

/ Perfect Welding / Solar Energy / Perfect Charging



WELDCUBE

The software solutions portfolio from Fronius
for welding data management

WeldCube

Light | Basic | Premium

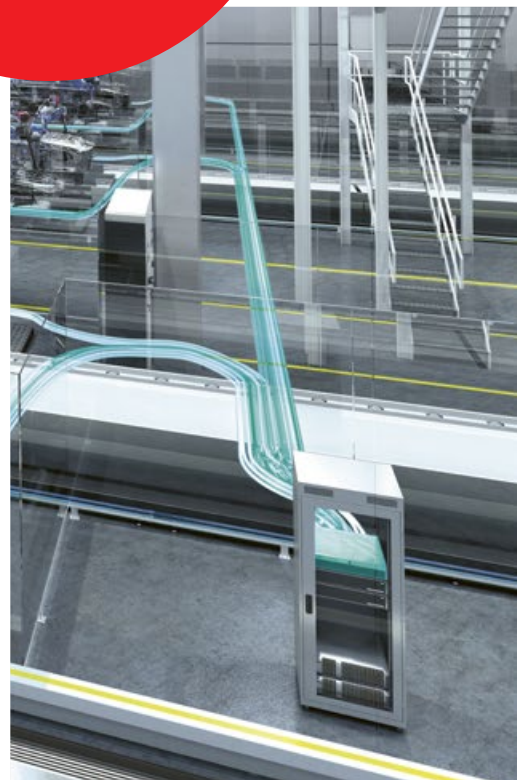
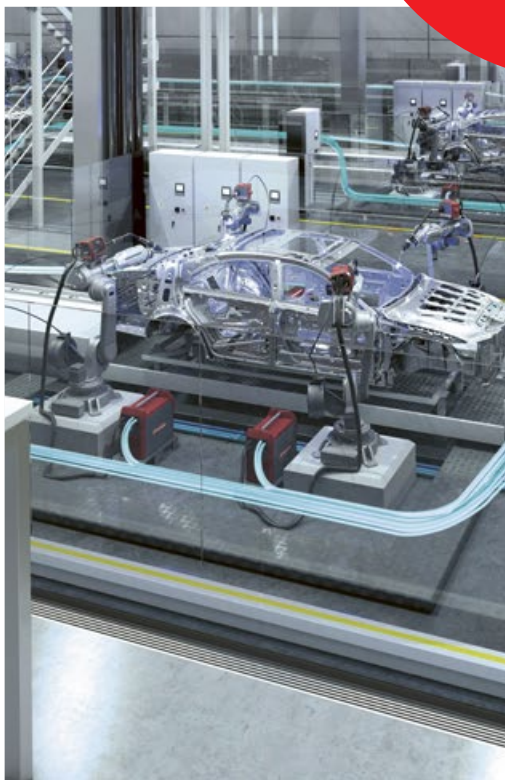
Alongside productivity and time saving, transparency and safety are also common requirements in the Welding Technology production. In order to achieve this, welding data needs to be recorded for documentation and analysis, with these topics growing in significance as a result.

Immediate feedback from production helps to optimize processes, monitor system statuses and identify errors in order to ensure safety and high quality when manufacturing.

WeldCube offers a variety of solutions for small enterprises and large corporations alike that allow these goals to be met through networked Fronius welding systems.

What's your welding challenge?

Let's get connected.



WELDING TECHNOLOGY PRODUCTION MONITORING. ANYTIME. ANYWHERE.



SAVES TIME AND COSTS



- / Automated documentation without handwritten notes
- / Analysis at the push of a button
- / Early fault detection

ENSURES SAFETY IN PRODUCTION



- / Traceability at workpiece and seam level
- / Access to seamless documentation if required
- / Risks are minimized

SUPPORT SERVICES



- / Installation, commissioning and configuration of software
- / Training and expert training for users

INCREASES PRODUCTIVITY



- / Identifies potential for optimization
- / Continuous weld-seam monitoring
- / All system status data at a glance

WeldCube DATA MANAGEMENT

Fronius offers the optimal web-based software solution for the ongoing planning, collection, analysis and visualization of welding technology production data in the form of WeldCube, with various versions available.

Depending on the variants, welding and system data can either be recorded locally and directly in the welding systems and visualized online, or compiled, evaluated and analyzed centrally.

USER MANAGEMENT

The TPS/i has an authorization system which enables the user to create individual authorizations.

Users log in to the welding system using a card or a key fob, which is assigned specifically to them.

THE BENEFITS

- / Individual authorizations
- / Traceability in combination with WeldCube
- / Reduction in faults



/ Keycard



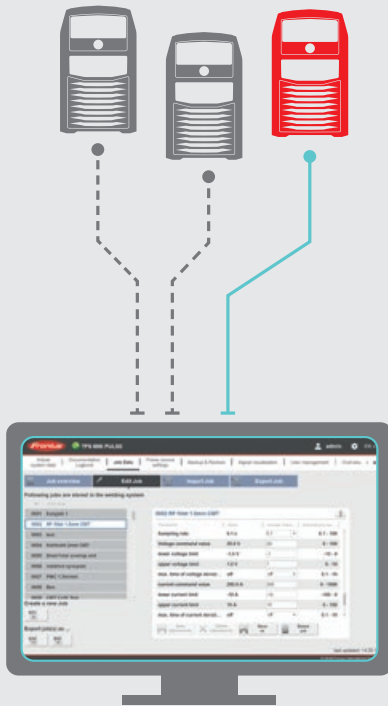
/ Key fob

DECENTRALIZED DOCUMENTATION

WeldCube Basic

WeldCube Light

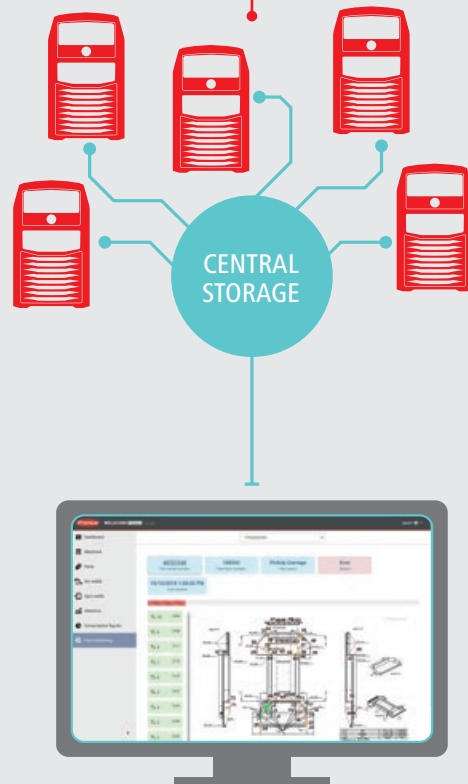
3 VARIANTS for differing customer requirements



- / Data storage directly in the welding system
- / Data viewed and processed for each welding system

CENTRALIZED DOCUMENTATION

WeldCube Premium



- / All data stored in the central database
- / Data collection for all networked systems

WeldCube Light

MINIMAL DECENTRALIZED
DOCUMENTATION
AS STANDARD FOR EVERY TPS/i

WeldCube Light is available in SmartManager in every TPS/i for no additional cost. Mean values for every weld seam are recorded directly in the welding system, which can then be separately visualized online for each TPS/i and exported in PDF format.

ALL PARAMETERS
for the selected job

JOB COMPARISONS:
Differences marked in red



Refine results using
TIME FILTER

AVERAGE VALUES RECORDED FOR EACH WELD SEAM:
time, duration, current, voltage, wire speed, power

Display of the last 100 entries
to 10.10.2018, 13:39:24(current time filter)

Time filter

Filter:
 Welds
 Errors
 Events

Documentation: Welds

		Start time (local ...)		U				
20	10.10.2018, 13:39:24	9.2 s	120 A	21.0 V	7.3 m/min	3297.4 W	30.2 kJ	
19	10.10.2018, 12:36:55	15.1 s	119 A	21.1 V	7.3 m/min	3280.2 W	49.7 kJ	
18	10.10.2018, 12:34:31	5.4 s	103 A	22.3 V	6.1 m/min	3011.4 W	16.2 kJ	
17	10.10.2018, 12:33:50	5.8 s	105 A	20.4 V	6.2 m/min	2814.8 W	16.3 kJ	
16	10.10.2018, 12:33:11	5.5 s	109 A	21.3 V	6.1 m/min	2889.8 W	15.4 kJ	
15	10.10.2018, 12:31:07	16.8 s	110 A	18.9 V	6.4 m/min	2718.7 W	45.6 kJ	
14	10.10.2018, 12:28:40	6.0 s	103 A	22.1 V	6.2 m/min	2883.1 W	17.6 kJ	
13	10.10.2018, 12:28:13	5.4 s	105 A	22.4 V	6.1 m/min	3057.6 W	16.5 kJ	
12	10.10.2018, 12:26:53	6.4 s	98 A	22.2 V	5.7 m/min	2826.3 W	18.2 kJ	

Export documentation as ...



PDF export

Data also available on the
TPS/i display



THE ADVANTAGES OF WeldCube Light

- / Free introduction to the world of documentation
- / Transparency and traceability at seam level
- / EN 1090

WeldCube Basic

EXTENDED DECENTRALIZED DATA DOCUMENTATION
WITH CONFIGURABLE RANGE OF FUNCTIONS

WeldCube Basic is the ideal solution for users who not only need mean values, but actual values with a sampling rate up to 100 ms. limit monitoring or editing functions for set values. This variant also records data directly in the welding system and provides online visualization for each TPS/i. The data is available as a PDF or CSV export.

HELPS TO MAINTAIN WELDING QUALITY AND PROCESS STABILITY:

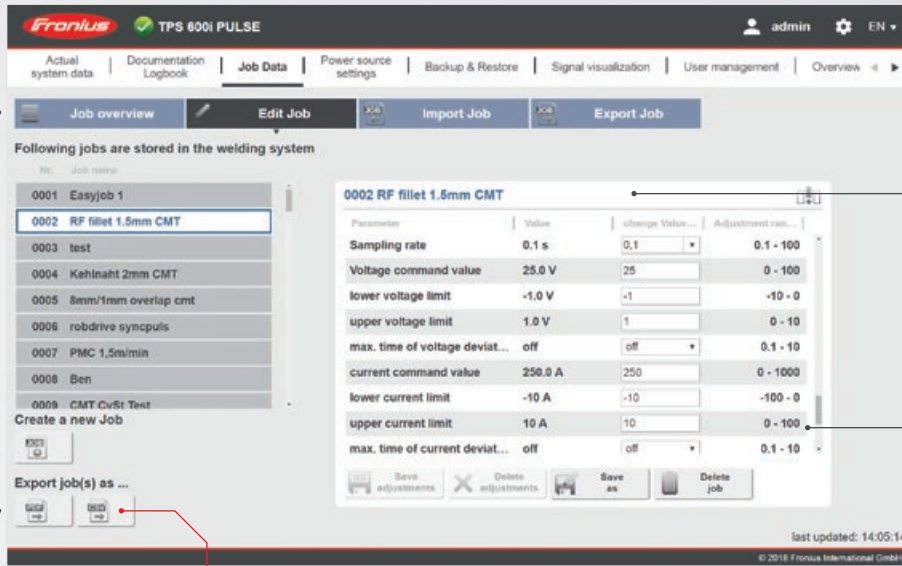
Limit violations are documented and highlighted



The IMPORT/EXPORT FUNCTION enables jobs to be transferred to other systems



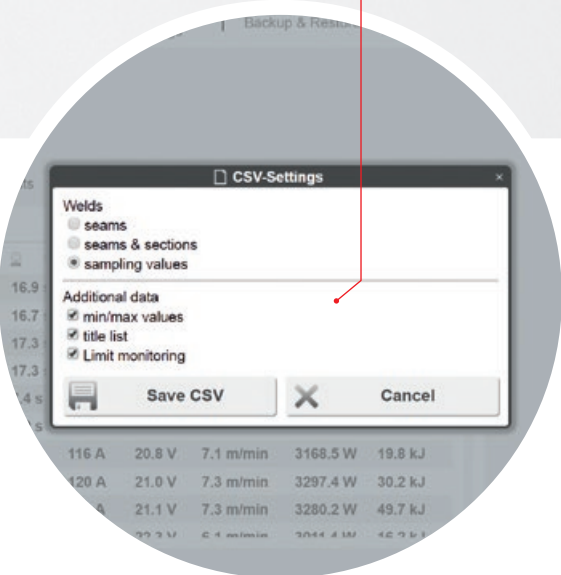
Create and process jobs



PDF export (+) CSV export

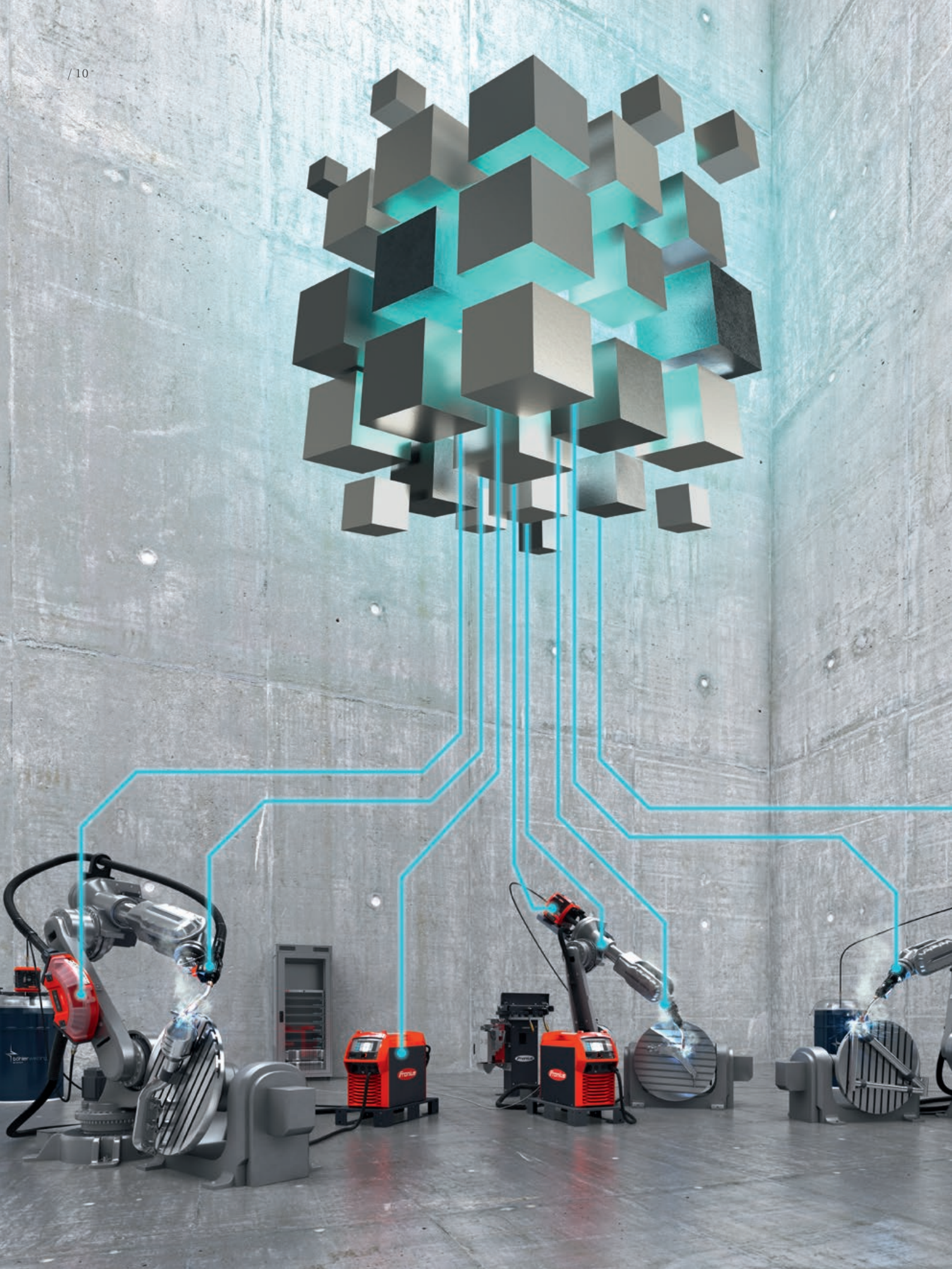
Define limit values (!)

Welding jobs can be exported based on the selected sampling rate



THE ADVANTAGES OF WeldCube Basic

- / SCALABLE RANGE OF FUNCTIONS: options for jobs, actual-value documentation and limit monitoring
- / Ideal solution for smaller companies with few welding systems
- / Transparency and traceability at seam level
- / Can be upgraded at any time



WeldCube Premium

CENTRALIZED DOCUMENTATION SOLUTION WITH INTELLIGENT MANAGEMENT, STATISTICAL AND ANALYSIS FUNCTIONS, AND GRAPHICAL VISUALIZATION OF RESULTS

- / WeldCube Premium stores the welding data of networked Fronius systems in a central database.
- / As well as Fronius TPS/i, digital systems and Fronius DeltaSpot can also be used with WeldCube Premium.
- / Centralized data storage enables comprehensive and workpiece-oriented documentation, evaluation and analysis of the data.
- / Table and graph-based evaluations are available at the push of a button.
- / The integrated Web API also enables data to be forwarded to third-party systems after being compiled and standardized.



WeldCube Connect

WeldCube Connect allows prepared data to be sent to third-party systems.

- / File export and Web API interfaces

WeldCube Premium

All users have the option of pinning their most important information to their dashboard

Widgets are available for machines, lists and statistics

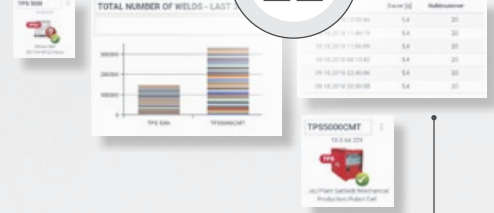
THE RIGHT INFORMATION FOR EVERYONE:

statistics based on all documented data can be created using intelligent filters, integrated into the dashboard, shared and made available via e-mail reporting



INDIVIDUAL SELECTION OF CONTENT:

Widgets can be positioned anywhere within the specified grid



Time stamp	Duration [s]	Seam number
10/10/2018 12:38:46 PM	5.4	20
10/10/2018 11:46:19 AM	5.4	20
10/10/2018 11:06:09 AM	5.4	20
10/10/2018 8:10:42 AM	5.4	20
10/9/2018 10:46:06 PM	5.4	20
10/9/2018 8:30:55 PM	5.4	20

1024 x 768

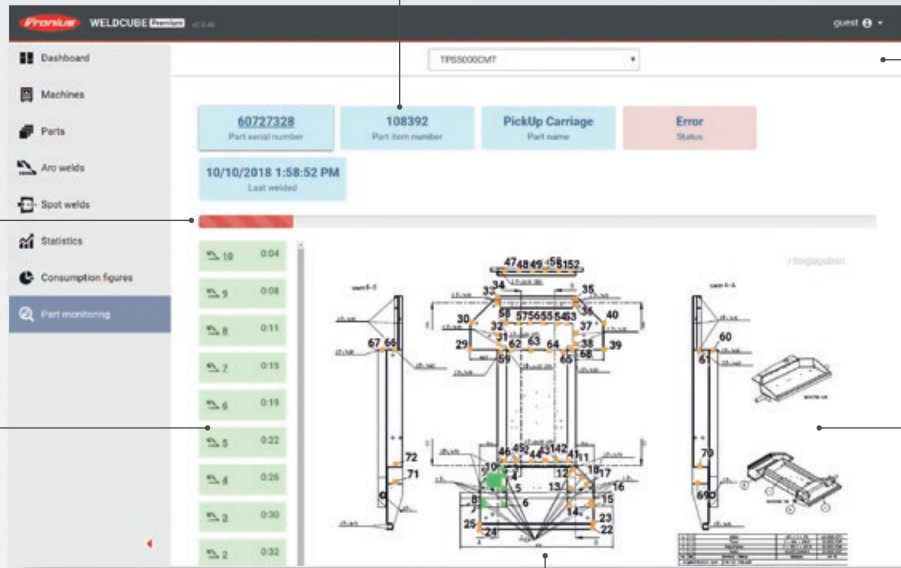
Stop editing

STATUS DISPLAY
for workpiece progress

Workpiece information for
optimal traceability*

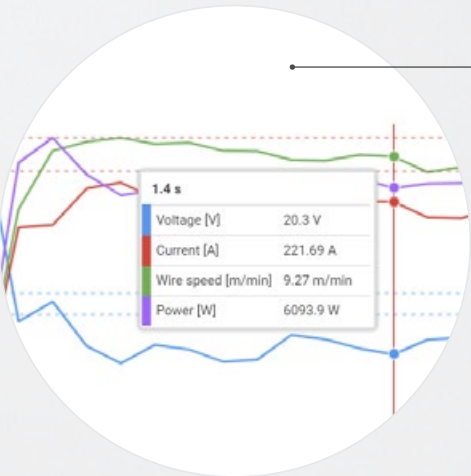
* Requirement: traceability and
workpiece identification processes
must already be implemented at
the customers' premises

PDF report on each
workpiece



Details on every weld seam directly accessible

Configuration module for individual
definition of workpiece



TRAFFIC LIGHT SYSTEM
FOR EACH WELD SEAM:

- Yellow = Not yet welded
- Red = Faulty due to limit violation
- Green = Correct

Target and actual values as well as limit
violations and consumption data are
documented and prepared for each seam



WeldCube Premium

ALL CHANGES TO JOBS AT A GLANCE for traceability, including change date and time

Reset changes with one click

Changes are highlighted

Value	9/23/2017 7:35:31 AM	9/23/2017 7:24:04 AM	9/1/2017 11:29:44 AM	8/31/2017 12:16:27 PM	8/29/2017 4:26:04 PM	8/29/2017 4:16:36 PM
Common						
Name	SEAM 1 PMC	SEAM 1 PMC	SEAM 1 PMC	SEAM 1 PMC	SEAM 1 PMC	SEAM 1 PMC
Gas	M21 Ar+15-20%CO2	M21 Ar+15-20%CO2	M21 Ar+15-20%CO2	M21 Ar+15-20%CO2	M21 Ar+15-20%CO2	M21 Ar+15-20%CO2
Wire	CEN: Steel, AWS: ER 70 S-6	CEN: Steel, AWS: ER 70 S-6	CEN: Steel, AWS: ER 70 S-6	CEN: Steel, AWS: ER 70 S-6	CEN: Steel, AWS: ER 70 S-6	CEN: Steel, AWS: ER 70 S-6
Wire diameter	1.2 mm	1.2 mm	1.2 mm	1.2 mm	1.2 mm	1.2 mm
Characteristic	3189	3189	3189	3189	3189	3189
Command values						
Voltage	23.5 V	23.5 V	23.5 V	24.0 V	24.0 V	23.9 V
Current	168 A	168 A	168 A	200 A	200 A	194 A
Material Thickness	4.7 mm	4.7 mm	4.7 mm	6.0 mm	6.0 mm	5.7 mm
Penetration stability	10.0 m/min	10.0 m/min	10.0 m/min	10.0 m/min	16.6 m/min	10.0 m/min



WeldCube Subscription

WeldCube subscription keeps the software up-to-date at all times. New functions and improvements are included.



WeldCube PerfectStart

WeldCube PerfectStart provides support from initial installation through to software training for users. Now there is nothing standing in the way of perfect quality from day one.

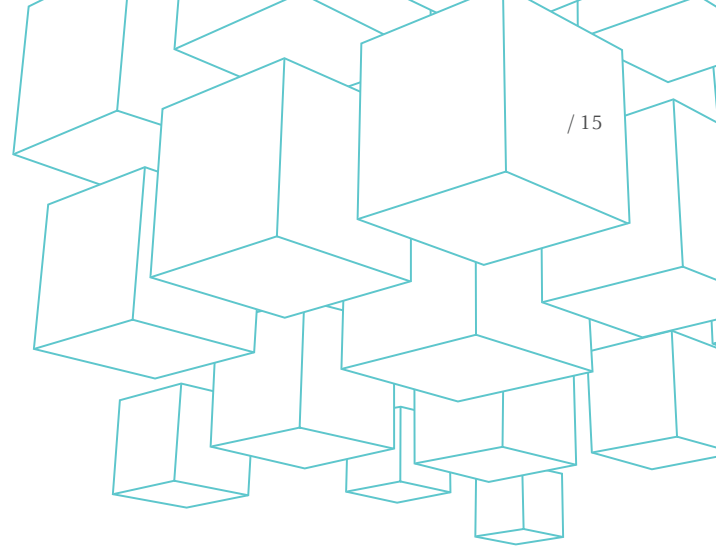
THE ADVANTAGES OF WeldCube Premium

- / Centralized documentation with automated evaluation and analysis
- / Proof of quality
- / Time and cost savings through optimization and more efficient working
- / Traceability and transparency at workpiece level

Experience WeldCube Premium's full range of functions right now in the live demo at www.fronius.com/weldcube

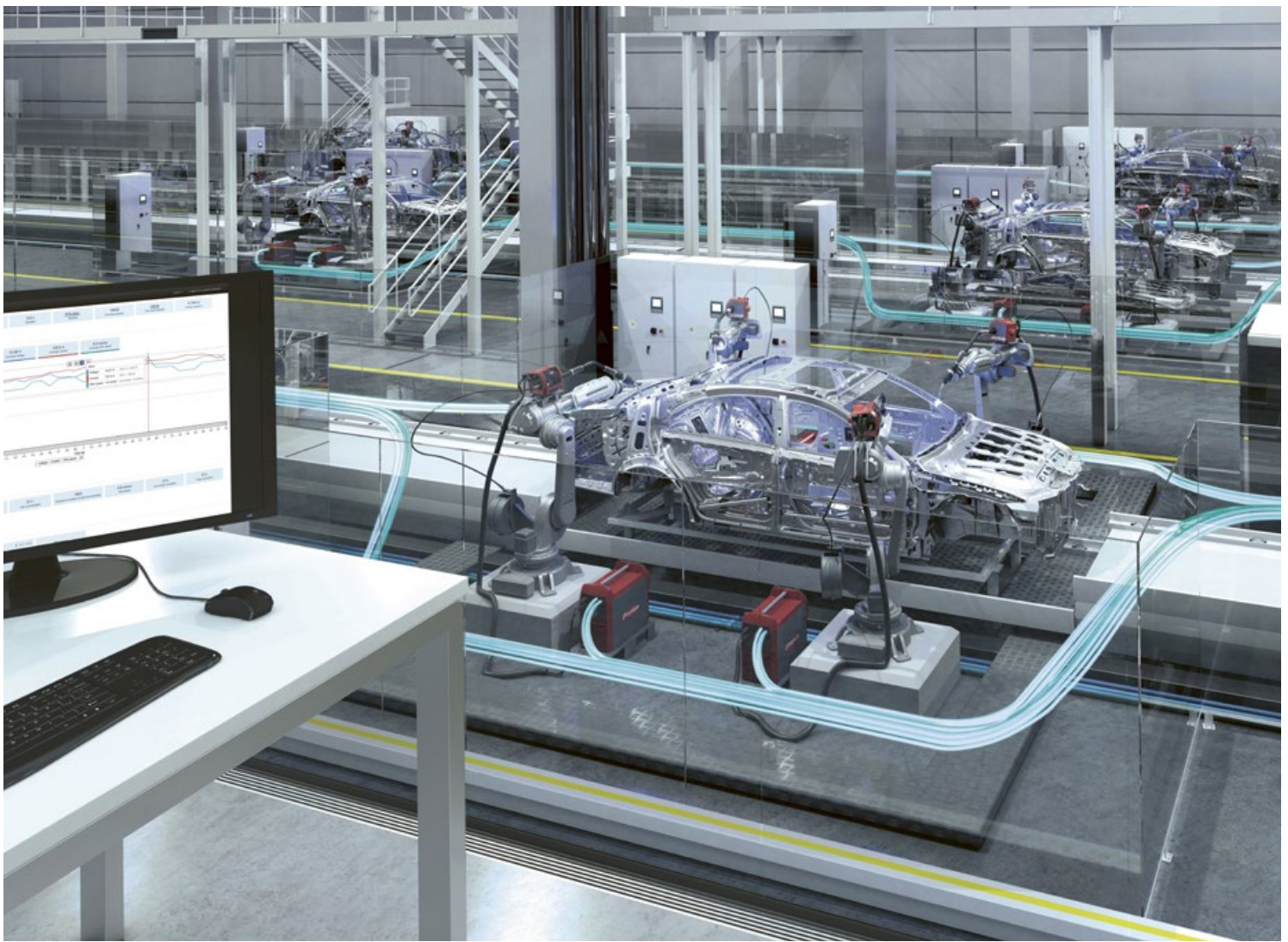
OVERVIEW OF RANGE OF FUNCTIONS

WeldCube



	Light	Basic	Premium
DATA STORAGE			
Decentralized in the welding system	■	■	
Centralized database			■
PERSONALIZED DASHBOARD			
Editable dashboard			■
DEVICE OVERVIEW AND MACHINE DETAILS			
System component overview	■	■	■
System component history			■
Location overview incl. status			■
Automatic machine backup	■	■	■
Restoration of system settings	■	■	■
SET VALUES/JOB MANAGEMENT			
Show jobs	■	■	■
Edit jobs		■	■
Create jobs		■	■
Delete jobs		■	■
Compare jobs	■	■	
PDF export of job data	■	■	
CSV export of job data		■	
XML export and import of jobs		■	
Centralized job management (display, create, edit, copy, limit calculation)			■
Job history			■
Automatic back-up of jobs	■	■	■
Restoration of jobs		■	■
STATISTICS AND ANALYSIS			
Creation of statistics			■

	Light	Basic	Premium
WELDING DATA DOCUMENTATION AND MONITORING			
Average values per weld seam (U, I, Vd)	■	■	■
Data sampling rate (up to 100 ms)		■	■
Time per weld seam	■	■	■
Welders per weld seam		■	■
Export of weld seam data (PDF)	■	■	■
Export of weld seam data (CSV)		■	■
Export of weld seam data (JSON, XML)			■
Visualization of seams in diagrams			■
Limit function (I, U, Vd) – Define limits and reactions		■	■
Documentation and visualization of limit violations		■	■
Automatic calculation of limits			■
WORKPIECE MANAGEMENT			
Workpiece documentation			■
Workpiece administration			■
Workpiece monitoring			■
Export of workpiece reports (PDF)			■
Display of gas and wire costs per workpiece			■
Limit information in workpiece documentation and reports			■
WELDCUBE CONNECT			
Web API for third-party systems			■



/ Perfect Welding / Solar Energy / Perfect Charging

THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 4,550 employees worldwide and 1,241 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

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