

**Equipment Rental Division**

**Flange Facing Machines**

*Flange facing machines are used to recondition both raised and flat surface flanges. We have a fleet of Bore-Mount and OD-Mount flange facing machines that produce fine surface finishing.*



Alstern Technologies provide flange facing machines from H&S Tools and D.L. Ricci for rental. These portable and powerful flange facing machines are ideal for use in the shop or in the field for flange reconditioning of both raised and flat surface flanges. The broad working range of the flange facing equipment allows the operator to resurface and recondition the bolt pattern with the flange facer. Each flange facer model can be adjusted to produce a surface finish from 63 to 500 rms.

One person can set up and operate the flange facing equipment. Precision elbow mandrels are easily installed with centering and squaring guides to assure accuracy. Elbow mandrels are designed to lock the tool securely internally even in short radius elbows.

**BORE MOUNT FLANGE FACING MACHINE SELECTION GUIDE**

Model	Make	Range	Speed	Type	Weight	Shipping Weight
<b>MS-F</b>	H&S Tools	22mm – 304mm	50 RPM	Pneumatic	12 kg	50 kg
<b>MT-F</b>	H&S Tools	127mm – 420mm	22 RPM	Pneumatic	16 kg	75 kg
<b>MFT-F</b>	H&S Tools	127mm – 508mm	18 RPM	Pneumatic	24 kg	100 kg
<b>FF 5000</b>	FMT	130mm – 750mm		Pneumatic	27 kg	120 kg
<b>FF 5500</b>	FMT	152mm – 1200mm		Pneumatic	45 kg	250 kg
<b>FF 6000</b>	FMT	356mm – 1066mm 813mm – 1524mm	Variable	Pneumatic	189 kg	290 kg



**Model MS-F**



**Model MT-F**



**Model MFT-F**



**Model FF 5000**



**Model FF 5500**



**Model FF 6000**

**Equipment Rental Division – Flange Facing Machines (Bore Mount)**

**FF 5000 Bore Mount Flange Facing Machine**



Range	130mm to 750mm dia.
Mounting	130mm (min) / 680mm (max)
Facing	170mm (min) / 750mm (max)
Air required	620kPa (90 psi)
Shipping Weight	120 kg
Shipping Dimension	1200 x 200 x 400 (mm)

**Lightweight**

- Machine body weighs 27kg (60 lbs.)
- Smallest mounting chuck weighs 2.2kg (5 lbs.)

**Quick & Easy Setup**

- Separate mounting chuck
- All centering & levelling done right on chuck

**Low Profile**

- Right angle motor mount
- Machine extends only 193mm (7.6") above flange

**Simplified Operation**

- Single selector for bidirectional, radial or downfeed
- One wrench for clamping jaws and body draw bolt

**Quiet**

- Exhaust air is routed through body of machine for muffling

**Safe Operation**

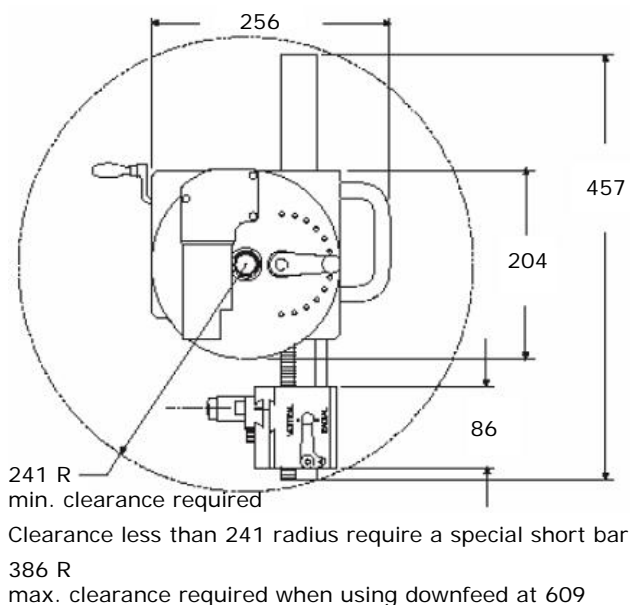
- Stationary feed rate selector
- Machine is controlled without touching any moving parts

**Easy Mounting/ Dismounting**

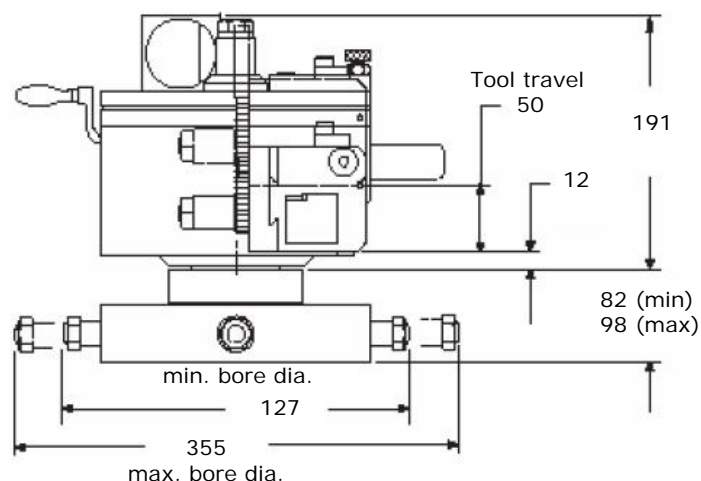
- Loosen one bolt and machine can be removed from chuck without disturbing alignment

**Cuts Chamfers & Groves**

- Compound tool head & downfeed for cutting angles and groves



**Overhead View**



**Side View**

All measurements in mm

## Equipment Rental Division – Flange Facing Machines (Bore Mount)

### Set-Up of Model FF 5000 Flange Facer is Quick and Easy

Experience operators can have this machine mounted, aligned and ready to cut in about 15 minutes (depending on site conditions). Lightweight, alignable mounting chucks eliminate many problems associated with other portable flange facers.



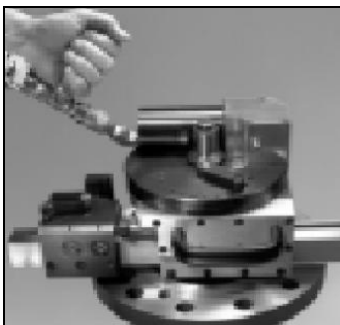
#### **Step 1**

With the proper set of jaws inserted, place the mounting check into the flange bore resting on the setup bars. Snug the jaws up to hold the chuck in place.



#### **Step 2**

Use the special indicator accessory to center the chuck in the bore, then tighten the jaws securely. Align the chuck for flatness across the flange by adjusting the levelling screws.



#### **Step 3**

Attach the machine body with one draw bolt. The machine may be removed and replaced if necessary without disturbing the alignment.

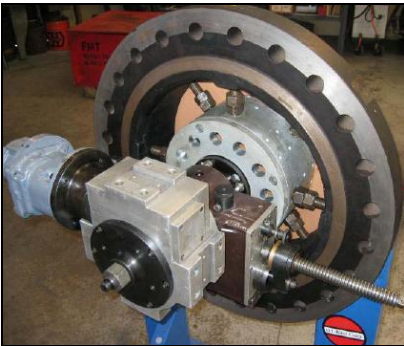


#### **Step 4**

Position the tool head with hand crank so the cutter is at the desired starting point. The Model FF5000 Flange Facer is ready to run.

**Equipment Rental Division – Flange Facing Machines (Bore Mount)**

**FF 5500 Bore Mount Flange Facing Machine**



Range	152mm to 1200mm dia.
Mounting	152mm (min) / 1000mm (max)
Facing	180mm (min) / 1200mm (max)
Air required	620kPa (90 psi) @ 100cfm
Shipping Weight	250 kg
Shipping Dimension	1000 x 900 x 650 (mm)

**Set-Up of Model FF 5500 Flange Facer**



**Step 1**

Choose one of two mounting chucks provided:

[1] 150mm diameter mounting chuck (bore ID 170mm to 400mm).

[2] 300mm diameter mounting chuck (bore ID 400mm to 1200mm).

Diagram shows 300mm diameter mounting chuck with short jack-bolts and optional lock nuts.

Choose long or short jack-bolts provided. Install short thread section into chuck and tighten with long thread exposed. Jack bolt will be fixed. The adjustment is made with the extension jaws (not shown) threaded onto the jack bolt.

Note: Bores under 500mm diameter will not allow use of the extension jaws. Install short jack bolts with long thread into chuck.



**Step 2**

[1] Use extension leg plates for bores over 400mm diameter.

[2] Fit the alignment spider to the chuck face. Use the alignment spider to install the mounting chuck at the correct depth and flatness to the gasket surface.

[3] Use the rule provided to measure the concentricity. Use coarse adjustments to move the chuck concentric to the bore.



**Step 3**

[1] Remove the alignment spider.

[2] Install the indicator bearing-post to the chuck face.

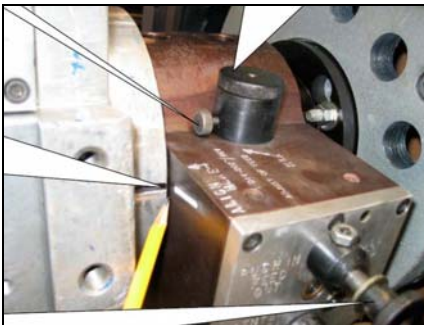
[3] Attach the dial indicator to the bearing-post provided and indicate the gasket face. Adjust the jack-bolts or extension legs to establish flatness to the flange face or gasket surface.

**Equipment Rental Division – Flange Facing Machines (Bore Mount)**



**Step 4**

- [1] Lift the flange facer with sling provided and bolt it to the chuck face.



**Step 5**

- [1] Turn the top feed knob clockwise to increase feed rate. Each increment on the feed knob equals 0.03" per revolution.
- [2] Align the marks on rotation unit and facer body to adjust feed rate. There are 4 alignment locations on the facer body.
- [3] Push/ pull side rotation knob to shift feed.  
In position – Feed Out  
Centre position – Neutral  
Out position – Feed In



**Step 6**

- [1] Use sling provided to place facer in locker position. Position facing bar retracted as shown for best balance.

**Equipment Rental Division – Flange Facing Machines (Bore Mount)**

**FF 6000 Bore Mount Flange Facing Machine**



Range	356mm to 1524mm dia.
Mounting (Std)	356mm (min) / 863mm (max)
Mounting (Option)	813mm (min) / 1524mm (max)
Facing (Std)	356mm (min) / 1066mm (max)
Facing (Option)	813mm (min) / 1524mm (max)
Air required	620kPa (90 psi) @ 100cfm
Shipping Weight	290 kg
Shipping Dim.	1220 x 660 x 685 (mm)

**Solid**

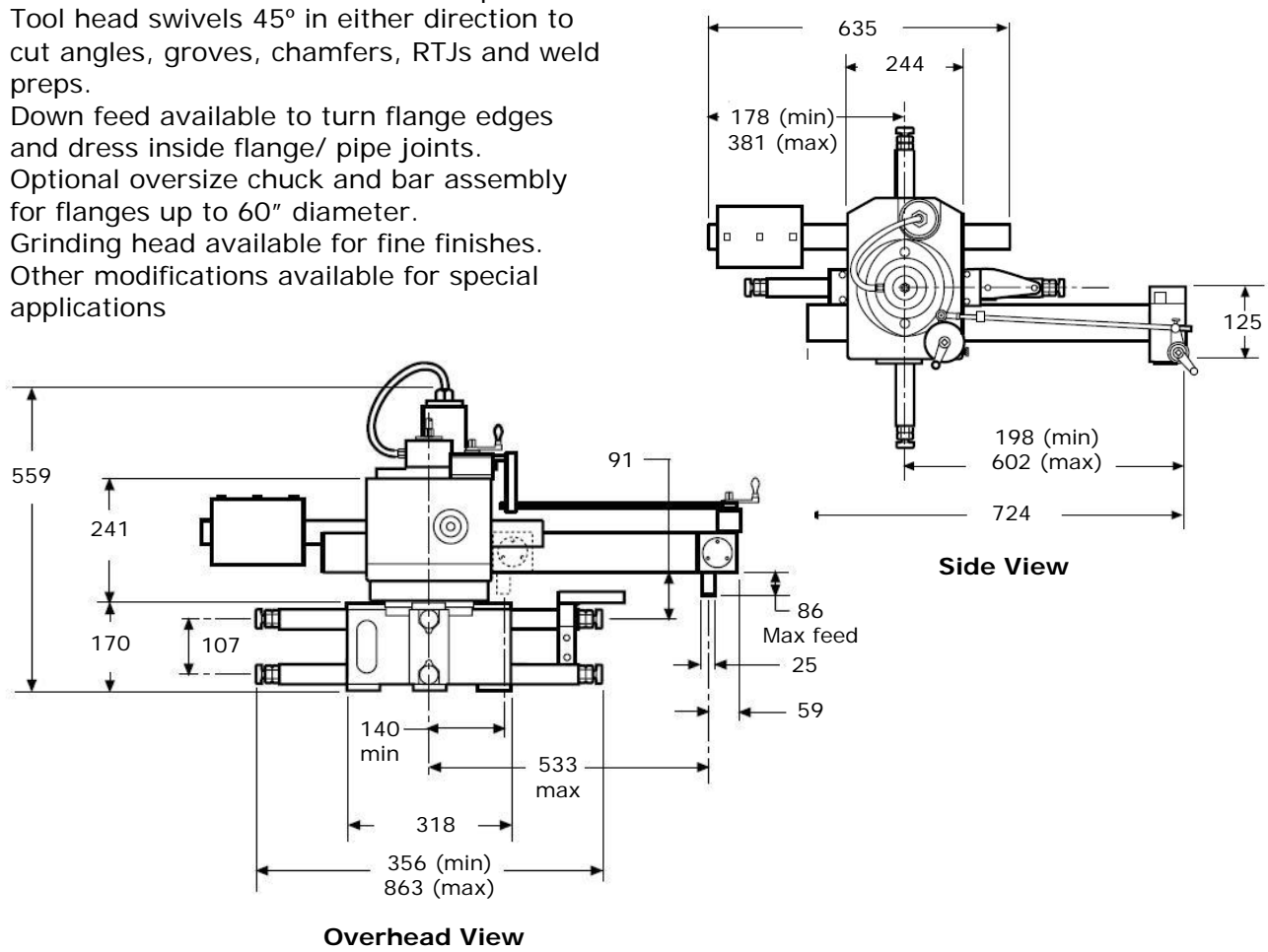
- 8-jaw chuck provides rigid clamping in the bore.
- 76mm (3") diameter turning bar ensures a rigid tool platform, even at maximum extension.
- Tapered Timken spindle bearings and heavy duty bearings for smooth, chatter-free machining.

**Versatile**

- Sealed lubrication allows inverted operation.
- Tool head swivels 45° in either direction to cut angles, groves, chamfers, RTJs and weld preps.
- Down feed available to turn flange edges and dress inside flange/ pipe joints.
- Optional oversize chuck and bar assembly for flanges up to 60" diameter.
- Grinding head available for fine finishes.
- Other modifications available for special applications

**Effective**

- Gear reduction provides 798 Nm (550 ft.lbs) of torque at the cutter to remove metal fast.
- Radial feed is 0.076mm to 0.813mm (0.003" to 0.032") per revolution, infinitely variable, reversible, rack & pinion system.
- Down feed rates from 0.076mm to 0.254mm (0.003" to 0.01") per revolution is provided by the down-feed actuator system.
- Tool holder accepts 13mm or 1/2" square tool bits

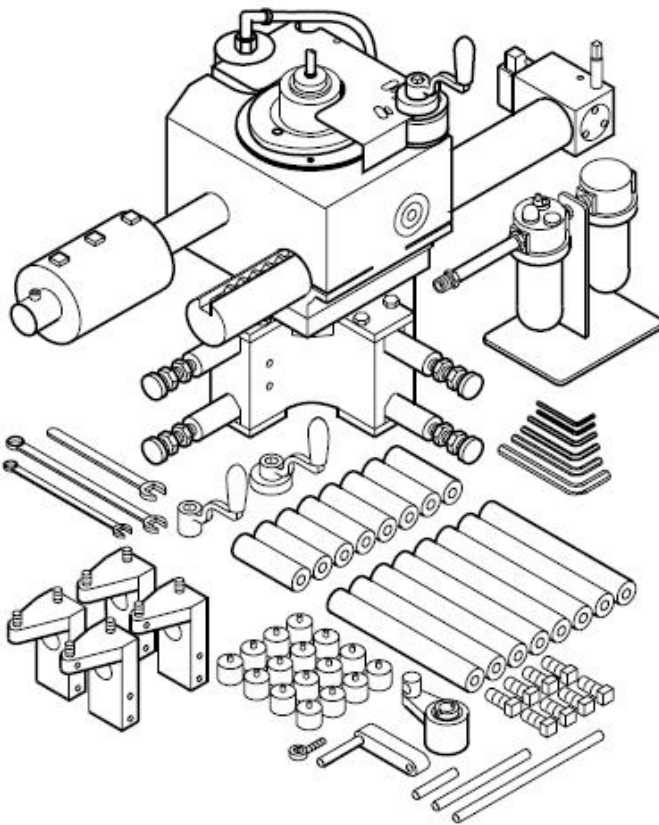


## Equipment Rental Division – Flange Facing Machines (Bore Mount)

The standard and extended-reach FF 6000 comes complete with everything you need to face from 356mm to 1066mm (14" to 42") and from 356mm to 1524mm (14" to 60") respectively. Included is the base machine with air motor, pneumatic conditioning unit, setup fingers and jaws, tool kit, tolling and operators manual. The extended reach FF 6000 comes complete with the above accessories to face.

A cost effective alternative for any company faced with repairing flanges on-site and in-line with the Model FF 6000. Reduce the costs of stocking replacement flanges by repairing existing flanges in place. The job can be performed quickly, so that production downtime can be minimised. An experienced operator can normally mount the machine, align and start cutting in 30 minutes.

### Set-Up of Model FF 6000 Flange Facer



#### **Step 1**

Select the appropriate jaw set for internal diameter that the machine will be chucked into. Set an approximate length of the jaws.

#### **Step 2**

Attach set up fingers to end of jaws (top level only). Place machine in bore and tighten jaws.

#### **Step 3**

Remove set up fingers, indicate machine level by adjusting jaws.

#### **Step 4**

Place tool bit in machine and you are ready to start work!