
ZH/SM HYDRAULIC IMPACT WRENCHES



Device description:

Hydraulic impact wrenches ZH/SM are devices for the installation and removal of bolted connections capable to achieve very high torque with relatively low weight.

The double-blade impact mechanism used is driven by an SM-type hydraulic satellite motor, specially designed for this type of equipment and adapted to be powered by HFA water-oil emulsion. As a result, it is possible to supply these tools directly from the emulsion hydraulic buses of mechanized casings in underground mining. It is also possible to supply oil from other hydraulic systems, such as roadheaders. The stainless steel valve uses a slotted filter to prevent dirt from entering the motor. The advantage of the ZH/SM hydraulic impact wrenches is the very favorable relation of the obtained power to the weight of the device. The devices are functional (ergonomic), characterized by high durability and at the same time low operating costs.

Hydraulic impact wrenches of the ZH/SM type are available in four versions, each with a different maximum impact torque.

- Hydraulic impact wrench ZH/SM 1700
- Hydraulic impact wrench ZH/SM 2000
- Hydraulic impact wrench ZH/SM 3500
- Hydraulic impact wrench ZH/SM 4000

MANUFACTURE AND SERVICE

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Drive unit description:

ZH/SM type hydraulic impact wrenches are driven by SM type hydraulic satellite motors developed and manufactured by SM Hydro company. These motors are distinguished by their simple and compact design and high torque combined with high efficiency. The special advantages of SM type hydraulic satellite motors are due to the precision measured in microns and the quality of manufacture based on the state-of-the-art construction materials with high durability, including the use of sintered carbides.

The use of hydraulic satellite motors in mining is most often associated with the use of water-oil emulsion type HFA, but oil supply is also possible. SM type hydraulic satellite motors driving impact wrenches vary in size and impact torque, making it possible to select a tool with the right power to achieve a specific purpose while ensuring the desired performance.

**Hydraulic impact wrenches type ZH/SM can work
in explosive atmospheres.**

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Technical characteristics of ZH/SM hydraulic impact wrenches:

#	Parameter	Unit	ZH/SM 1700	ZH/SM 2000	ZH/SM 3500	ZH/SM 4000
1.	Motor type		SM 0,5/10	SM 06/10		
2.	Geometrical displacement	cm ³ /rev.	5,8	8,3		
3.	Nominal pressure*	MPa	22	22		
4.	Max. impact torque	Nm	1700	2000	3500	4000
5.	Filtration	µm	100			
6.	Weight	kg	5,4	8	10,8	16
7.	Arbor size		3/4	3/4	1	1
8.	Feed liquid		water-oil emulsion HFA, hydraulic oil			

* When fed with low-percentage HFA emulsion, continuous operation at pressures higher than nominal will result in accelerated wear of the toothed working mechanism of the motor. Pressures higher than nominal in continuous operation are recommended only when fed with hydraulic oils.

All SM-type and SMW-type motors are suitable for operation on HFA water-oil emulsion. They can also be operated with hydraulic and also vegetable oils.

Detailed information on motors and tools ranges can be found at www.smhydro.com.pl

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