Stand 22042018 hpw short everything

# **CNC-controlled multifunction machine WIAP DM3S for processing rebar**

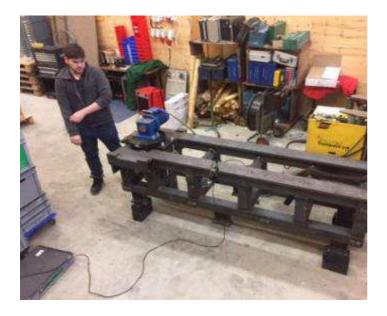
### Construction time eight months





Picture 2

Picture 1





Picture 3 Picture 5



Picture 4



Picture 6: Everything is set up for testing, so that when we have the machine mechanically finished, everything has been running and is preset



Picture 7



Picture 8



Picture 10: Machine bed return delivery with console



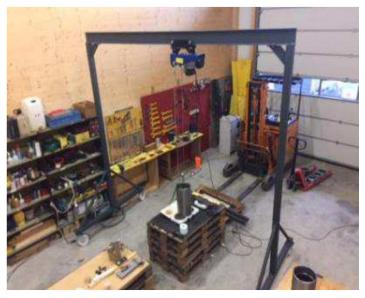
Picture 11



Picture 12: 40x70 bought scraper specially made for WIAP for 3 machines in stock



Picture 13: Material for the two headstocks



Picture 14



Picture 15: Heisschrunpf system that the weight and processing costs were moving



Picture 16



Picture 18: 3 towards MEMV relax. Logging of relaxation of both headstocks



Picture 17: Jim and Sven weld the headstock housing



Picture 19: Paint priming and 2 K



Picture 20: 2 identical spindles ground



Picture 22: Here, the Z-carriage is MEMV vibration relaxed in 4 axial directions



Picture 21



Picture 23: Drill several hundred mm lubrication channels that admission is only on one side per lane



Picture 24: Be milled sliding coating test with lubrication paths before



Picture 26: Many M8x1 for the lubrication connections. On the X slide



Picture 25: 150 mm deep drilling for lubrication



Picture 27



Picture 28 Picture 31: Frame welding



Picture 30: Welding beginning of the HLV supply and carrying away



Picture 32: Sven, he strives for every mm. Everything must be perfect just



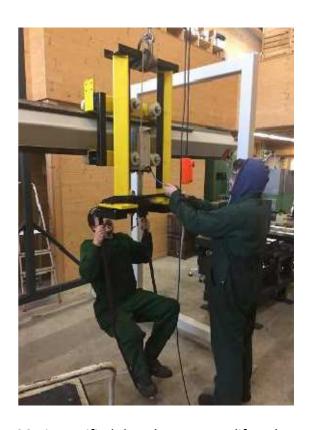
Picture 33: Workpiece depositing sliding webs



Picture 35



Picture 34



Picture 36: Jim verified that the HLV may lift rods 40 kg. He tested with his weight. No problem.



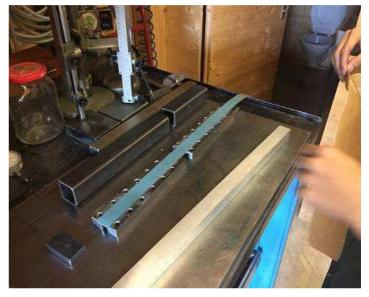
Picture 37: Parallel gripper 2 pcs. WIAP own design



Picture 39: Clamping is good



Picture 38: The housing made of cast iron for a good sliding



Picture 40: The underhand grip. Thus it is not steel on steel, we also accept slide lining



Picture 41: 2 grippers for 40 kg. It could be lifted safely even 80 kg



Picture 43: Touchieren of Z carriage



Picture 42: Test of the gripper with the HLV (auxiliary charging device)



Picture 44: Cross slide in the assembly



Picture 45: Cross slide



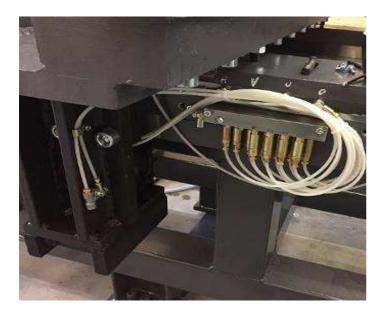
Picture 47: Jim, installation of X spindle



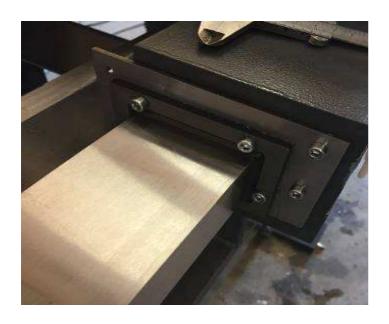
Picture 46: Sven, assembly of the lubrication



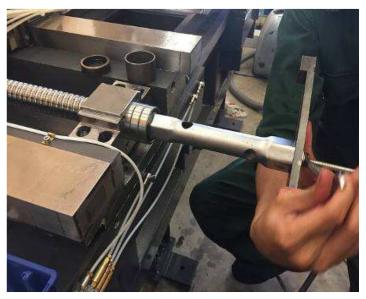
Picture 48: Lubrication is always a sweat of the brow; it takes time



Picture 49: The distribution blocks, we do it yourself, because it was easier for installation. Per slide the WIAP always min. 3 lubrication points to ensure enough oil comes on the pads even with short strokes. The large areas have large dossier units and sub handles the smallest. The side surfaces average



Picture 50: We chose 40x70 mm and equal to buy a form at the wiper manufacturers, so we can use this model as standard a new command variable. In stock we have 3 machines



Picture 51: The axial bearing we have bearing with a 40 ° angle. The same as with the WIAP vibration system. These last for years and are available from stock



Picture 52: Ball screw lubrication and cover assembly



Picture 53: So now the assembly of the two main spindles



Picture 54: Clean, no dirt, no compressed air; as sterile in the hospital, prolongs the life



Picture 55: No hammer during installation, all with mounting auxiliary devices



Picture 56: Slowly the machine adopts the form



Picture 57: Sven at E cabinet assembly



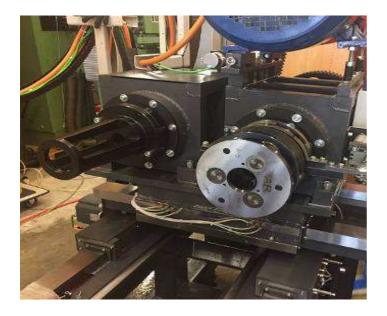
Picture 59: The power supply is always something that just is one of them



Picture 58: Installation of adjustment that the headstock can are adjusted at the hundredths. He is easy on both sides reference surfaces for spindle bore, that the belts tighten



Picture 60: Under the feed, as well as in the two spindles, it has documents that can be ground, that the alignment is not so hard



Picture 61: Even the X carriage has enough lubrication points



Picture 63: Diligence work, welding



Picture 62: So now the formwork. The sheets we bought externally, but the frame is so bulky



Picture 64: Since the CNC no analogues has inputs and outputs, we have taken a PLC with HMI operation. It was easier to do as a Poti solution. The tool breakage monitoring of roller burnishing tools and peeling head monitoring for all threads on M function programmable. Like the food setting with Amp. And the setting of the vibrator of the parts supply goes beyond the PLC with HMI



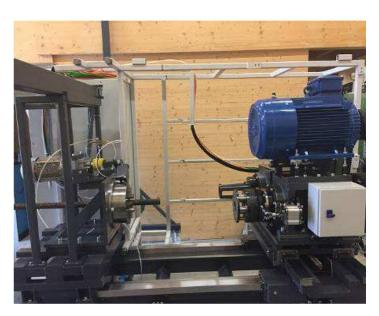
Picture 65: The rolling head of the old machine now goes on the new CNC machine WIAP Open and close above the cylinder. The longitudinal factor of the workpiece by the rolling is automatically calculated using an R parameters in the CNC program and taken into account



Picture 66



Picture 67: Standard switches, standard cylinders; easy to care for the maintenance



Picture 68





Picture 69 Picture 71: Sven controlled





Picture 70

Picture 72: The framework is taking shape



Picture 73: Jim during welding of the parts shelf subframe



Picture 75: Everything has been primed with 2-component paint and painted



Picture 74: In order to have space, we had to, and outside to by



Picture 76: Iris Widmer has a lot of experience from previous projects, it was their estimated support



Picture 77: Wear plastic, also protects against noise



Picture 79: How is it working, it is a film soon



Picture 78: The entire automation is finally also securely over 2 tons



Picture 80: Time and again had to be painted that in the assembly continued to be made. Bring the goods into the injection molding and always wait a week, would have greatly damaged the schedule. In addition, expensive to transport these bulky goods always



Picture 81: Yellow paint is very tiring. Almost to paint the most unpopular color



Picture 83: The claws to rotate around the blank and finished part in the support. What moves yellow



Picture 82: The finished part racks prysmen rods 50 a 40 kg shall be as pure



Picture 84: Fortunately, we do not have to paint every day



Picture 85: Soon the automation for the assembly department is ready



Picture 87: Cargo in the space 1



Picture 86: For 2 tons must hold the device



Picture 88: Transport goes well, with two possible pallet trucks



Picture 89: This is the blank edition, here a bunch a 50 pcs. is laid



Picture 91: Fit plates is not to be underestimated



Picture 90: Sven for fine adjustments



Picture 92: The WIAP has a system for special machine that much needs to be done with simple sheets. It is less beautiful than in large series machines, but it serves the purpose



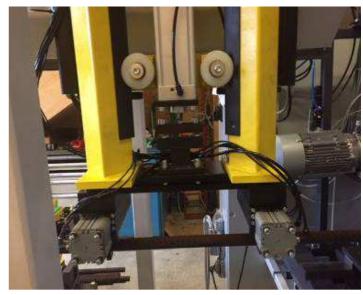
Picture 93: The passing through of the whole machine



Picture 94: Creating CNC programs and PLC, all of the boy's tip top. Sven has made virtually in the project all electrical, PLC marriage of CNC with the external PLC was not a simple matter, because the CNC does not have as many inputs and outputs, we had to use BCD coded language between CNC and PLC



Picture 95: The surgeon must only select the component, make little redirecting works, then he can start the new component. Nothing programming, everything goes automatically with parameter programs, jump instructions, etc. Automatically in case of overload the workpiece take shelter in the committee and restart. That's without any manual intervention.



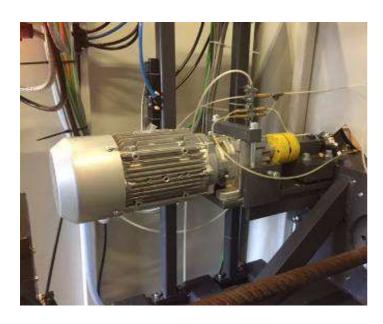
Picture 96: The loader holds the component, while it is processed ahead.



Picture 97: At 40 kg to 4 meters long stank go to a feed requires a stable solution. We have not saved with the steel weight



Picture 99: Band filter with chip conveyor



Picture 98: Food drive for 180 Nm. All diameters without jaw change possible. Lining can be freely opened enough to drive without interference contour with the loader to feed from behind. The lubrication lines are now installed throughout clean. The feed as the drive is everything lubricated automatically

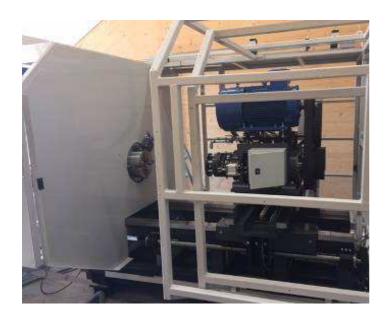


Picture 100: The automatically closeable door is mounted.

Plates are already drilled, but not yet mont wobbles that we do not scratch at the still to be made work



Picture 101



Picture 102



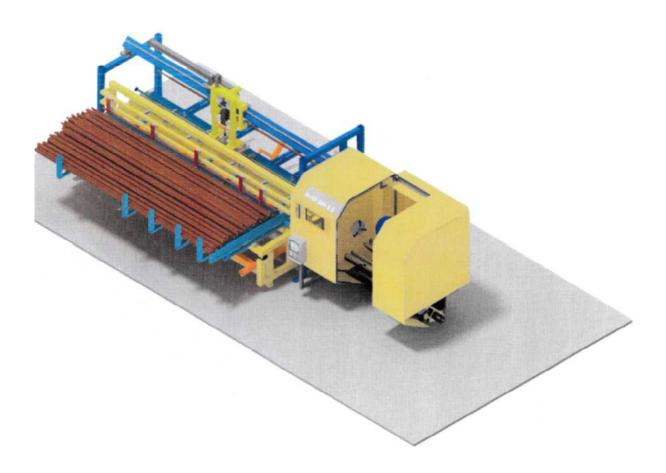
Picture 103: Photo with the installation team from the side of the machine



Picture 104: Design, construction electrically and mechanically. Assembly electrically and mechanically.

Production Team; a more versatile work can hardly be imagined.

From left to right: Dai, HP, Sven, Jim



End product

Created: sw-jw-iw-hp Widmer



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