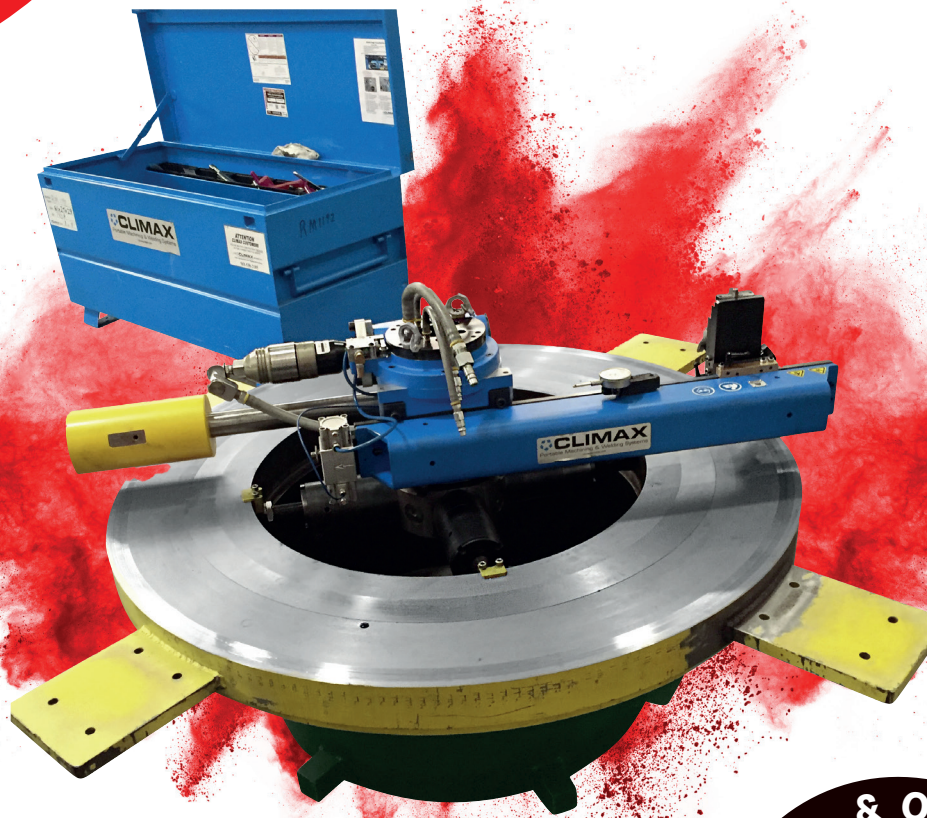


NOVUS



CLIMAX
AN OOO GROUP BRAND



CLIMAX portable machines

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Introduction to Climax

CLIMAX pioneered the portable machining revolution in 1966 and has ever since been the technology leader in the industries it serves. CLIMAX entails an unrivalled suite of equipment and end-to-end solutions for mission-critical manufacturing and repair work in a wide variety of industries, including Oil and Gas, Mining and Heavy Construction, Power Generation, Ship Building and Repair, Aerospace and Defence, and many others.

The product portfolio consists of the best-in-class, versatile and unbeaten line boring equipment and bore welders, as well as the most complete range of ID and OD mount flange facing machines. Next to that also portable lathes and linear / gantry and circular milling machines are well represented in the global rental fleet.

The combination of all these machines, their accessories and specific tooling, supported by first-class and accredited training support, allow end users to work on a sheer indefinite amount of widely varying applications.

Index

Line boring equipment	3
Bore welding machines	4
ID mount flange facers	5
OD mount flange facers	6
ODF speed facers™	7
Milling machines	8
Key mills	9
Portable lathes	10
CM6200 circular mill	11

Line Boring Equipment

The CLIMAX line boring machines support boring diameters from 1.375 to 80 inches (35 to 2,030 mm), with the precision and speed of stationary machines. Specially designed mounting brackets, spherical bearings, self-centering setup cones, and movable rotational drive and feed units simplify setup and allow the tools to work in spaces too tight for most line boring machines.

All models feature rugged rotational drive and axial feed systems, precision bars and heavy-duty bearings, with electric, pneumatic and hydraulic options. All BB-models have the ability to share the same mounting system with Auto Bore Welding Systems for single-setup machining and welding.



Type	Bar diameter		Boring diameter		Maximum stroke		Torque @ BAR		Power*
BB3000	1,25"	31,8 mm	1,5 - 5"	38,1 - 127 mm	10"	254 mm	40 ft-lb	54,2 Nm	E
BB4500	1,75 or optional 1,25"	44,5 or optional 31,8 mm	1,5 - 10"	38,1 - 254 mm	36"	914,4 mm	417 ft-lb	565,4 Nm	E, P, H
BB5000	2,25 or optional 1,25 & 1,75"	57,2 or optional 31,8 & 44,5 mm	1,5 - 24"	38,1 - 609,6 mm	36"	91,4 mm	417 ft-lb	565,4 Nm	E, P, H, S
BB6100	3,5"	88,9 mm	8,8 - 40,8"	223,5 - 1.036,3 mm	Length of bar		470 - 1.820 ft-lb	637,2 - 2.467 Nm	H
BB7100	5"	127 mm	10,25 - 8,25"	260,4 - 1.036,3 mm	Length of bar		750 - 2.900 ft-lb	1.020 - 3.930 Nm	H
BB8100	8"	203,2 mm	17,1 - 85,6"	434,3 - 2.174,2 mm	Length of bar		3.350 - 6.068 ft-lb	4.542 - 8.227 Nm	H

* (E)lectric, (P)neumatic, (H)draulic, (S)ervo Electric.

Bore Welding Machines

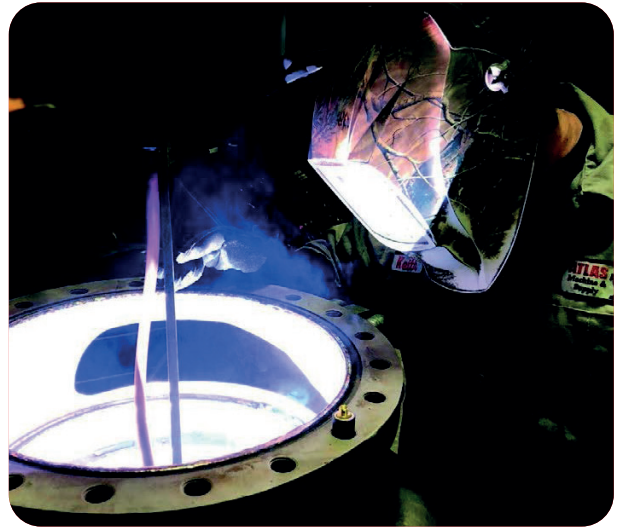
The CLIMAX automated welding systems are portable and can be used in both field and shop repairs. The automated welding systems are designed to attach directly to several CLIMAX line boring machine mounting fixtures, allowing a single setup for both welding and machining operations, giving the operator the ability to weld one bore while machining another!

ONE SETUP FOR BOTH WELDING AND BORING

Ensures perfect alignment for both welding and machining. One setup for both welding and boring saves time, and helps you get your job done quickly.

WELD AND BORE AT THE SAME TIME

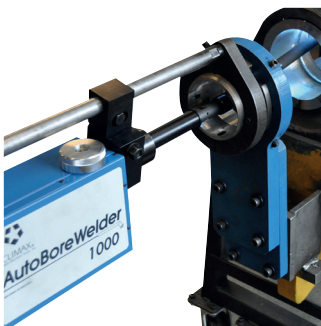
Because the Auto Bore Welder uses the same mounting fixtures as the CLIMAX BB3000, BB4500 or BB5000 Boring Systems, you can weld up one section of your job and bore out another section at the same time. Simply use an extra set of bearing mounts to line bore one set of bores while bore welding another... cuts your work time!



HIGH QUALITY AND PRECISION

Arc interrupt, contactor control, gas purge, and extended utilization of Auto-Skip function are also performed from the control. Adjustable coarse/fine resolution of the step size, rotation speed and wire speed controls for maximum operator convenience. Auto-Stop allows the operator to automatically shut down the machine at the end of the bore.

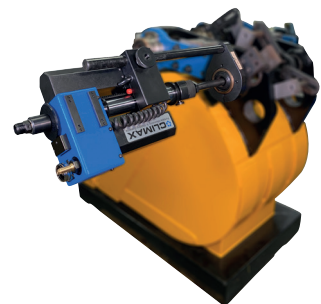
Type	Axial travel		Wire diameter range		Step range and pitch	Rotational-direction	Auto-skip	Maximum torch range	
BW1000	9"	228,6 mm	0,030 - 0,045"	0,76 - 1,14 mm	Pitch: 0,125" 3,2 mm helical	Clockwise rotation	No	0,88 - 24"	22,4 - 609,4 mm
BW2600	9"	228,6 mm	0,030 - 0,045"	0,76 - 1,14 mm	Step range: 0,050 - 0,175" / 1,27 - 4,45 mm/rev	Reversible	Skip & fill	0,88 - 12"	22,4 - 304,8 mm
BW3000	6 or 12"	152,4 or 304,8 mm	0,023 - 0,045"	0,58 - 1,14 mm	Step range: 0,040 - 0,220" / 1,0 - 5,6 mm	Reversible	Auto skip, pie mode & carriage return	0,50 - 54"	12,7 - 1.371,6 mm



BW1000



BW2600



BW3000

ID Mount Flange Facers

CLIMAX offers a wide variety of rugged and innovative ID Mount Flange Facers covering from 0.75 to 120 inch (19.1 to 3,050 mm) diameters.

Several of these machines can be configured for (re-)facing and milling or both. Other applications are bevelling, squaring, counter boring, or cut end-prep configurations for welding.

For easy setup, smaller units use an integral mandrel to quickly lock into place, while the larger units can be installed with a separate mount or chuck to which the facer body is installed.



Type	Facing diameter (Ø)		Feed rate		ID Mounting diameter		Power
FF3000	1,5 - 12"	38,1 - 304,8 mm	0 - 0,025"/rev	0 - 0,635 mm/rev	1,5 - 6,75"	38,1 - 171,5 mm	Pneumatic
FF4000	3 - 19"	76,2 - 482,6 mm	0 - 0,025"/rev	0 - 0,635 mm/rev	3 - 12,5"	76,2 - 317,5 mm	Pneumatic

Type	Facing diameter (Ø)		Milling diameter (ID Mount)	ID Mounting diameter		OD Mounting diameter		Minimum swing diameter		
FF5000	5 - 24"	127 - 609,6 mm	Single point only	5 - 18"	88,9 - 457,2 mm	ID mount only		19"	482,6 mm	
FF5300	5,7 - 32"	144,8 - 812,8 mm	Single point only	5,7 - 35,8"	144,8 - 909,3 mm	ID mount only		22,75"	577,9 mm	
FF5300*	5,7 - 40"	144,8 - 1.016 mm	Single point only	5,7 - 35,8"	144,8 - 909,3 mm	ID mount only		26,25"	666,8 mm	
FF6300	11,8 - 60"	299,7 - 1.524,0 mm	Single point only	11,8 - 57,5"	299,7 - 1.460,5 mm	38,1 - 63,8"	967,7 - 1.620,5 mm	39,4"	1.000,8 mm	
FF7200	30 - 72"	762 - 1.828,8 mm	35 - 72"	889 - 1.828,8 mm	30 - 72"	762 - 1.828,8 mm	ID mount only		55,8"	1.417,3 mm
FF8200	45 - 120"	1.143 - 3.048,0 mm	45 - 120"	1.143 - 3.048 mm	45 - 120"	1.143 - 3.048 mm	89,8 - 136,4"	2.280,9 - 3.464,6 mm	84,7"	2.151,4 mm

* with extended arm



FF3000



FF4000



FF5000

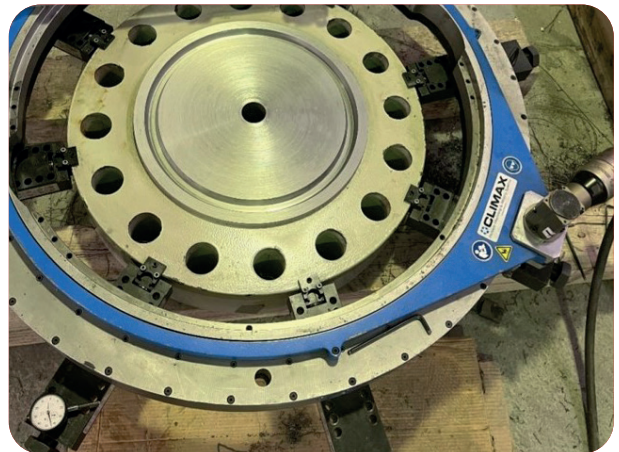
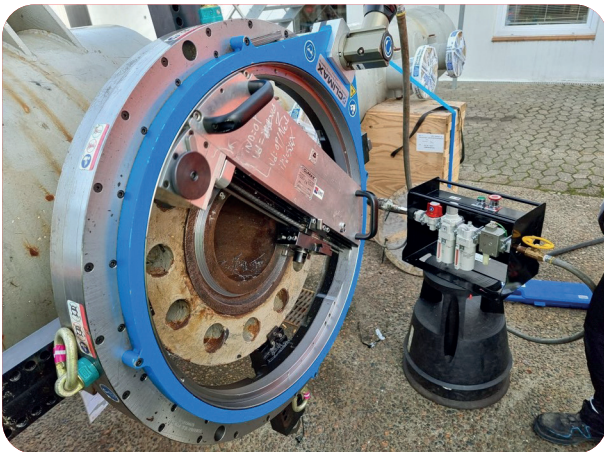


FF5300

OD Mount Flange Facers

With various models of OD Mount Flange Facers to reface, mill, bevel, square, counter bore or cut end prep configurations for welding, CLIMAX offers a solid portfolio of portable solutions covering 0 to 120 inch (0 to 3,050 mm) in diameter.

For easy setup, larger units can be installed with a separate mount or chuck to which the facer body is installed.



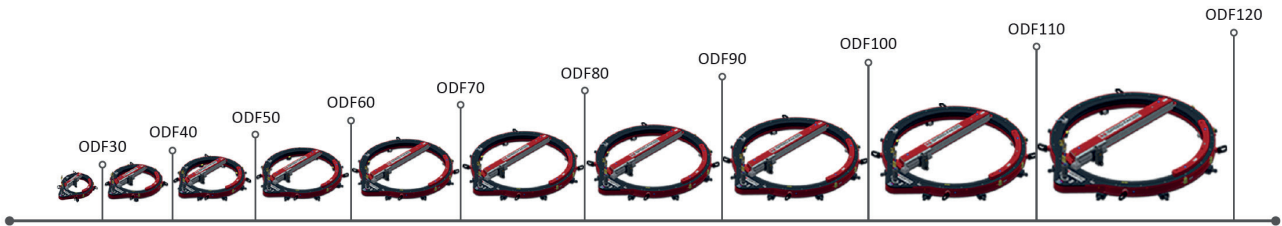
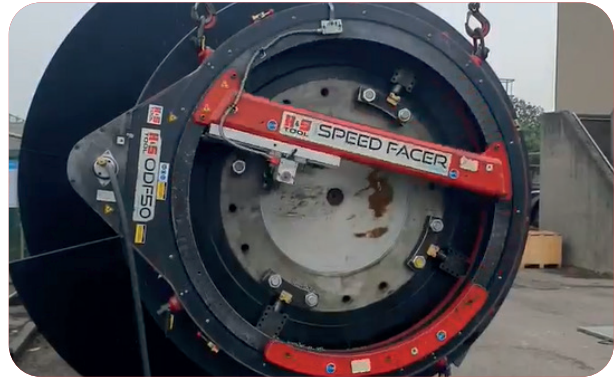
Type	Facing diameter		Feed rate		OD Mounting diameter		Power
FF1200	0 - 12,5"	0 - 318 mm	0 - 0,035"/rev	0 - 0,889 mm/rev	2 - 14"	50,8 - 355,6 mm	Pneumatic
FF2400	0 - 24,5"	0 - 622 mm	0 - 0,035"/rev	0 - 0,889 mm/rev	8 - 26"	203,2 - 660,4 mm	Pneumatic
FF3600	0 - 36,5"	0 - 927 mm	0 - 0,35"/rev	0 - 0,889 mm/rev	20 - 38"	508 - 965,2 mm	Pneumatic

ODF Speed Facers™

The CLIMAX Speed Facer family is designed with safety and productivity enhancing features that make it stand out its field of applications

The remote feed control and auto-feed system allows for hands-free machining, keeping operators hands away from moving parts. The customized setup fingers and levelling feet allow the operator to easily set up the machine making it possible to go from crate-to-cut in 15 minutes or less.

With infinitely variable feed rates and the ability to rotate the tool head and bits 360°, the CLIMAX Speed Facer range has increased flexibility for higher metal removal, variable surface finishes, and the ability to create a variety of cuts.



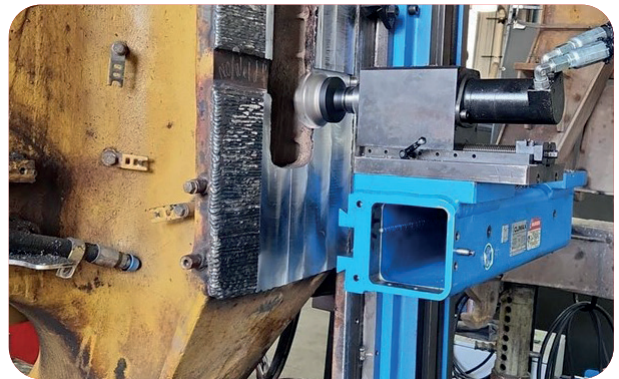
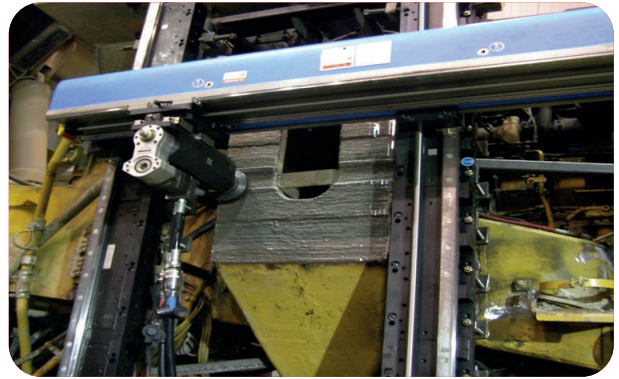
Type	Facing diameter (Ø)		Feed rate		OD Mounting diameter		Power
ODF30	0 - 30,5"	0 - 775 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	9,2 - 30,5"	234 - 775 mm	Pneumatic & Hydraulic
ODF40	0 - 40,5"	0 - 1.029 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	19,2 - 40,5"	488 - 1.029 mm	Pneumatic & Hydraulic
ODF50	0 - 50,5"	0 - 1.283 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	29,2 - 50,5"	742 - 1.283 mm	Pneumatic & Hydraulic
ODF60	0 - 60,5"	0 - 1.537 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	39,2 - 60,5"	996 - 1.537 mm	Pneumatic & Hydraulic
ODF70	0 - 70,5"	0 - 1.791 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	49,2 - 70,5"	1.250 - 1.791 mm	Pneumatic & Hydraulic
ODF80	0 - 80,5"	0 - 2.045 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	59,5 - 80,5"	1.504 - 2.045 mm	Pneumatic & Hydraulic
ODF90	0 - 90,5"	0 - 2.299 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	69,2 - 90,5"	1.758 - 2.299 mm	Pneumatic & Hydraulic
ODF100	0 - 100,5"	0 - 2.553 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	79,2 - 100,5"	2.012 - 2.553 mm	Pneumatic & Hydraulic
ODF110	0 - 110,5"	0 - 2.807 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	89,2 - 110,5"	2.266 - 2.807 mm	Pneumatic & Hydraulic
ODF120	0 - 120,5"	0 - 3.061 mm	0,001 - 0,032"/rev	0,025 - 0,813 mm/rev	99,2 - 120,5"	2.520 - 3.061 mm	Pneumatic & Hydraulic

Milling Machines

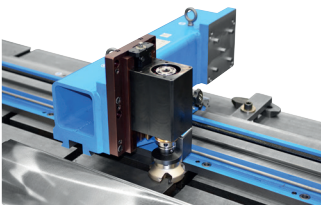
Wherever equipment repair applications involve milling critical mounting surfaces, CLIMAX offers a precision machine that can be perfectly configured to fit.

The portable three-axis milling machine family starts with the PM4200 – a versatile model with available bed options of 20, 49 or 78 inches (508, 1,244.6 and 1,981.2 mm) of travel.

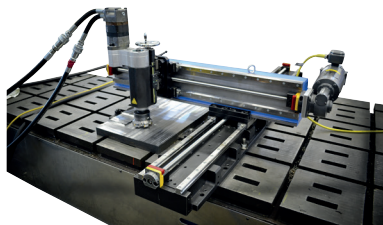
The largest mill, the LM6200, features the ability to configure for linear and gantry milling, with up to 176 inches (4,470.4 mm) of x-axis travel and 106 inches (2,692.4 mm) of y-axis travel. There is plenty of spindle torque for fast metal removal and the capacity to mill in nearly any position.



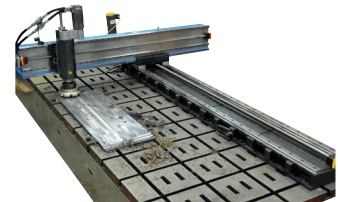
Type	X-axis travel		Y-axis travel		Maximum vertical travel		Spindle size	Power
PM4200	20, 49 or 78"	508,0, 1.244,6 or 1.981,2 mm	8" / 203,2 mm with weldon 12" / 304,8 mm with HSK		3" / 76,2 mm with weldon spindle 4" / 101,6 mm with HSK spindle		0,75" / 19,1 mm weldon, 40A (HSK)	Electric, Pneumatic, or Hydraulic
LM5200	36, 60 or 84"	914,4, 1.524 or 2.133,6 mm	16 or 34"	406,4 or 863,6 mm	4"	101,6 mm	40 NMTB/CAT 40 Milling cutter diameter: 4 - 6" / 101 - 152 mm	Hydraulic
LM6200	32, 56, 80, 128, 152 or 176"	812,8, 1.422,4, 2.032, 2.641,6, 3.251,2, 3.860,8 or 4.470,4 mm	26, 38, 72 or 106"	660,4, 965,2, 1.828,8 or 2.692,4 mm	8"	203,2 mm	40 NMTB/CAT 40 Milling cutter diameter: 4 - 10" / 101 - 254 mm	Hydraulic



PM4200



LM5200



LM6200

Key Mills

A compact, rugged, portable milling machine, the Portable Key Mill is designed to cut extra wide keyways, stress relief pockets, motor mount slots, and more.

These two-axis and three-axis mills cut keyways, slots, pockets, or flats on shaft diameters of 1.5 to 24 inches (38 to 610 mm). They can be operated in any position, thanks to their sealed gear box lubrication.

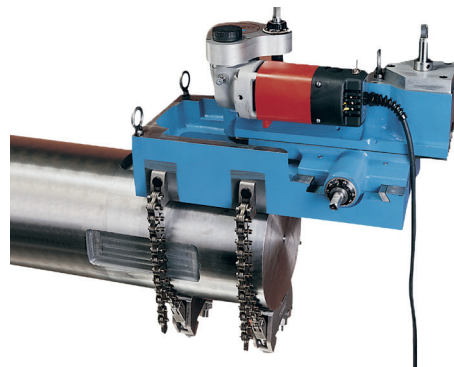


Type	Keyway length		Keyway width		Shaft diameter		Spindle diameter		Power*
KM3000	6"	152,4 mm	1,25"	31,8 mm	0,75 - 10,5"	19,1 - 266,7 mm	0,625"	15,9 mm	E, P, H
KM4000	8"	203,2 mm	3,25" with 2" sideshift	82,6 mm with 50,8 mm sideshift	4 - 24"	101,6 - 609,6 mm	Inch: 0,75" / 19 mm Metric: 0,79" / 20 mm		E, P, H

* (E)lectric, (P)neumatic, (H)draulic



KM3000



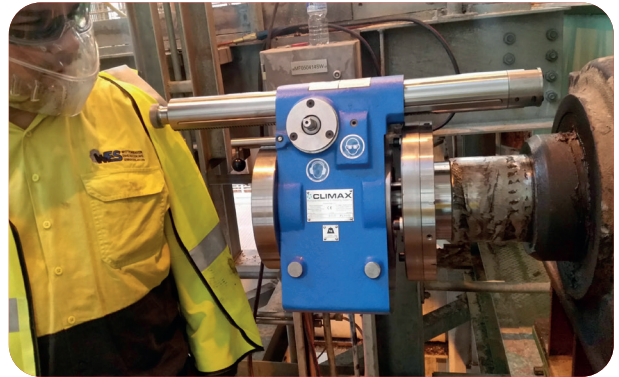
KM4000

Portable Lathes

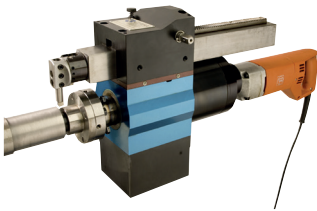
Whether cutting O-ring grooves, repairing turbine spindles, or fixing an out-of-round gear seat area on the shaft of a high-speed production machine.

The CLIMAX lathes bolt onto the end of a shaft to re-turn shafts and roll journals from 1.5 inches to 24 inches (38 to 610 mm). Some models can work in quarters as tight as 7 inches (177.8 mm) of radial clearance, while the PL4000 has the ability to machine a tapered shaft.

Pneumatic power is standard, with optional electric power available on several models.



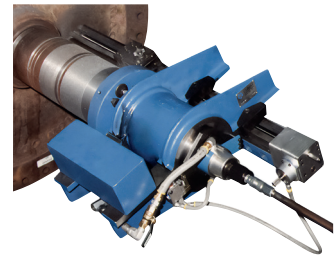
Type	Maximum turning reach		Shaft diameter		CUTTER	POWER
PL2000	12,5"	317,5mm	1,5 - 9"	38,1 - 228,6 mm	1/2" / 12,7 mm HSS round lathe tool bit	Electric or Pneumatic
PL3000	22"	558,8 mm	4 - 11"	101,6 - 279,4 mm	3/8" / 10 mm lathe tool bit	Electric or Pneumatic
PL4000	27"	685,8 mm	8 - 24"	203,2 - 609,6 mm	1/2" / 12,7 mm square lathe tool bit	Electric or Pneumatic



PL2000



PL3000



PL4000

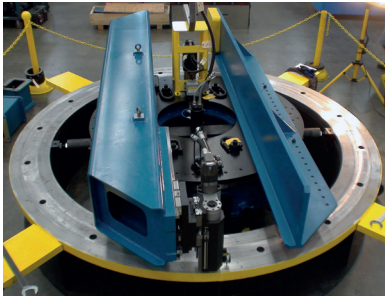
CM6200 Circular Mill

For machining large flanges 73.5 – 199 inches (1,866.9 – 5,054.6 mm) in diameter and featuring a centre machine clearance designed to fit over 24 inches (609.6 mm) diameter kingpins, this Circular Mill can be configured for powerful milling, single-point machining, and grinding operations.

Extraordinary rigidity, versatility, and power are at your fingertips - this machine can handle the toughest large flange machining jobs quickly and efficiently. For smaller ranges view the FF7200 or FF8200 Flange Facers.



Type	Facing diameter (Ø)		Milling diameter (ID Mount)		ID Mounting diameter		OD Mounting diameter		Minimum swing diameter		POWER
	69,5 - 189"	1.765,3 - 4.800,6 mm	73,5 - 199"	1.866,9 - 5.054,6 mm	45 - 120"	1.143 - 3.048 mm	98,4 - 209,9"	2.499,4 - 5.331,5 mm	135,6"	2.444,2 mm	
CM6200	69,5 - 189"	1.765,3 - 4.800,6 mm	73,5 - 199"	1.866,9 - 5.054,6 mm	45 - 120"	1.143 - 3.048 mm	98,4 - 209,9"	2.499,4 - 5.331,5 mm	135,6"	2.444,2 mm	Electric Servo



CM6200

NOVUS

Our certifications:



- 📍 **NOVUS Special Tools bv**
Van Coulsterweg 1F
2952 CB Alblasterdam (NL)
- ☎ +31 (0)88 20 40 200
- ✉ info@novus-bv.com
- 🌐 www.novus-bv.com