CNC-STEP
CNC Maschinenbau

Operating Instructions
Cabinet with Inverter for Isel iSA750

Software: WinPCNC USB

www.cnc-router.com

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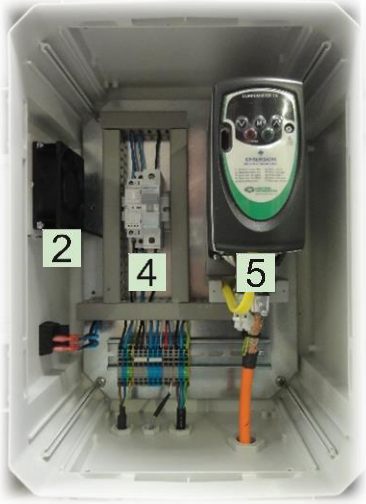
Cabinet with Inverter for Isel iSA750

Short Description

This manual will help you with the initial start-up of the Isel iSA750 spindle.
For more detailed information please refer to the individual manuals.

Contents

1 Overview Cabinet



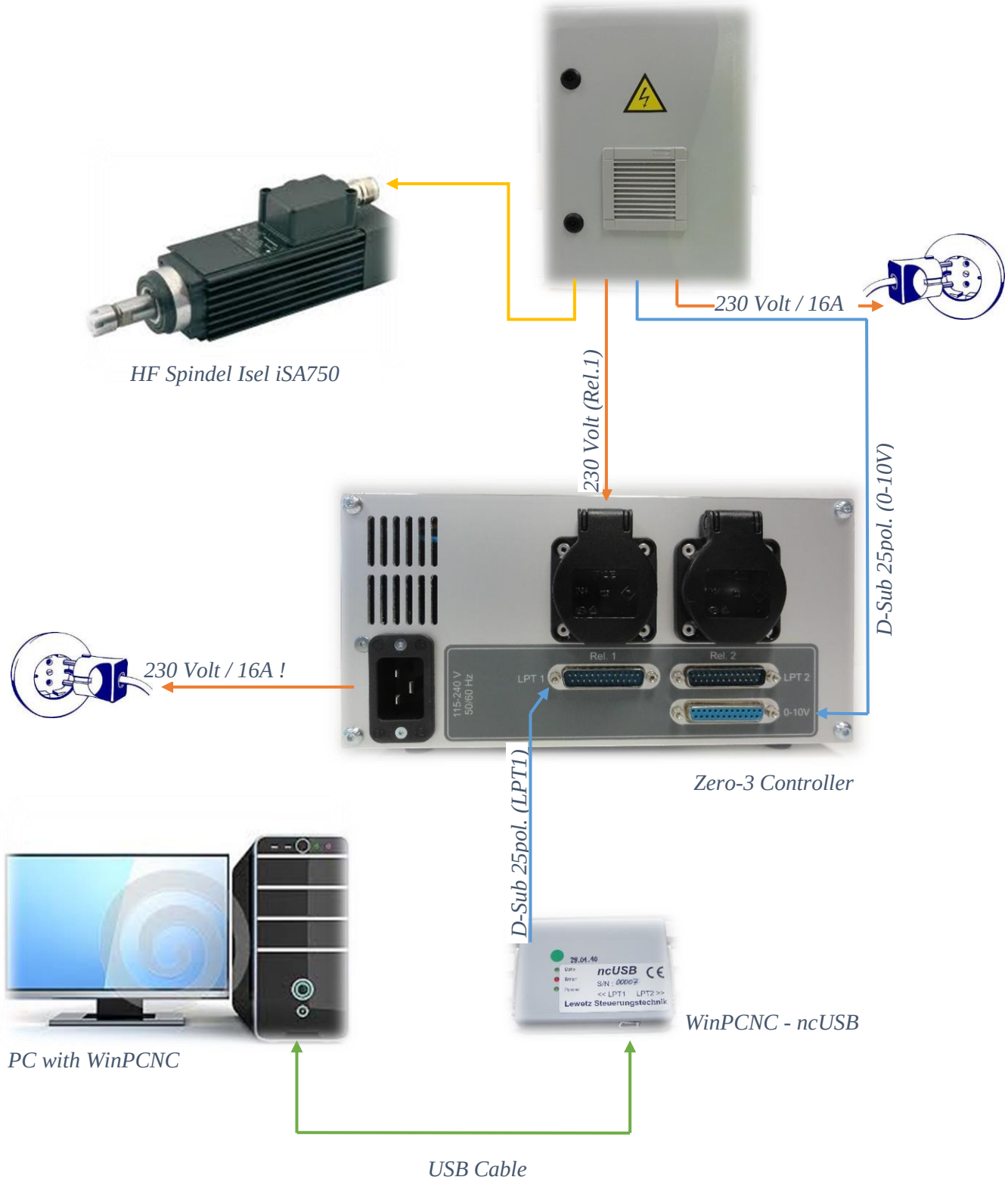
1	Air Inlet	4	Automatic Fuse
2	Fan	5	Inverter SKC 750 [1]
3	Power Button (with control light)[2]		

Power 230V / 16A	External power supply
Power 230V to Zero-3	Power supply – switchable for automatic control (WinPCNC)
M23 plug 8pol.	Motor Connection
D-Sub 25pol. (0-10V)	Control line

Connection Cable

[1] Inverter needs 230 Volt / 50hz
[2] The control light is on, when the spindle is turning on in the software WinPCNC

2 Connection Diagram (WinPCNC USB)



3 Connecting the Cabinet to the Zero-3 control

Look at the connection diagram!

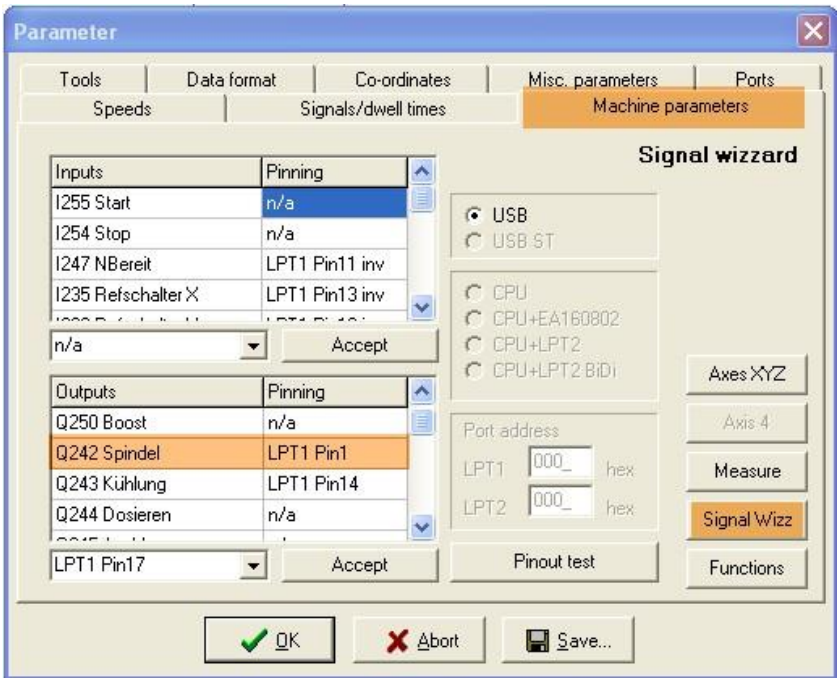
Make sure that the control is turned off.

- Connect the cables with the Zero-3 controller and the external power supply.
- Make sure that you back up all connections with the knurled screws from loosening.
- Turn on the Power Buttons (Cabinet and Zero-3)

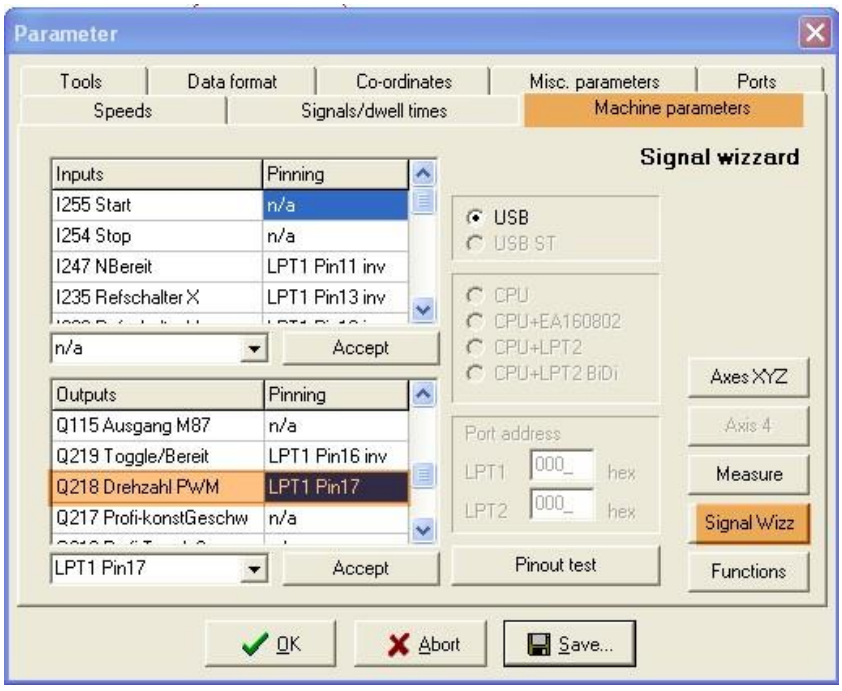
The control light of the cabinet power button is continues off!
The control light is on, when the spindle is turning on in the software WinPCNC.

4 Settings in WinPCNC

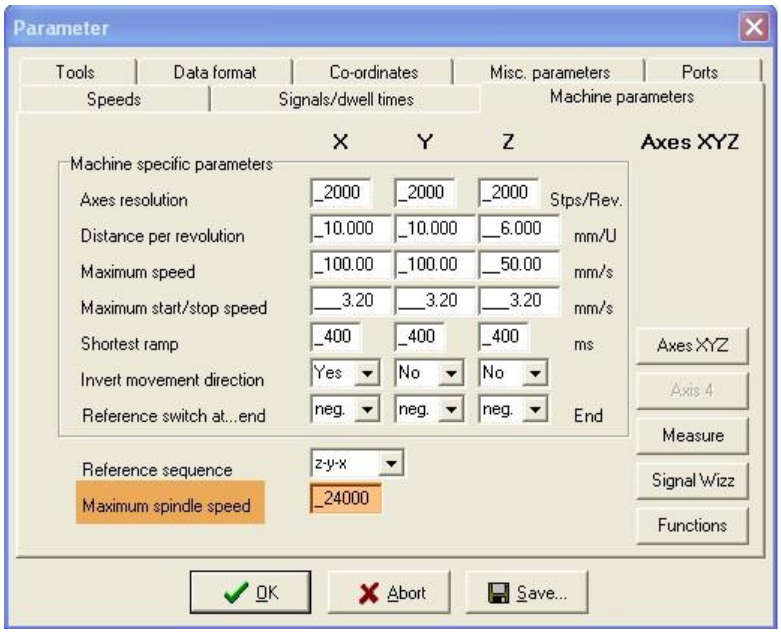
These settings are needed:



Activating spindle



Activating PWM for spindle speed control

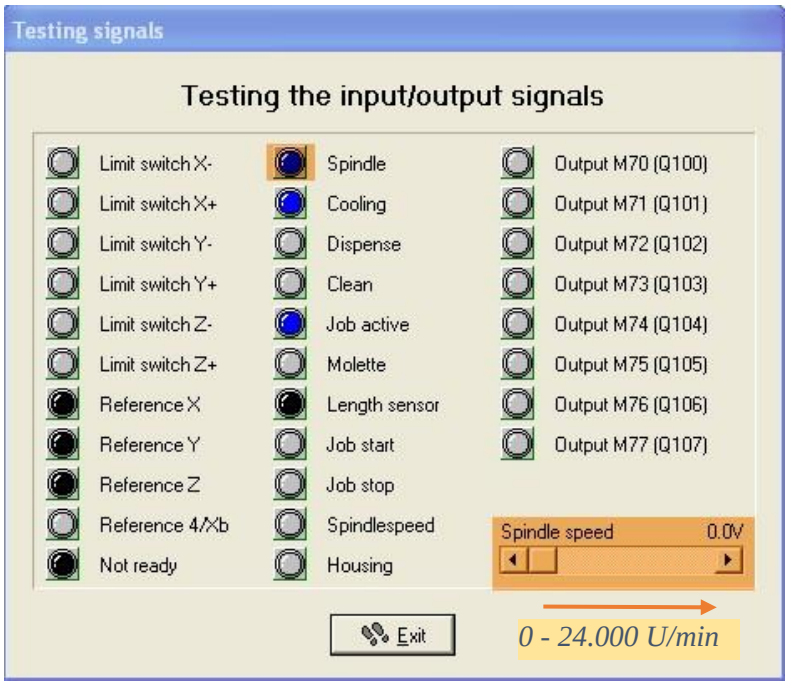


Setting for max. spindle speed

Check the efficiency

To check the settings you must open the signal test (special functions)

Now you can move the slider (spindle speed). The spindle goes on and the speed can be regulated.



Signal test for spindle speed

5 Technical Data

5.1 HF-Spindle Isel iSA 750

spindle motor
with manual tool changer

iSA 750

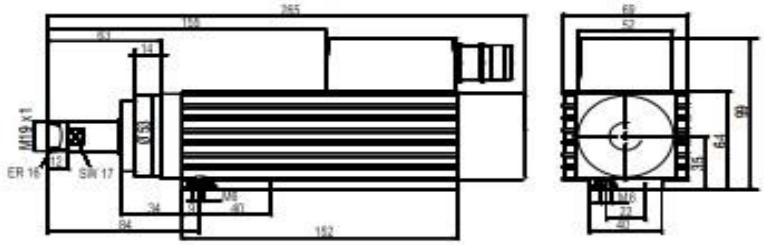
Features

- Robust 2-pole AC motor (asynchronous motor)
- Square shape, Protection class IP54, insulation class F
- Aluminium extrusion A and B sides
- Motor shaft to take ER 16 collets
- Rated output 0.75 kW (S6-40% operation)
- Speed range 3,000 rpm. - 24,000 rpm.
- Manual tool change
- M23 plug connection
- Incl. ER16 collet, Ø 6 mm
- Clamping range Ø 1 mm – Ø 10 mm
- Intrinsic ventilation B-side
- Two precision bearings
- Controlled by frequency converter
- optional:
  - CoolMin® (internal and external)
  - Frequency converter
  - Various collets, mounting plates, lead lengths
  - Suction device

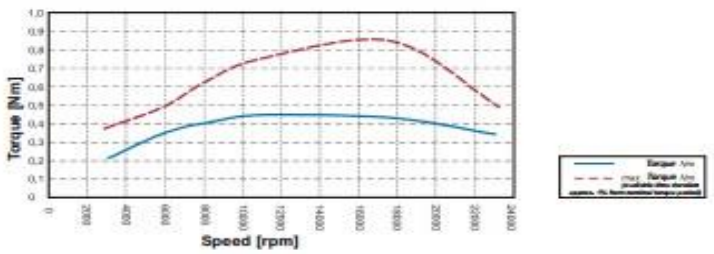
Technical specification

Description		iSA 750
Torque at rated speed 22,000 rpm	[Nm]	0.34
Speed	[rpm]	3,000 to 24,000
Cut-off frequency	[Hz]	300
Number of poles		2
Rated voltage	[V]	230
Rated current	[A]	3.4
cos φ		0.79
S 6 = 40% rated output	[kW]	0.75
Concentricity	[mm]	0.01
Weight	[kg]	2.6

Dimensioned drawings



Torque curves



Subject to technical changes.

5.2 Frequenz Converter SKC 750

Frequency converters

SKC 750 frequency converter, suitable for iSA 500, iSA 750 + iSA 900
Part no.: **311707 6000**

SKC 1500 frequency converter, suitable for iSA 1500 + iSA 2200
Part no.: **311715 6000**

SKC 4000 frequency converter, suitable for iSA 3600
Part no.: **311740 6500**

- Compact, pulse width modulated equipment in three output classes
- Input voltage, 230 V AC, single phase (SKC 750/1500) or 400 V AC, three phase (SKC 4000)
- Three phase, vector controlled control voltage frequency 0...1500 Hz
- Fast spindle braking with highly stressed, integrated brake resistance in the sub-frame
- Turn-off EMC filter
- Programmable inputs and outputs, relay output
- User-friendly control unit for configuring spindles
- 95 operating and display parameters for both simple and demanding applications (e. g. spindle energy sink in no load)
- Protection class: IP 20
- Control types: SPS; 0...10 V; 0...20 mA; with operating unit; CAN Bus (additional module required)
- Approved: CE; C-Tick; UL

6 Customer Service

For technical information, please contact our Technical Customer Service:

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If you have questions, please contact our customer service via e-mail or phone.
We advise you gladly.

Numerous suggestions and information can be found on our website:

www.cnc-router.com