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JUMO smartWARE Program

Software for editing process technology programs with JUMO variTRON

Brief description

The browser-based software solution JUMO smartWARE Program enables intuitive creation and editing of process technology programs and recipes on the JUMO variTRON 500 via web access. As a result, plant manufacturers can define process steps and then link them into a program using the graphical editor. The plant user can control the program sequence via a connected web interface.

JUMO smartWARE Program



Customizable graphical interface

Web development tools allow plant manufacturers to adapt the interface to their particular needs.



Browser-based software

View, create and edit programs with ease through the web browser



Simple program administration

View, create and edit programs through the web browser



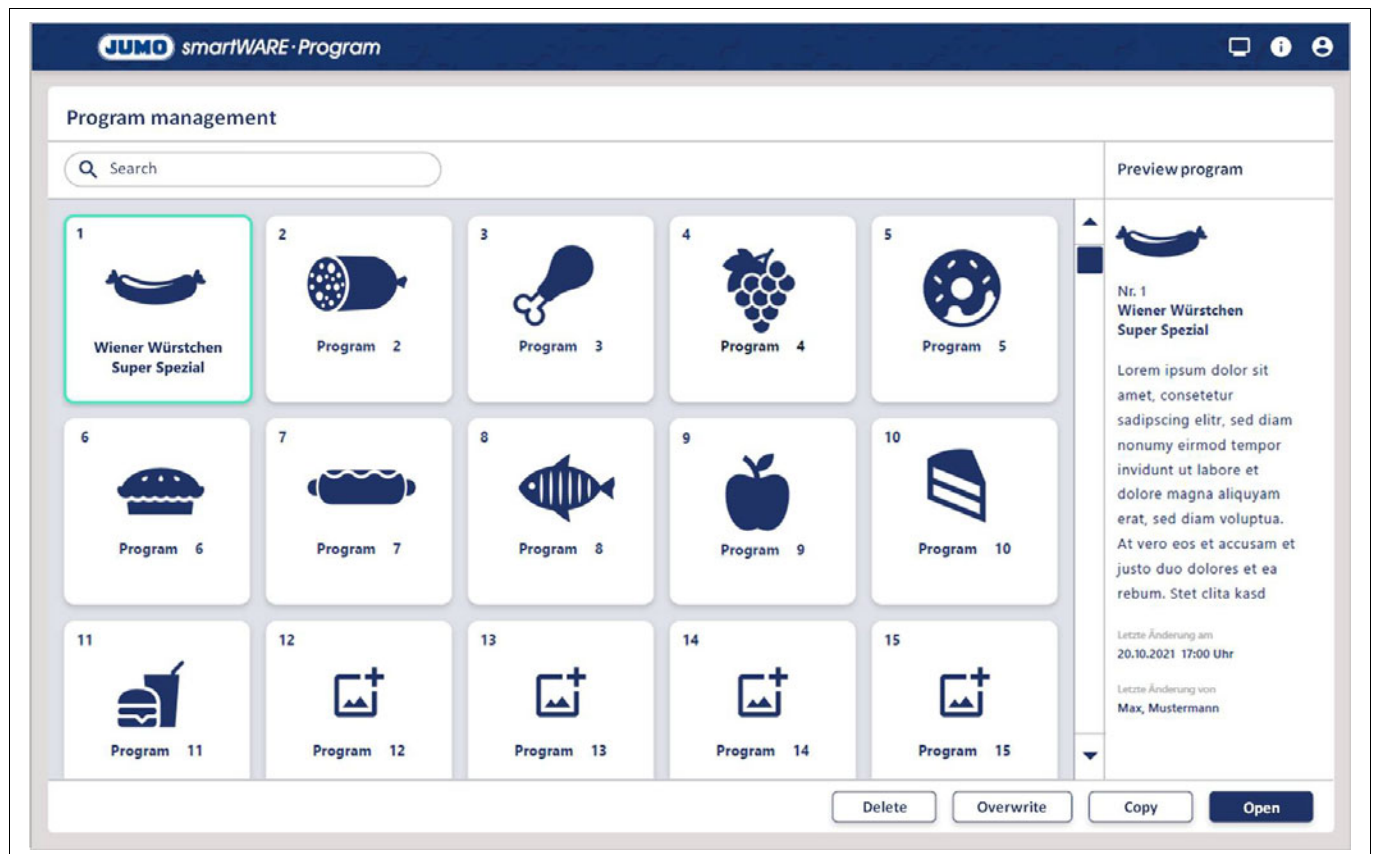
No software installation required on end devices

The web server application runs on the JUMO variTRON devices in your plant.



Access control through user rights

Protection against operating errors by various user groups



JUMO smartWARE Program

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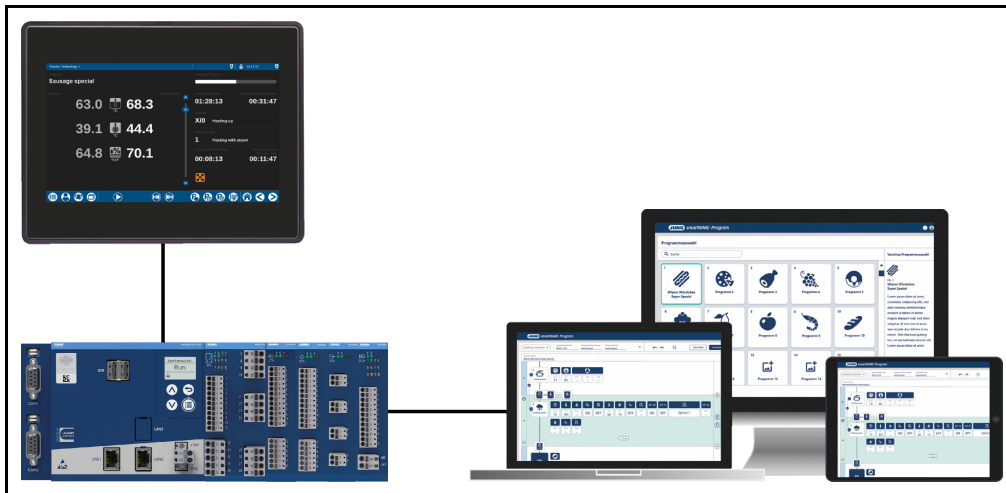
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Description

Process technology programs with JUMO smartWARE Program

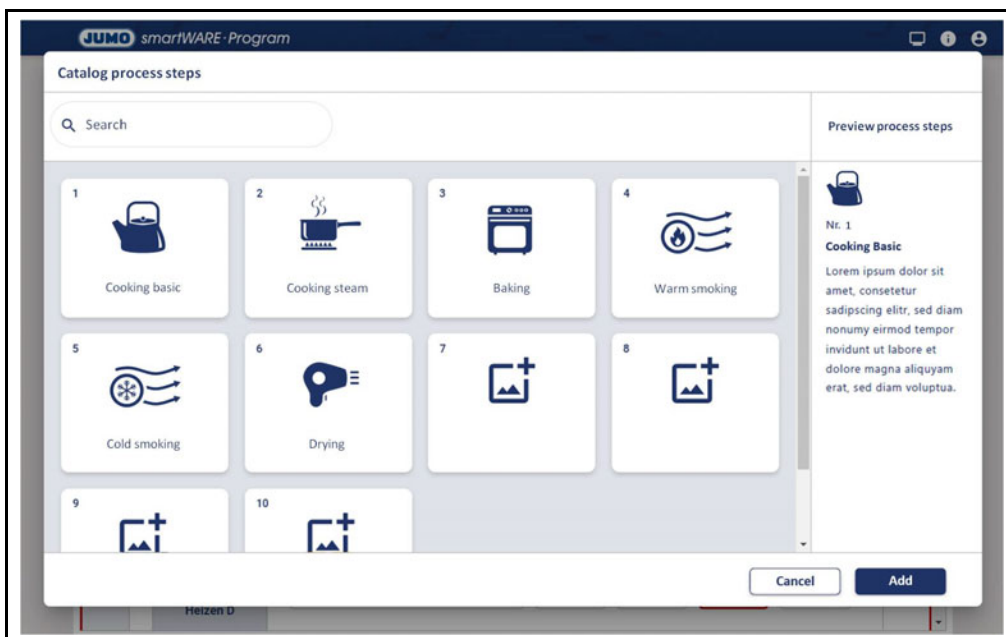
JUMO smartWARE Program facilitates the interaction between plant manufacturer, plant operator, and plant user when handling process technology programs.



Plant manufacturers provide a catalog of process steps for the plant operator during project planning on the JUMO variTRON 500 with the PC software JUMO smartWARE Setup variTRON". In addition, the plant manufacturer defines different types of plants. During programming with JUMO smartWARE Program, only certain process steps can thus be selected for each plant type.

In addition, the plant manufacturer can provide standard programs. Standard programs are process technology programs that can no longer be edited with JUMO smartWARE Program. They are used for the fixed specification of programs by the plant manufacturer.

Example of a catalog with a selection of specified process steps:



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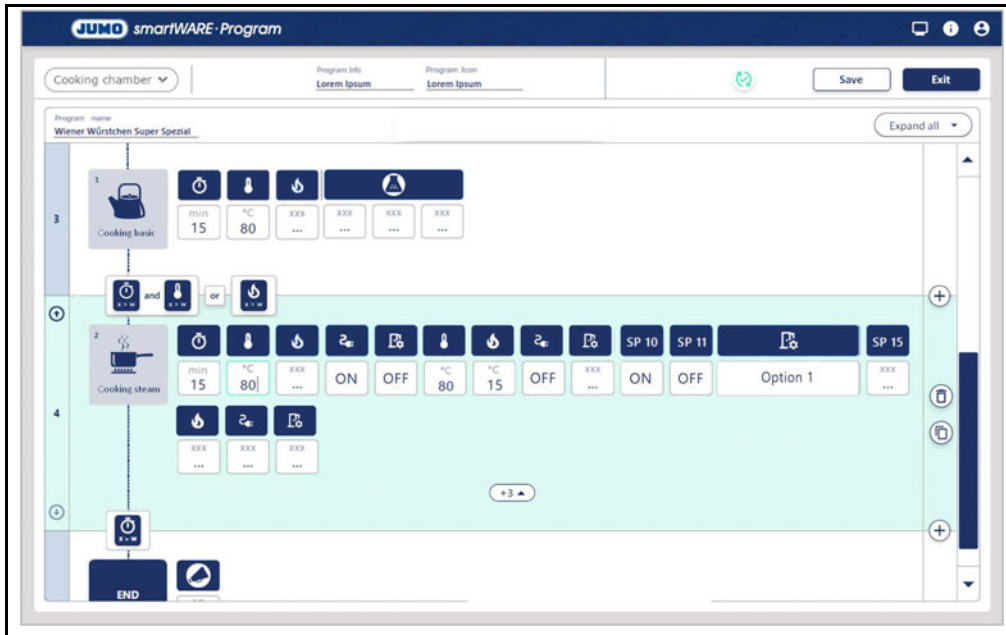
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Plant operators can use JUMO smartWARE Program to create and edit programs on a JUMO variTRON 500 via a web browser. The process steps predefined by the plant manufacturer are available in the catalog for the compilation of the programs, which can be inserted into the programs as program sections.

In addition, the plant operator can choose between different plant types to determine on which plant the program should run.

Example of a program in the JUMO variTRON 500:



Plant users start and stop the programs prepared by the plant operator when operating the plant on an HMI or via a web panel with CODESYS WebVisu. The web panel can be accessed from JUMO smartWARE Program.

The application also allows individual batch data to be entered, temporary changes to be made and specific process steps to be run in manual mode. A total of four program generators (four plants) can be operated simultaneously.

Example view of a program operation on an operator panel with CODESYS WebVisu:



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System requirements

The process technology system solution is supported by the JUMO variTRON 500 automation system (705002) as of system version 7.

Both JUMO smartWARE Program and the associated CODESYS WebVisu run as a web server application on the JUMO variTRON. No installation is required. Only the template file for the JUMO process technology must be imported into the JUMO variTRON using the JUMO smartWARE Setup variTRON PC program. In addition, the required extra codes must be activated in the JUMO variTRON.

Required software for JUMO variTRON 500

- JUMO smartWARE Setup variTRON
- JUMO smartWARE Program incl. process technology template for JUMO variTRON 500 can be downloaded at:



<http://qr-705002-en.jumo.info>

- Extra codes for JUMO variTRON 500:
 - 001 (program generator incl. JUMO smartWARE Program)
 - 281 (WebVisu)
 - 224 (PLC according to IEC 61131-3)

Supported browsers

- Microsoft Edge on Windows
- Google Chrome on Linux, Windows, macOS
- Mozilla Firefox on Linux, Windows
- Apple Safari on iOS

Technical data

The following data apply to a JUMO variTRON 500 and are the maximum values in the standard version. On request, the maximum number of instances can be increased. If required, please contact our sales department.

General information

Number of programs	Max.	300
Number of process steps	Max.	200
Number of program sections	Max.	200 per program
Number of program generators	Max.	4
Number of plant types	Max.	10
Simultaneous client accesses (CODESYS WebVisu)	Max.	2

Setpoint values

Number of editable digital setpoint values ^a	Max.	32
Number of editable analog setpoint values ^a	Max.	32
Number of definable digital setpoint values ^b	Max.	64
Number of definable analog setpoint values ^b	Max.	32

^a Editable setpoint values can be changed in the program sections by the plant operator using JUMO smartWARE Program.

^b Definable setpoint values are usually defined in process steps by the plant manufacturer during project planning and cannot be changed in JUMO smartWARE Program.

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Worth knowing

Test the solution quickly and easily

To do so, simply contact a JUMO contact person of your choice.

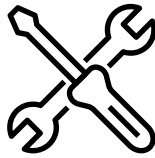
Do you need support?

If you need more information, simple explanations, training courses, or support for JUMO smartWARE Program, JUMO has a wide range of options available for you.



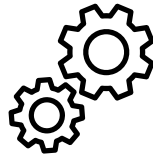
JUMO Help Center

Detailed documentation



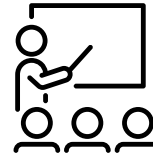
Technical support

Questions and information



JUMO Engineering

Services



JUMO Campus

Training courses



YouTube channel

Explanatory videos

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Order details

Note on ordering

The UMO smartWARE program is ordered as a feature for a JUMO variTRON 500.

The order information required for both a new purchase and for retrofitting a JUMO variTRON 500 is provided below and followed by the full order code of the JUMO variTRON 500.

Order information for new purchase of a JUMO variTRON 500

JUMO variTRON 500 extra code	Designation
001	Program controller, incl. JUMO smartWARE program
224	PLC according to IEC 61131-3
281	WebVisu

Order information for retrofitting a JUMO variTRON 500

Part no.	Designation
00771090	Program controller, incl. JUMO smartWARE program
00724988	PLC according to IEC 61131-3
00724991	WebVisu

Master application

One master application (software and hardware) covering all plant types and its options is available upon request. Please contact our sales department in this regard.

Order details for JUMO variTRON 500 (705002)

(1)	Basic type
705002	Central processing unit, type 705002 (1 × Ethernet (RJ45), 1 × system bus (side), 2 × USB host interface), Node-RED
(2)	Basic type extension 1
2	Quad core CPU
(3)	Basic type extension 2
2	RAM 1024 MB
(4)	Basic type extension 3
1	eMMC 8 GB ^a
(5)	Basic type extension 4
0	Without software control loops
(6)	Version
8	Standard with default settings
(7)	Com1 interface
00	Not used
51	RS232 Modbus-RTU ^b (as of system version 3)
55	RS485 Modbus-RTU ^b (as of system version 3)
(8)	Interface Com2
00	Not used
51	RS232 Modbus-RTU ^b (as of system version 3)
55	RS485 Modbus-RTU ^b (as of system version 3)
(9)	Interface LAN2
00	Not used
08	Ethernet (RJ45)
(10)	Voltage supply
36	DC 24 V +25/-20 %, SELV
(11)	DNV GL approval

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000	Without approval
(12)	Extra codes
001	Program generator incl. JUMO smartWARE Program (701850; as of system version 7) ^{c, d}
224	PLC according to IEC 61131-3 (CODESYS V3.5; necessary to operate the device as a PLC) ^e
225	Program generator 1 – 9 (as of system version 4) ^c
280	Remote TargetVisu ^{c, e}
281	WebVisu ^{c, e}
282	PROFINET IO controller ^{c, e}
283	OPC UA server ^{c, e}
284	Modbus-TCP master ^{c, e}
285	Modbus-TCP slave ^{c, e}
286	EtherCAT master ^{c, e}
289	BACnet/IP (as of system version 4) ^{c, e}

- ^a Flexible allocation between system data and application data.
- ^b The PLC (extra code 224) enables additional interface protocols to be implemented (extra cost).
- ^c Only in conjunction with extra code 224.
- ^d Only in conjunction with extra code 281.
- ^e This function can be used in demo mode free of charge for 30 minutes.

Order code (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 705002 / 2 2 1 0 - 8 - - - - 36 / 000 , 224 , ...^a

Order example 705002 / 2 2 1 0 - 8 - 00 - 00 - 00 - 36 / 000 , 224

^a List further extra codes in sequence, separated by commas.

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Accessories

The following JUMO products are available for the evaluation of recorded batches and for fulfilling the obligation to provide proof.

701810



qr-en-cloud.jumo.info

The IoT platform for process visualization as well as data acquisition, evaluation, and archiving enables worldwide access to measurement data using common web browsers. The JUMO Cloud is characterized by a high degree of security as well as valuable visualization, alarm, and planning functions.

701820



qr-en-scada.jumo.info

The JUMO smartWARE SCADA software provides easy access to measurement data using conventional web browsers. It offers functions for process visualization as well as for evaluation of the acquired data. The software also supports manufacturing and work processes with valuable visualization, alarm, and planning functions.

701840



qr-en-evaluation.jumo.info

JUMO smartWARE Evaluation stores process data from distributed plants that is acquired by JUMO variTRON devices. The collected data can be viewed and evaluated with a web browser. Thanks to Docker technology, JUMO smartWARE Evaluation can be installed on a desktop computer, on a server in your own network, or on a cloud server. A manipulation detection system ensures data security.

Trademark information

All trademarks and trade and company names used are the property of their rightful owners or authors.