

Penetration depth induction made in Germany: VauQuadrat V-Series

Of course, the decisive part of VauQuadrat always has been outstanding applicational knowledge in heat straightening, preheating, and demounting. But now, even the induction units are made by us. So much more than the "replacement of the open flame".

Technical data VauQuadrat V4/V4X:

Induction power	18kW max., selectable 30..100% by steps of 1%
Induction technology.....	Penetrating Induction, fixed frequency 15,8kHz
Hose package.....	6m
Power connection.....	3x400V / 50Hz 32A, power cord 10m. Use V4X if no stable Neutral is available. Can be used on generator.
Cooling.....	Internally water cooled. Recooling by integrated air-cooled compressor refrigeration system
Coolant.....	Propylene glykol / water mixture
Refrigerant.....	R455A (A2L)
Dimensions.....	L=1480mm W=685 H=1040
Protection.....	IP21
Colour scheme.....	Dark grey / yellow-green
Weight.....	240kg
Configuration.....	Inductors with 30mm/45mm field enhancers on ferritic steel, 60mm on Austenites, 120mm on Aluminum / Copper
Safety devices.....	Active flow monitoring, overtemperatur guard RCD, overcurrent, HP-/LP-cutoff, E-stop (Option)
Undercarriage.....	Rubber wheels rear, caster rolls with brake
Operation.....	Big graphical display, big encoder
Materials.....	Depending on inductor useable on steel, stainless steel, aluminum, copper 1mm .. 250mm
Options.....	Timer, Special inductors, PTFE caps (up to 300°C) Master Process Description for defining highly repeatable heating processes, not only in regulated environment



Application competence

One thing is for sure: This is not about "induction", and most of our applications would never work with resonant induction or even an open flame! Due to a certain primary penetration depth (not only thermal conductivity), we can do some cool stuff.

- Heat straightening: With surface temperatures that do not "run away", you have a straightening process that is even less damaging to the material than cold bending on a press. Positive side effect: Less residual stress, that would bring deformation back in a hot zinc bath or after vibration! "Minimum invasive straightening" (Patent DE10 2014 011 551) means nearly no visible glowing, no need for clamping, and no need to wait for cooldown. Minimum invasive does not work in all situations, but even when we glow, it is much less than what is expected compared to flame - or to all other induction
- "Preheating is no longer a cuss word!". Penetration depth induction as an unexpected universal solution for more or less all welding problems. Aluminum welding, for one. Starting from size 1mm, preheating is risk free and ultra fast - read that as "economic". And welding with very high quality becomes real easy. Preheating steel, even fine grain, tempered or armor steel is all of a sudden possible. Our special inductor shapes and our Master Process Description help.
- Dehardening of cutting edges (plasma, laser,...): Real fast and it looks like applied magic. No visible glowing. Why? Not because EN1090 says so, but because blasting does no effect on hardened surfaces. Or did you never wonder why coatings were perfect everywhere but on free, non-treated cutting edges? And please don't answer "we always grind all of them off anyway". This is the 21st century!
- Easy and quick removing of zinc accumulations after zinc coating. Man muss das Zuviel an Zink auch im Interesse der Umwelt und der Mitarbeiter-Gesundheit ja nicht unbedingt in Zinkstaub verwandeln!

- 0.GY 004 Penetration Depth Induction Heater V4 18kW
- 0.GY 006 Penetration Depth Induction Heater V4X 18kW
- 2.NY 002 Spare Hose Package V4/V6/V7/A4000/A1200 6m
- 2.NY 003 Spare Hose Package V4/V6/V7/A4000/A1200 10m
- 2.NY 033 Universal inductor "Robbiductor B" 45mm
- 1.NC 009 Handle
- 1.GE 225 Upgrade TimeMasterEXPERT
- 1.GE 406 Upgrade Capacitor selection for bigger inductors
- 2.NY 038 Large Surface Inductor 2x60=120mm
- 2.NY 051 Straightenin-/Preheating inductor 60mm