

/ Perfect Welding / Solar Energy / Perfect Charging



## **VERSIONSHISTORY** **FIRMWARE TRANSSTEEL**

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Version 12/2019

BU Perfect Welding

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# 1. CHANGES FROM TRANSSTEEL V1.21.32 TO V1.22.33 CHANGES FROM TRANSSTEEL 2200 v0.11.10 TO v0.12.16

Date: 21<sup>st</sup> December 2020

## 1.1 New functions

**Extension Easy Documentation\* functionality** for TransSteel 3500c; TransSteel 3000 C PULSE; TransSteel 3500/5000 Syn; TransSteel 4000 / 5000 Pulse

- Support of new OPT Easy Documentation IK/CK for compact and split systems
- Implementation DOCMAG pc-board (Software v0.0.28) for Easy Documentation
- Implementation arc air gouging mode for TransSteel 5000 Syn & TransSteel 4000/5000 Pulse
- Implementation of "AAG" parameter for optimized mode for gouging (*no further welding parameter setting required*)
- Changed HOLD display - the values of the last 300ms after the end of welding are no longer displayed on the front of the device, but the average values from the main current phase are displayed instead
- Open circuit pulsing TSt 2200 / 2700 in Stick Mode has been removed – improved ignition behavior
- Usability:
  - o Improved operation for TransSteel Syn & Pulse as well as for TransSteel 2200.
  - o Display of the set process or mode (e.g.: Pulse, Standard, spot welding...)
  - o Implementation of the function - EasyJobs switch with TIG U/D torch for TransSteel compact devices TSt 2200, TSt 2700, TSt 3000 C PULSE, TSt 3500c
- Spot welding:
  - o Change - set value SPt no longer refers only to the main current phase but now also includes the ignition phase (consideration of current flow time)
  - o When used with Easy Documentation, the current flow time including ignition phase, trigger and burnup is then recorded and can therefore deviate minimally from the set value, depending on the operating point used.
  - o It may therefore be necessary to set the spot time to a slightly longer time after this update.
- Program selector:
  - o If two equivalent program selectors are installed in the welding device or in the wire feeder (optional) - both are active and can be used equally.
  - o If two different program selectors are installed - only the master program selector in the wire feeder is always active (closer to the welder)
- Remote control:
  - o Support of additional remote controls TR1200, TR1300, TR1600 (except TSt 2200)
- Changes characteristic lines
  - o P4065 Rutil FCW „E71T FCW“ 0,9mm Ar+15-25%CO2 created
  - o P4048 AISi 5 „ER4043“ 0,9mm Ar 100% created
  - o Short-circuit treatment for Pulse characteristics adjusted around lower power range
    - AlMg5 0,8mm – 1,6mm
    - AISi5 0,8mm – 1,6mm
    - CrNi 19 9 0,8mm – 1,6mm
    - CuSi 3 1,0mm & 1,2mm
- database number TSt2200 changed from 3644 to 3815

## 1.2 Fixed errors

- Bug fix Lock front insert via key combination - Faulty "Open" display
- Bug fix 2nd menu setting & incremental encoder
- Bug fix VRD self-test parameter display

**Compatibility** - new software is always backward compatible and can be used on all existing devices

\* Option can be retrofitted on TransSteel\*\* from production date July 2020 (except TSt 2200 & 2700).

- \*\*TransSteel 3000 C Pulse and 3500c: as of serial number 31244027
- \*\*TransSteel 3500syn, 4000 Pulse, 5000 Syn and 5000 Pulse: as of serial number 31440389

## 2. CHANGES FROM TRANSSTEEL V1.20.26 TO V1.21.32

Datum: 30<sup>th</sup> June 2020

### 1.1 New functions

- **Extension by pulse functionality** for TransSteel 3000 C PULSE; TransSteel 4000 / 5000 Pulse
  - Support of new power sources front inserts for Pulse
  - Pulse front pannel support for VR 5000 Remote
  - Implementation of SynchroPulse functionality for all TransSteel Pulse devices
  - Implementation of "Syn" parameters for the use of US characteristics without switching from metric to imperial
  - Change of display to show selected process when it is changed only for TransSteel Pulse
  - Change program selector for TransSteel Pulse inserts
  - Support cooling circuit FK5000 new with integrated coolant filter & FCL10
  - Adding new Pulse characteristics
  - Change - new DB numbers
    - o DB3991 Euro & US TransSteel 3000 C Pulse
    - o DB3971 Euro & US TransSteel 4000 / 5000 pulses
  - Internal bug fixes
- **Compatibility** - new software is backward compatible and can be used on all existing devices (except TSt 2200)

## 3. CHANGES FROM TRANSSTEEL V1.19.13 TO V1.20.26

Date: 18th April 2019

### 1.1 New functions

#### **Extension to MultiProcess for TransSteel 2700c / 3500c**

- Support SMB2700MP with TIG Interface (TMC)
- Support SRVT-COMP new with TIG Interface (TMC)
- Support TIG U/D torch (TMC) digital → no bus system support
- Support second gas solenoid valve
- Implementation of the new inserts for MultiProcess devices
- Implementation TIG parameters for MultiProcess
- Implementation of TIG pulsing
- Support cooling circuit FK5000 in TIG mode
- Consideration of voltage doubler with TSt 2700c MP in MMA mode
- Add new characteristics (steel 0.6mm, steel 0.8 / 0.9 / 1.0 revised AlSi5 & AlMg5 1.0 & 1.2mm added)
- Change of DB numbers (own DB for TSt 3500c)
  - o 3787 Euro & Yard & USA TransSteel 3500c
  - o 3431 Euro & Yard & USA TransSteel 3500
  - o 3430 Euro & Yard & USA TransSteel 5000
  - o 3788 Euro TransSteel 2500c & 2700c

- 3826 USA TransSteel 2500c & 2700c

**Compatibility** - new software is backwards compatible and can be used on all existing devices (except TSt 2200)

## 1 CHANGES FROM TRANSSTEEL V1.18.5 TO V1.19.13

Date: 1<sup>st</sup> October, 2018

### 1.1 New functions

- ✓ **Overcurrent Fault Efd14** (for example when motor stalled) added
- ✓ **Motor correction controller Efd10** - Out\_Of\_Range error removed
- ✓ **Efd 80 added** - it will be detected if the engine is not plugged in or the connector is faulty.
- ✓ **Efd 83 changed from persistent to acknowledgeable** - if a current peak of > 8A is reached by a current spike, the error can now be acknowledged without having to switch the machine off and on again.
- ✓ **Efd 83n** - if the motor overcurrent fault is longer than 500ms, this error becomes persistent.
- ✓ **Efd 84 added** - now it can also be detected if the motor supply is faulty.
- ✓ **Efd 10 Error Output** "Motor Correction Controller Out Of Range" disabled
  - In order to increase the operational safety in the lower speed range, the Efd 10 was deactivated.
- ✓ **Motor PWM increased**
  - The duty cycle has been increased from 88% to 93% □ more reliability at high motor currents.
- ✓ **Changeover during motor alignment**, initialization to default values
  - During motor calibration, the default values are now initialized before starting.

### 1.2 Fixed errors

- ✓ Motor calibration bug fixing
- ✓ Data optimized (optimizations for front)
- ✓ Crashlog function optimized
- ✓ Motor correction controller is now reset at parameter change (Auto / Manual) and at calibration start.
- ✓ The voltage is now checked for different voltage during motor calibration.
- ✓ During motor alignment, all motor data is now initialized with the default data, not just the adjustment data.
- ✓ Bugfixing with "Keylock via key switch"

## 2 CHANGES FROM TRANSSTEEL V1.17.13. TO V1.18.5

Date. 29<sup>th</sup> September, 2017

### 2.1 New functions

- ✓ New machine type TSt 2700c and 2700c MV implemented
- ✓ New parameter settings – Spot time (SPt) – OFF and 0,3 to MAX)
- ✓ New control for stitch welding more via current flow signal (increased precision)



Rob 3000 activated

## 3 CHANGES FROM TRANSSTEEL V1.16.14 TO V1.17.13

Date: 31 January, 2017

### 3.1 New functions

- Keylock-switch function implemented.  
ATTENTION: In order to be able to use the keylock-switch function, a new frontpanel software at least V1.0.4 is required!
- Spot welding and interval modes implemented.  
The activated mode is also indicated via LED "SF" on newer fronts.  
The menu items Spot-welding time (SPt) and Spot-welding break (SPb) are hidden in S4T.
- The maximum permitted size of the characteristics configuration has been increased from 512 kB to 768 kB, so that multiple characteristics are possible.
- New program selector for 'Euro\_Yard\_USA multiple characteristics' implemented.
- In the case of several program selectors, all program selectors but the one at the master front are switched inactive.
- If a FP250-Universal program selector is used on its own, the STANDARD or US characteristic is used on the program selector, depending on which language has been selected (metric / imperial).
- Support of the robot interfaces and robot wirefeeder for TransSteel-3500/5000 Syn deactivated.  
The automated interface is still supported.
- When switching the LocalNet ports, all nodes are logged off / logged on.

### 3.2 Fixed bugs

- Timing optimised for ELITE-SDRAM.  
Update is recommended!

## 4 CHANGES FROM TRANSSTEEL V1.15.4 TO V1.16.14

Date: August 12, 2016

### 4.1 New functions

- New parameter View-ArcLengthCorrection (ALC - ON/OFF) has been implemented. (only in Synergic Mode)
- TSt 2500c in single-phase operation – fuse values for Metric have been implemented and fuse values for Imperial have been adjusted.
- New data for Motor4
- Fuse values for EUR10A and EUR13A have been implemented.
- Change from fuse EUR12A to EUR10A.
- Adaptation of LocalNet software due to new compiler for Windows 8
- Cut-out temperature for TSt 3500MV has been adjusted
- Differentiation between evaluation of main switch for devices TSt 2500 and TSt 5000

### 4.2 Fixed errors

- TSt2500c MV with VRD, adaptation of parameters for motor calibration and feeding in with 25.5 m
- FPGA\_SPIDER1A(1.10.2) and FPGA\_SPIDER2A(2.4.2) – evaluation of the mains switch signal is back in the state it was in before TSt 2500
- Fixed immediate turning off of the hold indicator of remote control TR2000
- Correction range of motor speed controller extended from 25% to 50% for motors with IWGTC (PAPIO)

## 5 CHANGES FROM TRANSSTEEL V1.14.22 TO V1.15.4

Date: March 16th, 2015

### 5.1 New functions

### 5.2 Fixed bugs

- ✓ Tst 2500c MV adaptation in Single Phase Mode (fuse 20A) - Max. Current-Adjustment increased at 180A.

## 6 CHANGES FROM TRANSSTEEL V1.13.20 TO V1.14.22

Date: February 5th, 2015

### 6.1 New functions

- ✓ LED in the wirespool area of Tst 2500c
  - ✓ Adaptation in single-phase mode Tst 2500c (30 A)
  - ✓ Support of OEM - FAN & Castolin (PROTON MIG+ 250c, CASTOMIG 2500C)
  - ✓ Additional temperature sensor in PFC-Induktor of Tst 2500C MV nc
- Attention !!! When SW update to V1.14.22 is carried out, power sources below serial number SN 26051314 must be retrofit with temperature sensor!

### 6.2 Fixed bugs

- ✓ Error IP fixed
- ✓ Error messages of cooling unit fixed

## 7 CHANGES FROM TRANSSTEEL V1.12.21 TO V1.13.20

Date: July 14th, 2014

### 7.1 New functions

- ✓ Consolidation of TransSteel 3500/5000 – TransSteel 2500 – CastoMig software
- ✓ SinglePhase monitoring for TransSteel 2500C (USA)
- ✓ Countdown after tripping of SinglePhase monitoring
- ✓ New SMB2500C V3.0 (galv. isolation) is supported

### 7.2 Fixed bugs

- ✓ AST – ON/OFF adjustable again

## 8 CHANGES FROM TRANSSTEEL V1.11.11 TO V1.12.21

Date: May 5th, 2014

### 8.1 New functions

- New parameter ,Ur' for VRD self-test implemented
- In VRD power sources, Mode LED flashes during ,unsafe operation'
- Voltage indicator dependent on arc length correction  
(for this purpose, updating the databases is absolutely essential !)
- New parameter ,PFS' for the continuous display of the wirefeed speed in VR5000 Manual
- Support of CASTOLIN devices
- Parameter EnE set to OFF upon FAC-Reset
- MHP 500i ML/W/FSC/UD/xxm/LED welding torch implemented (welding torch LED function)
- Motor calibration data adjusted for new motor type3 (robot wire-feed unit)

### 8.2 Fixed bugs

- S4T LED is now no longer displayed in Manual mode
- In Tst3500, the operating point was not taken correctly if ,noProg' was selected beforehand

**!!! ATTENTION !!!**

**NO DOWNGRADE OF FIRMWARE UNDER 1.12.21 !!!**

## 9 CHANGES FROM TRANSSTEEL V1.11.2 TO V1.11.11

Date: February 18<sup>th</sup> , 2013

### 9.1 New functions

- Operating hours counter can be viewed in Service parameters (not resettable)
- Real Energy display implemented + LED kJ on the control panel (EnE On)
- Function torch LED implemented

### 9.2 Fixed bugs

- ManualQuit for main switch signal removed
-

## 10 CHANGES FROM TRANSSTEEL V1.10.11 TO V1.11.2

Date: September 19<sup>th</sup>, 2012

### 10.1 New functions

- LSTMAG50MV and LSTMAG35MV implemented.

## 11 CHANGES FROM TRANSSTEEL V1.9.1 TO V1.10.11

Date: March 13<sup>th</sup>, 2012

### 11.1 New functions

- Keylock control panel (Key combinations: bottom left „<“ (2T/4T/S4T) , and top right „>“ (Dyn/V...)
- Mode Touch (Output as „arcstable“ when wire touches the workpiece and display of „touch“ on 7-Seg as soon as Mode is set by robot) Caution!

### 11.2 Changes

- Dynamic settings on Manual Front in increments of 100
- L/R alignment can be started by pressing robot wirefeed unit feeder button
- Feeding in with robot (in robot power sources): power module is not switched on
- In case of interruption of the automatic motor calibration, an error is now displayed (Efd12) just as with the “manual” motor calibration

### 11.3 Fixed bugs

- In case of interruption of the automatic motor calibration, an error is now displayed (Efd12) just as with the “manual” motor calibration

## 12 CHANGES FROM TRANSSTEEL V1.8.16 TO V1.9.1

Date: October 25<sup>th</sup>, 2011

### 12.1 Changes

- Range adjustment of tolerances for motor current calibration for VR 5000 Rob.

## 13 CHANGES FROM TRANSSTEEL V1.7.7 TO V1.8.16

Date: October 25<sup>th</sup>, 2011

### 13.1 Changes

- Wire threading range adjusted to 25.5m/min
- Special 4-step mode adapted to TPS (if pressed a second time during the gas pre-flow time, it is started using the final current)
- RL calibration for 70m hosepacks changed
- When the interface (Rob Tst, Rob 5000 or Beckhoff 6021-0010) is connected, the torch trigger acts as the wire threading button.
- Three dedicated error codes introduced for incorrect interface configuration and incorrect remote control configuration:
  - Two or more wire-feed units: ELn 8
  - Two or more interfaces: ELn 14
  - Two or more remote controls: ELn 15
- If a manual power source is in use and the TR3000 remote control is disconnected (without a wire-feed unit), it is switched to manual mode.
- If a manual Power source is in use, with STICK mode selected, and the wire-feed unit is disconnected, it is switched to manual mode.

### 13.2 Fixed bugs

- Starting current was not working above 100% in special 4-step mode.
- The hold value of the last weld was not displayed during wire threading.
- The cooling unit started during wire threading.
- The gas solenoid valve did not close for gas test on before the start of welding, the gas test was then off during welding.
- The gas solenoid valve did not close for gas test ob before the start of welding, an error then occurred during welding.

## 14 CHANGES FROM TRANSSTEEL V1.6.45 TO V1.7.7

Date: May 12<sup>th</sup>, 2011

### 14.1 Changes

- Gas tests, wire threading and welding cannot be carried out when a welding parameter is selected in the 2nd menu (also applies to the service menu)
- The 2nd menu cannot be accessed during a gas test, wire threading or welding (also applies to the service menu)

### 14.2 Fixed bugs

- Wire threading was not possible in the 2nd menu
- 4-step LED was not displayed on the Manual control panel
- In the event of an arc break, the arc break signal on the interface was not reset
- If the "Robot ready" signal was reset while the gas test was active, the gas solenoid valve remained open permanently
- The "Process active" signal was output during the gas test

## 15 CHANGES FROM TRANSSTEEL V1.5.53 TO V1.6.45

Date: March 09<sup>th</sup>, 2011

### 15.1 New Functions

- Currently selected characteristic number indicated
- Additional robot signals:
  - Wire retract
  - Full power range
  - Power outside range
  - Main current signal
  - Process active
  - Error number
  - Actual values
- Parallel operation of several Synergic control panels
- Manual control panel with set value indication
- Power limitation on the characteristic (PowerLimiter function)
- Switch between stored operating points during welding

### 15.2 Changes

- Setting the wirefeed speed at the UP/Down welding torch was optimized.

### 15.3 Fixed bugs

- When the "robot ready" signal was set with the machine start, "Error STOP" could not be quitted.
- The wirefeeder could not be tested on manual Power sources with the PC software "Calibrate"
- Stopping the "rod electrode (MMA) welding" process by changing the process during welding was not possible.
- Changing of feeder inching speed during feeding in the welding wire was not possible.
- When the torch trigger was pushed while the power source has been switched on, the machine started welding.
- With a connected Up/Down welding torch an external signal was not evaluated.
- The timing problem when initializing the robot wire feeder was corrected.
- The flow watchdog was not evaluated at the "ON" cooling unit setting.

## 16 CHANGES FROM TRANSSTEEL TST V1.4.21 TO V1.5.53

Date: August 25<sup>th</sup>, 2010

### 16.1 New functions

- On the Manual control panel, it is possible to change parameters in the menu by means of press and hold.
- RL-Alignment has been implemented.
- Special 2-step has been implemented.
- TR 3000 has been implemented.
- Calibrate is supported.

### 16.2 Changes

- CAT signal is now inverted (identical to TPS).

### **16.3 Fixed errors**

- ✓ After deleting a flag, the old flag is still displayed.
- ✓ Operating point and flag were overwritten with minimum values after a restart.
- ✓ Errors could not be reset on the front panel when a TR 2000 was connected to the system.
- ✓ Corrections in standard mode were overwritten when selecting a flag.

## **17 CHANGES FROM TRANSSTEEL TST V1.4.20 TO V1.4.21**

Date: 21 June 2010

### **17.1 New functions**

- ✓ VR 5000 Yard 4R/W/FSC Syn. (4,049,012,800), VR 5000 4R/G/FSC Man. (4,049,002,800) and VR 5000 4R/W/FSC Syn. (4,049,008,800) are supported

## **18 CHANGES FROM TRANSSTEEL TST V1.3.21 TO V1.4.20**

Date: March 26<sup>th</sup>, 2010

### **18.1 New functions**

- ✓ TR2000 remote control supported
- ✓ ROB TSt interface supported
- ✓ ROB 5000 interface supported
- ✓ Beckhoff KL6021-0010 interface supported
- ✓ Intermediate arc LED function has been implemented
- ✓ Unit switching (ipm) has been implemented

## **19 CHANGES FROM TRANSSTEEL TST V1.2.31 TO V1.3.21**

Date: March 26<sup>th</sup>, 2010

### **19.1 New functions**

- ✓ Program selector Yard and USA has been implemented.
- ✓ VR5000 ROB has been implemented.
- ✓ ROB 3000 has been implemented.

### **19.2 Fixed bugs**

- ✓ Hold indicator in "manual" mode (at the front manual) was not correct.
- ✓ In the 2nd menu welding could be done.
- ✓ After accessing the menu or after a Factory Reset the Hold indicator was not deleted.



## 20 CHANGES FROM TRANSSTEEL TST V1.1.16 TO V1.2.31

Date: January 07<sup>th</sup>, 2010

### 20.1 New functions

- FAC (Factory) can now also be performed using the key 2 (+ in the case of Manual control panel and "Shift" key (arc length, voltage, dynamic) in the case of the Synergic control panel).
- Stick mode has been implemented.
- Stick menu has been implemented.
- 2nd menu in the case of MIG/MAG Synergic and MIG/MAG Manual has been implemented.
- Cooling unit control has been implemented.
- Wire retract correction in the case of Synergic has been implemented.

#### Changes compared with previous version 1.001.16

- Setup parameters SL, I-S and I-E now only displayed in special 4-step mode.
- The UpDown welding torch is ignored in Manual mode and the Manual control panel (can only be set on the control panel).
- Dynamic LEDs on the Manual control panel now displayed as bars.

#### The following bugs have been fixed

- Flag keys could be assigned during motor calibration.
- The PrG indication now disappears immediately following a factory reset. (Sometimes, PrG was still displayed next to the factory code after exiting and then re-entering the menu)
- The flag keys could be selected from the Service menu.
- Opening a menu with an empty flag did not work properly. (Now no longer permitted)
- If an empty flag is selected, the welding procedure LEDs, trigger mode LEDs and program selector LEDs are deactivated.
- The operating point is now reset when a factory reset is performed.
- The arc-length correction is now reset when a factory reset is performed.
- The dynamic is now reset when a factory reset is performed.
- Slope can be deactivated.
- The operating point changes when the trigger mode is changed if this was set previously using the UpDown welding torch.
- The gas was not selected following a restart.
- Operating mode (2 or 4 step) does not change when switching the welding procedure.
- "no H2O" error message does not appear after a cooling circuit filling phase.
- The gas control system remains active when switching on the gas post-flow and in the ignition phase.
- The most recently selected operating point (or the most recently selected flag) change following a restart.