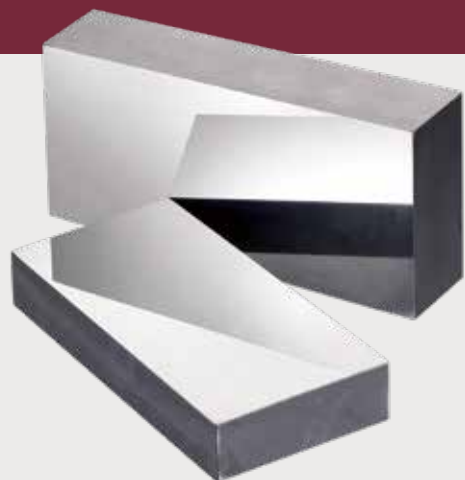




FSG Series

High Precision Surface and Form Grinders

Precise. Dependable. Affordable.

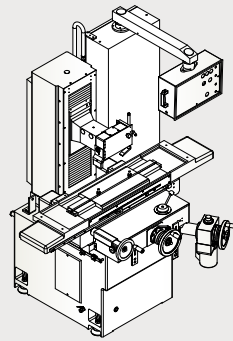


CHEVALIER®
Grinding / Turning / Milling

We shape your ideas.™

Precise. Dependable. Affordable.

These words describe the core benefits behind the design of our FSG Series of manual surface and form grinding machines. They set the standards required by the automotive, mining, aerospace and job shop industries in order to meet current and future market needs.




This series is built for ease of operation and provides long-lasting, dependable performance requiring little to no service. The series is capable of producing “mirror” finishes on highly accurate workpieces due to machine construction features and the specially designed spindle directly coupled with a V3 motor. The machine’s assembly, comprised of heavy-duty slide rails, single-piece base casting and hardened wheel-head guideways, results in a solid, rigid structure that minimizes vibration, movement and displacement.

Chevalier’s user-friendly grinding machines come with a wide range of optional accessories that are available for various types of grinding requirements. And to ensure the affordable and reliable FSG-Series machines continue to operate efficiently for years to come, we back them with our no-nonsense standards and legendary service for reliable performance.



The FSG-3A818 is shown with optional accessories.



Double-V crossfeed guideway span ensures minimum bending movements to achieve maximum support capability for table and workpiece



PERMANENT MAGNETIC CHUCK
MODEL
SERIAL NO.

FSG-612SP / FSG-618SP / FSG-818SP Manual Grinders

Key features and benefits

- For this high-precision series, table traverses on linear ball bearings and D2 (SKD11) hardened ground guideways.
- Machine-base slideways are laminated with Turcite-B coating and are hand-scraped along with an automatic intermittent lubrication system ensuring high accuracy and longer life of slideways.
- Ergonomically designed vertical handwheel is at waist level.
- Spindle is supported by four Class 7 (P4) super-precision angular contact ball bearings, that are preloaded and assembled ensuring superior water resistance, grinding accuracy and surface finish.
- Low-friction slideways incorporated with an automatic intermittent lubrication system ensure high accuracy and longer life of slideways.

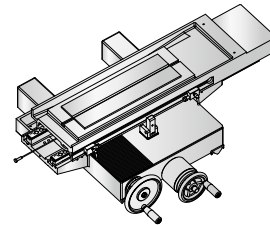


The FSG-818SP is shown with optional accessories.

Machine Construction

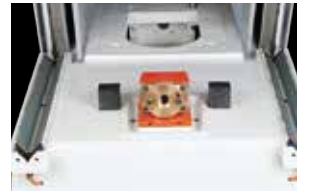
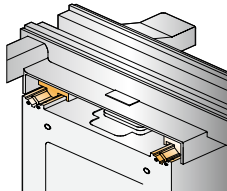
Table guideways

Table is driven by steel wire and traverses on hardened and ground guideways with steel ball bearings that have been accurately sieved. This provides smooth, accurate and efficient table movement.



Durable slideways

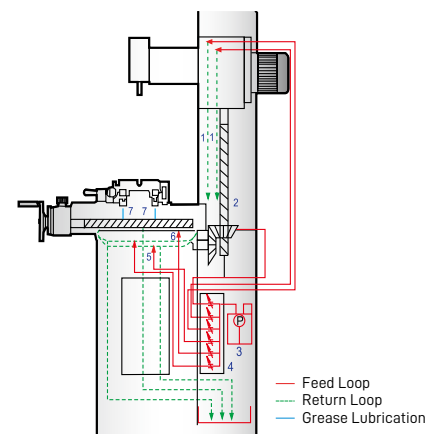
Machine-base slideways are laminated with a Turcite-B coating and are precisely hand-scraped. Low-friction slideways feature an automatic intermittent lubrication system to ensure high accuracy and longer life of slideways.



Automatic lubrication system

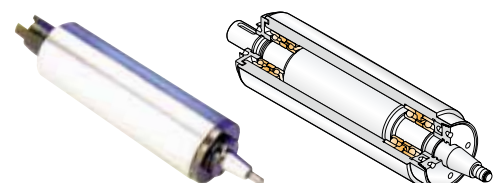
Provides lube oil to saddle, column ways, crossfeed ballscrew and elevating leadscrews. The system minimizes the wear caused by negligent operations, ensuring the machine's accuracy and extending its life (3 cc/30 min).

- | | |
|------------------------|--|
| 1. Column slideways | 5. Machine base double-V slideways |
| 2. Elevating leadscrew | 6. Crossfeed ballscrew |
| 3. Lubricator | 7. Table guideways with ball bearings lubricated by grease |
| 4. Oil distributor | |



High-precision, cartridge-type spindle

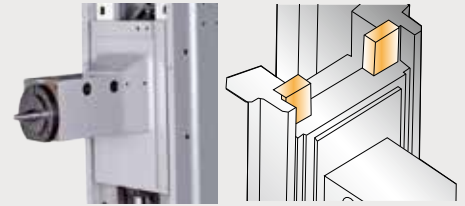
Supported by four Class 7 (P4) super-precision angular-contact ball bearings, which are accurately measured, selected, preloaded and assembled to ensure superior water resistance, longevity grinding accuracy and surface finish. The labyrinth seal-type structure is designed to offer better water-resistance.



Machine Construction

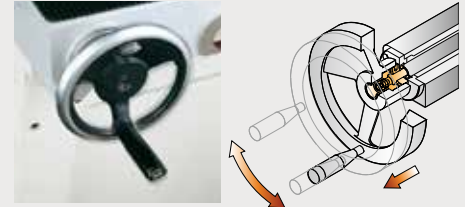
Wheelhead and column

The column casting is cross-ribbed for extra rigidity. The elevating guideways of the wheelhead and column are hardened/ground. The sliding surfaces of the wheelhead are laminated with Turcite-B, providing accuracy of downfeed and machine longevity.



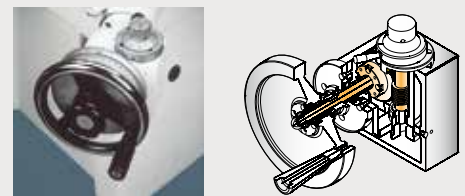
Indexing table handwheel

Can be indexed to a comfortable position to enhance the ease of table traverse.



Elevating micro-feed device

Utilizes a worm and worm gear for vertical feeds in increments of 0.001 mm (0.00005"). The micro-feed device is engaged by turning the lever clockwise, which also locks the handwheel to prevent any danger caused by accidentally touching the handwheel.



Accuracy

Parallelism of upper and lower sides of the workpiece within 0.002 mm (0.0001")

- Material: SAE1045 (S45C), HRC45
- Workpiece size: $\varnothing 25.4 \times 25.4 \text{ mm}$ ($\varnothing 1" \times 1"$)
- Dressing depth: 0.01 ~ 0.02 mm (0.0004" ~ 0.00079")
- Grinding depth per stroke: 0.001 ~ 0.005 mm (0.00005" ~ 0.0002")
- Room temperature: 20 ~ 25°C (68~77°F)
- Grinding wheel: KINIK PSA 46H (or same spec.)
- Grinding wheel size: $\varnothing 205 \times 12.7 \times \varnothing 31.75 \text{ mm}$ ($\varnothing 8" \times 0.5" \times \varnothing 1.3"$)



Surface finish better than or equal to $R_{\text{max}} 0.3S$ (3 micro inch AA)

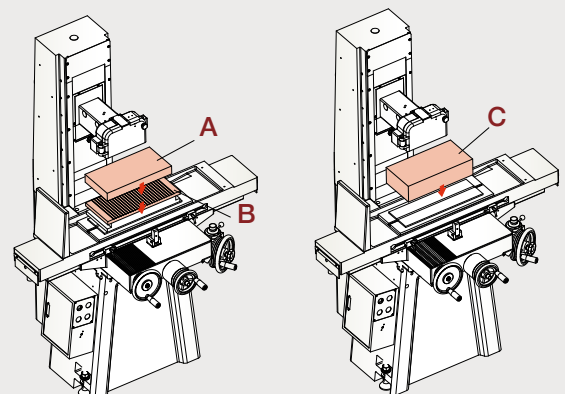
- Material: D2 (SKD11), HRC60
- Workpiece size: 100 x 100 mm (3.9" x 3.9")
- Dressing depth: 0.01 mm (0.0004")
- Grinding depth per stroke: 0.001 mm (0.00005")
- Room temperature: 20 ~ 25°C (68~77°F)
- Grinding wheel: ELBE 89A60-2I11V26
- Grinding wheel size: $\varnothing 205 \times 12.7 \times \varnothing 31.75 \text{ mm}$ ($\varnothing 8" \times 0.5" \times \varnothing 1.3"$)



Loading capacity

Item	FSG-612SP	FSG-618SP	FSG-818SP
A	130 kg (286 lbs.)	180 kg (396 lbs.)	215 kg (473 lbs.)
B	20 kg (44 lbs.)	30 kg (66 lbs.)	35 kg (77 lbs.)
C	150 kg (330 lbs.)	210kg (462 lbs.)	250 kg (551 lbs.)

Suggested maximum table loads:
A = Workpiece B = Chuck C = A+B



FSG-618M Manual Grinder

FSG-2A618 Semi Automatic Grinder

Key features and benefits

- This high-precision surface grinder has been specially developed to help manufactures with a wide range of needs.
- The tool cabinet in the machine base is specially designed for operator's convenience (618M).
- The interlock between electrical cabinet door and power supply is established to ensure safe operation.
- The maximum distance from the table surface to the spindle centerline is 450 mm (17.7"), which provides more clearance for grinding.
- The manual grinders feature spring-loaded-type table travel stops that dampen the over-travel caused by abnormal operations (618M).
- The optimum span of double-V crossfeed guideways is designed based on bending movement, kinematics and supporting force.
- All essential castings are high-grade cast iron, stress-relieved by annealing, to eliminate internal stress. With the impressive stiffness and stability of its castings, this machine is suitable for both precision surface grinding and form grinding.



The FSG-618M is shown with optional accessories.

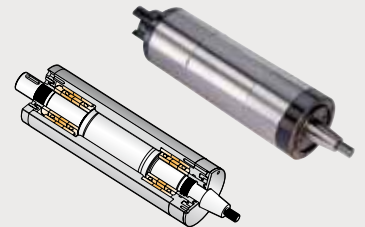


The FSG-2A618 is shown with optional accessories.

Machine Construction

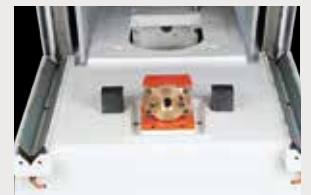
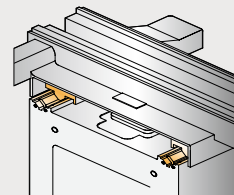
High-precision, cartridge-type spindle

Supported by four Class 7 (P4) super-precision angular-contact ball bearings, which are accurately measured, selected, pre-loaded and assembled in a temperature-controlled room to ensure superior grinding accuracy and surface finish. The labyrinth seal-type structure is designed to offer better water resistance, enhancing the longevity of the spindle bearings.



Durable slideways

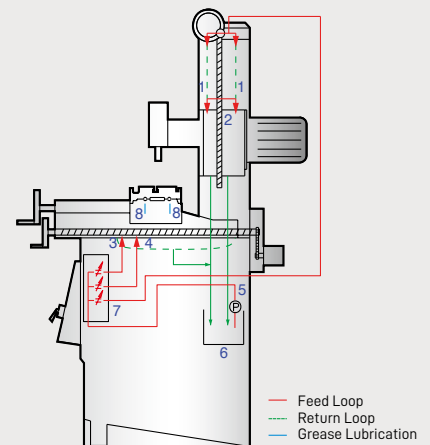
Machine-base slideways are laminated with a Turcite-B coating and precisely hand scraped. The low-friction slideways, incorporated with an automatic forced lubrication system, ensure high-accuracy and longer way life.



Automatic lubrication system

Provides lube oil to saddle, column ways, crossfeed and elevating leadscrews. And also minimizes the wear caused by negligent operations, ensuring the machine's accuracy and extending its life (3 cc/30 min).

1. Column slideways
2. Elevating leadscrew
3. Crossfeed leadscrew
4. Machine base double-V slideways
5. Pump
6. Lubricator
7. Oil distributor
8. Table guideways with grease-lubricated ball bearings



Machine Construction

Indexing table handwheel

Can be adjusted to a comfortable position to enhance the ease of table traverse.

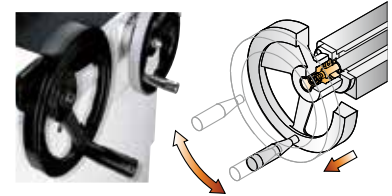
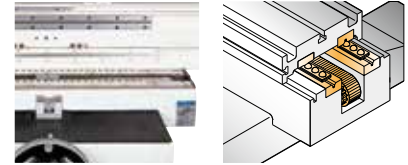


Table reversing mechanism

The high-precision guideway includes accurately-chosen steel balls for quick and smooth movement. The 2A618 machines are driven by a specially designed hydraulic system; the table's transmission mechanism achieves high accuracy and high efficiency.



Travel-ends limit switch (FSG-618M)

Continuous-loop, wire-reinforced cog timing belt drives the table. Operator obtains higher grinding efficiency with an easily set table stroke for each workpiece, which has been accurately sieved for smooth, efficient table movement. This results in less grinding time and higher- grinding efficiency.



Electronic non-contact table reverser (FSG-2A618)

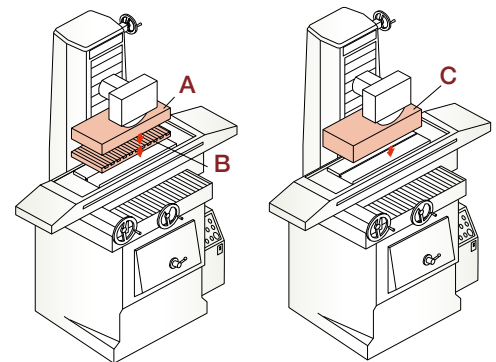
Operator easily sets table stroke for each workpiece, which has been accurately sieved for smooth, efficient table movement. This results in less grinding time and higher grinding efficiency.



Loading capacity

Item	FSG-618M	FSG-2A618
A	180 kg (396 lbs.)	
B	30 kg (66 lbs.)	
C	210 kg (462 lbs.)	

Suggested maximum table loads:
A = Workpiece B = Chuck C = A+B



Series is capable of producing “mirror” finishes on highly accurate workpieces due to machine construction features and the specially designed spindle

FSG-2A818 Semi Automatic Grinder FSG-3A818 Automatic Grinder

Key features and benefits

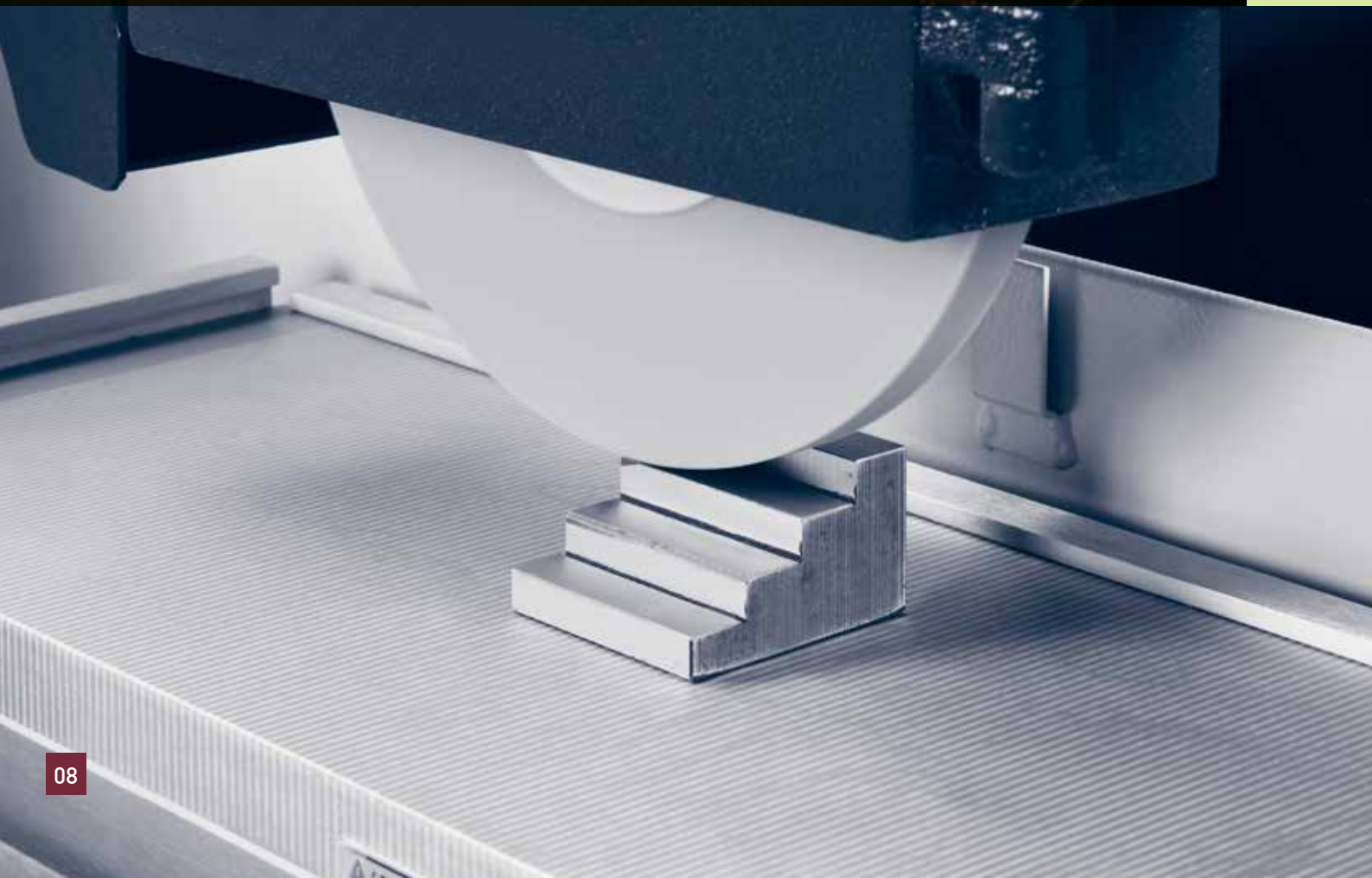
- This series has been specially developed and improved to continuously offer reliable high-performance precision surface grinding.
- An interlock is placed between the electrical cabinet door and the power supply as an added safety feature.
- The maximum distance from table surface to spindle centerline is 450 mm (17.7"), which provides more clearance for grinding.
- The Double-V crossfeed guideway span has been designed by applying kinematics to calibrate for minimum bending moments, thus achieving maximum support capability for table and workpiece.
- All essential castings are made of a high-grade cast iron that is stress relieved by annealing, ensuring the greatest stability and rigidity with low stress.



The FSG-2A818 is shown with optional accessories.

The FSG-3A818 is shown with optional accessories.

With the electronic non-contact reverser, operator can easily set suitable table stroke for each workpiece to save grinding time and obtain higher grinding efficiency



Machine Construction

High-precision, cartridge-type spindle

Supported by four Class 7 (P4) super-precision angular-contact ball bearings, which have been accurately measured, selected, pre-loaded and assembled in a temperature-controlled room to ensure better grinding accuracy and surface finish. The labyrinth seal-type structure is designed to offer better water resistance, enhancing the longevity of the spindle bearings.

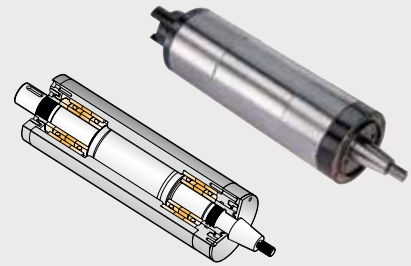
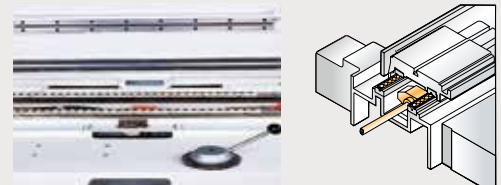


Table reversing mechanism

The high-precision guideway includes accurately chosen steel balls for quick and smooth movement. The machine is driven by a specially designed hydraulic system; the table's transmission mechanism achieves high accuracy and high efficiency.



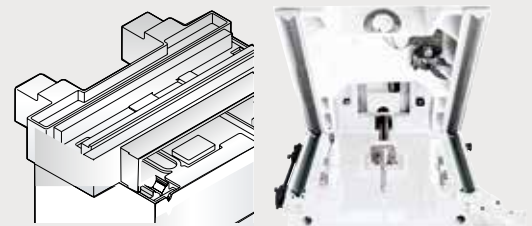
Travel-ends limit switch

With the electronic non-contact reverser, operator can easily set suitable table stroke for each workpiece to save grinding time and obtain higher grinding efficiency, providing smooth, accurate and efficient table movement.



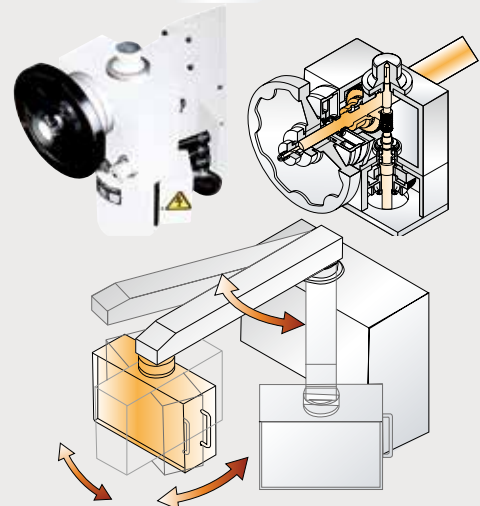
Durable slideways

Machine base slideways are laminated with Turcite-B coating and precisely hand scraped. The low-friction slideways, featuring an automatic forced lubrication system, ensure high-accuracy and longer way life.



Elevating micro-feed device (FSG-3A818)

The elevating system is equipped with a precision micro-feed device for precise positioning of the Y-axis, and this device consists a worm and worm gear. The minimum automatic downfeed increment can be selected as 0.002 mm (0.0001") or 0.004 mm (0.0002").



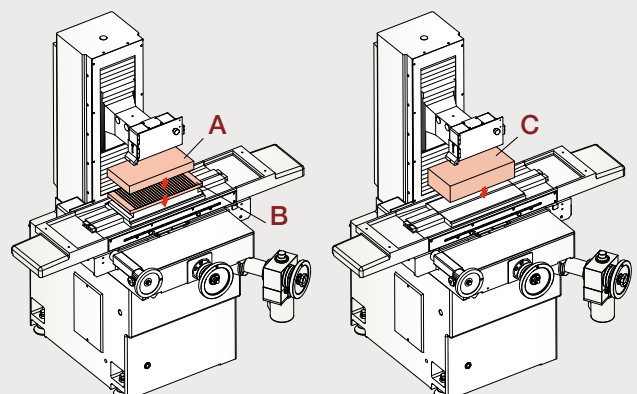
Control station (FSG-3A818)

Can be adjusted to a comfortable position for operator. All switches, indicators, lamps, LEDs and displays are ergonomically designed for easy operation.

Loading capacity

Item	FSG-2A818	FSG-3A818
A	215 kg (473 lbs.)	
B	35 kg (77 lbs.)	
C	250 kg (551 lbs.)	

Suggested maximum table loads:
A = Workpiece B = Chuck C = A+B



FSG-2A1224 Semi Automatic Grinder FSG-3A1224 Automatic Grinder

Key features and benefits

- This series has been specially developed and improved in order to continuously offer reliable high-performance precision surface grinding.
- The Double-V crossfeed guideway span has been designed applying kinematics to calibrate minimum bending movements to achieve maximum support for table and workpiece.
- All high-grade cast iron is stress-relieved by annealing to ensure superior stability and rigidity and high-precision surface grinding.
- The table travel for each workpiece can be easily set by using the electronic non-contact reverser, which saves grinding time and delivers higher grinding efficiency.



The FSG-2A1224 is shown with optional accessories.



The FSG-3A1224 is shown with optional accessories.

The low-friction slideways feature an automatic forced lubrication system to ensure high-accuracy and longer way life

Machine Construction

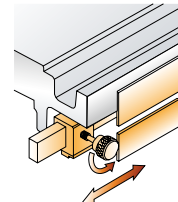
High-precision, cartridge-type spindle

Supported by four Class 7 (P4) super-precision angular-contact ball bearings, which have been accurately measured, selected and pre-loaded and assembled in a temperature-controlled room to ensure better grinding accuracy and surface finish. The labyrinth seal type structure is designed to offer better water resistance, enhancing the longevity of the spindle bearings.



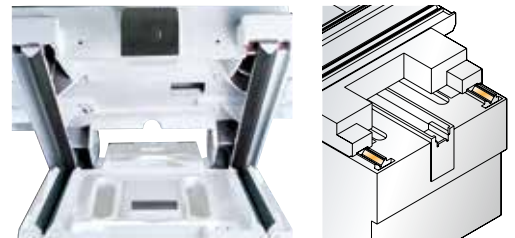
Travel-ends limit switch

Using the electronic non-contact reverser, operator can easily set suitable table stroke for each workpiece to save grinding time and obtain higher grinding efficiency. The proximity switches are properly covered for operator's safety.



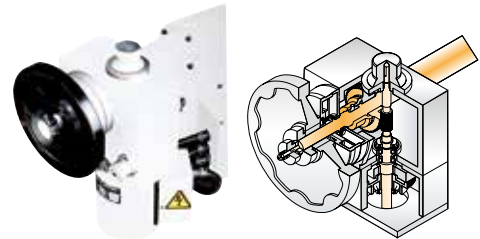
Durable slideways

Machine base slideways are laminated with a Turcite-B coating and precisely hand scraped. The low-friction slideways feature an automatic forced lubrication system, ensures high-accuracy and longer way life.



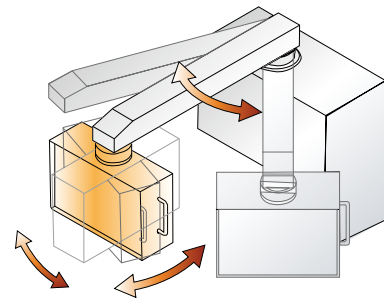
Elevating micro-feed device (FSG-3A1224)

The elevating system is equipped with a precision micro-feed device for precise positioning of the Y-axis, and this device consists a worm and worm gear. The minimum automatic downfeed increment can be selected as 0.002 mm (0.0001") or 0.004 mm (0.0002").



Control station (FSG-3A1224)

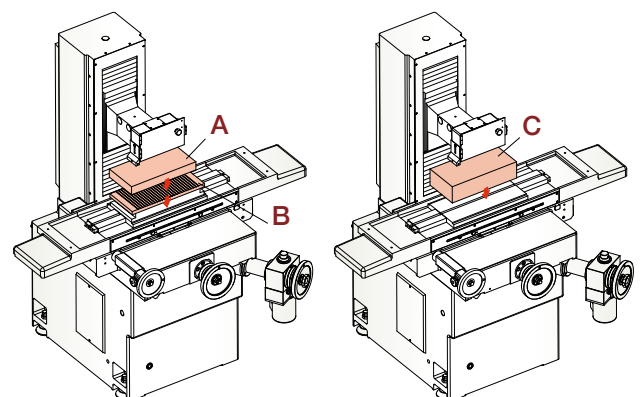
Can be adjusted to a comfortable position for operator. All switches, indicators, lamps, LEDs and displays are ergonomically designed for easy operation.



Loading capacity

Item	FSG-2A1224	FSG-3A1224
A	314 kg (692 lbs.)	
B	106 kg (233 lbs.)	
C	420 kg (925 lbs.)	

Suggested maximum table loads:
A = Workpiece B = Chuck C = A+B

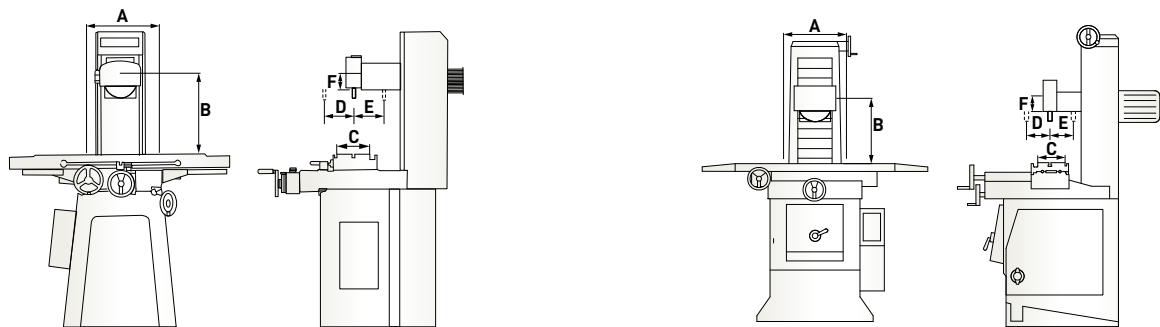


Max. Working Space

Units: mm ["]

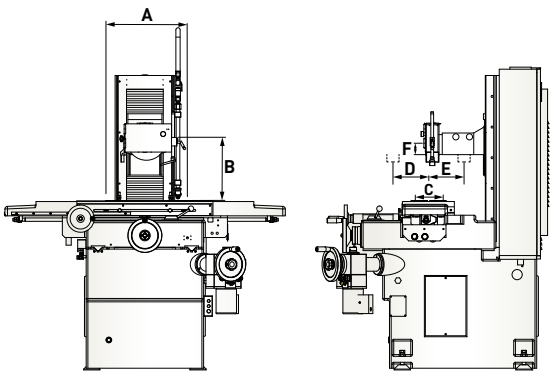
FSG-612SP / FSG-618SP / FSG-818SP

FSG-618M / FSG-2A618



Item	A	B	C	D	E	F
FSG-612SP	330 [13.0]	500 [19.7]	150 [6.0]	95 [3.7]	85 [3.3]	50 [2.0]
FSG-618SP	480 [18.9]	500 [19.7]	150 [6.0]	95 [3.7]	85 [3.3]	50 [2.0]
FSG-818SP	480 [18.9]	500 [19.7]	200 [8.0]	110 [4.3]	110 [4.3]	50 [2.0]
FSG-618M	460 [18.1]	450 [17.7]	150 [6.0]	95 [3.7]	85 [3.3]	50 [2.0]
FSG-2A618	460 [18.1]	450 [17.7]	150 [6.0]	95 [3.7]	85 [3.3]	50 [2.0]

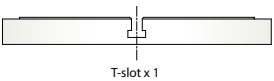
FSG-2A818 / FSG-3A818 / FSG-2A1224 / FSG-3A1224



Item	FSG-2A818	FSG-3A818	FSG-2A1224	FSG-3A1224
A	460 [18.1]		610 [24.0]	
B	450 [17.7]		600 [23.6]	
C	200 [8.0]		305 [12.0]	
D	115 [4.5]		178 [7.0]	
E	110 [4.3]		177 [7.0]	
F	54 [2.1]		83 [3.3]	

Table and T-slots Dimension

FSG-612SP/FSG-618SP/FSG-818SP
FSG-618M/FSG-2A618
FSG-2A818/FSG-3A818
FSG-2A1224/FSG-3A1224



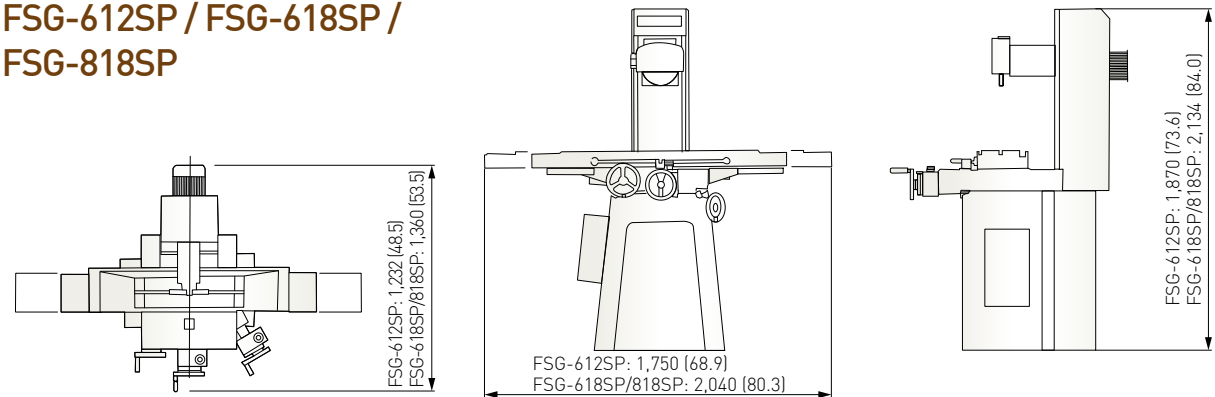
FSG-612SP/FSG-618SP/FSG-818SP
FSG-618M/FSG-2A618

FSG-2A818/FSG-3A818

FSG-2A1224/FSG-3A1224

Machine Dimensions

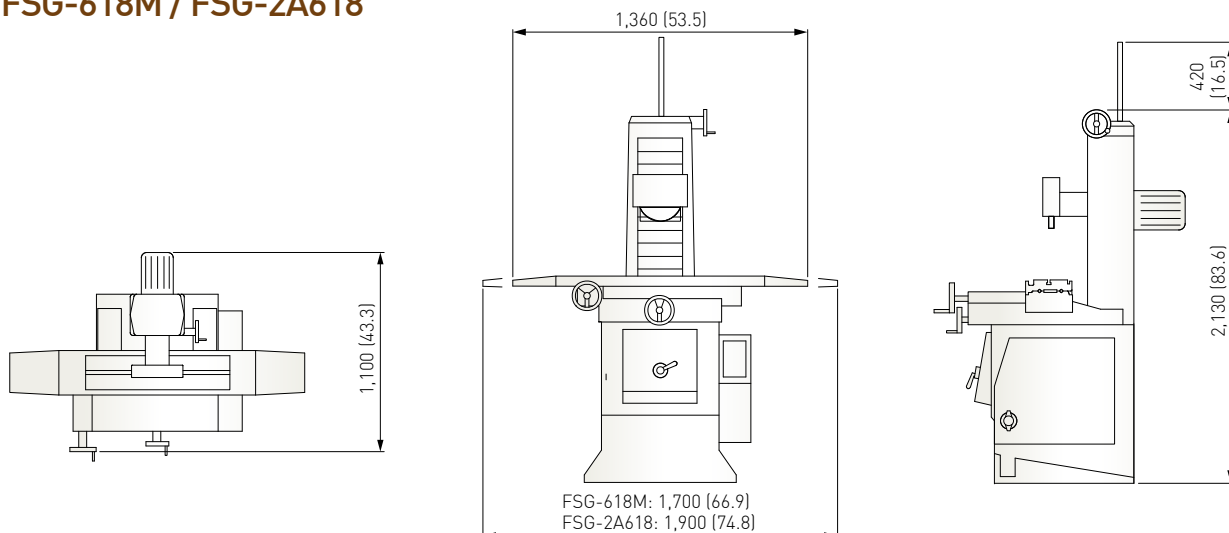
FSG-612SP / FSG-618SP / FSG-818SP



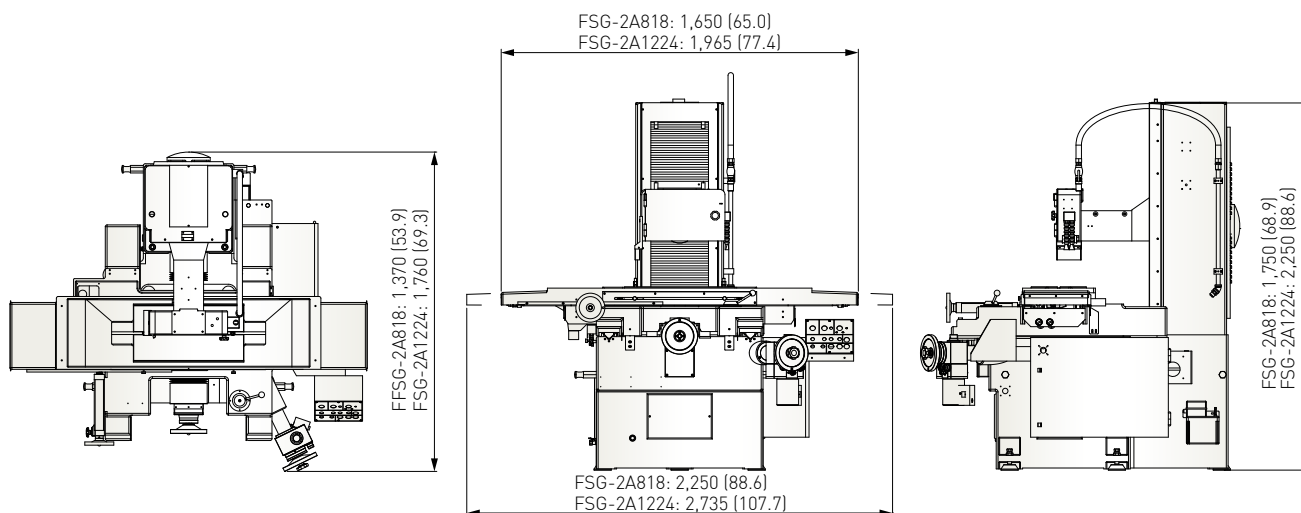
Machine Dimensions

Units: mm (")

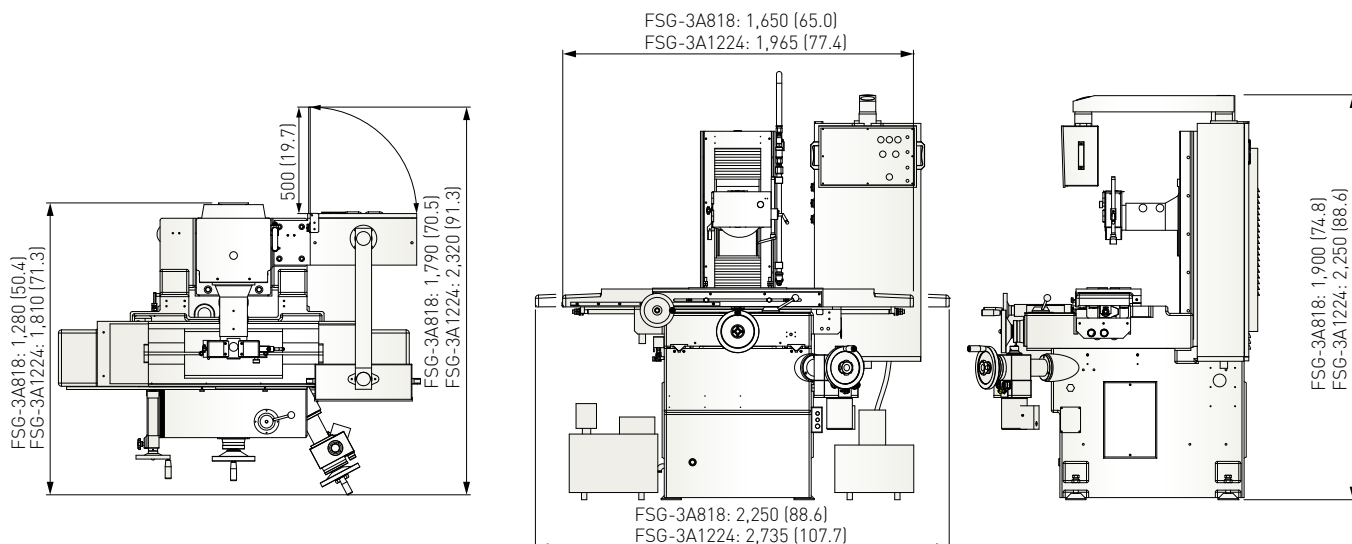
FSG-618M / FSG-2A618



FSG-2A818 / FSG-2A1224



FSG-3A818 / FSG-3A1224



Optional Accessories



Halogen / lamp

B01-0101 (618M*, 2A618*, 612SP, 618SP, 818SP)

B01-0601 (3A818*)

B01-0901 (2A/818) (12V / 20W)

LED lamp

B01-0104 (618M, 2A618, 612SP, 618SP, 818SP)

B01-0905 (2A / 3A818)



Halogen lamp

B01-0903 (2A / 3A1224) (12 V / 50 W)

LED lamp

B01-0906 (2A/3A1224)



Diamond dresser

B03-0101 (618M, 2A618, 618SP*, 818SP*, 618M*, 2A618*, 3A818*)

0.1 Carat



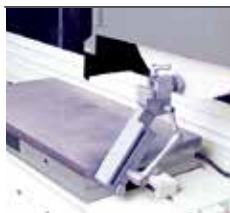
Diamond dresser

B03-0102 (618M, 2A618) 0.5 Carat

B03-0401 (2A / 3A818, 2A / 3A1224) 1.0 Carat

B03-0601 (2A / 3A818, 612SP, 618SP, 818SP)

1.0 Carat



Single face dresser

B13-0301 (618M, 2A / 3A818, 2A / 3A1224)



Wheel flange

B05-0101 (618M, 2A618, 612SP, 618SP, 818SP, 2A / 3A818)

Suitable for Ø205 x 12.7~19 x Ø31.75 mm (Ø8" x 0.5"~0.7" x Ø1.3") grinding wheel



Wheel flange

B05-0401 (2A / 3A1224)

B05-0404 (2A / 3A1224)

Suitable for Ø355 x 50 x Ø127 mm (Ø14" x 2" x Ø5") grinding wheel



Punch former

B07-01011

Diameter of the punch: 4~25 mm (0.16"~1.0")

Length of the punch: over 22 mm (0.9")



Inclinable permanent magnetic chuck

B09-0104 (2A618, 612SP)

100 x 175 mm (3.9" x 6.9")

B09-0105 (618M, 2A618, 618SP, 818SP, 2A / 3A818)

150 x 300 mm (5.9" x 11.8")

Electromagnetic chuck*

B09-0605 (612SP)

B09-0608 (612SP) (fine pole)

150 x 300 mm (5.9" x 11.8")

B09-0106 (618M, 2A618, 618SP)

150 x 450 mm (5.9" x 17.7")

B09-06071 110V (2A / 3A818)

200 x 450 mm (7.9" x 17.7")

B09-0609 (618SP) (fine pole)

150 x 450 mm (5.9" x 17.7")

B09-0607 (818SP)

B09-0610 (818SP) (fine pole)

200 x 450 mm (7.9" x 17.7")

300 x 600 mm (11.7" x 23.6")

* To order chuck control is required.



Inclinable electromagnetic chuck*

B09-0601 (618M, 2A618)

150 x 450 mm (5.9" x 17.7")

B09-1101 (612SP)

100 x 175 mm (3.9" x 6.9")

B09-0107 (618SP, 818SP)

150 x 300 mm (5.9" x 11.7")

B09-09011 100 V (2A / 3A818)

200 x 300 mm (5.9" x 11.7")

* To order chuck control is required.



Chuck controller

(with variable holding power and auto demagnetizer)

B23-0106 (618M, 2A618, 612SP, 618SP, 818SP)

Input: 110 V AC

Output: 0~90 V DC



Chuck controller

B23-0401 (3A818, 3A1224 CE machines and 2A618, 2A818, 2A1224)

Input: 135 V AC

Output: 115 V DC



Chuck controller

B23-0602 (3A818, 3A1224)

Input: 135 V AC

Output: 110 V DC

with variable holding power control and auto demagnetizer (for CE machines, please choose **B23-0401**).



Precision vise

B11-0101 50 x 76 mm (2" x 3")

B11-0102 63 x 100 mm (2.5" x 3.9")

B11-0103 76 x 100 mm (3" x 3.9")

B11-0104 89 x 127 mm (3.5" x 5")

B11-0105 100 x 127 mm (3.9" x 5")



Permanent magnetic chuck

B09-0102 (618M, 2A618, 618SP)

150 x 450 mm (5.9" x 17.7")

B09-0103 (2A / 3A818, 818SP)

200 x 450 mm (7.9" x 17.7")

B09-0101 (612SP)

150 x 300 mm (5.9" x 11.8")

B09-0602 (612SP) (fine pole)

150 x 300 mm (5.9" x 11.8")

B09-0110 (618M, 618SP) (fine pole)

150 x 450 mm (5.9" x 17.7")

B09-0604 (2A / 3A818, 818SP) (fine pole)

200 x 450 mm (7.9" x 17.7")



Parallel dressing attachment

(Manual)

B13-0101 (618M, 2A618)

B13-1101 (612SP, 618SP, 818SP)

B13-0603 (2A / 3A818)

Suitable for Ø205 mm (Ø8") grinding wheel

B13-0902 (2A / 3A1224)

Max. OD: Ø355 mm (Ø14.0")

Min. OD: Ø235 mm (Ø9.3")



Balancing stand with bubble

B15-0102

(618M, 2A618, 612SP, 618SP, 818SP, 2A / 3A818)

Suitable for Ø205 mm (Ø8.0") grinding wheel



Parallel dressing attachment

(Hydraulic crossfeed, manual downfeed)

B13-04011 (2A / 3A1224)

Max. OD: Ø355 mm (Ø14.0")

Min. OD: Ø235 mm (Ø9.3")



Balancing stand

(roller type)

B15-0601

Suitable for Ø205~355 mm (Ø8.0"~14.0") grinding wheel



Parallel dressing attachment

(Hydraulic crossfeed, manual downfeed)

B13-0601 (2A / 3A818)

Suitable for Ø205 mm (Ø8") grinding wheel



Balancing stand with leveling bubble

B15-0301 (2A / 3A1224)

Max. OD: Ø355 mm (Ø14.0")

Max. width: 50 mm (2.0")



Rapid elevation with micro downfeed device

(Standard on 3A series)

B39-0901 (2A818, 2A1224)

Motor: 0.19 kW (1/4 HP)

Micro feed: Per revolution 0.2 mm (0.01")

Per graduation 0.002 mm (0.0001")



Universal wheel guard for side forming

B41-0106 (618M, 2A618)

B41-1101 (612SP, 618SP, 818SP)

B41-09011 (2A / 3A818)

Suitable for: Ø205 mm (Ø8") grinding wheel



Micro crossfeed device

B39-1101 (612SP, 618SP, 818SP)

Per revolution 0.1 mm (0.005")

Per graduation 0.001 mm (0.00005")



Micro downfeed device

(Standard on 3A series)

B39-0902 (2A818, 2A1224)

Micro feed: Per revolution 0.2 mm (0.01")

Per graduation 0.002 mm (0.0001")



Rapid elevation device

B39-1102 (612SP, 618SP, 818SP)

Motor: 0.19 kW (1/4 HP)

Speed: 175 mm/min (8.75 ipm) - 60Hz

Speed: 145 mm/min (7.25 ipm) - 50Hz



Coolant system

B17-0110

Volume: 42 L

Pump: 1/8 HP

Coolant capacity: 20 L/min

Space: 530 x 360 mm (20.9" x 14.2")

Height: 500 mm (19.7")



Grinding wheel

(for mirror surface grinding)

5115-00630804

(89A60-2I11V26) (612SP, 618SP, 818SP)



Single side water baffle

B19-0906 (2A / 3A818)

Double side water baffle

B19-0910 (2A / 3A1224)



Coolant system with double filter

B17-0901

Volume: 95 L; Pump: 1/8 HP

Coolant capacity: 20 L/min

Space: 660 x 480 mm (26.0" x 18.9")

Height: 610 mm (24.0")



Splash guard

(with nozzle for coolant system)

B19-0102 (618M, 2A618*)

B19-0909 (2A / 3A818*)

B19-1101 (612SP)

B19-1102 (618SP, 818SP)

B19-0907 (2A / 3A1224*)



Coolant system with manual paper feeding device

(with 1 roll of paper)

B17-0107

Volume: 85 L; Pump: 1/8 HP

Coolant capacity: 20 L/min

Space: 550 x 1,000 mm (21.7" x 39.4")

Height: 775 mm (30.5")

*U.S.A. sold as standard accessory.

Optional Accessories



Coolant system with automatic paper feeding device

(with 1 roll of paper)

B17-0301 (2A / 3A1224)

Volume: 120 L

Paper feeding motor: 25 W

Pump: 1/8 HP

Space: 1,450 x 620 mm (57.1" x 24.4")

Height: 760 mm (29.9")



Combination coolant and dust suction unit with magnetic separator*

B17-0106

Volume: 34 L

Pump: 1/8 HP

Coolant Capacity: 20 L/min

Separator Capacity: 20 L/min

Space: 628 x 790 mm (24.7" x 31.1")

Height: 680 mm (26.8")



Coolant system with automatic paper feeding device and magnetic separator

(with 1 roll of paper)

B17-0302

Volume: 120 L

Paper feeding motor: 25 W

Pump: 1/8 HP

Coolant capacity: 20 L/min

Separator capacity: 40 L/min

Space: 1,450 x 620 mm (57.1" x 24.4")

Height: 760 mm (29.9")



Combination coolant and dust suction unit*

B17-0101

Volume: 34 L

Pump: 1/8 HP

Coolant capacity: 20 L/min

Space: 398 x 798 mm (15.7" x 31.4")

Height: 680 mm (26.8")



Coolant system with magnetic separator

B17-0105

Volume: 50 L

Pump: 1/8 HP

Coolant capacity: 20 L/min

Separator capacity: 20 L/min

Space: 655 x 520 mm (25.8" x 20.5")

Height: 730 mm (28.7")



Dust collector*

B17-0102

Suction motor: 1/2 HP, 2 P

Space: 470 x 500 mm (18.5" x 19.7")

Height: 585 mm (23.0")

*When purchasing a vacuum cleaner accessory, the dust suction cover is sold separately.

The system minimizes the wear caused by negligent operations, ensuring the machine's accuracy and extending its life



A full line of standard and optional accessories adds flexibility to FSG Series grinders

Accessories

Standard accessories

● Standard Accessories

Item	FSG-612SP	FSG-618SP	FSG-818SP	FSG-618M	FSG-2A618	FSG-2A818	FSG-3A818	FSG-2A1224	FSG-3A1224
Wheel flanges	●	●	●	●	●	●	●	●	●
Grinding wheel	●	●	●	●	●	●	●	●	●
Leveling pads	●	●	●	●	●	●	●	●	●
Wheel fixing bolt set								●	●
Wheel fixing nut	●	●	●	●	●	●	●		
Balancing arbor	●	●	●	●	●	●	●	●	●
Fixing bolt	●	●	●	●	●	●	●	●	●
Lock nut	●	●	●	●	●	●	●	●	●
Leveling bolt set	●	●	●	●	●	●	●	●	●
Plug	●	●	●	●	●	●	●	●	●
Lifting rod		●	●	●	●	●	●	●	●
Lifting bolt	●	●	●	●	●				
Tool box	●	●	●	●	●	●	●	●	●
Cross screwdriver						●	●	●	●
Slotted screwdriver						●	●	●	●
Hex. wrench set	●	●	●	●	●	●	●	●	●
Wheel wrench	●	●	●	●	●	●	●	●	●
Hook wrench	●	●	●	●	●	●	●		

Specifications

Item	Description	FSG-612SP	FSG-618SP	FSG-818SP
Capacity	Max. grinding length-longitudinal	350 mm (13.8")	500 mm (19.7")	
	Max. grinding width-crosswise	170 mm (6.7")		220 mm (8.7")
	Distance between table to spindle centerline	500 mm (19.7")		
	Max. table load	150 kg (330 lbs.)	210 kg (462 lbs.)	250 kg (551 lbs.)
Table	Table size	150 x 330 mm (6.0" x 13.0")	150 x 480 mm (6.0" x 18.9")	200 x 480 mm (8.0" x 18.9")
	Max. travel	360 mm (14.2")	520 mm (22.5")	
	Table speed (variable)	—		
Transverse movement (Z)	Feed speed	—		
	Auto. transverse movement	—		
	Max. automatic travel	—		
	Max. manual travel	195 mm (7.7")	220 mm (8.7")	
	Handwheel per revolution	5 mm (0.2")		
	Handwheel per graduation	0.02 mm (0.001")		
	Micro feed	Optional 0.001 mm (0.00005")		
Wheelhead elevation (Y)	Automatic infeed	—		
	Handwheel per revolution	1 mm (0.05")		
	Handwheel per graduation	0.005 mm (0.0001")		
	Rapid travel (approx.)	Optional 330 mm/min (13 ipm)		
	Micro feed per revolution	0.02 mm (0.001")		
	Micro feed per graduation	0.001 mm (0.00005")		
Spindle	Spindle speed	60 Hz 3,450 rpm / 50 Hz 2,850 rpm		
	Spindle motor	1.5 kW (2 HP)		
Motors	Axis motors (Z)	—		
	Axis motors (Y)	Optional 0.19 kW		
	Hydraulic motor	—		
Wheel dimension	OD x Width x Bore	Ø205 x 12.7 x Ø31.75 mm (Ø8" x 0.5" x Ø1.3")		
Power	Power required	2 kVA		
Machine dimensions	Floor space (W x D x H)	1,750 x 1,232 x 1,870 mm (68.9" x 48.5" x 73.6")	2,040 x 1,360 x 2,134 mm (80.3" x 53.5" x 84.0")	
	Net weight	900 kg (1,980 lbs.)	950 kg (2,090 lbs.)	1,050 kg (2,310 lbs.)

All content is for reference only and may be subject to change without prior notice or obligation.

FSG-618M		FSG-2A618		FSG-2A818		FSG-3A818		FSG-2A1224		FSG-3A1224	
480 mm (18.9")				480 mm (18.9")				630 mm (24.8")			
170 mm (6.7")				220 mm (8.7")				355 mm (14.0")			
450 mm (17.7")				450 mm (17.7")				600 mm (23.6")			
210 kg (462 lbs.)				250 kg (551 lbs.)				420 kg (925 lbs.)			
150 x 460 mm (6.0" x 18.1")				200 x 460 mm (8.0" x 18.1")				305 x 610 mm (12.0" x 24.0")			
520 mm (20.5")		500 mm (19.7")		500 mm (19.7")				650 mm (25.6")			
–		5~ 25 m/min (16 ~ 82 fpm)				5~ 25 m/min (16 ~ 82 fpm)					
–		960 mm/min (37 ipm)		960 mm/min (37 ipm)				1,100 mm/min (43 ipm)			
–		0.4 ~6 mm (0.02" ~ 0.24")		0.4 ~6 mm (0.02" ~ 0.24")				1 ~12 mm (0.04" ~ 0.47")			
–		170 mm (6.7")		225 mm (8.9")				355 mm (14.0")			
		185 mm (7.3")		235 mm (9.3")				365 mm (14.4")			
		3 mm (0.1")				4 mm (0.2")					
0.01 mm (0.005")		0.02 mm (0.001")				0.02 mm (0.001")					
		–				–					
–				–		0.002 ~ 0.04 mm (0.0001" ~ 0.002")		–		0.002 ~ 0.04 mm (0.0001" ~ 0.002")	
		1 mm (0.05")				2 mm (0.1")					
		0.005 mm (0.0001")				0.01 mm (0.005")					
–			Optional 330 mm/min (13 ipm)		330 mm/min (13 ipm)		Optional 330 mm/min (13 ipm)		330 mm/min (13 ipm)		
–			Optional 0.2 mm (0.1")		0.2 mm (0.1")		Optional 0.2 mm (0.1")		0.2 mm (0.1")		
–			Optional 0.002 mm (0.0001")		0.002 mm (0.0001")		Optional 0.002 mm (0.0001")		0.002 mm (0.0001")		
60Hz 3,450 rpm / 50Hz 2,850 rpm											
		1.5 kW (2 HP)				1.5 kW (2 HP)				3.7 kW (5 HP)	
–						40 W					
		–		Optional 0.19 kW		0.19 kW		Optional 0.19 kW		0.19 kW	
–		0.75 kW				0.75 kW				1.5 kW	
Ø205 x 12.7 x Ø31.75 mm (Ø8" x 0.5" x Ø1.3")				Ø205 x 12.7 x Ø31.75 mm (Ø8" x 0.5" x Ø1.3")				Ø355 x 50 x Ø127 mm (Ø14" x 2" x Ø5")			
2 kVA		3 kVA		5 kVA				9 kVA			
1,700 x 1,100 x 2,550 mm (66.9" x 43.3" x 100.4")		1,900 x 1,100 x 2,550 mm (74.8" x 43.3" x 100.4")		2,250 x 1,370 x 1,750 mm (88.6" x 53.9" x 68.9")		2,250 x 1,790 x 1,900 mm (88.6" x 70.5" x 74.8")		2,735 x 1,760 x 2,250 mm (107.7" x 69.3" x 88.6")		2,735 x 2,320 x 2,250 mm (107.7" x 91.3" x 88.6")	
674 kg (1,480 lbs.)		790 kg (1,740 lbs.)		1,250 kg (2,910 lbs.)		1,320 kg (2,910 lbs.)				2300 kg (5,070 lbs.)	



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Please Contact us.



3305 Edison Way,
Fremont, CA 94538

Phone: 510-249-1000
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