



Options & Accessories

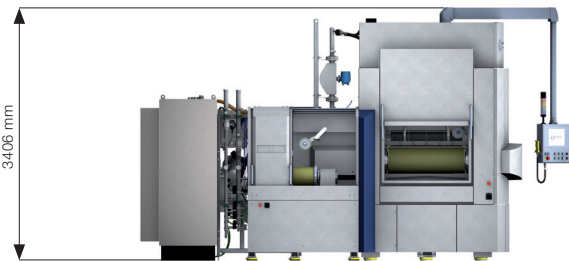
Accessories

- Handling accessories for workpiece/ wire guide rolls/ wire spools
- Tools for exchange of spools/ wire web/ wire guide rolls and for maintenance

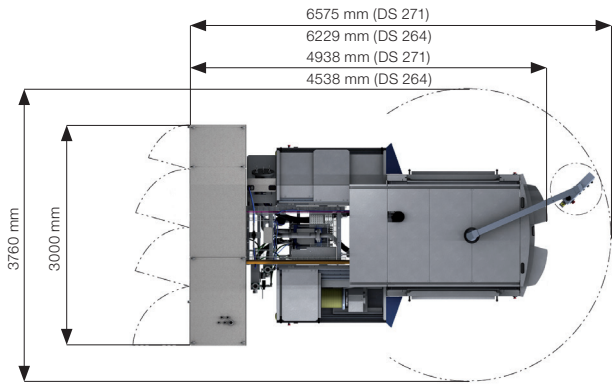
Options

- Slurry-Management for automatic slurry exchange
- MES Interface in different standards: OPC/ XML/ SECS/ GEM/ SEMI PV II
- Interface for external filtration for DW water based process

Technical data



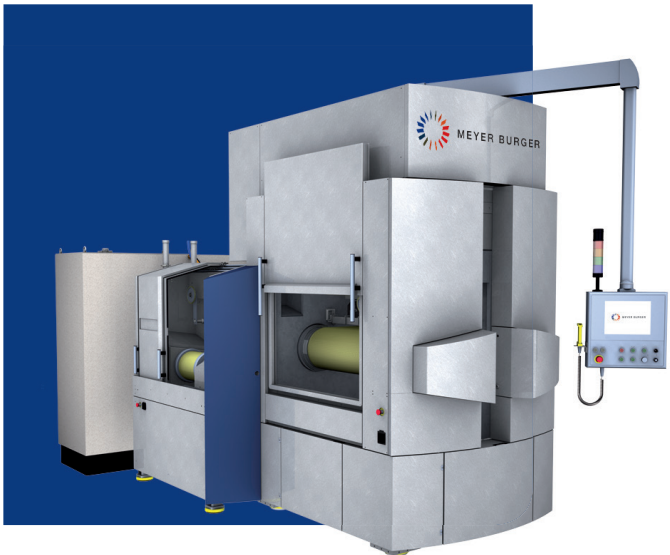
Layout wire saws (side view)



Layout wire saws (top view)

Technical data at a glance

	DS 271	DS 264
Loading length [mm]	1020	820
Workpiece dimension [mm]	max. 220 x 220	
Workpiece holders [mm]	4 x 255, 3 x 340, 2 x 510, 1 x 1020	4 x 205, 2 x 410, 1 x 820
Wire diameter	100–160 micron	
Wire speed	15 m/ sec (option: max. 20 m/ sec)	max. 15 m/ sec
Cutting media	Slurry/ diamond wire (glycol or water based)	
Wire guide rolls diameter [mm]	350	320
Machine weight [kg]	16'600	15'200



DS 271 / DS 264

Wire Saws for the Photovoltaic Industry

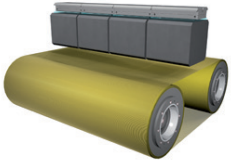
Lowest Cost of Ownership & Highest Yield

- **>98 % yield** thanks to single table concept
 - Additional 24 wafers per run compared to double table
- **>95 % uptime** reliable and industry proven components
 - Low maintenance
 - Highest productivity due to shortest exchange times
- **Lowest cost of ownership**
 - 50 % less parts compared to a double table machine
 - Latest technology for wire break detection
 - Slurry: <0.4 USD per wafer and 52 wafers/kg c-Si*
2.5 million wafers per year (> 10 MW)**
 - DW: <0.3 USD per wafer and 52 wafers/kg c-Si*
5.5 million wafers per year (> 25 MW)**

*Depending on process parameters and consumable cost
**180 µm wafer, mono c-Si, eff. = 18 %

Reduced kerf and thinner wafers

- **Best machine concept** to decrease wire diameter and wafer thickness
- **Highest volumes/optimal loading** length before wire wear out
- **100 & 120 µm wire** established for mass production



Quality guarantee due to permanent process monitoring

- **Easy monitoring** of all process related data
- **Lifetime monitoring** with alarm settings
- **User-friendly** operator interface (HMI)
- **Smart software** features

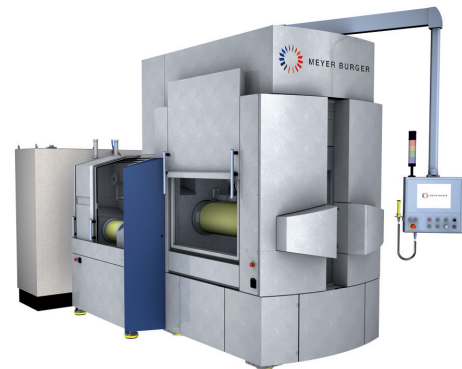


We reserve the right to make changes reflecting technical progress (10/2015)



Wire Saws DS 271 / DS 264

Summary of Advantages



Overview

- Maximum load 1020/820 mm
- Thinnest wire 100 micron
- Highest yield
- Best TCoO
- User-friendly operation
- Most sold wire saw in PV
- Industry proven process
- Fast exchange times

Wire web

- Wire break control system detects wire break
- Save stop system in case of wire break or power failure
- Easy access and fast exchange of spools, rewiring, WGR and pulleys



Slurry process

PV wire saw benchmark

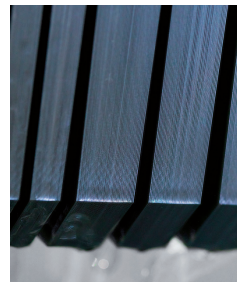
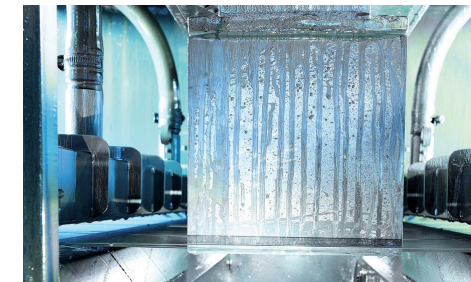
- DS 271 wins benchmark evaluation by exceeding demanding customer expectations and beating the competition

Workpiece

- Mono c-Si brick
- 156 mm x 156 mm
- 1000 mm load
- 180 µm wafer thickness

Thin wire, thin wafers

- The machine is specially designed for thin wafers using thin wire
- 100–120 micron wire has been established for mass production



Benefits

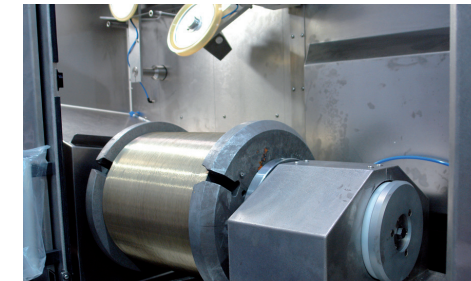
- Best performance
- Maximum uptime 96 %
- Higher saw yield and best CoO
- Less pulleys
- Global service network
- After-sales services

Meyer Burger results

- Saw yield > 98 %
- TV ± 12 µm
- TTV < 35 µm (typically < 20 µm)
- Saw marks 1 < 12 µm
- Uptime 96 %

Less parts = lower cost

- 50 % less parts compared to a double table machine
- Only 6 vertical pulleys
- Minimal wear part cost
- Easy maintenance



Diamond wire upgrade

- The machine concept of the wire saws DS 271 and DS 264 is designed for a fast and easy upgrade to diamond wire cutting. Wafering with diamond wire reduces cutting times, offers higher output and less process complexity. Reduction of CoO for mono process

