

6000-SW SERIES

Manual Swing Clamps | Product Overview and Dimensions

Features:

- Left or right swing motion available
- 90° Swing clamp arm motion
- Higher clamping force than pneumatic version
- Through-hole mounting
- Clamp arm can be radially positioned 360°
- Handle can be radially positioned up to 180°

Applications:

- Assembly
- Checking fixtures
- Welding fixtures
- Tensioning devices

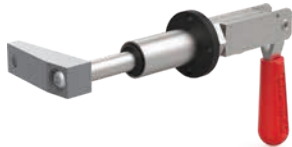
6002-SWL
Clamp Arm
Swing Left



6002-SWR
Clamp Arm
Swing Right



6004-SWL
Clamp Arm
Swing Left



6004-SWR
Clamp Arm
Swing Right



Shown in open (un-clamp) position.

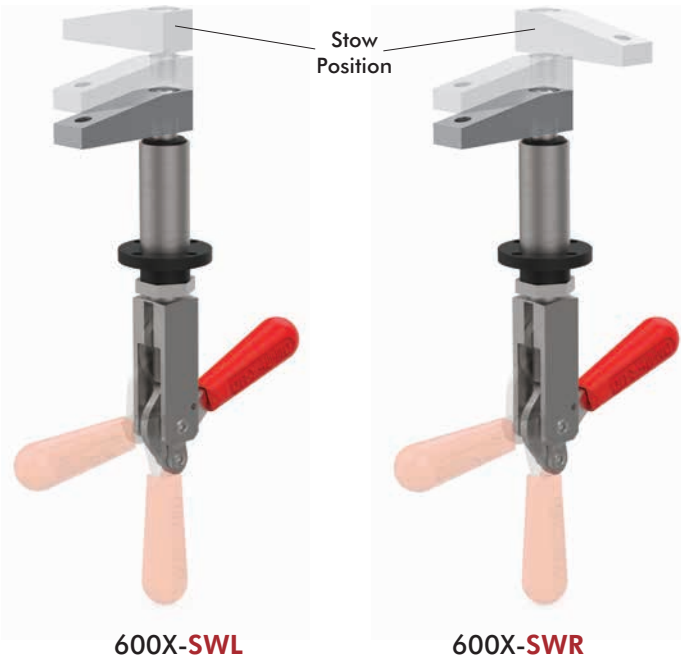
Technical Information | Holding Capacities | Dimensions

Color Handles
Available on models
in this series. Add
-Y, -G, -B, -K to end
of model number.



Model	Swing Direction	Max. Holding Capacity*	Total Stroke [in] mm	Stroke During Rotation [in] mm	Stroke Straight Pull [in] mm	Weight [lb] Kg
6002-SWL	LH	[400 lbf] 1780 N	[0.75] 19,1	[0.53] 13,5	[0.22] 5,6	[0.95] 0,43
6002-SWR	RH					
6004-SWL	LH	[600 lbf] 2670 N	[1.50] 38	[0.87] 22	[0.63] 16	[1.32] 0,6
6004-SWR	RH					

*Straight pull. Does not account for clamp arm.



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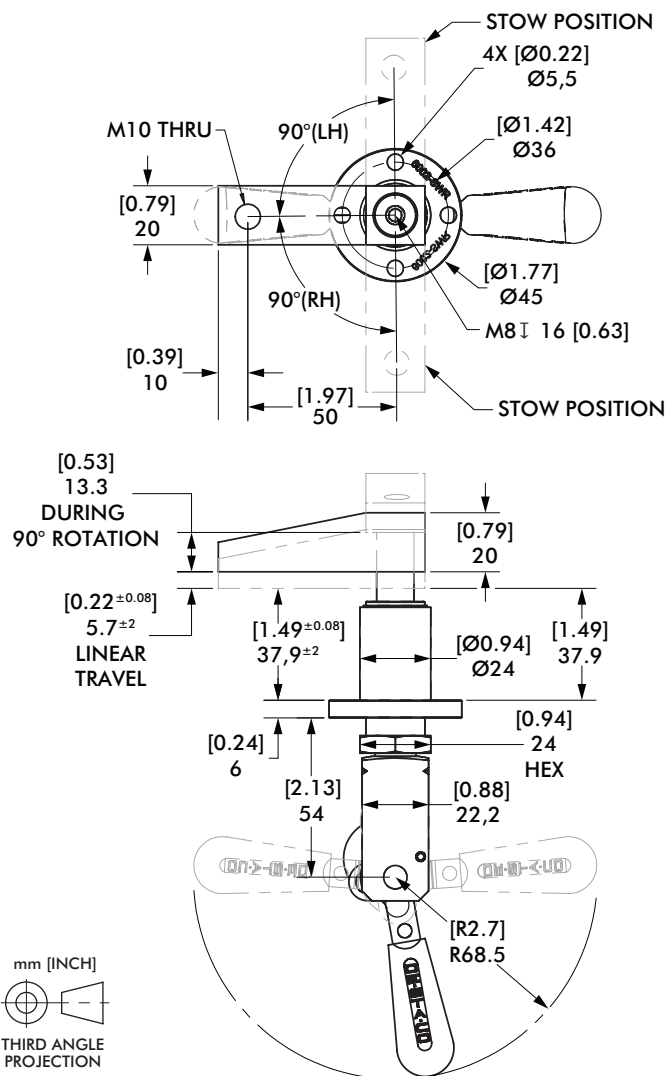
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6002-SWL/SWR



6002-SWL

6002-SWR

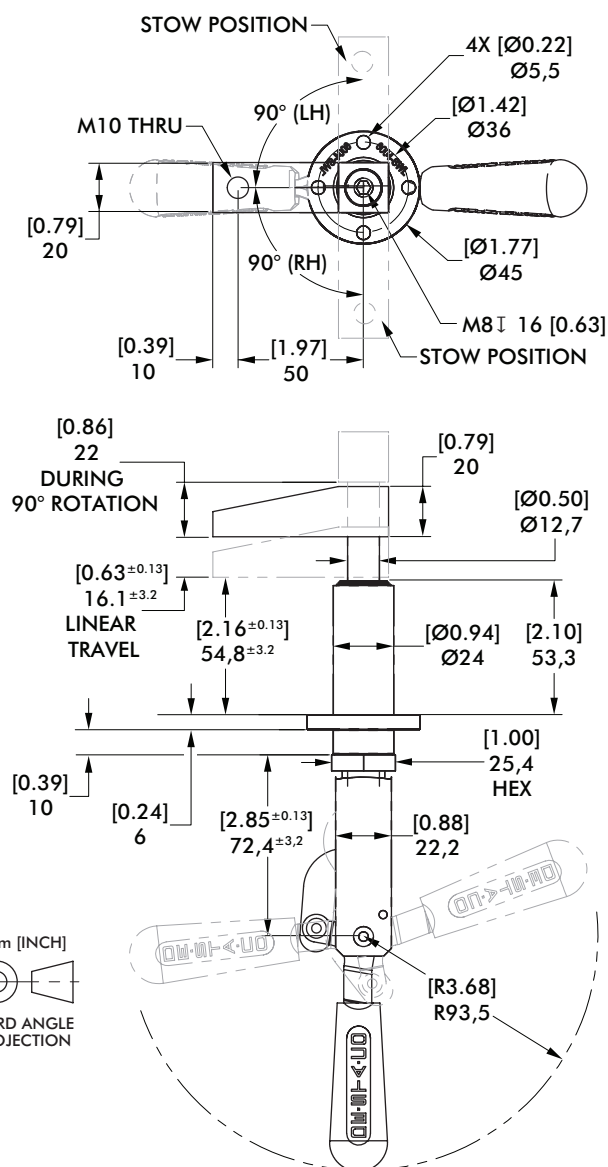


6004-SWL/SWR



6004-SWL

6004-SWR



Applied Force (on handle)	[lbs] N	[25] 111	[20] 89	[15] 67	[10] 44
Plunger Pull Force (straight pull)		[360] 1601	[288] 1281	[216] 961	[144] 641
Clamp Force (with arm shown below)		[229] 1019	[189] 841	[149] 663	[108] 480

Applied Force (on handle)	[lbs] N	[40] 178	[30] 133	[20] 89	[10] 44
Plunger Pull Force (straight pull)		[576] 2562	[432] 1922	[288] 1281	[144] 641
Clamp Force (with arm shown below)		[323] 1437	[269] 1197	[189] 841	[108] 480

Higher clamping forces than pneumatic version

PNEUMATIC POWER CYLINDERS

Features

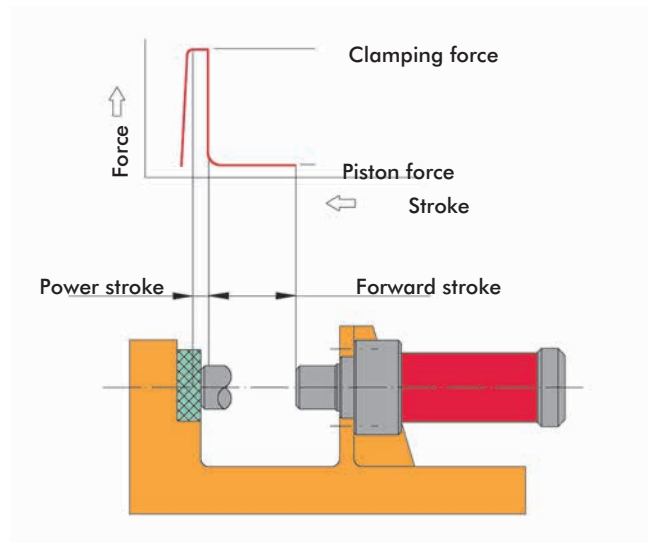
Your requirements

Power element of machines, tools and devices for the following applications:

- Clamping
- Coining
- Punching
- Riveting
- Stamping
- Pressing
- Notching
- Clinching

The solution

DESTACO's double acting power cylinder, which is based on the wedge lever principle.



Product features

- Mechanical advantage: 10:1
- Characteristic are the two steps of stroke: the forward stroke to move a certain distance and the power stroke with an amplified force on a short distance
- Exact positioning of cylinder by flange mount on cylinder's head
- Cylinder works in any position
- High durability because of solid and maintenance free wedge lever mechanics.
- End position control by magnetic field sensing

Technical Data

Power forces at 6 bar	4 – 60 kN
Forward strokes	15 – 200 mm
Power strokes	6 and 7 mm*
Air pressure	max. 6 bar, min 3 bar
Mechanical advantage	max. 10:1
Cylinders require clean, water- and oil free air	

*power strokes up to max. 12 mm upon request

Round design: Type K and WK

- Piston rod with male thread (Type K) or ISO fit (Type WK)



Rectangular design: Type WR

- Two piston rods prevent twisting

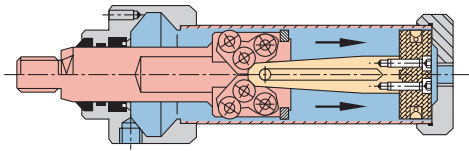


Application Recommendations

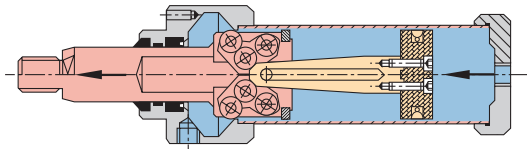
- Compressed air should be treated by filter, water separator and pressure regulator. Oiler is not allowed!
- For an adequate piston speed air hoses with 6mm I.D. should be used.
- Do not increase the max. air pressure of 6 bar, because this would reduce the cylinder's life cycle considerably.
- The piston rods of type K and WK are not secured against twisting, an external device should be provided.
- Piston rod should not be subjected to transversal forces. Force should always be exerted by coaxial force through the piston rod to the work piece.
- For Type WR, force must be transmitted via the centre of the pressure plate.
- Connection between rod and tool should be performed as frictional connection (coupling), not as form fitting connection.
- For punching operations we recommend a force reserve of approx. 30 %.
- If the cylinder is used for positioning in the extended rod position you should consider that a possible counter-force will cause an axial deflection of approx. 1 mm. This feature is due to the cylinder's design because after the nominal power stroke the clamping force drops down to the level of the piston force (see force-stroke diagram left side).
- Valves are not usable to avoid piston movement. If the piston should be positioned within the range of the forward stroke, both chambers of the cylinder have to be vented. If the cylinder should stay at a retracted position the piston rod chamber should be under pressure and the piston chamber should be vented.
- For further facts and additional applications features see operating instruction MAPnkz-2.

PNEUMATIC POWER CYLINDERS

Functions

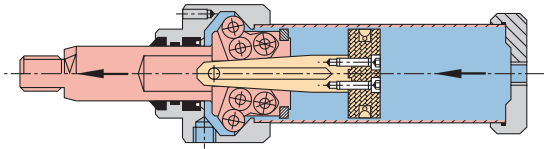


Basic position



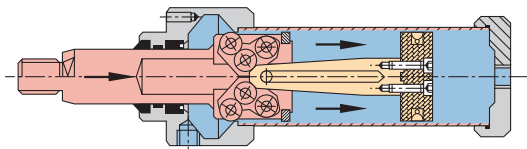
Forward stroke

Piston force is identical to the force of a common pneumatic cylinder with adequate piston diameter



Power stroke

Beginning of mechanical force amplification.
Mechanical advantage max. 10:1

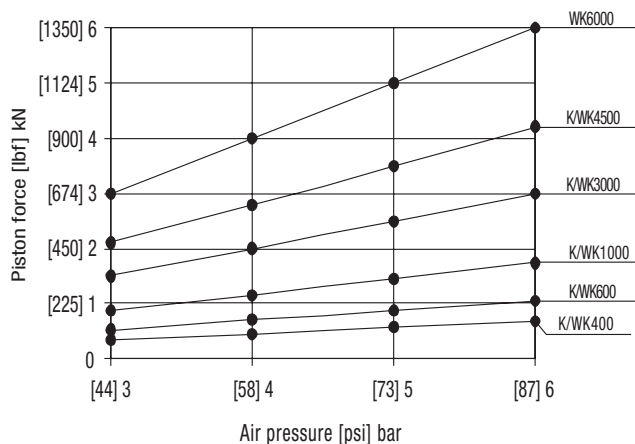


Return stroke

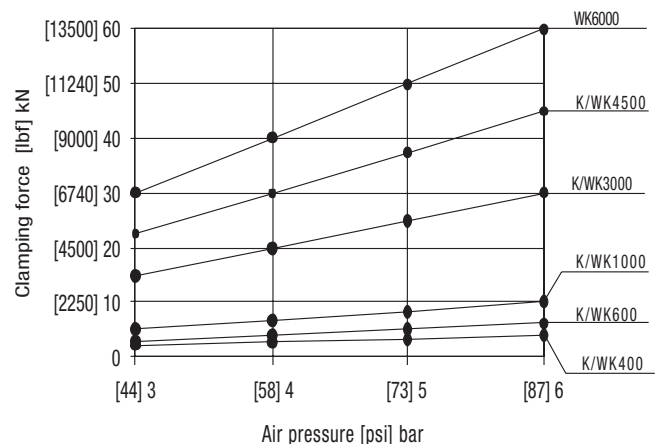
The return stroke can be initiated in any position of piston. The force during return stroke is approx. half of piston force.

Forces

Force within forward stroke



Clamping force within power stroke



Return stroke force: half of piston force