



# RSS 160 SONIC DRILLING HEAD

## ABOUT US

With more than **25 years of experience** in **special purpose machine design** and more than 40 qualified employees, we develop **efficient methods** for your requirements that lead to **economically lucrative solutions**. All important aspects are located at **Kirschenhofer Maschinen GmbH** in-house. From **design to assembly**, but also in the areas of training and service you will receive comprehensive support from us. We only work together with **absolutely reliable**, selected suppliers. When looking for solutions to **complex requirements**, the focus is always on **high accuracy and punctuality**.

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Sonic is an advanced form of drilling that uses **high frequency resonance energy** that is generated in the **Sonic head**, to drive a drilling string into geological formations. During drilling the **resonance energy with high frequencies** is transmitted to the drill surface via the drill string. By simultaneously rotating the drill string, **energy and impact are evenly distributed** over the drilling surface.



## DESIGN

- **Compact design** requires small mounting space
- **Strong bearing system** off the main shaft
- Due to its **hollow shaft design** there is no need for an extra expensive water swivel
- All mechanical components and bearing with **time lubrication and cooling**
- Compatible to drill rigs of **all manufacturers**

## TECHNICAL SPECIFICATIONS

| General data                | metric     | imperial     |
|-----------------------------|------------|--------------|
| Sonichead tilt max.         | 90°        | 90°          |
| Quantity of oil drill rig   | 260 l      | 68,68 gal    |
| Engine power from drill rig | 120 KW     | 163 HP       |
| Weight sonichead            | 800 kg     | 1763 lbs     |
| Drilling depth              | ca. 80 m   | ca. 269 ft   |
| Drilling diameter           | ca. 160 mm | ca. 6,3 inch |

| Vibration            | metric     | imperial   |
|----------------------|------------|------------|
| Frequency max.       | 0 – 150 Hz | 0 – 150 Hz |
| Centrifugal force    | 160 kN     | 35,96 lbf  |
| Quantity of oil max. | 108 l      | 28,53 gal  |
| Oil pressure max.    | 300 bar    | 4351 psi   |

| Rotary drive         | metric            | imperial              |
|----------------------|-------------------|-----------------------|
| Torque               | 3550 Nm / 300 bar | 2627 lb-ft / 4351 psi |
| Rotation max.        | 120 rpm           | 120 rpm               |
| Quantity of oil max. | 150 l             | 39,62 gal             |
| Oil pressure max.    | 300 bar           | 4351 psi              |