



# Rough Grinding and Cutting



## Purpose

The main goal of rough grinding and cutting off is to remove as much material (stock) as possible. Surface finish is of minor importance. This process involves leveling or smoothing edges and shaping cast, forged, or welded pieces. It can also involve removing material to form or enlarge a cavity. Typical tasks include fettling castings, trimming welding joints, or cutting off.



## Choosing the Tool

Several factors determine the choice of tool, including the type of grinding work, the workpiece material, shape, location, the abrasive used, and the power required. More power enables more material to be removed over time.



## Choosing Wheel Diameter and Thickness

Key considerations when choosing wheel diameter include ease of use, machine speed, and economy:

- Many operators prefer the smallest wheel possible as it is lighter and generates less torque.
- Machine speed (rpm) is crucial. Safety codes restrict maximum speeds; larger wheels have lower maximum speeds.
- Larger wheels provide more usable abrasive material at a lower additional cost.
- Wheel thickness is also a matter of cost-effectiveness. Thicker wheels offer more abrasive material for the same price, but thinner wheels may be necessary for precision control or confined spaces, despite requiring a heavier tool and higher air consumption.



## Technique

When using grinders, the material removal pattern is unpredictable, unlike stationary machines. Each grain on the abrasive acts as a tiny cutting tool, removing small chips of material. Over time, these grains become blunt, but the right abrasive will cause blunt grains to break off, exposing new, sharp grains, which is essential for effective grinding. Self-sharpening is crucial for effective grinding. Grinding with a rocking movement helps different parts of the abrasive touch the workpiece, aiding the self-sharpening process. When cutting off material, this rocking motion should follow the wheel's rotation direction.

**Engineered for high performance and unmatched durability, our straight grinders feature a powerful vane motor, making them the ultimate solution for heavy-duty applications.**

### Description

Designed to excel in the toughest conditions, our straight grinders are indispensable tools in the metal industry and shipbuilding. Perfect for shipyards, forges, foundries, metal factories, and craft workshops, these grinders effortlessly remove corrosion, clean metal surfaces, and finish welds with precision. Their streamlined shape ensures easy access to hard-to-reach areas, especially when using a disc brush, enhancing ergonomics and user comfort.

Built to withstand the harshest industrial environments, each straight grinder is crafted for maximum durability and resilience, capable of enduring scratches, impacts, shocks, and pervasive dust and dirt. Plus, we offer both cone wheel and Type 1 grinding wheel options, providing versatility to meet all your rough grinding and cutting needs. Trust our pneumatic straight grinders to deliver high performance and reliability in every heavy-duty application

### Features

- Cone wheel and Type 1 grinding wheel options
- Integrated speed controlled governor
- Minimum sound levels; Robust aluminum housing
- Powerful vane motor; Integrated Autobalancer (for LSR48)

### Benefits

- Optimal process speed for different applications
- Highest productivity
- Long service intervals
- Reduced risk of vibration related injuries



## Straight Grinders



**LSR48**

[Details](#) >



**LSR64**

[Details](#) >



Model	Max free speed r/min	Max output kW	Length mm	Weight kg	Air consumption at max output l/s	Air consumption at free speed l/s	Rec hose size mm	Air inlet thread BSP in	Air inlet thread NPT in	Wheel Diameter (DxTxH) <sup>a</sup> mm	Ordering No.
LSR48 S120-CW	12000	1.8	475	2.3	30	13	16	-	1/2	-	8423 0708 02
LSR48 S090-10	9000	1.5	495	3.2	28	11	16	1/2	-	100x25x13-25	8423 1430 02 (equipped with closed wheel guard)
LSR48 S090-CW	9000	1.5	450	2.3	28	11	16	1/2	-	-	8423 1430 03
LSR48 S120-CW	12000	1.8	450	2.3	30	13	16	1/2	-	-	8423 1430 05
LSR48 S120-13	12000	1.8	487	3.6	30	13	16	1/2	-	125x25x16-25	8423 1430 06
LSR48 S150-CW	15000	2.0	450	2.3	35	19	16	1/2	-	-	8423 1430 08
LSR48 S120-10	12000	1.8	495	3.5	30	13	16	1/2	-	100x32x16-25	8423 1430 09

<sup>a</sup>DxTxH = Diameter x Thickness x Hole

## Accessories

	8423 0708 02	8423 1430 02	8423 1430 03	8423 1430 05	8423 1430 06	8423 1430 08	8423 1430 09	Ordering No.
<b>Included</b>								
Face spanner (A/F 27mm - 1 1/16" Type B)	✓	-	✓	✓	-	✓	-	0902 0427 00
Face spanner (26/4mm)	-	✓	-	-	-	-	-	4080 0210 00
Face spanner (30mm)	-	-	-	-	✓	-	✓	4080 0201 00
Rear flange (wheel inner Ø16mm)	-	-	-	-	✓	-	✓	4150 0619 00
Rear flange (wheel inner Ø13mm)	-	✓	-	-	-	-	-	4150 0732 01
Rear flange (wheel inner Ø20mm)	-	-	-	-	✓	-	✓	4150 1650 00
Rear flange (wheel inner Ø16mm)	-	✓	-	-	-	-	-	4150 0732 02
Rear flange (wheel inner Ø25mm)	-	-	-	-	✓	-	✓	4150 0713 00

## Accessories

	8423 0708 02	8423 1430 02	8423 1430 03	8423 1430 05	8423 1430 06	8423 1430 08	8423 1430 09	Ordering No.
<b>Included</b>								
Rear flange (wheel inner Ø25mm)	-	✓	-	-	-	-	-	4150 0732 04
Flange nut	-	-	-	-	✓	-	✓	4150 0670 00
Flange nut	-	✓	-	-	-	-	-	4150 0776 00
Front washer	-	-	-	-	✓	-	✓	4150 0671 00
Front washer	-	✓	-	-	-	-	-	4150 0731 00
<b>Optional</b>								
Adapter (for CW with thread - UNC/W 5/8")	✓	-	✓	✓	-	✓	-	4150 0945 01
Collet nut	-	-	✓	✓	-	✓	-	4150 0849 00
Collet holder	-	-	✓	✓	-	✓	-	4150 0680 01
Collet Ø6mm	-	-	✓	✓	-	✓	-	4150 1453 00
Collet Ø8mm	-	-	✓	✓	-	✓	-	4150 0706 00
Collet Ø9mm	-	-	✓	✓	-	✓	-	4150 0765 00
Productivity kit (MIDI-FRL-1/2-BSP EQ10-T16)	-	✓	✓	✓	✓	✓	✓	8202 0850 12
MULTIFLEX-1/2-HF	-	✓	✓	✓	✓	✓	✓	8202 1350 60



Model	Max free speed r/min	Max output kW	Length mm	Weight kg	Air consumption at max output l/s	Air consumption at free speed l/s	Rec hose size mm	Air inlet thread BSP	Wheel Diameter (DxTxH) <sup>a</sup> mm	Ordering No.
LSR64 S041	4100	1.6	535	5.4	29	7	16	1/2	-	8423 1640 14 (for wire brushes)
LSR64 S060-15	6000	2.3	535	5.4	41	11	16	1/2	150x25x16	8423 1640 22
LSR64 S072-13	7200	2.5	535	5.4	45	14	16	1/2	125x25x16	8423 1640 30
LSR64 S100-15	10000	2.9	535	5.8	53	26	16	1/2	150x25x25	8423 1640 55

<sup>a</sup>DxTxH = Diameter x Thickness x Hole

## Accessories

	8423 1640 14	8423 1640 22	8423 1640 30	8423 1640 55	Ordering No.
<b>Included</b>					
Face spanner (A/F 27mm - 1 1/16" Type B)	✓	-	-	-	0902 0427 00
Face spanner (30mm)	-	✓	✓	✓	4080 0201 00
Rear flange (wheel inner Ø16mm)	✓	✓	✓	-	4150 0619 00
Rear flange (wheel inner Ø25mm)	-	-	-	✓	4150 0713 00
Flange nut	✓	✓	✓	✓	4150 0670 00
Front washer	✓	✓	✓	✓	4150 0671 00
<b>Optional</b>					
Steel wire brush Ø115mm	✓	-	-	-	4170 0491 00
Rear flange (wheel inner Ø16mm)	-	-	-	✓	4150 0619 00
Rear flange (wheel inner Ø20mm)	✓	✓	✓	✓	4150 1650 00
Rear flange (wheel inner Ø25mm)	✓	✓	✓	-	4150 0713 00
Productivity kit (MIDI-FRL-1/2-BSP EQ10-T16)	✓	✓	-	-	8202 0850 12
Productivity kit (MAXI-F/R-1-BSP T 1/2" BSP)	-	-	✓	✓	8202 0850 05
MULTIFLEX-1/2-HF	✓	✓	✓	✓	8202 1350 60

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