

# FF Flange Facer



Lathe quality surface finish



Based on powerful SDB end prep platform



Convertible to SDB series end prep

## Fast, Easy Setup - Self-Centering Design

Now anyone can produce a lathe quality surface finish on flat, raised or recessed face flanges in minutes. Based on the powerful Wachs SDB series ID mount end prep machines, the Wachs FF series flange facers offer a rugged yet lightweight and compact design that allows them to fit into tight quarters.

With the addition of the SDB conversion kit, the FF models can be converted into SDB series machines, allowing them to face, bevel, compound bevel and counterbore. Field proven industry workhorses, they are easy to setup with self-centering mandrels and easy to operate.



# FF Flange Facer

Wachs FF series flange facers are based on the powerful and versatile SDB series of bevelers. Simple to operate, they mount to the pipe ID and are self-centering. Specify the SDB conversion kit to add bevel, facing and counterbore capabilities.

- Fast, easy setup – self-centering design
- Simple operation, light-weight and compact
- Record groove, RMS 500, 250, 125
- Converts to SDB beveler series with optional SDB conversion kit

## Model FF 206

Flange facing machine for facing flat, raised or recessed face flanges from ID 2in (50.8mm) through OD 6in (152.4mm) up to a 2in (DN50) 150# flange.

## Model FF 313

Flange facing machine for facing flat, raised or recessed face flanges from ID 3in (76.2mm) through OD 13in (320.2mm) up to a 6in (DN150) 400# flange.

## Model FF 424

Flange facing machine for facing flat, raised or recessed face flanges from ID 4in (101.6mm) through OD 24in (609.6mm)



FF Flange Facer 206



FF Flange Facer 313



FF Flange Facer 424

SPECIFICATIONS	FF 206	FF 313	FF 424
Machine capacity (Pipe ID to OD)	2-6in (50.8-152.4mm)	3-13in (76.2-330.2mm)	4-24in (101.6-609.6mm)
Standard equipment	<ul style="list-style-type: none"> <li>• Heavy duty drive (air or electric)</li> <li>• 3-jaw independent "short perch" mandrel ID 1.95in - 4.11in (49.5-104.4mm)</li> <li>• 7 sets of leg extensions</li> <li>• Single point flange facing tool slide</li> <li>• Tooling package</li> <li>• Watertight storage case</li> <li>• Operating hand tools</li> <li>• Manual</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty drive (air, electric or hydraulic)</li> <li>• 3-jaw independent "short perch" mandrel ID 3in - 10.08in (76.2-256mm)</li> <li>• 18 sets of leg extensions</li> <li>• Single point flange facing tool slide</li> <li>• Tooling package</li> <li>• Watertight storage case</li> <li>• Operating hand tools</li> <li>• Manual</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty drive (air, electric or hydraulic)</li> <li>• 3-jaw independent "short perch" mandrel ID 3.78in - 20in (96-508mm)</li> <li>• 23 sets of leg extensions</li> <li>• Single point flange facing tool slide</li> <li>• Tooling package</li> <li>• Watertight storage case</li> <li>• Operating hand tools</li> <li>• Manual</li> </ul>
Shipping weight*	47lb (21.3kg)	180.8lb (82kg)	
Shipping dimensions* (w/o accessories)	25 x 22 x 9in (635 x 559 x 229mm)	12 x 32 x 12in (305 x 813 x 305mm)	

\*ESTIMATED.

MODEL	DRIVETYPE	PIPE ID TO OD	PART #
FF 206	Pneumatic	2-6in (50.8-152.4mm)	16-000-FF
FF 206	Electric 110 V, 50 Hz	2-6in (50.8-152.4mm)	ON REQUEST
FF 206	Electric 220 V, 50 Hz	2-6in (50.8-152.4mm)	ON REQUEST
FF 313	Pneumatic	3-13in (76.2-330.2mm)	56-000-FF
FF 313	Electric 110 V, 50 Hz	3-13in (76.2-330.2mm)	ON REQUEST
FF 313	Electric 220 V, 50 Hz	3-13in (76.2-330.2mm)	ON REQUEST
FF 313	Hydraulic	3-13in (76.2-330.2mm)	ON REQUEST
FF 424	Pneumatic	4-24in (101.6-609.6mm)	66-000-FF
FF 424	Electric 110 V, 50 Hz	4-24in (101.6-609.6mm)	ON REQUEST
FF 424	Electric 220 V, 50 Hz	4-24in (101.6-609.6mm)	ON REQUEST
FF 424	Hydraulic	4-24in (101.6-609.6mm)	66-000-FH
FF 424	SDB 412/2 + FF 424 (Set)	4-24in (101.6-609.6mm)	66-000-04

## Mandrels & Accessories for SDB 103

DESCRIPTION	PART #
Standard mandrel. For ID 1.16in - 4.18in (29.5-106mm). Without leg extension sets.	16-303-00
Standard mandrel. For ID 1.16in - 4.18in (29.5-106mm). Includes: 7 sets of leg extensions.	16-409-00
3-jaw independent "short perch" mandrel. For ID 1.95in - 4.11in (49.5-104mm). Includes: 7 sets of leg extensions. Minimum .75in straight run required. To rigid mount on fittings, flanges, elbows and valves.	16-414-00
Small ID accessory mandrel. For ID 0.875in - 1.25in (22-31.75mm). Includes: <ul style="list-style-type: none"> <li>• 1 rotating head 3.13in (79.5mm).</li> <li>• 1/4in (4 x 6.35mm) shank style tool slots. 2 sets of leg extensions for ID mounting ranges: 0.875-1.125in (22-28.6mm) and 1- 1.25in (25.4-31.75mm)</li> <li>• 1 mandrel</li> <li>• 1 drawbar nut</li> <li>• 1 drawbar</li> <li>• Fasteners</li> </ul>	16-401-00



SDB 103 / FF 206  
Mandrel Kit

## Mandrels & Accessories for SDB 206

DESCRIPTION	PART #
Standard mandrel "new style 2009" For ID 2.27- 2.92in (58-74mm). Without leg extension sets.	56-430-01
Standard mandrel "new style 2009" For ID 2.27in - 6.77in (58-172mm) Includes: 7 sets of leg extensions.	56-430-00
Standard range leg extension kit For standard mandrel "new style 2009". For ID 2.75in - 6.77in (70-172mm).	56-430-02
Upgrade for obsoleted mandrel. Requires return of the 56-401-010 mandrel to complete the upgrade.  Estimate for upgrade given for customer approval.	56-310-00
Small ID accessory mandrel. For ID 1.91in - 2.46in (48.5-62.5mm).	56-402-01
Extender kit "new style 2009" for mandrel 56-430-00 Includes: <ul style="list-style-type: none"> <li>• 4 sets of leg extensions for ID 6.71in - 9.04in (170-229.6mm)</li> <li>• 1 rotating head (8in).</li> </ul>	56-407-02
Small 3-jaw independent "short perch" mandrel. For ID 2in - 3.25in (50.8-82.5mm). Includes 3 sets of leg extensions. To rigid mount on fittings, flanges, elbows and valves.	56-416-01
3-jaw independent "short perch" mandrel. For ID 3in - 6.08in (76.2-154mm). Includes 8 sets of leg extensions. Minimum .75in (19.05mm) straight run required. To rigid mount on fittings, flanges, elbows and valves.	56-414-01
Extension adapter hub. For ID 6in - 10.1in (152.4-256.5mm). Includes 10 sets of leg extensions. For 3-jaw independent "short perch" mandrel 56-414-01.	56-415-00
Single point flange facing tool slide. For flanges with ID 3in (76.2mm) to OD 13in (330mm).	56-404-00



SDB 206 / FF 313  
Mandrel Kit

## Mandrels & Accessories for SDB 412

DESCRIPTION	PART #
Standard mandrel. For ID 3.80-12.02in (96.5-305mm). Excludes leg extension sets.	66-301-01
Standard mandrel. For ID 3.80-12.02in (96.5-305mm). Includes 8 sets of leg extensions.	66-407-01
3-jaw independent "short perch" mandrel. For ID 3.75-12.80in (95-325mm) Includes 13 sets of leg extensions. Minimum .75in straight run required. To rigid mount on fittings, flanges, elbows and valves.	66-414-01
Extension adapter hub. For ID 12.72-20in (323-508mm). Includes 10 sets of leg extensions. For 3-jaw independent "short perch" mandrel 66-414-01.	66-415-00
Leg set replacement Includes: • 3 chuck legs (66-084-00) • 1 complete set of extension leg assemblies from 0.5-4in (12.7-101.6mm)	66-411-00



SDB 412 / FF 424 Mandrel Kit

## Facing/Beveling/Counterboring Tools for SDB 103

DESCRIPTION	PART #
FF Flange facing tool insert holder.	56-714-01
FF Flange facing tool insert for holder (56-714-01). Carbide.	60-702-00
Facing tool (non-wedgelock) for ID 1.16-3in (29.5-76.2mm).	26-410-02
Facing tool (non-wedgelock) for ID 2.3-4.18in (58.4-106mm).	26-410-03
Facing tool (non-wedgelock) Carbide tipped. Max. wall 0.75in (19.05mm).	26-410-04
Custom HSS facing tool bit (non-wedgelock) Ground to customer specification.	26-SPT-01
Bevel tool 37.5° (non-wedgelock). For ID 1.16-3in (29.5-76.2mm).	26-411-01
Bevel tool 37.5° (non-wedgelock). For ID 2.3-4.18in (58.4-106mm).	26-411-02
Bevel tool 37.5° (non-wedgelock). For ID 2.14-2.7in (54.4-68.6mm).	26-411-03
Bevel tool carbide 37.5° (non-wedgelock).	26-411-04
Bevel tool bit 20° "J" 32 radius (non-wedgelock). For ID 1.35-4in (34.3-101.6mm). Use with facing tool 26-410-02 for 0.03in (0.76mm) land extension.	26-713-00
Custom HSS single angle bevel tool bit (non-wedgelock). Ground to customer specification.	26-SPT-02
Custom HSS "J-Prep" bevel tool bit (non-wedgelock). Ground to customer specification.	26-SPT-06
Universal beveling and facing tool 37.5° (non-wedgelock). For ID 1.5-3in (38.1-76.2mm).	26-413-01
Universal beveling and facing tool 37.5° (non-wedgelock). For ID 2.2-3.8in (55.9-96.5mm).	26-413-02
Custom HSS combination facing and beveling tool bit (non-wedgelock). Ground to customer specification.	26-SPT-04
Small ID deburring tool (non-wedgelock). 0.186in (4.7mm) required between mandrel and ID.	26-412-01
Medium ID deburring tool (non-wedgelock). 0.43in (10.9mm) required between mandrel and ID.	26-412-02
Large ID deburring tool (non-wedgelock). 0.68in (17.3mm) required between mandrel and ID.	26-412-03
Combo 30° taper counterbore and facing tool (non-wedgelock) 0.326in (8.3mm) required between mandrel and ID.	26-426-00
Custom HSS ID deburring tool (non-wedgelock). Ground to customer specification.	26-SPT-03
Custom HSS counterboring tool bit (non-wedgelock). Ground to customer specification.	26-SPT-05



Medium ID deburring tool  
(non-wedgelock)



Bevel tool 37.5°  
(non-wedgelock)



32 radius 2-sided "J-Prep"  
bevel tooling insert (Premium)



## Facing and Beveling Tools for SDB 206 & SDB 412

DESCRIPTION	PART #
<b>Facing tool insert holder (low range) includes:</b> <ul style="list-style-type: none"> <li>• 1 holder (56-198-01)</li> <li>• 2 insert screws (56-190-00)</li> <li>• 1 wrench (56-191-00)</li> </ul>	56-708-01
<b>Facing tool insert holder (high range) includes:</b> <ul style="list-style-type: none"> <li>• 1 holder (56-198-02)</li> <li>• 2 insert screws (56-190-00)</li> <li>• 1 wrench (56-191-00)</li> </ul>	56-708-02
<b>Premium grade HSS insert (2 sided).</b> For facing and beveling. For use with SDB 206, SDB 412 and EP 424 insert holders.	56-711-01
<b>Carbide 2 sided insert.</b> For facing and beveling. For use with SDB 206 and SDB 412 insert holders.	56-712-01
<b>Insert holder kit includes:</b> <ul style="list-style-type: none"> <li>• 1 low range facing insert holder (56-708-01)</li> <li>• 1 high range facing insert holder (56-708-02)</li> <li>• 1 bevel insert holder 37.5° (56-709-03)</li> </ul> For use with all SDB 206, SDB 412 and EP 424.	56-710-01
<b>Custom HSS facing tool bit (form tool).</b> Ground to customer specification.	56-SPT-02
<b>Custom facing insert holder.</b> Ground to customer specification.	56-SPT-09
<b>30° bevel tool insert holder kit includes:</b> <ul style="list-style-type: none"> <li>• 1 holder (56-199-02)</li> <li>• 2 insert screws (56-190-00)</li> <li>• 1 wrench (56-191-00)</li> </ul>	56-709-02
<b>Bevel tool insert holder kit 37.5° includes:</b> <ul style="list-style-type: none"> <li>• 1 holder (56-199-03)</li> <li>• 2 insert screws (56-190-00)</li> <li>• 1 wrench (56-191-00)</li> </ul>	56-709-03
<b>"J" bevel tool insert holder kit 20° (low range) includes:</b> <ul style="list-style-type: none"> <li>• 1 holder (56-199-01)</li> <li>• 2 insert screws (56-190-00)</li> <li>• 1 wrench (56-191-00)</li> </ul> Use with facing insert holder 56-708-01 for .04in (1mm) land extension	56-709-01
<b>"J" bevel tool insert holder kit 20° (high range) includes:</b> <ul style="list-style-type: none"> <li>• 1 holder (56-199-05)</li> <li>• 2 insert screws (56-190-00)</li> <li>• 1 wrench (56-191-00)</li> </ul> Use with facing insert holder 56-708-10 for .04in (1mm) land extension	56-709-05
<b>Premium grade HSS insert (2 sided). For facing and beveling.</b> For use with SDB 206, SDB 412 and EP 424 insert holders.	56-711-01
<b>Premium grade HSS insert (2 sided) 32 radius "J" bevel insert.</b> For use with 56-709-01 and 56-709-05 holders.	56-711-02
<b>Carbide insert (2 sided). For facing and beveling.</b> For use with SDB 206 and SDB 412 insert holders.	56-712-01
<b>Carbide insert (2 sided) 32 radius "J" bevel.</b> For use with 56-709-01 and 56-709-05 insert holders.	56-712-02
<b>Compound bevel form tool 10° x 37.5°.</b>	56-707-00
<b>Insert holder kit includes:</b> <ul style="list-style-type: none"> <li>• 1 low range facing insert holder (56-708-01)</li> <li>• 1 high range facing insert holder (56-708-02)</li> <li>• 1 bevel insert holder 37.5° (56-709-03)</li> </ul> For use with SDB 206, SDB 412 and EP 424.	56-710-01
<b>Legacy single point beveling tool holder.</b> For EP 424, FF 313 and FF 424, low range. EP 424 for OD 4.25in - 23.62in (108-600mm).	56-424-00



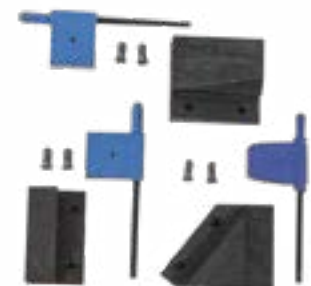
Facing tool insert holder (high range)



Bevel tool insert holder kit 37.5°



Premium grade HSS insert (2 sided)



Insert Holder Kit 56-710-01

## Beveling & Counterboring Tools for SDB 206 & SDB 412

DESCRIPTION	PART #
Legacy single point beveling tool holder. For EP 424, FF 313 and FF 424, high range. EP 424 for OD 7.25in - 24in (184-609.6mm)	56-424-01
Custom HSS single angle bevel tool bit (form tool). Ground to customer specification	56-SPT-01
Custom HSS compound angle bevel tool bit (form tool). Ground to customer specification	56-SPT-03
Custom single angle "J" bevel tool bit (form tool). Ground to customer specification	56-SPT-04
Custom HSS compound angle "J" bevel tool bit (form tool). Ground to customer specification	56-SPT-05
Custom bevel angle insert holder. Ground to customer specification	56-SPT-08
10° ID deburring tool. 0.15in (3.8mm) required between mandrel and ID	56-702-01
10° ID deburring tool. 0.449in (11.4mm) required between mandrel and ID	56-702-02
10° ID deburring tool. 0.762in (19.4mm) required between mandrel and ID	56-702-03
4:1 Taper counterbore tool. 0.315in (8mm) required between mandrel and ID	56-705-01
4:1 taper counterbore tool. 0.875in (22.2mm) required between mandrel and ID	56-705-02
4:1 taper counterbore tool. 1.375in (35mm) required between mandrel and ID	56-705-03
Custom HSS ID deburring tool bit. Ground to customer specification	56-SPT-06
Custom HSS counterbore tool bit. Ground to customer specification	56-SPT-07



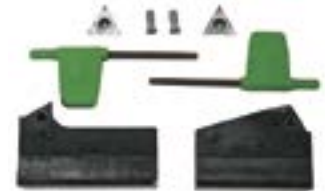
Legacy single point beveling tool holder



Legacy standard HSS tool bit  
9.5 x 9.5mm

## Flange Facing Tools for FF 206

DESCRIPTION	PART #
Carbide insert. For beveling and flange facing For use with insert holder 56-714-01	60-702-00
Carbide insert tool holder kit For single point beveling and flange facing includes: <ul style="list-style-type: none"> <li>• 1 holder (16-042-00)</li> <li>• 1 flag wrench (56-191-00)</li> <li>• 2 retaining screws (60-231-01)</li> <li>• 5 inserts (60-702-00)</li> </ul>	16-701-00



Flange facing tool kit

## Flange Facing Tools for FF 313 & FF 412

DESCRIPTION	PART #
Flange facing tool kit includes: <ul style="list-style-type: none"> <li>• 1 low range insert tool holder (56-195-00)</li> <li>• 1 high range insert tool holder (56-194-00)</li> <li>• 2 tool inserts (56-710-00)</li> <li>• 2 insert retaining screws (56-190-00)</li> <li>• 1 screw wrench (56-191-00)</li> </ul>	56-418-01
Tool insert for flange facing (high and low range)	56-710-00
Custom form tool or single point insert holder. Ground to customer specification	56-SPT-10



Flange facing tool insert

## Hydraulic Power Units

For available Hydraulic Power Unit options, see page 74.

## Air Control Module

Air Control Module "ACM", see page 72.