



DISC ALIGNER DA2002

THE MOST PROFITABLE SOLUTION



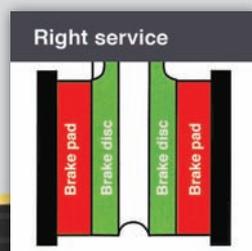
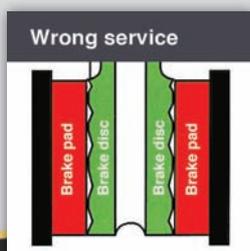
One of the major systems of a car is its brake system - all brake components are safety components.

A braking system is as strong as its weakest component. Therefore it is impossible to develop a braking system if the slightest concession is made on its components. Motorists rely on their braking system and therefore it must work at the full 100%. But whatever happens behind the brake pedal, the car driver only notices the end-effect. In numerous dangerous situations such as sudden traffic jam on the motorway, or a child suddenly runs into the street, it comes down to good response and requires the maximum performance of the brakes. Braking aids like ESP, Brake Assist and electronic safety systems are designed to work with full disc-to-pad contact. If this is not the case, then these systems are unable to function optimally. For proper operation of the braking system to ensure it is therefore necessary that the disc is as flat as the new pad. Only then the shortest stopping distance can be achieved.



Brake maintenance

A frequently heard comment is that by machining the brake discs they will be too thin. Since only about 0.1 mm is removed during the process, this is not a problem. At an average disc thickness of 25 mm, with a prescribed minimum thickness of 22 mm, this is a very small percentage. The effect is much greater, the customer does not need to be warned that his brakes have to be bedded in. The driver can immediately drive safely on the road again. Machining the brake discs creates an optimal braking surface, save new discs and there is no need to dispose off the old discs so the environment is spared.

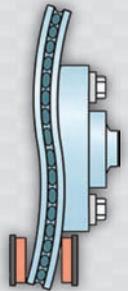


Brake problems

Because of constant improvements in materials, assembly tolerances and quality awareness, even minor defects in disc brakes are noticed by the driver. Vibration in the steering wheel or brake pedal can be felt immediately and brake noise is audible.

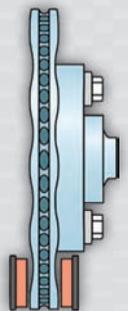
Run-out:

Is oscillation of the brake disc. This may be caused by tolerance in the brake disc and hub or by distortion of these parts by shock loads. The oscillation of the brake disc can be felt in the steering wheel. The brake disc and the brake pads are not in line!



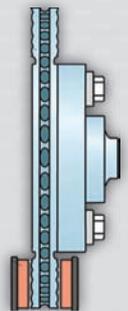
Disc Thickness Variation (DTV):

Is the difference in thickness of the brake disc, is measured at different points in the radial plane. This phenomenon is the logical consequence of differences in material structure, run out and constant changes in brake conditions such as ambient temperature, humidity and load on materials. DTV can be clearly felt in the brake pedal. Once again, brake disc and brake pads are out of line!



Roughness:

Of the brake disc surface leads to high or low frequency vibration of the brake components. The differences in surface structure do not conform to the manufacturer specification and will result in excessive brake noise.





Rust:

On brake discs of cars that have stood still for a longer period, a layer of rust forms on the disc.

This is removable by braking, but this result in grooves in the disc. This gives a loss in braking surface. So braking capacity decreases. To remove rust there is no better solution than machining the disc on the car. Through a small operation the disc is like new. It saves the investment in a new disc and you do not harm the environment, because you do not need to throw the old disc away.

Surface corrosion and rust will be quickly and cost-effectively removed.



DA2002 features:

- Powerful Drive Unit
- Ergonomic design
- Continuously variable speed rate
- Easy height adjustment
- Durable Dutch design
- More stability due to four wheels
- Modular storage facility for disc lathe and tools
- Electronic Disc Lathe
- Quick mounting of Disc Lathe



Easy mounting by USM

With the Universal Slide Mountings (USM) mounting the disc lathe on the calliper ears is very easy. No more extra adapters and it always fits.



Quality

The Disc Aligner DA2002 complies with the strictest international test specifications for workshop equipment. The configuration has been developed and manufactured according to ISO 9001-2008 standard. Approved by 20 car manufacturers. The CE safety mark, as well as the official approval of many other independent international authorities, ensures a constant high quality product. The DA2002 comes with a one year warranty. If you register your unit on our website you can profit from our two year warranty program.

On the Car Disc Aligning features:

- Completely eliminates Run-out, DTV, excessive brake noise and rust;
- Saves dismantling, re-assembly and adjustment of the brake disc;
- Guarantees perfect contact between the brake pads and brake disc;
- Can be used everywhere, both on a car lift or at ground level;
- Fits on 99 % of all passenger cars and light commercial vehicles, with or without ABS;
- No depending on outside specialists, no need for stocking brake discs;
- One stop shopping for brake service;
- And, above all, a satisfied customer!

Technical specifications DA2002:

Performance specifications

Run-out/Disc oscillation	< 20 µm
Disc Thickness variation	< 20 µm
Surface roughness/finish	< 2 µm
Max. brake disc thickness	41 mm
Max. depth of cut	0,8 mm pro bit
Incremental cutting scale	0.05 mm. per click.

Disc Lathe DL2002

Autofeed 1	6 mm/min.
Autofeed 2	12 mm/min.
< >	50 mm/min
<< >>	475 mm/min.

Drive Unit DU2010

Rotation speed	80 - 160 rpm
Working height DA2002	450 - 1250 mm

Electrical Data	DL2002	DU2010
Voltage	36 VDC	100-240V. Freq. 50/60 Hz.
Current	max. 1.3 A	2,4 / 3 A
Power	70 W	0,55 kW
Torque		65 Nm
Weight	7,5 kg	60 kg
Colours	Black RAL 9005/Yellow RAL 1003	

Service

MAD works in conjunction with car manufacturers and so keeps up-to date with all new developments.

MAD research division tests all new car types in relation to aligning equipment. The Vehicle Information database is being updated regularly on our website:

www.mad-tooling.com

Our international service desk in the Netherlands supports a worldwide network of distributors and workshops.

**The MAD Disc aligners can be used everywhere,
both on a car lift or at ground level!**

