

NAO 4-3E

**KEEP
SURFACE
KEEN**

Cladding machine (MIG/MAG method)



Cladding machine NAO series are suitable for the cladding of deep base surfaces for example cladding of valve seats up to 500 mm deep.

If the standard torch is used (MIG/MAG) it is also possible to clad external rotating surfaces.

It is possible to oscillate the torch during the cladding process depending on the width required.

The most common method of cladding is MIG/MAG (wire or tubular wire). With this technology it is possible to clad through a minimum diameter of 20 mm and the maximum depends on the machines capability.

Machine is fitted with 5 axes, 4 are controlled by the program and 5th is adjusted manually.

The cladding machine NAO is suitable for engineering industry, energy industry and also for other application with maximum load of 1.000 kg.

This technology it is possible to use for new and used parts.

Standard welding material (stainless steel, nickel, cobalt, etc.):

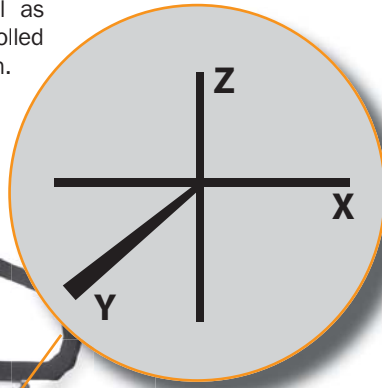
-solid wire (Ø 0,8 - 2,0 mm)

-tubular wire (Ø 1,2 - 2,8 mm)

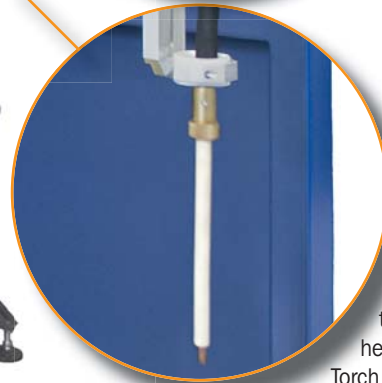


Welding source and wire feeder:
 In standard configuration the „NAO 4“ is supplied with 500A welding source.
 Wire feeder is located close to the torch.
 All welding parameters as well as all movement of axes are controlled from the machine control system.

Feed range of torch:
 In three axes. Two of them are fitted with digital servo motors.
 X-right, left (digital servo motors) 1.400 mm
 Y- forward-backward (manual adjuster) 100 mm
 Z- up-down (digital servo motors) 600 mm



Control system:
 With 5,7“ QVGA touch screen mounted in an air conditioned box fitted with B&R system and our own SW developer by KSK. Programming of the machine is provided in easy dialog or by method teach-in in cooperation with remote control.
 With all our machines it is possible to control and carry out diagnostics via internet.



Torch:
 For cladding of deep base surfaces KSK has developed and produced special water cooled torches. These torches are able to carry out this operation in pre-heated parts up to 600° C.

Torch is shielded by a special ceramic pipe against extreme temperature and this ceramic pipe also focuses the shielding gas to the cladding area, as well as preventing unwanted side arcs.
 These torches are constructed according to the required clad material. Cladding machine NAO 4 also allows cladding on the top of the surface using standard MIG/MAG torch.



Positioner:
 Cladding machine is fitted with tilting and rotating positioner. The positioners rotate with parts clamped on the table directly, alternatively clamped in chuck or jig. Both axes are driven by digital servo motors. In basic configuration, for short-run production is table fitted by chuck with exchangeable jaws. In case of large-run production its possible to fit machine with sophisticated clamping system.

Technical data:

Dimension (W x L x H)	1.450 x 890 x 2.430 mm	2.250 x 1.300 x 3.100 mm
Weight	910 kg	1.300 kg
Load weight of positioner	500 kg	1.000 kg
Diameter of the face plate	750 mm	1.000 mm
Rotation of the table	(according request – usually 0,1-12 rot./1min.)	
Tilting of the table	from - 10° to +100°	