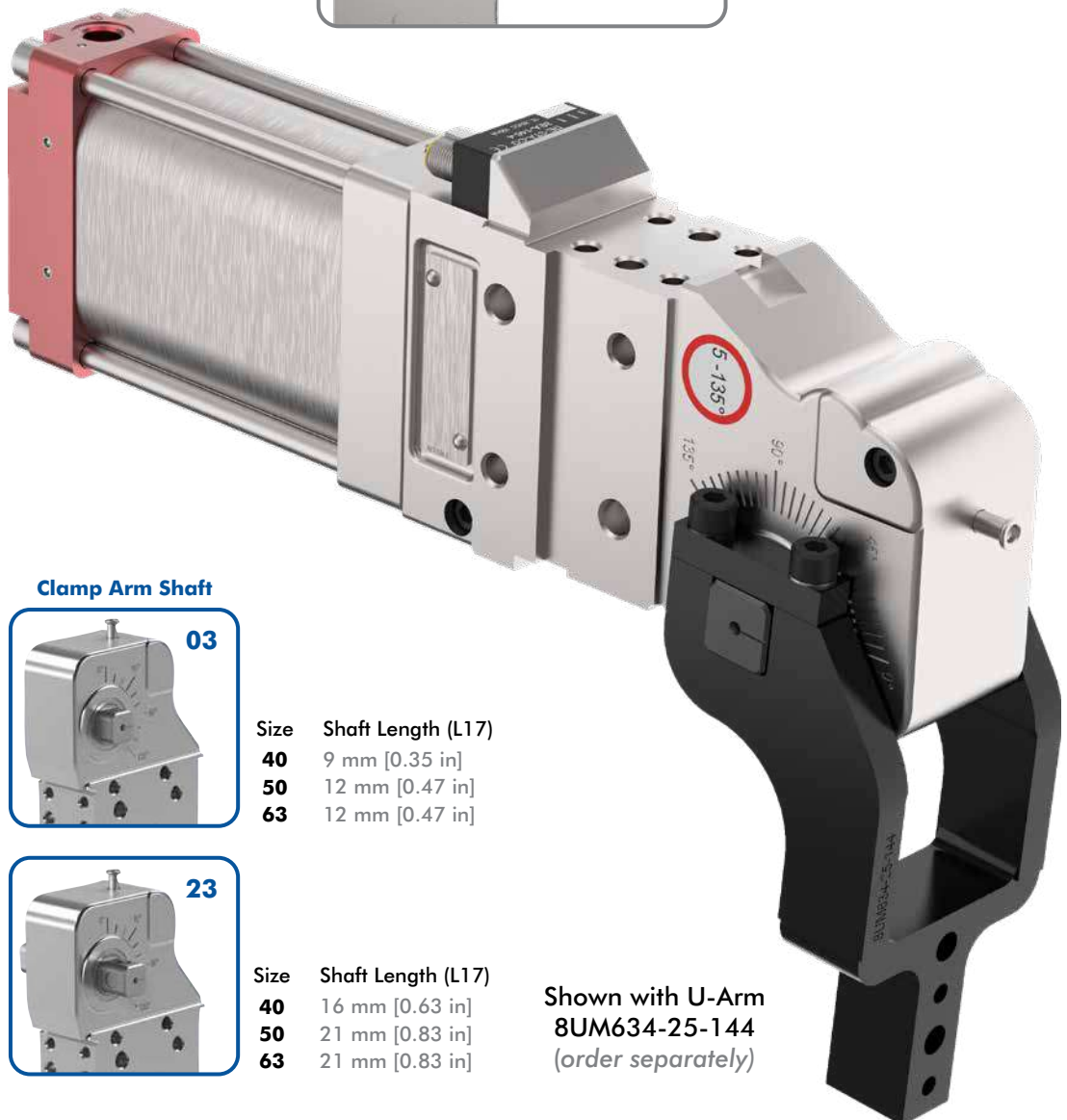


Size 63 Only



Tolerance compensation for variable part thicknesses

- Tolerance compensation for variable sheet metal thicknesses within three degrees of arm movement
- There is no need for shimming



Clamp Arm Shaft



03

Size	Shaft Length (L17)
40	9 mm [0.35 in]
50	12 mm [0.47 in]
63	12 mm [0.47 in]



23

Size	Shaft Length (L17)
40	16 mm [0.63 in]
50	21 mm [0.83 in]
63	21 mm [0.83 in]

Shown with U-Arm
8UM634-25-144
(order separately)

Enclosed Pneumatic Power Clamps | Heavy-Duty, Tolerance Compensation | Ordering Information

Sensor	Description
00	Without Sensing System
L8*	PNP Sensor with In-line M12x1 Connector (8EA-146-4)
N8*	NPN Sensor with In-line M12x1 Connector (8EA-154-4)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4)

*Not available for use with 4V, 5V, 6V cylinder option.

Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft] Cable



Cylinder (Standard)

- 40** 40 mm Cylinder (G1/8 Port)
- 50** 50 mm Cylinder (G1/4 Port)
- 5N** 50 mm Cylinder (1/4-18 NPT Port)
- 63** 63 mm Cylinder (G1/4 Port)
- 6N** 63 mm Cylinder (1/4-18 NPT Port)



Cylinder with Unlockable Return Valve

- 4C** 40 mm Cylinder (G1/8 Port)
- 5C** 50 mm Cylinder (G1/4 Port)
- 5D** 50 mm Cylinder (1/4-18 NPT Port)
- 6C** 63 mm Cylinder (G1/4 Port)
- 6D** 63 mm Cylinder (1/4-18 NPT Port)



Cylinder with Internal Hold Open Device

- 4A** 40 mm Cylinder (G1/8 Port)
- 5A** 50 mm Cylinder (G1/4 Port)
- 5B** 50 mm Cylinder (1/4-18 NPT Port)
- 6A** 63 mm Cylinder (G1/4 Port)
- 6B** 63 mm Cylinder (1/4-18 NPT Port)



Cylinder with Piston Rod Locking Device

- 4V** 40 mm Cylinder (G1/8 Port)
- 5V** 50 mm Cylinder (G1/4 Port)
- 6V** 63 mm Cylinder (G1/4 Port)



40

Max Holding/
Clamping Torque
85 Nm [62.7 ft-lb]
at 5 bar [72 psi]

50

Max Holding/
Clamping Torque
175 Nm [129 ft-lb]
at 5 bar [72 psi]

63

Max Holding/
Clamping Torque
295 Nm [217.6 ft-lb]
at 5 bar [72 psi]

82M-3

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Ordering Information

82M-3 **E** **23** **H0** **50** **L8** - **1** ● North America Only

Mounting	Description
E	Standard Mounting
B	Common Front Mount for Size 40 only (same mount pattern as size 50 & 63)
N	NAAMS Side Mounting for Size 63 only

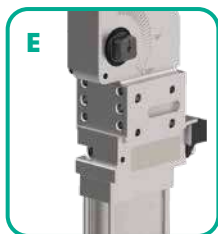
Clamp Arm Shaft	Description
03	for U-Arms
23	for Lateral Arms
D0	for Lateral Arms (size 63 NAAMS only)

Handle	Description
00	No Hand lever
H0	Hand Lever
HS	Weldable

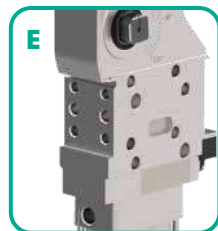
See below for further details

See below for further details

Mounting



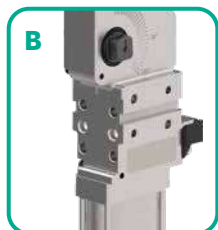
Size 40



Size 50



Size 63/80



Size 40 Only

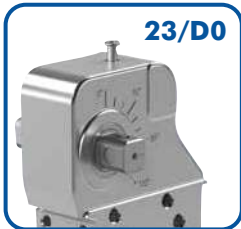


Size 63 Only

Clamp Arm Shaft



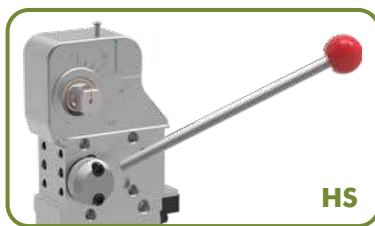
Size	Shaft Length (L17)
40	9 mm [0.35 in]
50	12 mm [0.47 in]
63	12 mm [0.47 in]



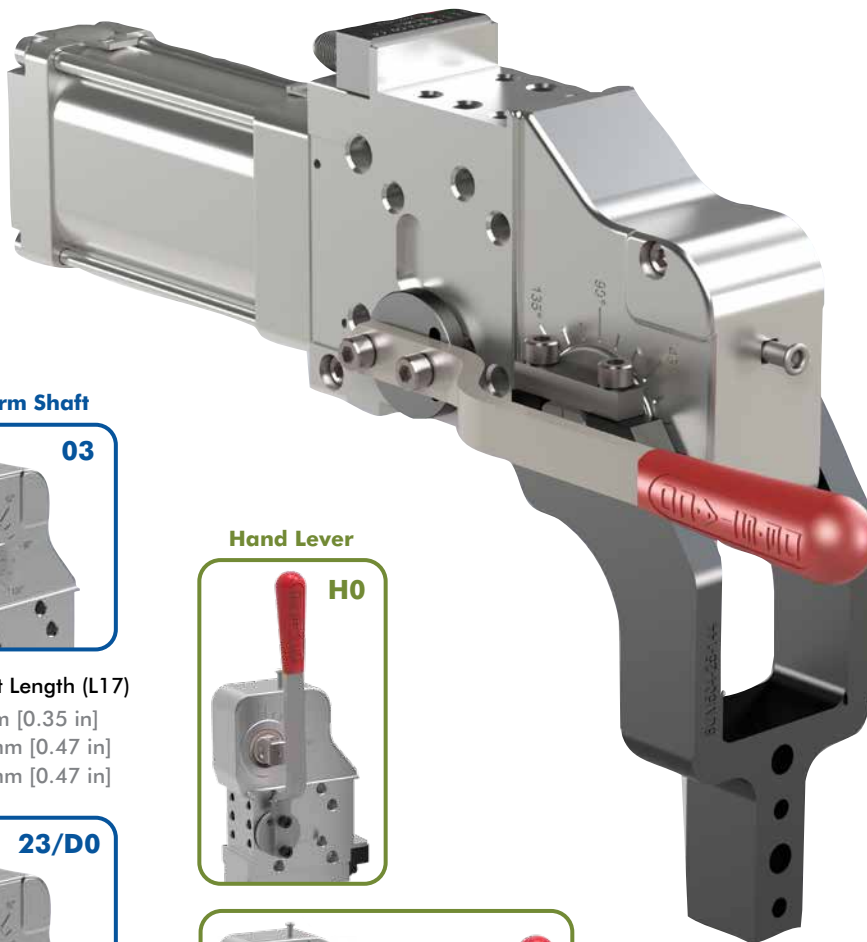
Size	Shaft Length (L17)
40	16 mm [0.63 in]
50	21 mm [0.83 in]
63	21 mm [0.83 in]
80	32 mm [1.26 in]

Size	Shaft Length (L17)
63	26 mm [1.02 in]

Hand Lever



Hand Lever	Description
00	No Hand Lever
H0	Standard Hand Lever (not compatible with cylinder options *A, *B)
HS	Weldable Hand Lever (not compatible with cylinder options *A, *B)



Shown with U-Arm
8UM504-25-144
(order separately)

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Ordering Information

Sensor	Description
00	Without Sensing System
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4)



L8/N8



L9/N9



K8/K9



Cylinder - Standard

- 40** 40 mm Cylinder (G1/8 Port)
- 50** 50 mm Cylinder (G1/4 Port)
- 5N** 50 mm Cylinder (1/4-18 NPT Port)
- 63** 63 mm Cylinder (G1/4 Port)
- 6N** 63 mm Cylinder (1/4-18 NPT Port)
- 80** 80 mm Cylinder (G1/4 Port)
- 8N** 80 mm Cylinder (1/4-18 NPT Port)



Cylinder with Internal Hold Open Device

- 4A** 40 mm Cylinder (G1/8 Port)
- 5A** 50 mm Cylinder (G1/4 Port)
- 5B** 50 mm Cylinder (1/4-18 NPT Port)
- 6A** 63 mm Cylinder (G1/4 Port)
- 6B** 63 mm Cylinder (1/4-18 NPT Port)
- 8A** 80 mm Cylinder (G1/4 Port)
- 8B** 80 mm Cylinder (1/4-18 NPT Port)



40

Max Holding Torque
380 Nm [280 ft-lb]
Max Clamping Torque
120 Nm [89 ft-lb]
at 5 bar [72 psi]

50

Max Holding Torque
1300 Nm [959 ft-lb]
Max Clamping Torque
270 Nm [199 ft-lb]
at 5 bar [72 psi]

63

Max Holding Torque
1800 Nm [1328 ft-lb]
Max Clamping Torque
420 Nm [310 ft-lb]
at 5 bar [72 psi]

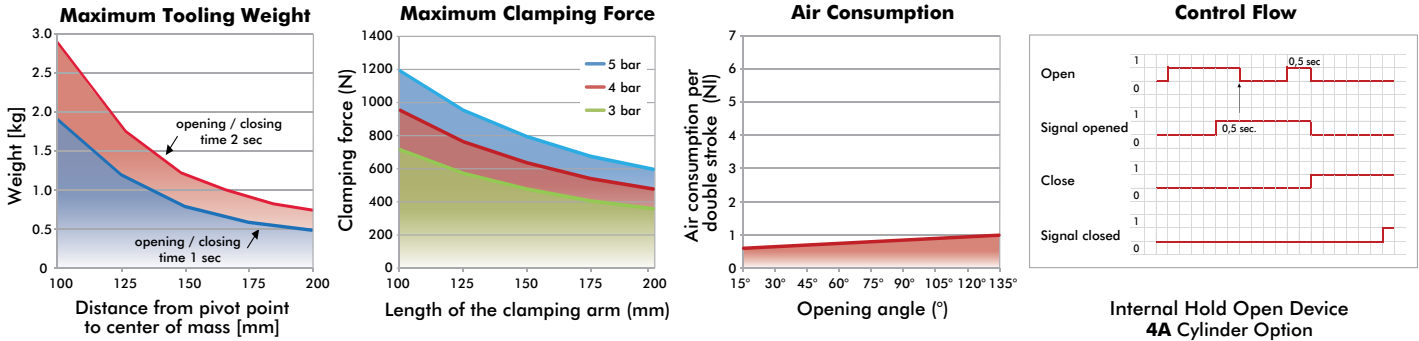
80

Max Holding Torque
3000 Nm [2213 ft-lb]
Max Clamping Torque
850 Nm [627 ft-lb]
at 5 bar [72 psi]

82M-3

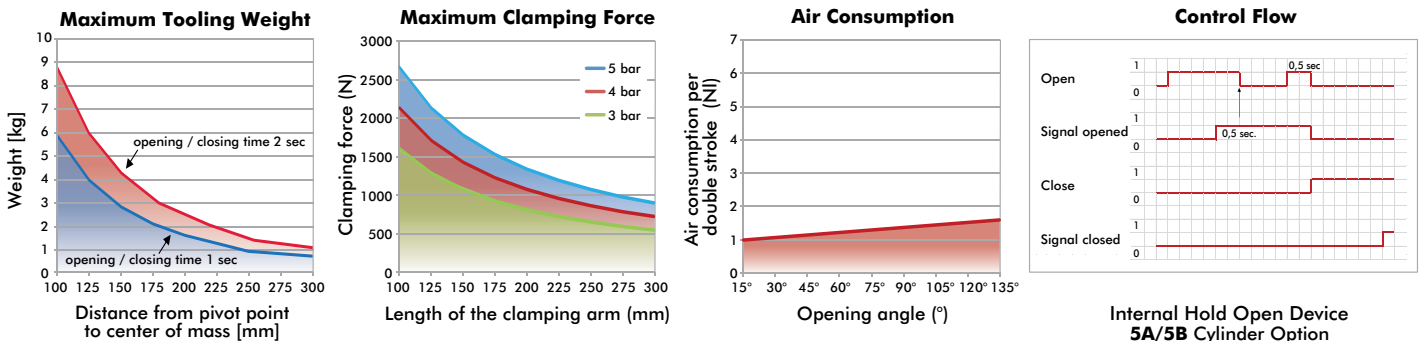
Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Technical Specifications

Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...4...	380	120	40	1,5	0,9
82M-3B...4...					



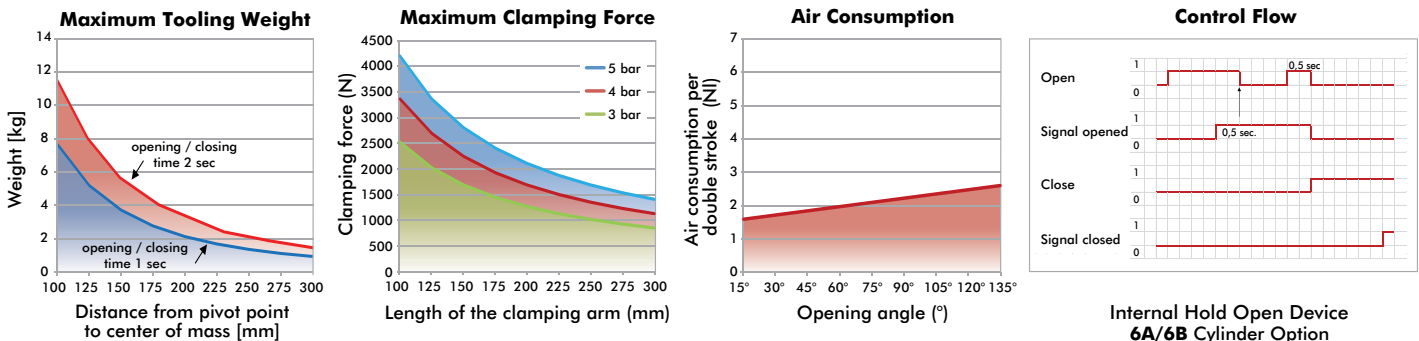
ATTENTION: Calculation tool available. Please consult factory.

Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...5...	1300	270	50	2,8	1,6



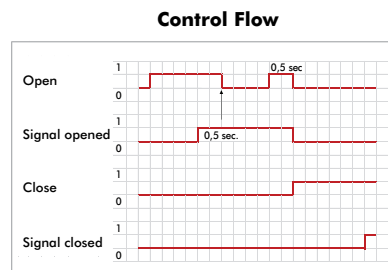
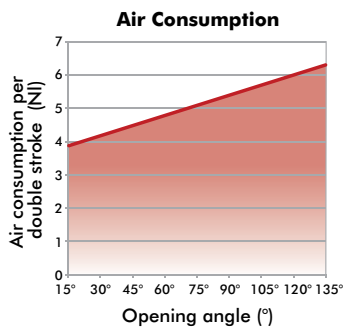
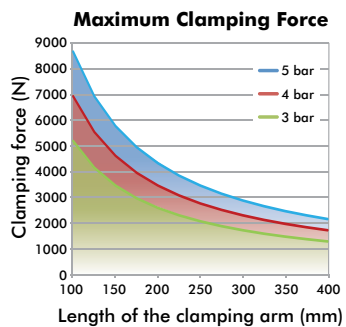
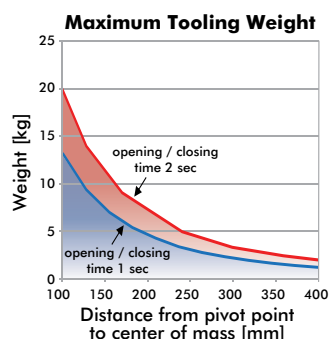
ATTENTION: Calculation tool available. Please consult factory.

Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...6...	1800	420	63	3,8	2,6
82M-3N...6...					



ATTENTION: Calculation tool available. Please consult factory.

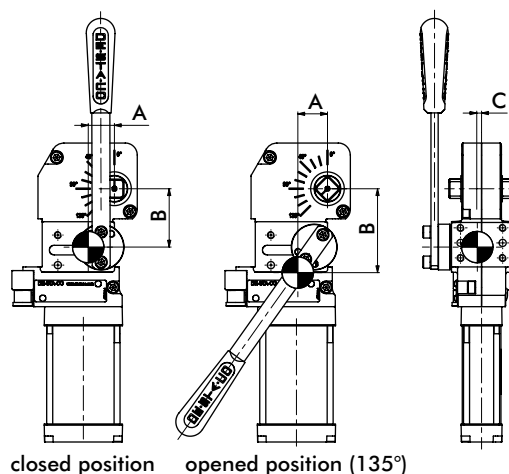
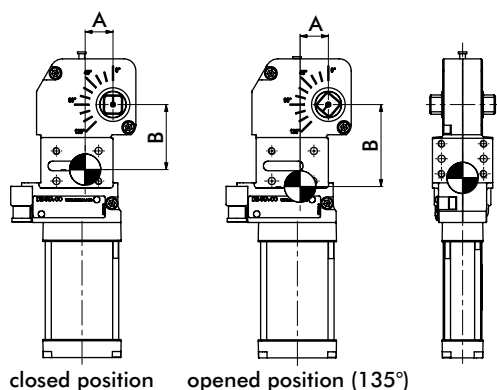
Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...80..	3000	850	80	8,7	6,3
82M-3E...8N..				8,8	
82M-3E...8A..					
82M-3E...8B..					



Internal Hold Open Device
8A/8B Cylinder Option

ATTENTION: Calculation tool available. Please consult factory.

Center of Mass



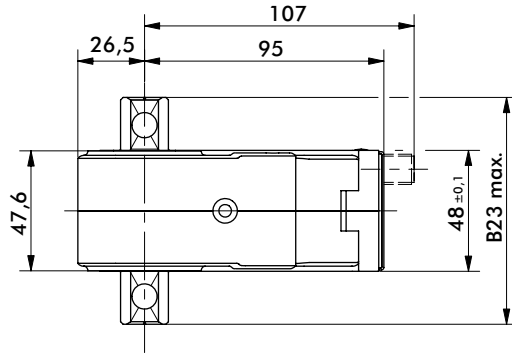
Model	Without Handle				Weight
	A		B		
	Closed	Open	Closed	Open	
82M-3E...40..	23	24	55	69	1,5
82M-3B...40..	24	24	54	68	
82M-3E...4A..	22	23	72	86	1,6
82M-3B...4A..	23		85		
82M-3E...50..	24	25	70	87	2,8
82M-3E...5N..			83	99	
82M-3E...5A..			83	99	
82M-3E...5B..			83	99	
82M-3...63..	27	28	88	103	3,8
82M-3...6N..			98	114	
82M-3...6A..			98	114	
82M-3...6B..			98	114	
82M-3E...80..	36	37	98	123	8,7
82M-3E...8N..			98	123	
82M-3E...8A..			104	129	
82M-3E...8B..			104	129	

Model	With Handle				C	Weight
	A		B			
	Closed	Open	Closed	Open		
82M-3E...40..	22	25	49	70	4	1,6
82M-3B...40..	24	27	46	67		
82M-3E...50..	23	30	62	85	3	3,1
82M-3E...5N..	23	30	62	85		
82M-3...63..	26	30	80	102		
82M-3...6N..	26	30	80	102		
82M-3E...80..	35	38	93	122	2	9,2
82M-3E...8N..	35	38	93	122		

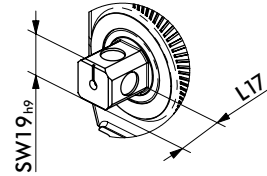
82M-3/TCC-2, 50MM

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Dimensions

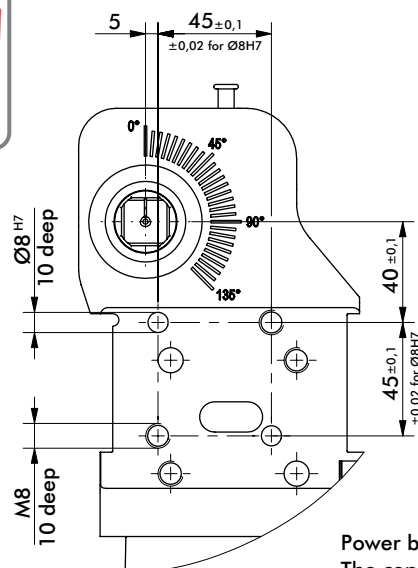
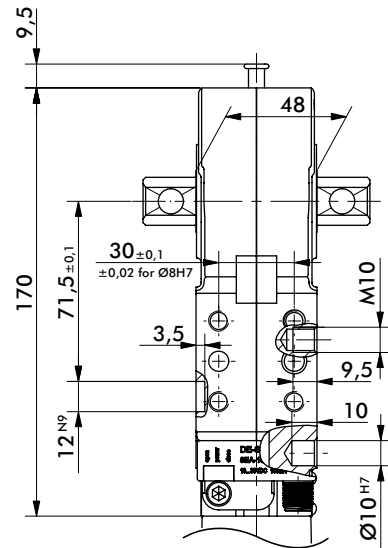
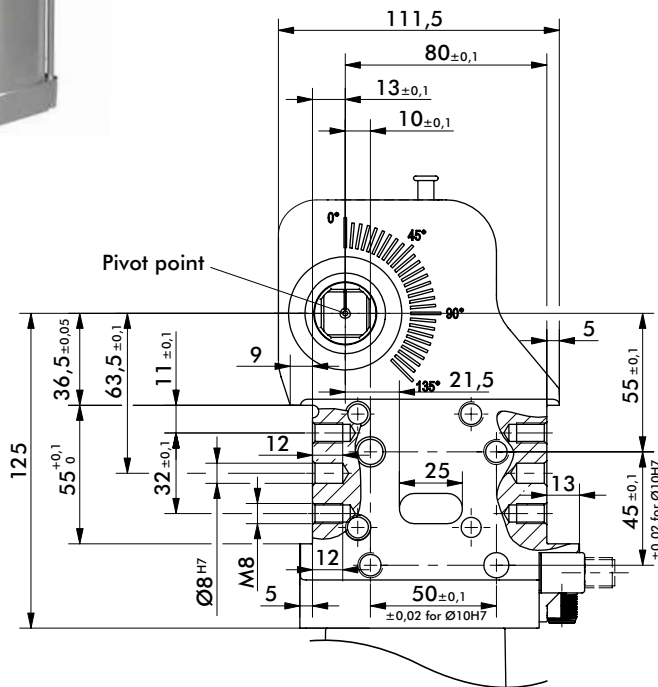
82M-3E/TCC-2E...5.



Dimensions of the driven shaft



Model	B23 Max.	L17
82M-3E03/TCC-2E03..5...	72	12
82M-3E23/TCC-2E23..5...	90	21



mm [INCH]



THIRD ANGLE
PROJECTION

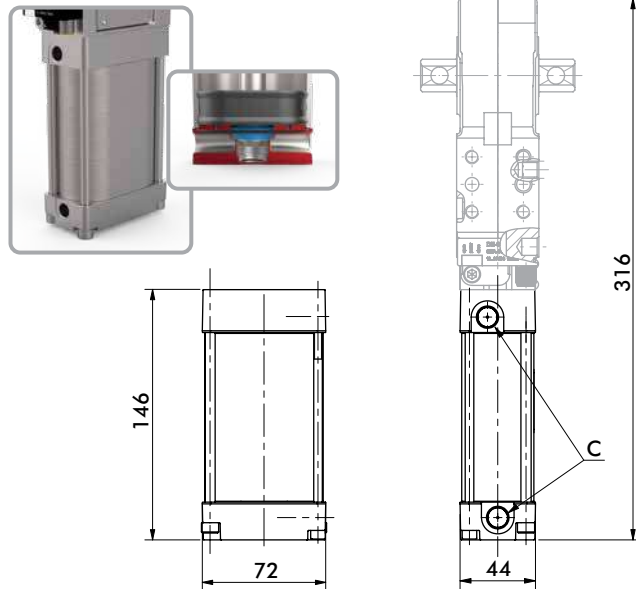
Power by compressed air, max. 6 bar operation with oil-free air is permissible.
The connector socket and the cable are not supplied with the unit.
Safe "holding/clamping" only under pressurization (for TCC models only).

82M-3/TCC-2, 50MM

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Cylinder Options Dimension

82M-3E/TCC-2E...50/5N

Standard Cylinder



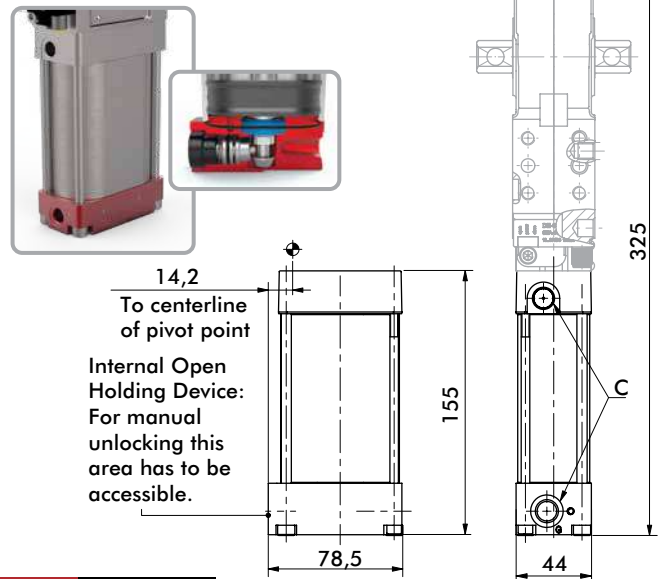
Ports	C
50	G1/4
5N	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

82M-3E/TCC-2E...5A/5B

Cylinder with Internal Hold Open Device

Securely holds clamp in the open position.



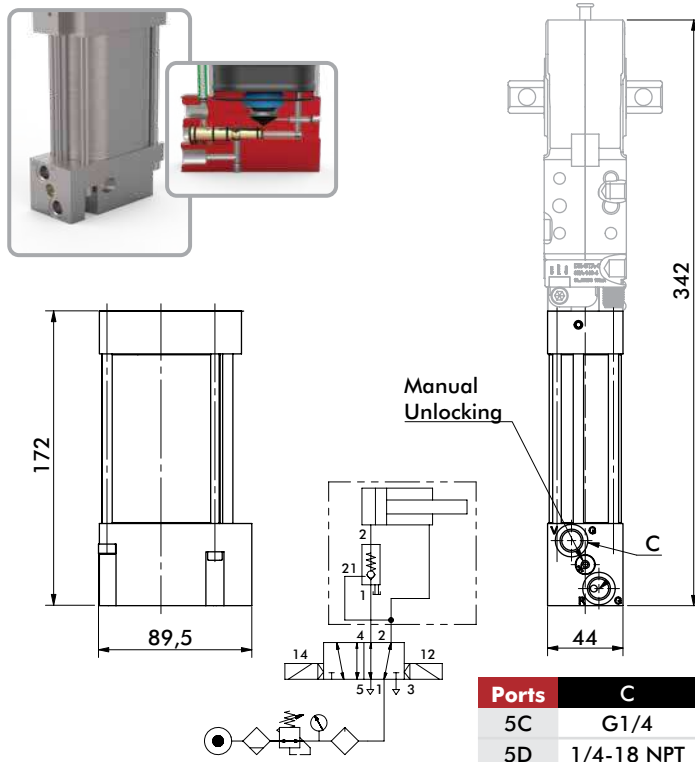
Ports	C
5A	G1/4
5B	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

TCC-2E...5C/5D

Cylinder with Unlock-able Return Valve

Pneumatically holds clamp arm in the closed position when air is released.

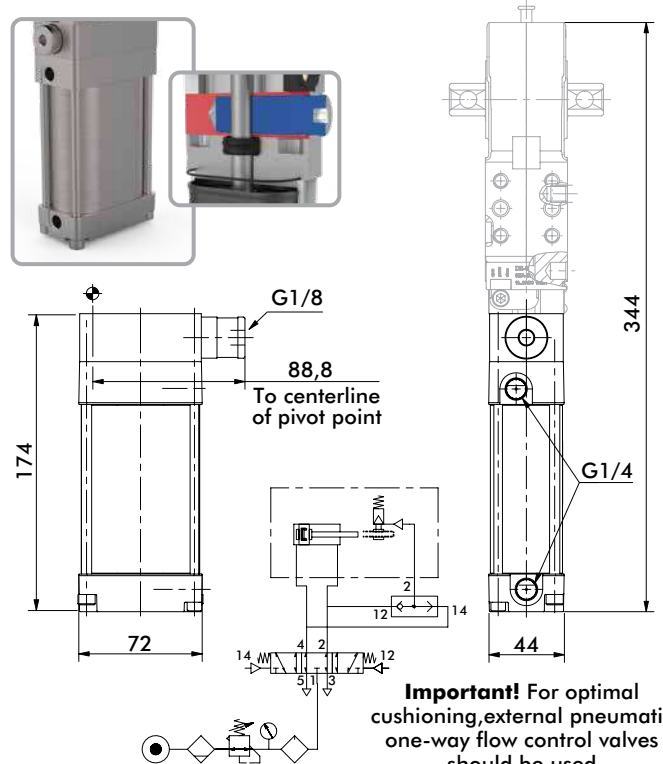


Ports	C
5C	G1/4
5D	1/4-18 NPT

TCC-2E...5V

Cylinder with Rod Locking Device

Uses friction to clamp rod at any point between open and closed positions.

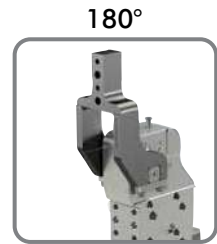
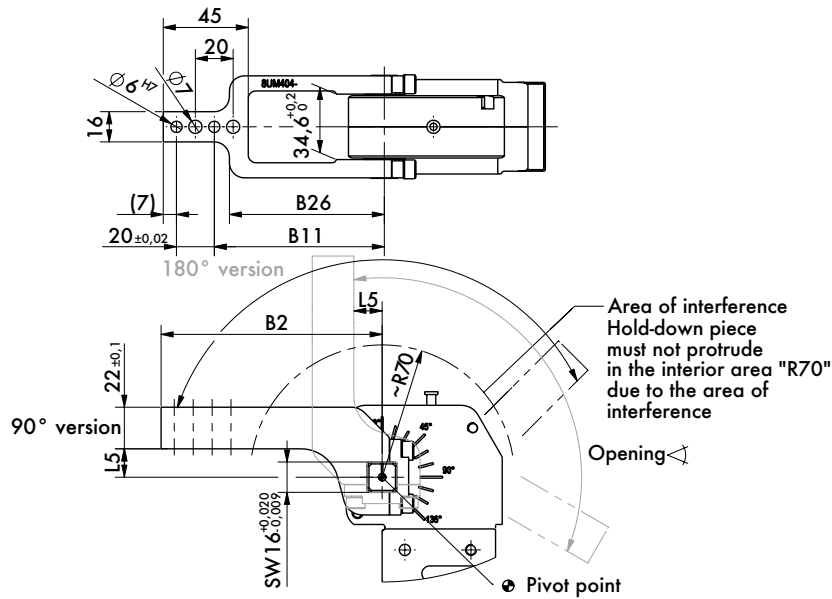


Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

U-ARMS CENTER (ALUMINUM)

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Dimensions and Technical Specifications

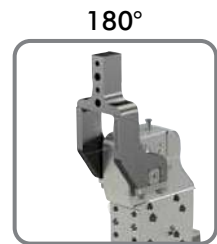
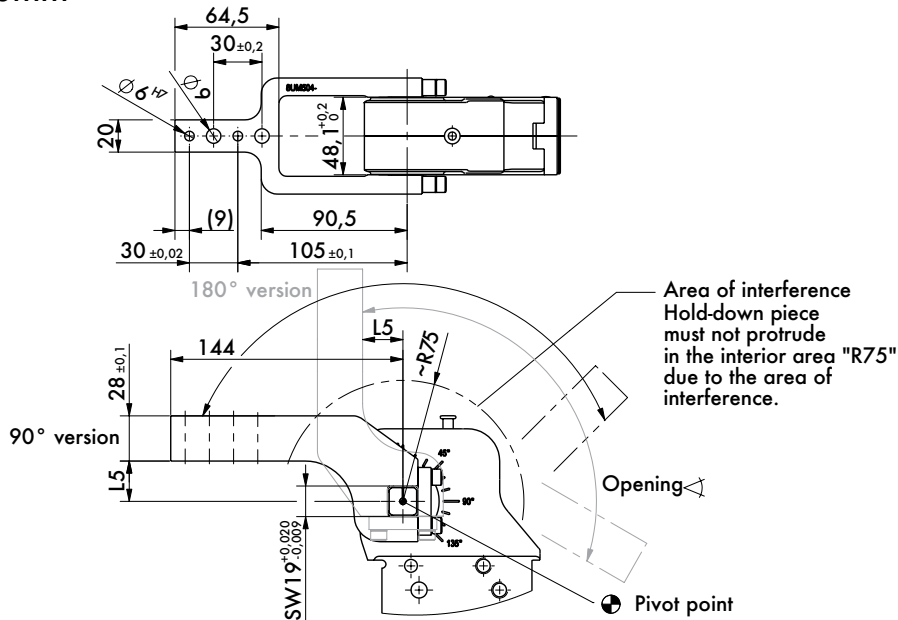
For Size 40mm



8UM404-00-117
8UM404-15-117
8UM404-25-117
8UM404-45-107

Arm Model No.	Max. Opening 90° Version	Max. Opening 180° Version	Weight (kg)	B2	B11 ±0,1	B26	L5
8UM404-00-117		105°	0,23				0
8UM404-15-117	135°	120°	0,24	117	90	82	15
8UM404-25-117			0,25				25
8UM404-45-107	130°	135°	0,24	107	80	72	45

For Size 50mm



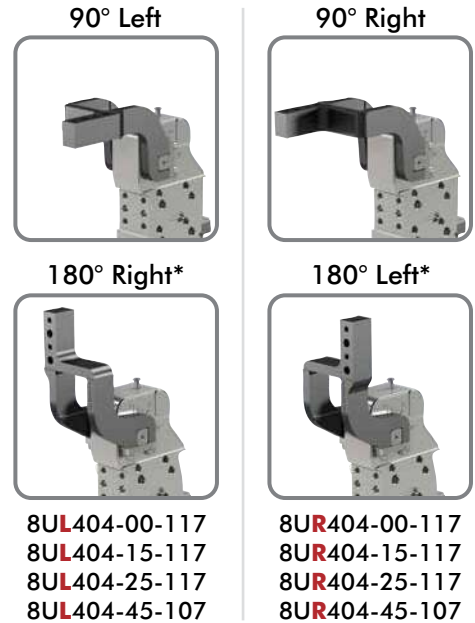
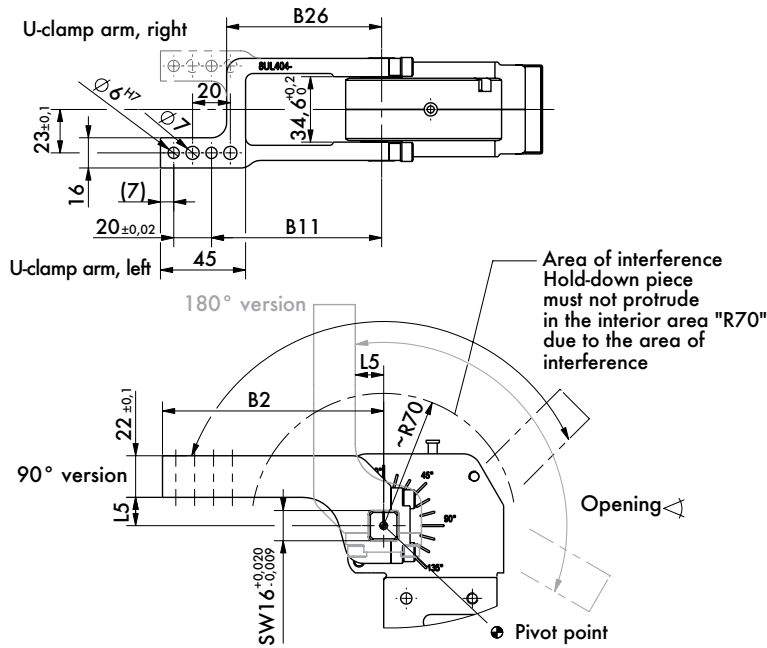
8UM504-15-144
8UM504-25-144
8UM504-45-144

Arm Model No.	Max. Opening 90° Version	Max. Opening 180° Version	Weight (kg)	L5
8UM504-15-144		105°	0,44	15
8UM504-25-144	135°	120°	0,45	25
8UM504-45-144		135°	0,48	45

U-ARMS OFFSET (ALUMINUM)

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Dimensions and Technical Specifications

For Size 40mm



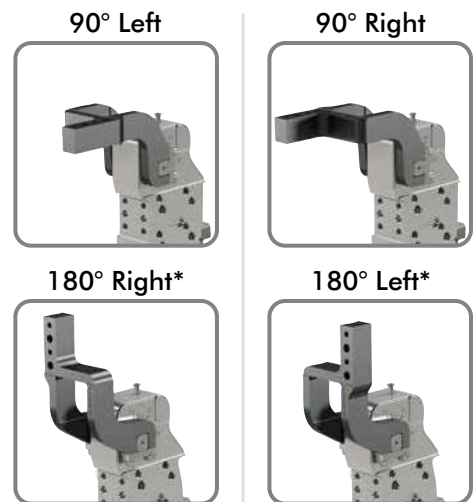
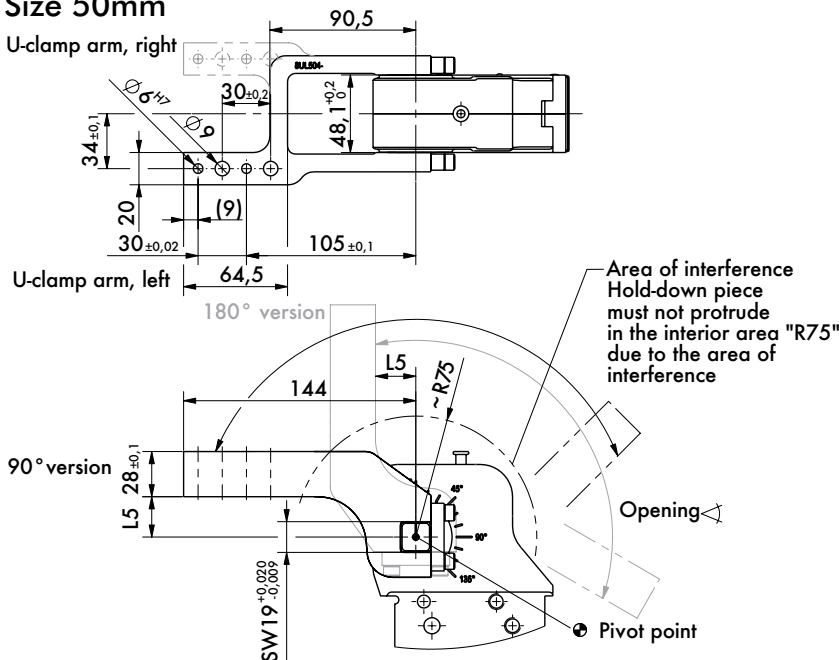
8UL404-00-117
8UL404-15-117
8UL404-25-117
8UL404-45-107

8UR404-00-117
8UR404-15-117
8UR404-25-117
8UR404-45-107

*90° left/180° right uses same clamp arm.
90° right/180° left uses same clamp arm.

Arm Model No.	Max. Opening 90° Version	Max. Opening 180° Version	Weight (kg)	B2	B11 ±0,1	B26	L5
8U(•)404-00-117		105°	0,23				0
8U(•)404-15-117	135°	120°	0,24	117	90	82	15
8U(•)404-25-117		135°	0,25				25
8U(•)404-45-107	130°		0,25	107	80	72	45

For Size 50mm



8UL504-15-144
8UL504-25-144
8UL504-45-144

8UR504-15-144
8UR504-25-144
8UR504-45-144

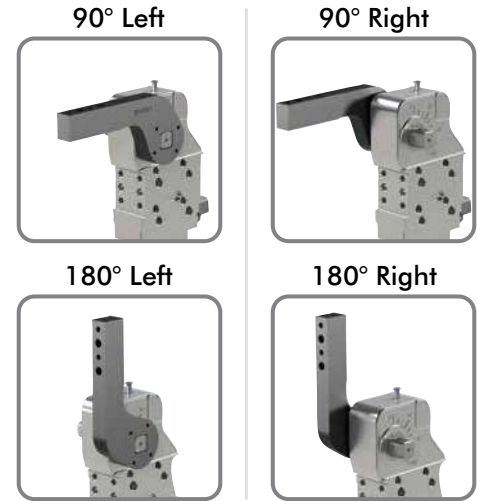
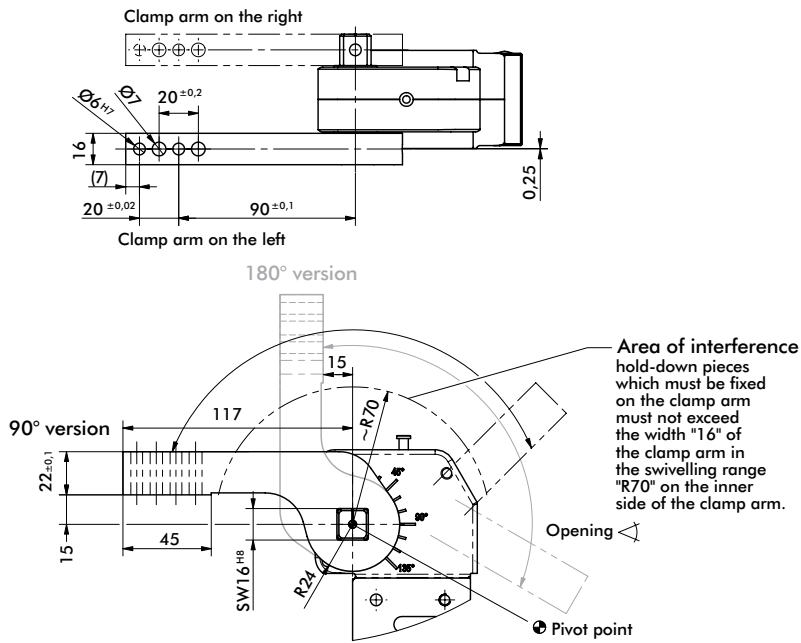
*90° left/180° right uses same clamp arm.
90° right/180° left uses same clamp arm.

Arm Model No.	Max. Opening 90° Version	Max. Opening 180° Version	Weight (kg)	L5
8U(•)504-15-144		105°	0,45	15
8U(•)504-25-144	135°	120°	0,46	25
8U(•)504-45-144		135°	0,49	45

LATERAL (SIDE) ARMS

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Dimensions and Technical Specifications

For Size 40mm

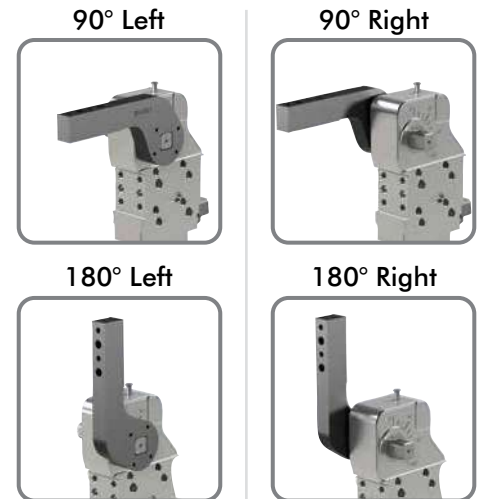
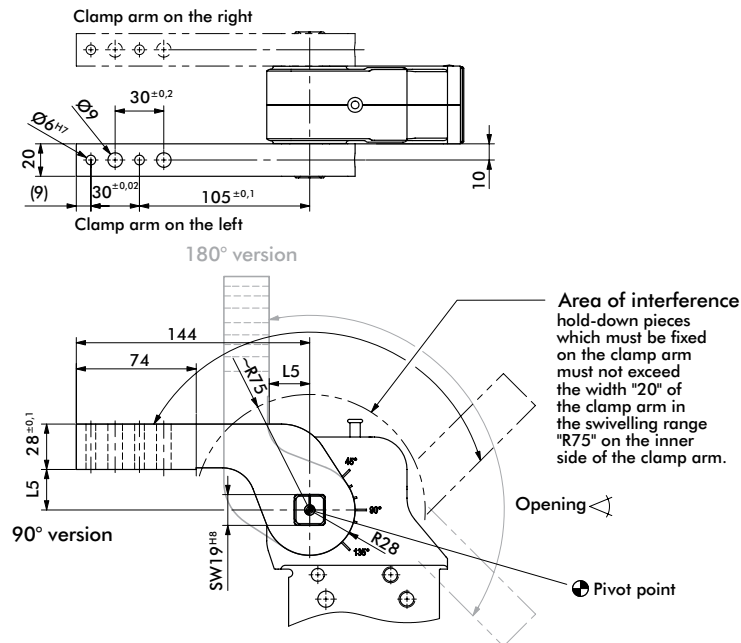


8S401-15-117

Arm Model No.	Max. Opening 90° Version	Max. Opening 180° Version	Weight (kg)
8S401-15-117	135°	120°	0,5

Models with 2 lateral clamp arms requires 2 clamp arm sets.

For Size 50mm



8JG-070-1-01
8S501-25-144

Arm Model No.	Max. Opening 90° Version	Max. Opening 180° Version	Weight (kg)	L5
8JG-070-1-01	135°	135°	0,9	15
8S501-25-144			1,0	25

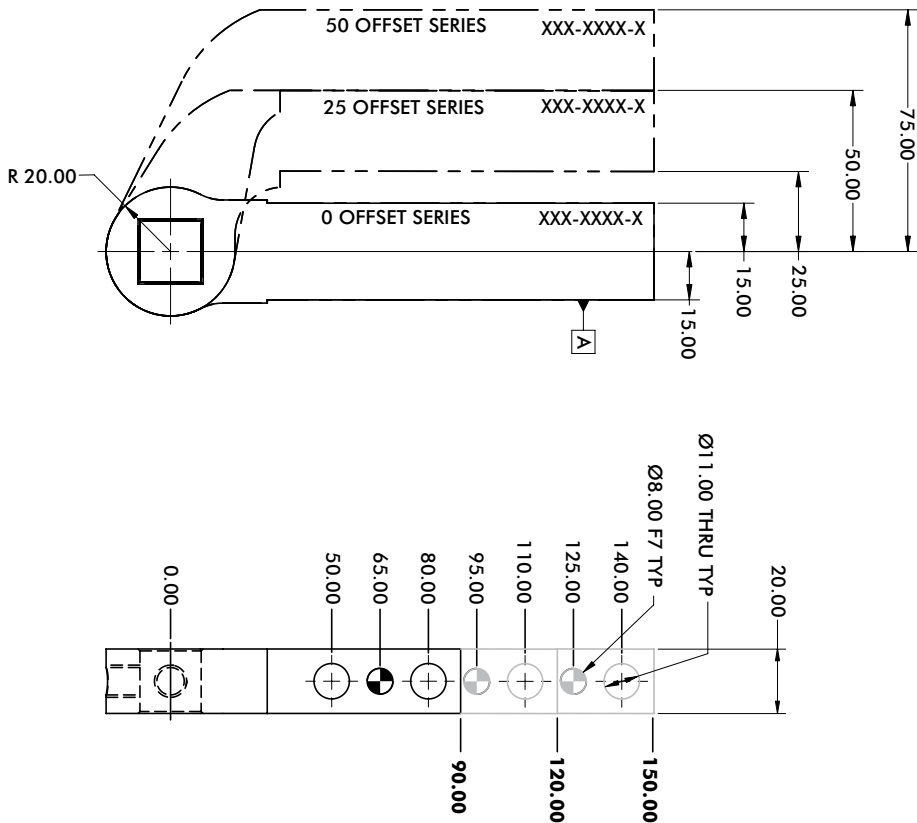
Models with 2 lateral clamp arms requires 2 clamp arm sets.

LATERAL (SIDE) ARMS, NAAMS-STYLE



Enclosed Pneumatic Power Clamps | Heavy-Duty Modular | Dimensions and Technical Specifications

For Size 50mm



9mm Thru Hole (6.00 H7 Dowel)

90mm [3.54"] Arm Length			120mm [4.72"] Arm Length			150mm [5.90"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
50 Offset	▲ • 3256	B8JG-3256-1	50 Offset	▲ • 3257	B8JG-3257-1	50 Offset	▲ • 3258	B8JG-3258-1
25 Offset	▲ • 3246	B8JG-3246-1	25 Offset	▲ • 3247	B8JG-3247-1	25 Offset	▲ • 3248	B8JG-3248-1
0 Offset	▲ • 3236	B8JG-3236-1	0 Offset	▲ • 3237	B8JG-3237-1	0 Offset	▲ • 3238	B8JG-3238-1

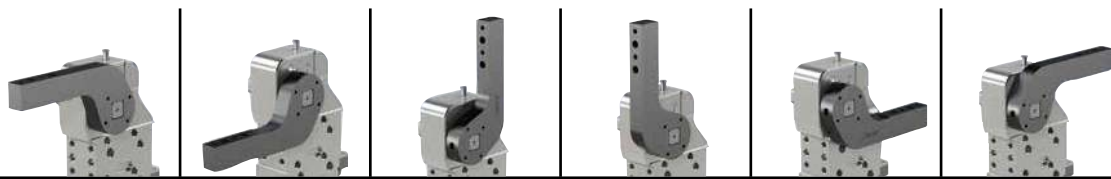
11mm Thru Hole (8.00 F7 Dowel)

90mm [3.54"] Arm Length			120mm [4.72"] Arm Length			150mm [5.90"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
50 Offset	▲ • 1226	B8JG-1226-1	50 Offset	▲ • 1227	B8JG-1227-1	50 Offset	▲ • 1228	B8JG-1228-1
25 Offset	▲ • 1216	B8JG-1216-1	25 Offset	▲ • 1217	B8JG-1217-1	25 Offset	▲ • 1218	B8JG-1218-1
0 Offset	▲ • 1206	B8JG-1206-1	0 Offset	▲ • 1207	B8JG-1207-1	0 Offset	▲ • 1208	B8JG-1208-1

▲ Common in North America

(•) STANDARD ARM OFFERING

Maximum Opening Angle (shown in locked position)



Arm Styles	1206-1208/3236-3238	1216-1218/3246-3248	1226-1228/3256-3258	1206-1207	1216-1217	1226-1227	1208-1209	1218-1219	1228-1229
1206-1208/3236-3238	135°	135°	100°	100°	N/A	N/A	N/A	N/A	N/A
1216-1218/3246-3248	135°	N/A	50°	125°	N/A	30°	N/A	N/A	N/A
1226-1228/3256-3258	125°	N/A	35°	135°	N/A	50°	N/A	N/A	N/A