

**YASKAWA**

# Total Customer Support

Our additional Service around your Robot



Total Customer Support.  
Our Attitude –  
Your Benefit!



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# **TCS –** Total Customer Support – Your Yaskawa Service

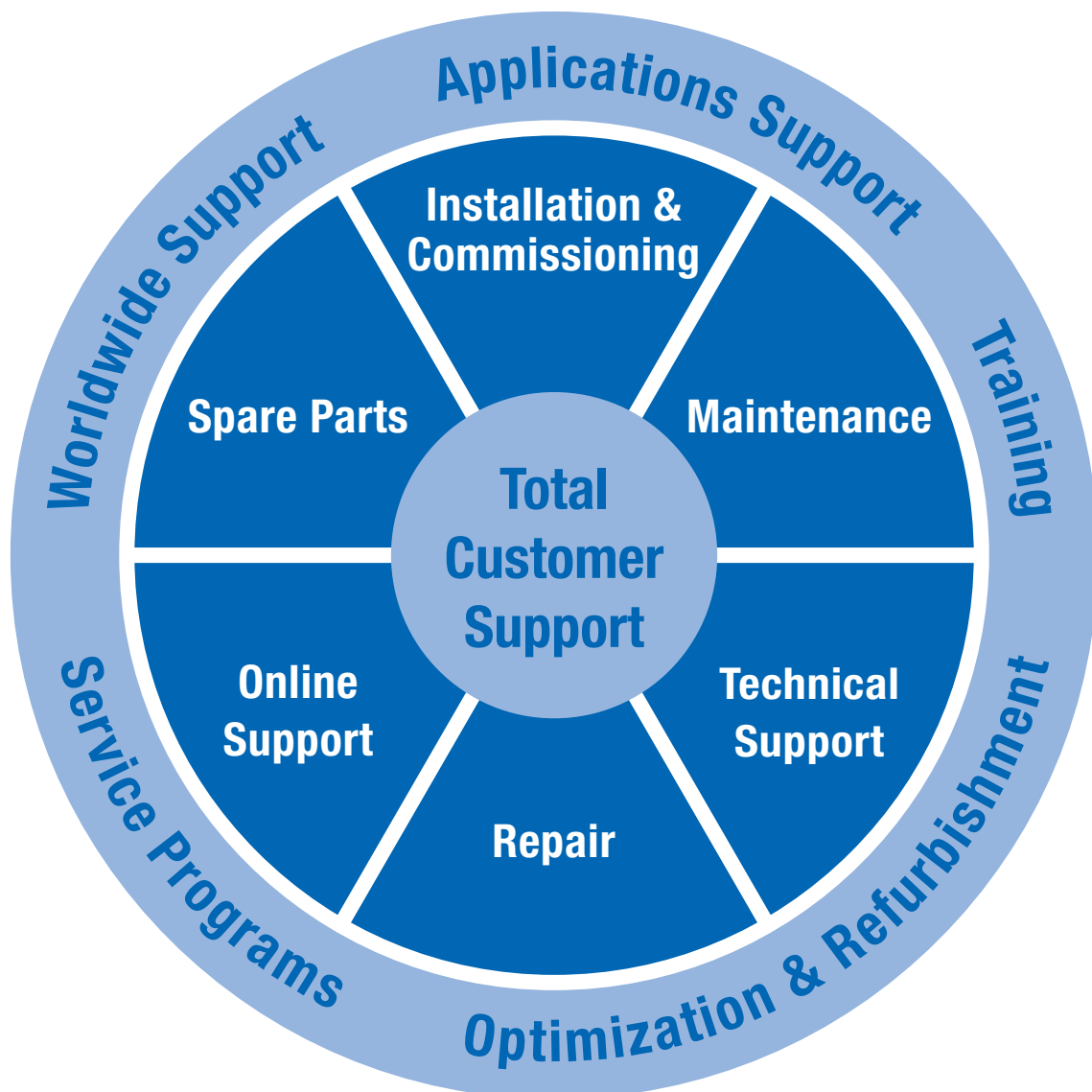
Yaskawa supports you throughout the entire product lifecycle with service products and services tailored to your needs.

In this way, we would like to support you in increasing your plant availability and productivity and keeping them at a continuously high level.

Through our global service network, Yaskawa is always close to you to ensure your success, because ...

... customer satisfaction is our top priority!

# Total Customer Support





# TCS. Total Customer Support.

## Customer satisfaction is our top priority!

***As soon as you consider acquiring an automation solution or robot for your company, that is where we come in.***

***With many years of expertise in this field and in-house coverage of all areas, we are able to offer comprehensive service that truly deserves the name "Total Customer Support".***



## Training is the best investment

***The Yaskawa Academy offers a broad range of courses to suit the level of knowledge of the participants – from beginner to expert.***

Our modular training concept offers courses in the following areas: basic training, operation and programming of robots, safety (protection and security), system integration, software, maintenance and repair. In addition, there are refresher and transfer courses, online training and e-learning.

All courses consist of theory and practice. The practical exercises are the center of attention to ensure efficient learning.

The Yaskawa Academy responds to your wishes and creates an individual and, if necessary, will create an individual training concept for you adapted to your requirements.

Qualification is your key to success. And your success is our motivation.

Visit our Learning  
Management System:

Or contact us under:  
**[academy@yaskawa.eu](mailto:academy@yaskawa.eu)**  
**Tel. +49 (0) 6196 777 25 -70**



**YASKAWA** ACADEMY

## Service is a matter of attitude

**The objective of our range of customer support services is:**

- To give you a sense of security and confidence in your system
- To train your employees and offer them further qualifications for the purpose of maximizing the availability of your robot systems
- To provide you with timely support, preventing problems before they can arise
- To provide you with process support, thereby optimising and ensuring the productivity of your system
- To ensure that you enjoy high levels of system availability and quality
- To ensure your success



## Only an operational system earns money



**Although Yaskawa MOTOMAN robots and systems are known for their low maintenance requirements, the value of continuous servicing and preventive maintenance must not be underestimated.**

Throughout the service life of its products, Yaskawa offers optimal all-round support in the form of regular preventive maintenance, customer support, spare parts support, optimization and modernization. This also refers to your applications and processes, ensuring that the availability of your system remains high.

With our global service network and 360° comprehensive support service, Yaskawa is always in your vicinity to ensure your success.

**Your success is our motivation!**

**tcs-sales@yaskawa.eu**  
**Tel. +49 (0) 81 66 / 90 - 20 02**

## High availability guaranteed

Rapid help is on hand at all times with our unique stock of parts for all controller and robot types.



Expert advice regarding which spare parts to select or what components to keep in store ensures maximum production reliability.

**spare-parts-sales@yaskawa.eu**  
**Tel. +49 (0) 81 66 / 90 - 20 00**

## Service agreements for peace of mind

Yaskawa MOTOMAN service agreements minimize the risk of system downtime and thus reduce service costs.

To find out more, simply call us for a personal consultation.

## Our telephone support is there for you when help is needed fast

Our experienced technicians are only a phone call away to provide you with fast and competent advice on every aspect of your robot system.

**Technical Support\***

**+49 1805-762683**  
**tcs@yaskawa.eu**

Call us!

\*14 ct/min. from landlines,  
mobile phones charges can vary.

You can be certain that our experts are thoroughly familiar with the systems and can quickly recommend the solution you need.

## Rarely needed – always appreciated

**It is always good to have a partner who can help you in an emergency. For instance, the staff at our repair centers where we can repair all controller and robot components.**

Since Yaskawa produces robots, controller components and servomotors in house, we can offer servicing for the entire system.

### This includes repairs to:

- Servomotors
- Servo packs
- Teach pendants  
(loan of teach pendants during repairs)
- CPU and I/O boards
- In-house repair and overhaul of complete robots, controllers and robot systems

In order to minimize production downtime of your systems, we offer overhauled exchange robots in the case of major, more complicated robot repairs.



We would be happy to advise you individually on this matter.

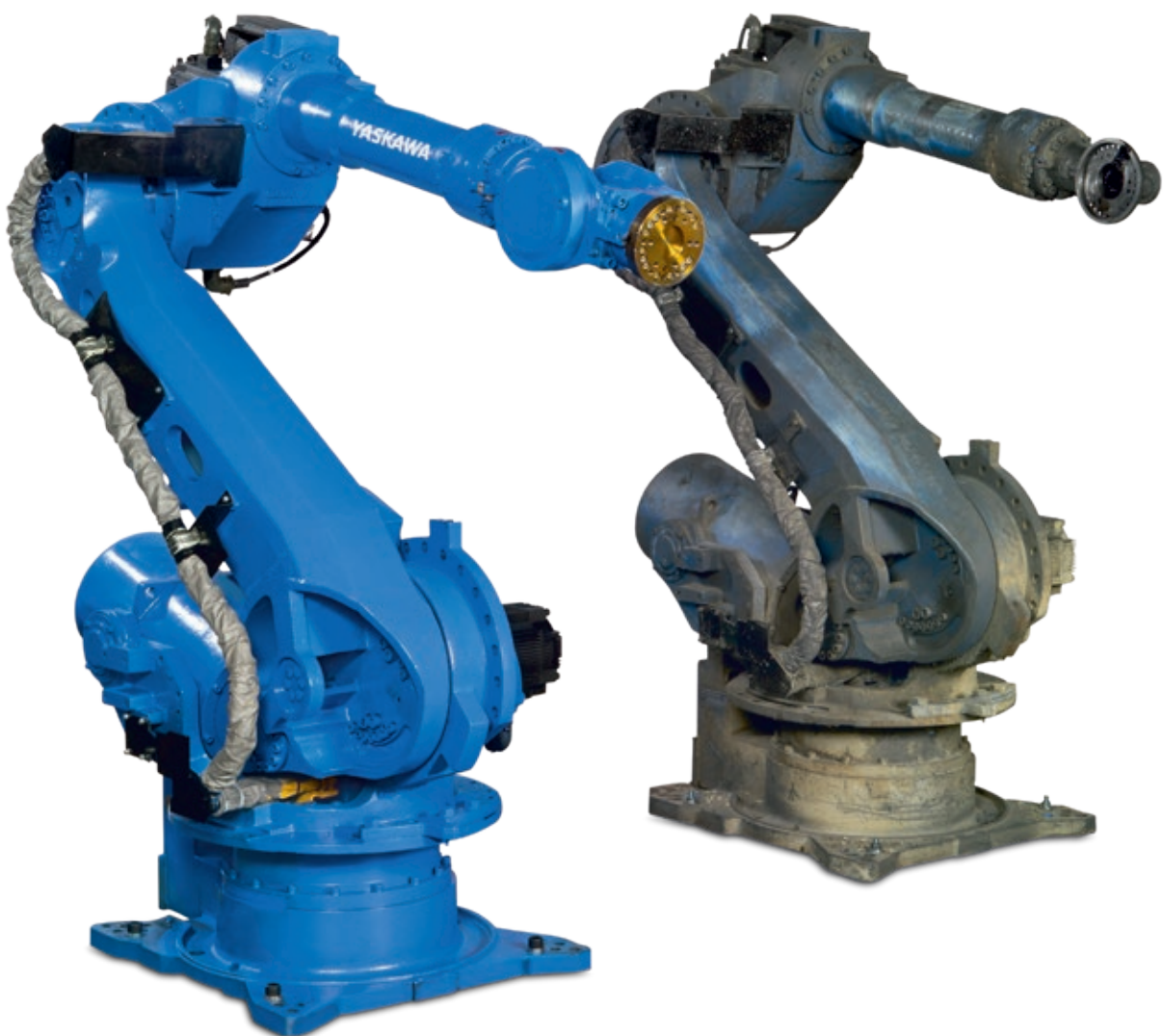
**yeur-repair-sales@yaskawa.eu**  
**Tel. +49 (0) 81 66 / 90 - 20 05**







# Modernisation Program



# Like new!



## Yaskawa Robot Overhaul

Your MOTOMAN robot is at the heart of your existing production line. That is why we do our utmost to ensure that you enjoy the assurance of reliable production. Our overhaul and exchange program is designed to offer you this ultimate assurance.

### **Overhaul program robots – Your robot is overhauled in-house at Yaskawa:**

- Exchange after inspection of all necessary bearings and gear units
- Grease analysis and evaluation of the condition of the gear unit
- Exchange of cable harnesses
- Cleaning and repainting
- ABS data calculation and robot calibration
- Re-filling of grease
- Battery change
- 24-hour test run
- 1-year warranty



## Yaskawa Robot Exchange Program

### **We supply you with a complete manipulator (robot) as a replacement device:**

- In exchange, you send your defective manipulator back to Yaskawa
- You are sent new ABS and tool data by Yaskawa
- 1-year warranty
- You have no downtime at your company and can resume production with a minimum of delay
- Fixed price guarantee



## Controller Overhaul (XRC, NX and DX)

- Overhaul and inspection with exchange of all wearing parts such as fans and ventilators
- Inspection of controller seals
- Battery change
- Cable and Teachbox replacement or repair
- Software and hardware diagnosis with our diagnostic system
- Optional software update
- Fixed price guarantee according to controller type
- Overhaul at Allershausen plant or at customer site on request

## System rebuilds/safety checks/ CE- & Safety Consulting

### **A question of competence!**

You wish to use your system for different applications?

You need to manufacture different products and your system is not up to the new challenges?

You want to carry out modifications and require consultation and support with regard to concept, safety and feasibility?

***We are there for you.***

**Ask us today – your Yaskawa TCS team will provide you with individual expert advice.**

### **Please contact TCS-Sales:**

Tel. +49 (0) 8166 90 - 2002

Fax +49 (0) 8166 90 - 225

tcs-sales@yaskawa.eu



# Robot Exchange Program



With the robot exchange program, we enable you to exchange your old robot for an overhauled robot.

## KEY BENEFITS

- Exchange robots available at fixed prices
- 1 year warranty on the complete robot
- Minimization of risk of failure
- Time and cost savings due to rapid exchange of the robot
- Increased quality due to production with a technically flawless robot

## A question of competence!

**A single interface:** On request, we can offer you a quotation for robot programming.

**We are there for you.**

## Please contact TCS-Sales:

Tel. +49 (0) 8166 90 - 2002  
Fax +49 (0) 8166 90 - 225  
[tcs-sales@yaskawa.eu](mailto:tcs-sales@yaskawa.eu)

## Repurchase of used robots

### We are convinced of our products!

We would be happy to provide you with a repurchase quotation for your used Yaskawa robots.

# MOTOMAN Service Contracts



## MOTOMAN Service Contracts

Our service and maintenance agreements round out our comprehensive range of products and services. With a MOTOMAN service contract (MSC), you have made the right decision to ensure that your Yaskawa products continue to provide reliable, high-quality production in the future.

### MOTOMAN Service Contracts from Yaskawa offer you:

- **M**inimized risk of a production stop
- **O**ptimal conditions in order to keep your production running with high quality
- **T**arget dates ensure regular and timely maintenance
- **O**ptimal cost control and reduction of the service costs
- **M**eaningful suggestions to help keep your robot system up to date
- **A** sensible way to plan long-term for upcoming repairs and restoration
- **N**ecessary information regarding the current condition of your robot system





## MOTOMAN Service Contract **MSC-A**

Performance of maintenance according to the inspection manual including required consumables **once within 2 years** in your factory. The maintenance is carried out according to the inspection manual with subsequent maintenance report and recommendation by Yaskawa.

With this contract you have the certainty about the actual condition of your products. This contract contains additionally the 365-days-extended phone support from 8.00 a.m. to 6.00 p.m. at Tel. +49 (0) 1805 / 76 26 83.

Our robots are equipped with an extensive diagnostic and alarm systems. A large number of malfunctions can be solved uncomplicated and fast by our expert support.



## MOTOMAN Service Contract **MSC-B**

The implementation is performed according to the inspection manual including required consumables **once every year**. Afterwards a maintenance report and recommendation by Yaskawa will be given.

With this contract you have the certainty about the actual condition of your products. This contract contains additionally the 365-days-extended phone support from 8.00 a.m. to 6.00 p.m. at Tel. +49 (0) 1805 / 76 26 83.

Our robots are equipped with an extensive diagnostic and alarm systems. A large number of malfunctions can be solved uncomplicated and fast by our expert support.





## MOTOMAN Service Contract **MSC-C**

Implementation of the maintenance according to the inspection manual for robots starting at 200 kg bearing load, with a gas-balancer, painting-, dualarm-, special- an extraordinary robots including required consumables plus a maintenance report **once a year**. Afterwards a maintenance report and recommendation by Yaskawa will be given.

With this contract you have the certainty about the actual condition of your products. This contract contains additionally the 365-days-extended phone support from 8.00 a.m. to 6.00 p.m. at Tel. +49 (0) 1805 / 76 26 83.

Our robots are equipped with an extensive diagnostic and alarm systems. A large number of malfunctions can be solved uncomplicated and fast by our expert support.





## MOTOMAN Service Contract **MSC-ERB<sup>1</sup>**

The extended on-call service can be booked separately.

With this contract you will receive the authorization level to reach the Yaskawa-MOTOMAN service via the official Yaskawa hotline +49 (0) 1805 / 76 26 83. The contract includes an extension of the hotline times on weekends and public holidays in the state of Bavaria.

Our robots are equipped with an extensive diagnostic and alarm systems. A large number of malfunctions can be solved uncomplicated and fast by our expert support.

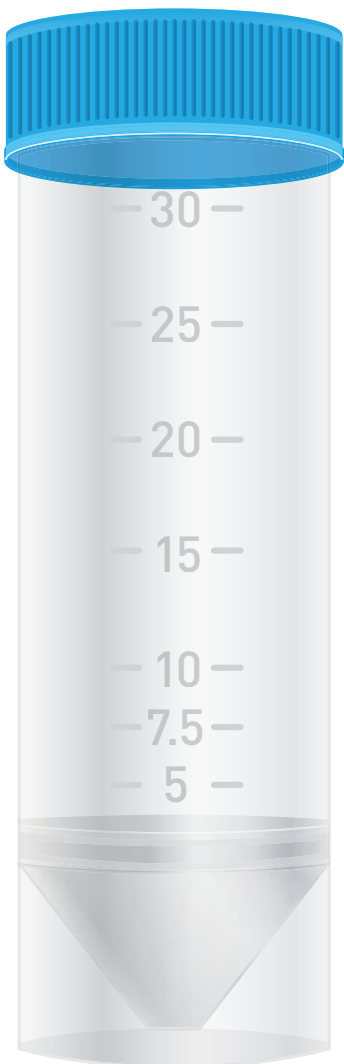


## MOTOMAN Service Contract **MSC-GAP<sup>1</sup>** (Grease Analysis Program)

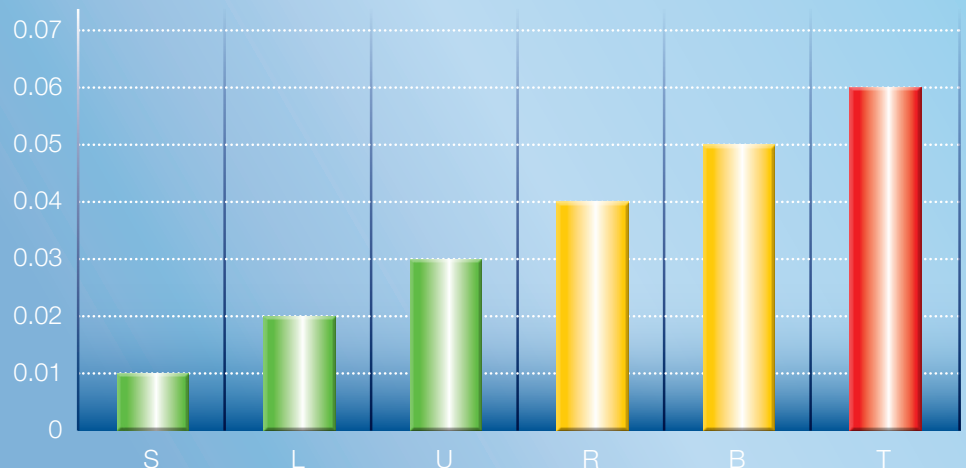
You can order the grease analysis program as well as an option to our customized MOTOMAN service contracts.

The grease analysis program (GAP) was developed by Yaskawa for the durability-evaluation of reducers. The grease analysis program helps to prevent spontaneous failures of reducers, helps to plan reliable preventive measures and helps to increase the availability of your systems.

The samples taken from all reducers of your robots will be analyzed and evaluated by a laboratory. You receive a laboratory evaluation and a detailed report with the evaluation. An individual action plan will be prepared for you if necessary.



### Metal content %



## MOTOMAN Service Contract **MSC-EM4<sup>2</sup>**

Yaskawa is offering with this option the opportunity to arrange a fixed price for the maintenance of your Yaskawa robots, which 4 years cannot be raised!

As an option, you can book an extended term for the maintenance contracts MSC-B and MSC-C. The term extends to 4 years.

**Your additional benefits:**

- Additional discount of 3 %
- No price increases within the term of 4 years





## MOTOMAN Service Contract **MSV-ADS**

With this option, Yaskawa offers you the possibility to check the condition of your servo amplifiers. As a preventive measure, this tool serves to increase failure safety and to estimate the service life of the servo amplifiers.

Easy detection of possible error causes: Overcurrent detection, trajectory deviations, collisions & strong vibrations.

A detailed report with a traffic light system provides information on whether you should preventively change one or more servo amplifiers.

Strong vibrations mean that the motor is overdriven or is no longer properly controlled by the servo amplifier. This leads to premature wear of the respective axis.

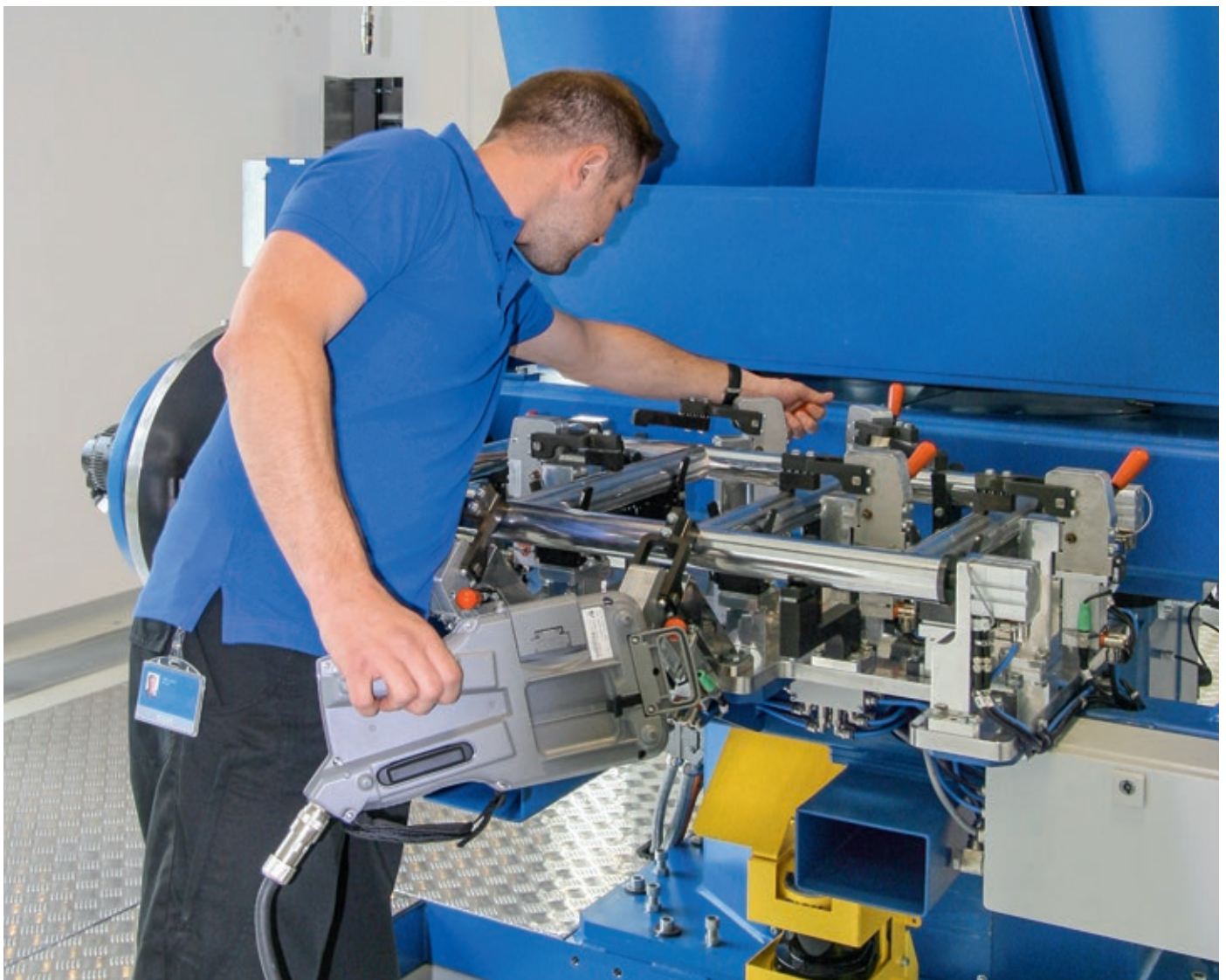


## MOTOMAN Service Contract **MSV-CWH<sup>1</sup>**

Yaskawa offers you with this option the possibility to order spare parts outside our normal business hours directly from our warehouse.

Delivery will be made within 24 hours by shipping company CTS within the Federal Republic of Germany and Austria.

For further information please refer to the terms of contract.





## MOTOMAN Service Contract **STILL QUESTIONS?²**

Yaskawa will be happy to assist you. If you still have questions regarding the right service contract or its options, then simply contact us. We will be happy to advise you.

We will be happy to advise you so that you can make the right decision about your service contract in the end.

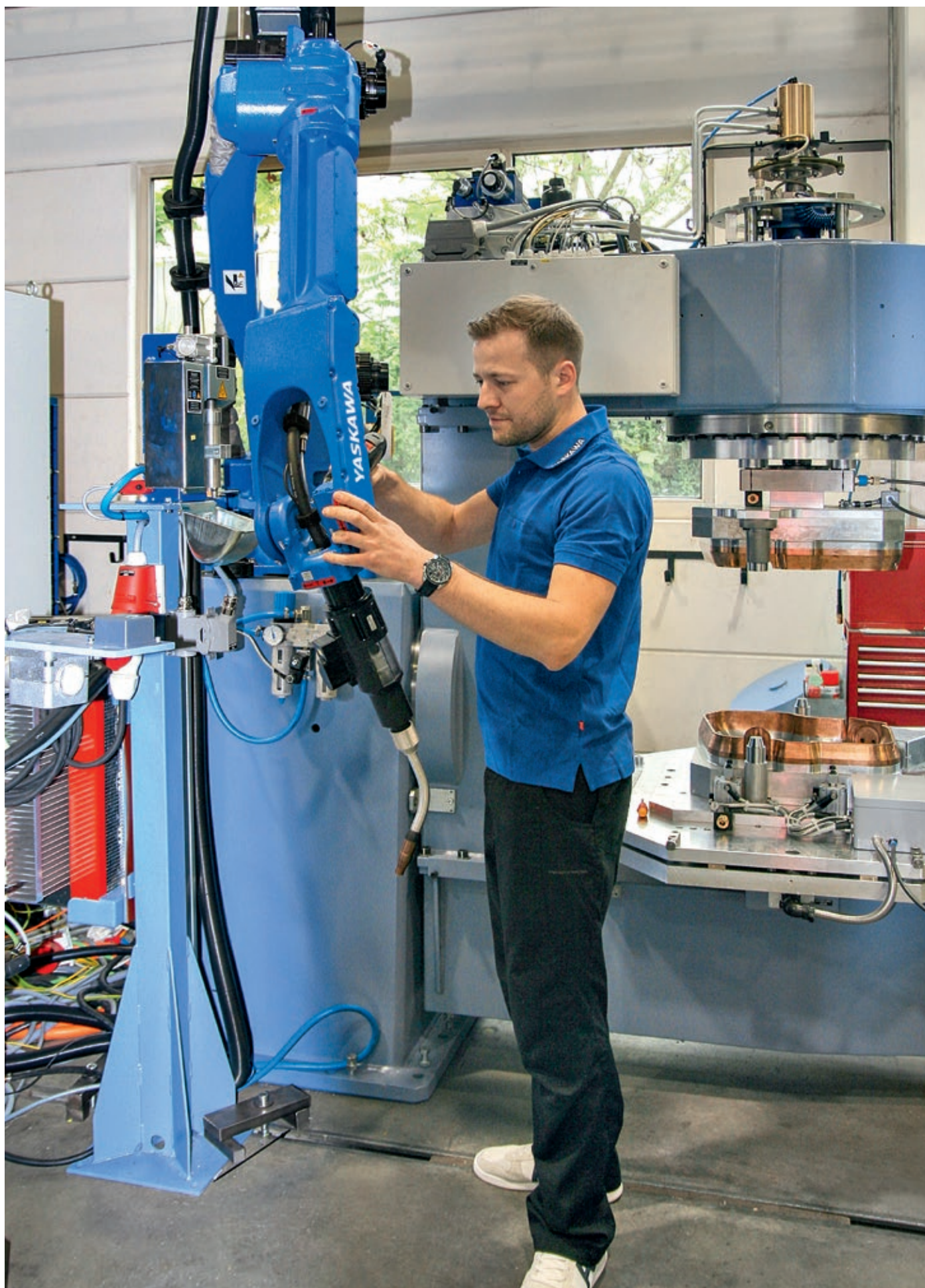
### **Your contact for maintenance contracts:**

**Mr. Stefan Grosso**  
**Outside Sales Manager**

Yaskawa Europe GmbH  
Robotics Division  
Yaskawastraße 1, 85391 Allershausen  
Tel. +49 (0) 160 / 99 87-56 11  
Stefan.grosso@yaskawa.eu







## Overview Service Contracts for your Robots

Description	MSV-A	MSV-B	MSV-C
Your choice	Yes	Yes	Yes
Service	Carrying out maintenance and grease analysis according to inspection manual including required consumables as well as maintenance protocol once within 2 years.	Carrying out maintenance and grease analysis according to the inspection manual including required consumables as well as maintenance protocol once a year.	Implementation of the maintenance according to the inspection manual for Robots starting at 200 kg bearing load, with a Gas-Balancer, Painting-, Dualarm-, Special- and Extraordinary- Robots including lubrication and batteries plus a maintenance report once a year.
Accessibility of the Yaskawa Hotline technical Support	365 days/year from 8.00 a.m. to 6.00 p.m. over our Hotline +49 (0) 1805 / 76 26 83 with PIN-Code	365 days/year from 8.00 a.m. to 6.00 p.m. over our Hotline +49 (0) 1805 / 76 26 83 with PIN-Code	365 days/year from 8.00 a.m. to 6.00 p.m. over our Hotline +49 (0) 1805 / 76 26 83 with PIN-Code
Service request	Mo to Fr from 7.30 a.m. to 6.00 p.m. at Tel. +49 (0) 1805 / 76 26 83	Mo to Fr from 7.30 a.m. to 6.00 p.m. at Tel. +49 (0) 1805 / 76 26 83	Mo to Fr from 7.30 a.m. to 6.00 p.m. at Tel. +49 (0) 1805 / 76 26 83
Spare parts dispatch	Mo to Th from 7.30 a.m. to 4.30 p.m., Fr from 7.30 a.m. to 3.00 p.m.	Mo to Th from 7.30 a.m. to 4.30 p.m., Fr from 7.30 a.m. to 3.00 p.m.	Mo to Th from 7.30 a.m. to 4.30 p.m., Fr from 7.30 a.m. to 3.00 p.m.
Discount on training	Dependent on the amount of participants	Dependent on the amount of participants	Dependent on the amount of participants
Discount on spare parts	10 %	10 %	10 %
Discount on service	without	Dependent on the year of the contract	Dependent on the year of the contract
Contract duration	48 Months + automatic extension (for 24 month)	48 Months + automatic extension (for 24 month)	48 Months + automatic extension (for 24 month)
Price per robot (when 1 – 4 Robots are under contract)	1,795.00 € / every 2 years	1,615.00 € / yearly	2,070.00 € / yearly
Price per Robot (when 5 – 10 Robots are under contract)	1,705.00 € / every 2 years	1,530.00 € / yearly	1,970.00 € / yearly
Price per Robot (when 11 – 17 Robots are under contract)	1,530.00 € / every 2 years	1,370.00 € / yearly	1,765.00 € / yearly
Price per Robot (when atleast 18 Robots are under contract)	1,285.00 € / every 2 years	1,155.00 € / yearly	1,485.00 € / yearly
Price per external Axis/Gearbox	165.00 € / every 2 years	165.00 € / yearly	165.00 € / yearly
Remark 1	The Hotline can be reached on weekends and on Bavarian holidays only with your allocated and in the contract specified PIN-Code.		
Remark 2	The above prices are guidelines. For an official quotation, please contact our Service Sales Team!		

## Service Contract Options for your Robot Systems

Description	MSV-ERB <sup>1</sup>	MSV-FAP <sup>1</sup>	MSV-EM4 <sup>2</sup>
<b>Your choice</b>	Yes	Yes	Yes
<b>Service</b>	Yaskawa is available over the official Yaskawa Hotline +49 (0) 1805 / 76 26 83. The contract holds an extension of the Hotline hours on weekends and on Bavarian holidays.	Yaskawa is offering with this option more information with respect to wear and tear. This can be achieved through our Grease-Analysing-Program. With this knowledge you can more precisely judge the life of the gears.	Yaskawa is offering with this option the opportunity to arrange a fixed price for the maintenance of your Yaskawa robots, which for 4 years cannot be raised!
<b>Additional description</b>	During these extended hours, you can receive technical support only with a PIN-Code. See contract conditions for details.	How it works: Grease samples get taken from all gears of the robot. These will be brought into our laboratory in order to get analyzed. See contract conditions for details.	And on-top you will receive an additional discount per Robot in the amount of 3 %!
<b>What can you expect?</b>	You can expect very experienced service technicians who are familiar with all robot generations (MRC, ERC, XRC, NX100, NXC100, FS100, DX100, DX200 and YRC1000) in the best way.	A detailed report with a traffic light system provides information whether you should preventively change one or change one or more gear units as a preventive measure.	Stable prices over 4 years. Protection against price increases, even if Yaskawa adjusts the official prices.
<b>Is that all?</b>	Even without the MSV-ERB contract you can get technical support during our normal business hours, but with your request will be processed faster.	Even without the MSV-FAP contract the grease is changed at every maintenance, but with the contract our estimation of the lifetime of the gearbox is more accurate.	Even without the MSV-EM4 contract prices are fixed for at least two years. Should there be come to a price adjustment, you can cancel the contract with terminate the contract with immediate effect.
<b>Contract duration</b>	Dependent on service contract. Otherwise 1 year + automatic extension for another year.	Dependent on service contract. Otherwise 1 year + automatic extension for another year.	Dependent on service contract. After that automatic extension for another year.
<b>Price per robot (when 1 – 4 Robots are under contract)</b>	295.00 € / yearly	205.00 € / yearly	3 % additional discount
<b>Price per Robot (when 5 – 10 Robots are under contract)</b>	275.00 € / yearly	190.00 € / yearly	3 % additional discount
<b>Price per Robot (when 11 – 17 Robots are under contract)</b>	240.00 € / yearly	175.00 € / yearly	3 % additional discount
<b>Price per Robot (when atleast 18 Robots are under contract)</b>	185.00 € / yearly	150.00 € / yearly	3 % additional discount
<b>Remark 1</b>	The extended Hotline hours are already included with the Service Contracts MSC-A, MSC-B and MSC-C.		
<b>Remark 2</b>	The extended minimum Contract Duration to 4 years is only available with the Service Contracts MSC-B and MSC-C.		



## Service Contract Options for your Robot Systems

Description	MSV-ADS	MSV-CWH <sup>1</sup>	NOCH FRAGEN? <sup>2</sup>
Your choice	Yes	Yes	Yes
Service	Yaskawa offers you with this option to check the condition of your servo amplifiers. As a preventive measure this tool serves to increase the reliability and to estimate the lifetime of the servo amplifiers.	With this option, Yaskawa offers you the possibility to purchase spare parts outside our normal hours directly from our warehouse. warehouse outside our normal business hours.	Yaskawa will be happy to assist you. If you still have questions regarding the right service contract or their options, please do not hesitate to simply get in touch with us.
Additional description	Easy detection of possible causes of faults: Overcurrent-detection, path deviations, collisions and strong vibrations.	Delivery is made within 24 hours by CTS within the Federal Republic of Germany and Austria. You can find more information the terms of contract take from it.	We will go through all the questions with you until you can make the right decision.
What can you expect?	A detailed report with a traffic light system provides information whether you should preventively change one or change one or more gear units as a preventive measure.	We provide a list per robot with part numbers from our Recommended Spare Parts so you can order the parts you need immediately.	Your contact for maintenance contracts:  Mr. Stefan Grosso Outside Sales Manager  Yaskawa Europe GmbH Robotics Division Yaskawastraße 1 85391 Allershausen Tel. +49 (0) 160 / 99 87 - 56 11 stefan.grosso@yaskawa.eu
Is that all?	Strong vibration means that the motor is overdriven or is no longer controlled by the servo amplifier. This leads the respective axis to an early premature wear.	The MSV-CWH assumes that you have already been trained in maintenance in our Yaskawa Academy. If not, we will be happy to advise you on the selection of the right training.	
Contract duration	Dependent on service contract. Otherwise 1 year + automatic extension for another year.	Dependent on service contract. Otherwise 1 year + automatic extension for another year.	
Price per robot (when 1 – 4 Robots are under contract)	185.00 € / yearly	500.00 € / yearly	0.00 € / yearly
Price per Robot (when 5 – 10 Robots are under contract)	125.00 € / yearly	375.00 € / yearly	0.00 € / yearly
Price per Robot (when 11 – 17 Robots are under contract)	70.00 € / yearly	300.00 € / yearly	0.00 € / yearly
Price per Robot (when atleast 18 Robots are under contract)	45.00 € / yearly	200.00 € / yearly	0.00 € / yearly
Remark 1	The extended Hotline hours are already included with the Service Contracts MSC-A, MSC-B and MSC-C.		
Remark 2	The extended minimum Contract Duration to 4 years is only available with the Service Contracts MSC-B and MSC-C.		

## Advantages of a Service Contract

- **Discounted maintenance**  
(dependent on the number of robots)
- **Discounted trainings**  
(dependent on the number of participants)
- **Discounted spare parts**  
10 %
- **Discounted hourly rate\***
  - 1. year: 2 %
  - 2. year: 4 %
  - 3. year: 6 %
  - 4. year: 8 %
  - 5. year: 10 % (maximal)
- **Possible participation in the bonus program**
- **Timely reminder for maintenance**
- **Technical support over the hotline with a PIN-code**  
Even on weekends and Bavarian holidays between 8.00 a.m. and 6.00 p.m.

\* Not with the Service Contract MSC-A available



## Discount on Training

Discount on training		Number of participants				
		1	2	3	4	5
Number of Robots	1	5 %	5 %	5 %	5 %	5 %
	2	5 %	10 %	10 %	10 %	10 %
	3	5 %	10 %	15 %	15 %	15 %
	4	5 %	10 %	15 %	20 %	20 %
	5	5 %	10 %	15 %	20 %	25 %

- The discount is only with the service contracts MSC-A, MSC-B and MSC-C available.
- Please mention your contract number with your training request to receive the corresponding discount.
- The above discounts are dependent on the amount of participants and the robots with a maximum discount of 25 %.
- The worth of the total discount is not allowed to be higher than the worth of the service contract.
- The discount on training is also available for trainings on site; however, not for the travel costs.
- The trainings have to be taken within a fiscal year. The counting of the amount of participants will start from the beginning in the next fiscal year.
- Only the current prices of the Yaskawa Academy are valid.

**YASKAWA** ACADEMY



# Repair Service

Our core competence as manufacturer of your robot system/complete system is your system. With our premium repair service for Yaskawa robots and components, we provide you a high-quality repair with original parts.



## SCOPE OF SERVICES:

- Robots
- Controllers
- Wrist units
- Servomotors
- Teachbox and Teachbox cable
- Servo amplifier
- Axis board
- IO-Boards
- CPU-Boards
- On/off assembly
- Power supply

## KEY BENEFITS

- Fair prices
- Short reaction time
- Tasks were performed from qualified stuff
- Minimization risk of failure
- Cost savings through extended service life
- Increase in quality through production with technically correct components

## A question of competence!

You have a broken manipulator and want to produce without time loss?

On request, we can offer you a replacement robot to a fixed price.

**We are there for you.**

## Please contact Repairs:

Tel. +49 (0) 8166 90 - 2005, Fax +49 (0) 8166 90 - 225  
your-repair-sales@yaskawa.eu

# PLC Programming and Adjustment

Our core competence as manufacturer of your robot system/ complete system is your system. We are happy to assist you with our years-long experience in the automation sector and PLC programming and customization.

## KEY BENEFITS

- Programming/customization tasks are performed by the manufacturer of your robot system/ complete system
- **One interface for the customer:**  
Robot and PLC programming from a single source
- Tasks are performed by specialized personnel
- Modernization and expansion of your system
- Availability of Spare Parts due to modernization
- **Programming of jigs**
- Fast troubleshooting
- Less downtime

## A question of competence!

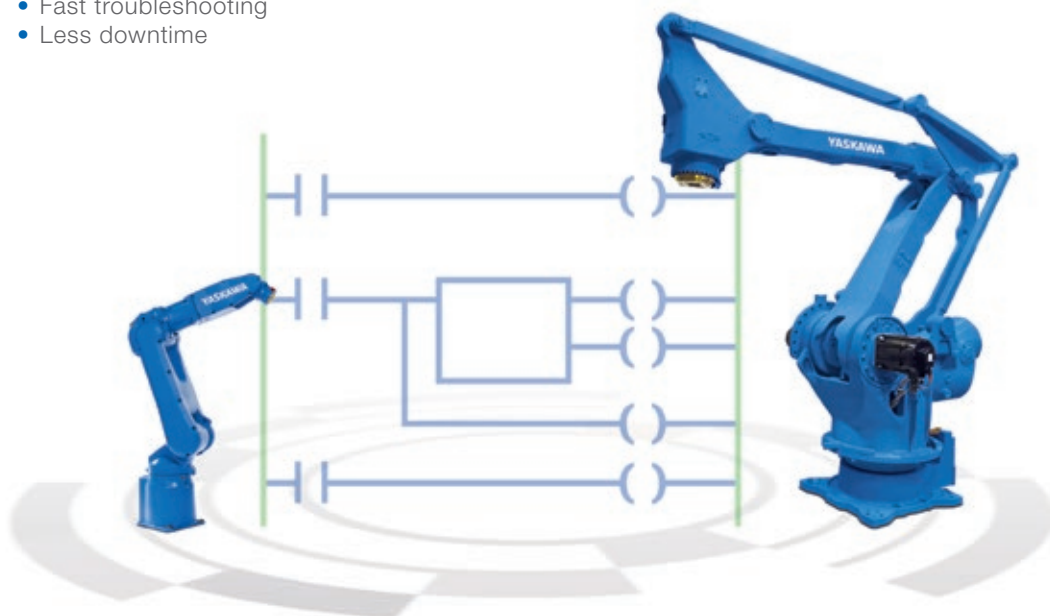
You wish to use your system for different applications?

You want your system to be adjusted to the latest safety?

You need to manufacture different products and your system is not up to the new challenges?

You want to carry out modifications and require consultation and support regarding concept, safety or feasibility?

**We are there for you.**



## Please contact TCS-Sales:

Tel. +49 (0) 8166 90 - 2002  
Fax +49 (0) 8166 90 - 225  
[tcs-sales@yaskawa.eu](mailto:tcs-sales@yaskawa.eu)

# Programming and Optimization Services

As a manufacturer of your system, we guarantee you a high level of experience and core competence, which is reflected in the reduction of your costs and the quality increase of your products.

The increase in the output quantity does not have to be at your expense. By using a fluid movement sequence of your system, the load on the mechanics can be avoided - which significantly increases the life expectancy, which leads to lower failures of your system.

The cost of programming and optimization services can be amortized within a few weeks.

## KEY BENEFITS

- Programming tasks are performed by specialized personnel
- Reduction of your manufacturing costs by Optimization services:
  - Cycle time
  - Cycle time for components
  - Robot program
  - Flow control
- Increase of productivity
- Increase in quality
- Increase in output quantity
- Time and cost savings through more effective use of existing resources
- One interface: robot and PLC programming from a single source
- Higher system availability

## A question of competence!

You wish to use your system for different applications?

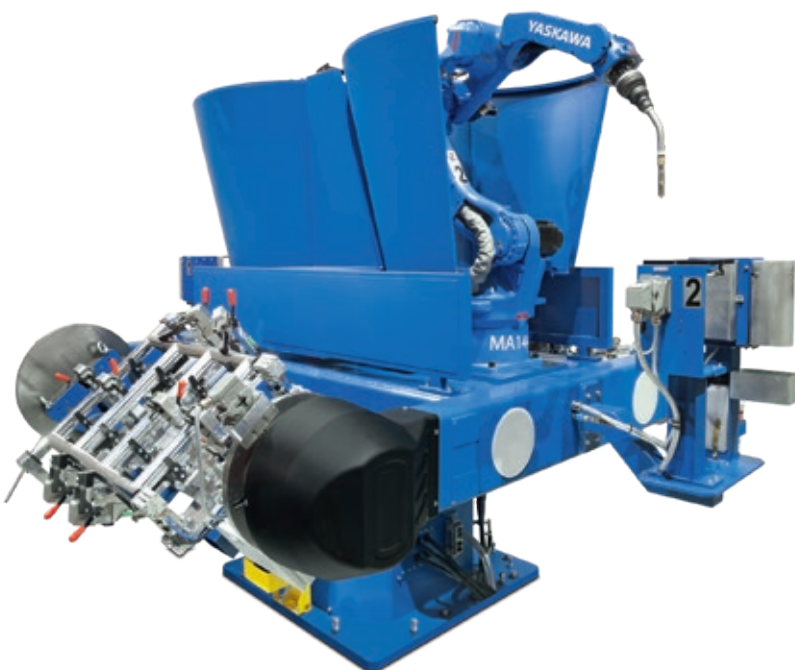
You need to manufacture different products and your system is not up to the new challenges?

You want to carry out modifications and require consultation and support regarding cycle time and optimization measures?

**We are there for you.**

## Please contact TCS-Sales:

Tel. +49 (0) 8166 90 - 2002  
Fax +49 (0) 8166 90 - 225  
tcs-sales@yaskawa.eu





# Grease Analysis Program

The »Health Check« for your Robot!

The Grease Analysis Program (GAP) was developed by Yaskawa for the durability-evaluation of reducers.

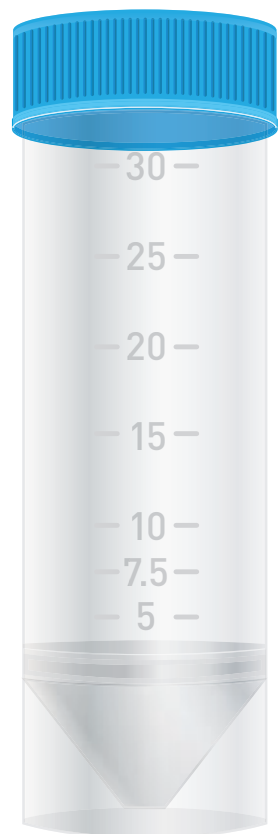
The Grease Analysis Program helps to prevent spontaneous failures of reducers, helps to plan reliable preventive measures and helps to increase the availability of your systems.

The samples taken from all reducers of your robots will be analyzed and evaluated by a laboratory. You receive a laboratory evaluation and a detailed report with the evaluation. An individual action plan will be prepared for you if necessary.

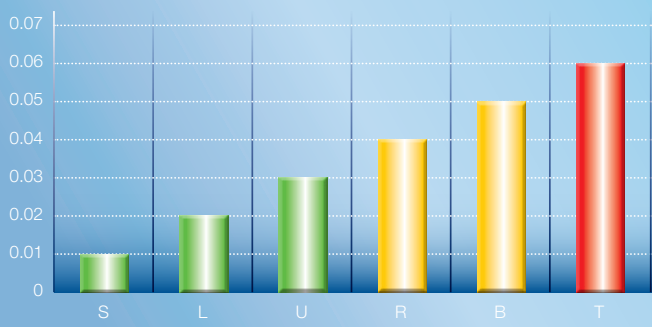
You might as well order the Grease Analysis Program as an option to our tailored Motoman Service Contracts.

## Please contact TCS-Sales:

Tel. +49 (0) 8166 90 - 2002, Fax +49 (0) 8166 90 - 225  
tcs-sales@yaskawa.eu



## Metal content %



We will gladly provide you the sending of the taken grease analyses. Please consult us for the samples.

## Please contact Repairs:

Tel. +49 (0) 8166 90 - 2005, Fax +49 (0) 8166 90 - 225  
your-repair-sales@yaskawa.eu

# MSV-ERB – Extended On-Call Service

The MSV-ERB contract includes an extension of the hotline hours on weekends and public holidays in the federal state of Bavaria.

During these extended service hours, telephone support (with PIN code) is available on the official Yaskawa hotline +49 (0) 1805 / 76 26 83. In addition, your request will be processed faster.

You can expect very experienced service technicians, who are familiar with all robot generations (MRC, ERC, XRC, NX100, NXC100, FS100, DX100, DX200 and YRC1000) are familiar with.

For more information, please refer to the contract terms and conditions.

***365 days from 8 am to 6 pm***



In most cases we solve your problems by phone and thus avoid longer downtimes.

# MSV-CWH – Extended Access to Spare Parts

With this option we offer you the possibility to order spare parts outside of our normal business hours directly from our warehouse.  
Delivery will be made within 24 hours by shipping company CTS within the Federal Republic of Germany and Austria.

We provide a list per robot with part numbers from our Recommended Spare Parts so that you can order the required parts immediately.

The MSV-CWH assumes that you have already been trained in maintenance in our Yaskawa Academy. If not, we will be happy to advise you on the selection of the right training.

For more information, please refer to the contract terms.

***extended on-call service  
and 24/7 deliveries from Allershausen***

**Contact our TCS service sales department::**

Tel. +49 (0) 8166 90 - 2002  
Fax +49 (0) 8166 90 - 225  
[tcs-sales@yaskawa.eu](mailto:tcs-sales@yaskawa.eu)



# Amplifier Diagnostic System

With the Yaskawa Amplifier Diagnostic System (ADS), there's an easy way for monitoring the condition of your Yaskawa controller. It helps to obviate spontaneous failure, increase the availability of your equipment and it ensures, that preventative arrangements will be performed accurate.



## DEGRADATION DIAGNOSIS

Detection of failure causes, which can lead to complete shutdowns such as:

- Over-current
- Tracking error
- Collision-detection
- Heavy vibrations

It is possible to review the amplification either in the on or off-state, therefore the process it is very easily performed in a short time.



# Improved Duration

One of our goals was to offer a reliable way, to check the condition of the Servo Amplifier, in order to determine its remaining life time. We accomplish this by making a digital Image of the Condition of these components.

With the diagnostic-process, we are capable to give you accurate information about the condition of your components. You receive the analysis and a detailed report immediately. If necessary, we provide individual arrangements for you.

With scheduled replacement, you can send us the exchanged model for in-house repair.

You also can book our Amplifier-Diagnostic-System as an option on top of our custom-made maintenance contracts.

The amplifier diagnostic system is available for generation NX and DX, which comes with a wide range of inbuild amplifiers, such as:

- SGDR-SDA
- SGDA-SDA

 **Within all different robots**

## YASKAWA

Customer name: \_\_\_\_\_

User name: \_\_\_\_\_

### NX100-AMP Degradation check Report

#### The contents of check items

Robot model	ES165N-B10	Machine No.	Measure/Punch R6 - Punch R1	Production years	
Order No.	S8M462-1-3	Serial No.	RH9550-8Z01-3	Ambient temperature	25
Control on time	31721:03	The request contents		Check day	11/1/2020
Servo on time	11657:36	Condition examination of the amplifier			
Play time	11643:55	Controller No. 053204			

\* Servo AMP output voltage result of measurement

#### Unit form:SGDR-ES165N

Management No.	—	Serial No.	D0056G248010004	Production date	
----------------	---	------------	-----------------	-----------------	--

Loaded part	Product type	Judgement	Conclusion
AMP1	SGDR-SDA710A01B	Normal	- No wearout measurable - We recommend a periodic check
AMP2	SGDR-SDA710A01BY2	Normal	- No wearout measurable - We recommend a periodic check
AMP3	SGDR-SDA710A01B	Caution	- Degradation tendency confirmed - Minor wearout has been diagnosed - We recommend to exchange the amplifier
AMP4	SGDR-SDA350A01B	Normal	- No wearout measurable - We recommend a periodic check
AMP5	SGDR-SDA350A01B	Normal	- No wearout measurable - We recommend a periodic check
AMP6	SGDR-SDA350A01B	Normal	- No wearout measurable - We recommend a periodic check
AMP7			
AMP8			

#### Please contact TCS Service Sales:

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 Fax +49 (0) 8166 90 - 225  
 tcs-sales@yaskawa.eu

# Cable Retraction

## System for Teach Pendants



The automatic YASKAWA cable retraction system has been specially developed for the connecting cables of industrial robot teach pendants. This system is used to improve work safety in the production area and is a recognized accident prevention measure.

The stable housing is made of impactresistant plastic, while the mounting bracket is made of steel plate, enabling alignment of the retraction system housing in the direction in which the cable is pulled out.

The cable deflection pulley is fitted with a spring element for cable retraction. Additionally, a releasable cable locking element is integrated at intervals of 50 cm so that the cable can be blocked if required when being pulled out or retracted.

Special connecting cables with high-strength polyurethane sheaths are used; these are highly flexible, flame-retardant and resistant to abrasion, oil and coolant. By being rolled up correctly, the cable is kept clean and damage is prevented.

### KEY BENEFITS

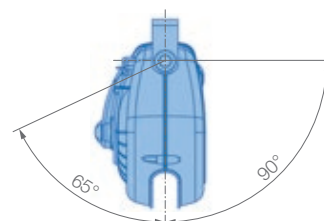
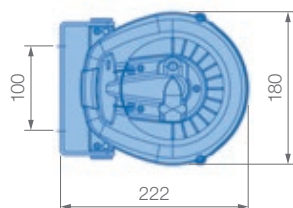
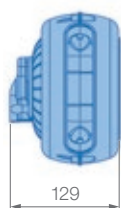
- Recognized as an accident prevention measure in manufacturing industry (in accordance with the occupational health and safety management system OHSAS 18001:2007, e.g. for the prevention of tripping hazards)
- Stable housing made of impactresistant plastic
- Cable deflection pulley with spring element enabling cable retraction
- Integrated slip ring system
- Releasable automatic cable locking element every 50 cm for blocking the cable when it is pulled out or retracted
- Stable mounting bracket of steel plate enables alignment of the retraction system housing in the direction in which the cable is pulled out
- Use of flexible, flame-retardant and resistant connecting cable
- Protection against dirt and damage to the cable by rolling it up correctly



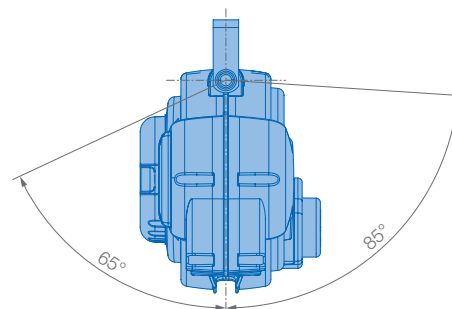
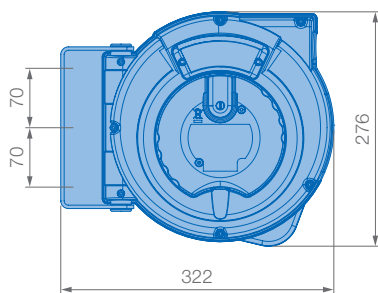
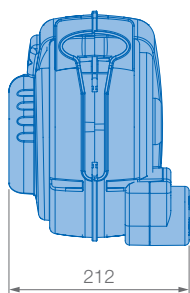
After the teach pendant has been used, orderly and safe storage of the connecting cable is automatically assured. Damage to the cable and a potential tripping hazard due to incorrect storage of the cable are thereby avoided.



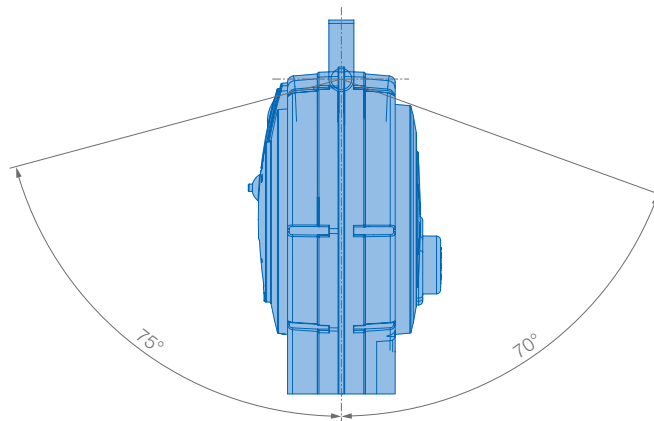
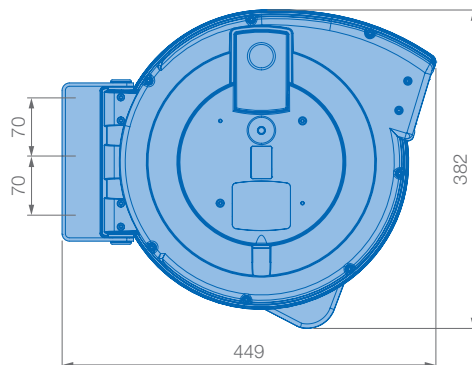
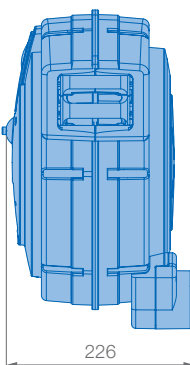
#### Cable retraction mini: H 222 x L 180 x P 129



#### Cable retraction medium: H 322 x L 276 x P 212



#### Cable retraction large: H 449 x L 382 x P 226



Article nr.	Designation
200168	Cable retraction mini 2,5/5 m for YRC1000, YRC1000micro Standard
200169	Cable retraction mini 2,5/5 m for YRC1000, YRC1000micro SmartPendant
190847	Cable retraction M, 2.5/10 m for NX100, DX100, DX200
190882	Cable retraction M, 2.5/10 m for YRC1000
190848	Cable retraction L, 2.5/20 m for NX100, DX100, DX200
190883	Cable retraction L, 2.5/20 m for YRC1000

#### Approval and quality features

##### TÜV-inspected quality and functions in accordance with

- ISO EN 13849-1 e2 (Risk assessment acc. Performance Level "e")
- IEC EN 60204-1 (Safety of machinery)
- UNI EN ISO 10218-1 (Risk assessment and safety requirements for industrial robots)

##### Integrated slip ring system

- Protection classification IP54
- ISO 9001 certified manufacturing; CE and RoHS compliant

#### Optional accessories

Available in 2 cable lengths: 10 and 20 metres

# Calibration Tips

Easy and effective



With the calibration tips from Yaskawa we offer a very simple tried and tested tool for a wide range of tasks in your robot system. Due to the rotational symmetry and the manually adjustable length of a calibration tip, a TCP (Tool Center Point) can be set up very simply. Deviations and errors are thereby reduced. The handling and application doesn't require any further training or reading of a manual. The benefit is obvious or depends on the robot flange.



Whether in the creation of user coordinate systems, the teaching of reference points or the calibration of robots with robots or robots with external axes – the clear tool facilitates your work. For a simple comparing calibration, such as tip-to-tip, the calibration tip serves as a simple and ingenious tool. The adjustment between real and virtually simulated robot environment can also be simplified with the aid of the calibration tips during offline programming. You can get a lot of application examples by attending a training course at the Yaskawa Academy.

The calibration tips are available for nearly all types of robots and in different lengths for you. Simply order your needs from your well-known Yaskawa contact person, the Yaskawa Academy or uncomplicated by fax on the back.

# Zeroing Sensor

## The new Generation

### The Zeroing sensor system offers you many advantages!

With the Zeroing Sensor, you are able to restore the zero point calibration of your robot quickly and easily after losing the absolute data or a repair. This ensures that the

kinematics of your Robots is optimally adjusted and you thus ensure the prerequisites for the best possible performance of the robot. A properly calibrated robot is the prerequisite for the fact that even existing programs need not be reworked after a repair. („No need to reteach“)

The Zeroing Sensor is suitable for nearly all robots and can be used with NX100\*, DX100, DX200 or FS100 controllers. The new Zeroing Sensor from Yaskawa offers the same functionality as the previous model, but is now even more precise, more durable and cheaper. Our new, improved Zeroing Sensor also has a replaceable calibration tip, which can be exchanged easily and without great expense in the event of a defect.

You get the Zeroing Sensor in a stable and practical handbag.

### Scope of delivery

(A-No. 157471)

- 1 sensor with exchangeable calibration tip
- sensor adapter
- Signal amplifier for Yaskawa sensor
- Serial port and extension cable
- USB adapter
- power supply 6 V

### \*Additionally required for NX100 controllers

(A-No. 160852)

- 1 data transfer CF card



### Please contact Spare Parts Sales:

Tel. +49 (0) 8166 90 - 2000, Fax +49 (0) 8166 90 - 225  
[spare-parts-sales@yaskawa.eu](mailto:spare-parts-sales@yaskawa.eu)



# YasXTouch

## Remote Maintenance and Scantool



YasXTouch allows the automatic view of fault diagnosis, installation data acquisition and backups via remote access to up to 15 controllers. By means of an additional barcode scanner the articles to be produced can quickly and easily be selected or modified.

### KEY BENEFITS

- Quick remote access/troubleshooting
- Linking of up to 15 controllers
- Simple operation via standard network devices
- Flexible product change via barcode scanner

The feature is operated by means of standard network devices with web browser. Access from outside is provided by the customer or by means of additional hardware in order to ensure the safe functioning.

### Technical Data

#### Compatible with the following controller generations:



#### Power supply:

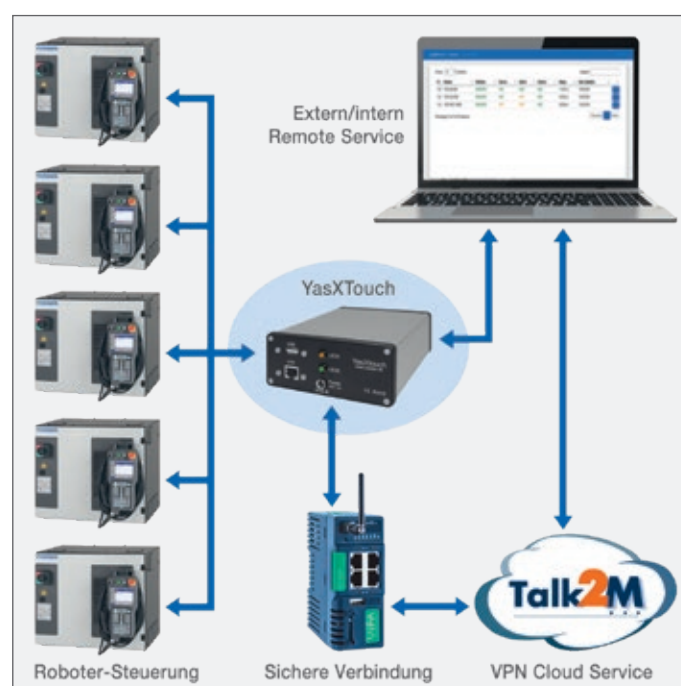
100 V – 240 V, 50 HZ – 60 Hz, Multi adapter

#### Available menu languages:

German, English, Spanish, French, Portuguese, Italian, Swedish, Czech, Slovenian, Dutch

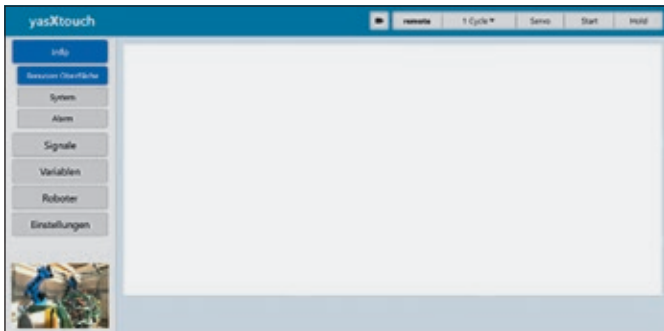
#### Supported browsers:

Chrome, Firefox, Edge, Internet Explorer



## Functions:

### Robot Admin menu with IO diagnosis and labeling



Nr	IN	Kommentar	DUT	Kommentar
1	00010	Test	00010	UNTERJOB
2	00011	err	00011	ZÄHLER RESET
3	00012	16 Beschreibung	00012	
4	00013	Greifer ist Auf	00013	Greifer Auf Ein
5	00014	<+7>[B/L]	00014	
6	00015	AAAAAAc64EE[EE]	00015	
7	00016	Ba0000000016	00016	
8	00017	<NA>[L]=<=	00017	
9	00018	IN08	00018	OUT5
10	00019	IN10	00019	OUT10
11	00020	IN11	00020	OUT11
12	00021		00021	
13	00022		00022	
14	00023		00023	
15	00024		00024	
16	00025		00025	
17	00026		00026	
18	00027		00027	

### Process diagnosis, Live Job procedure and Job editing

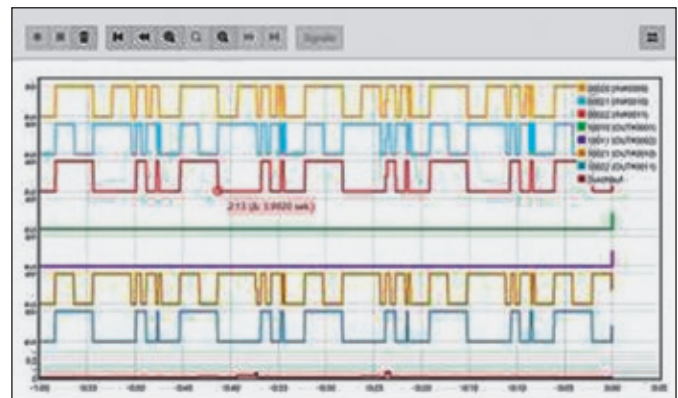
Task	aktueller Job	Zelle	Schritt	Override	Hauptjob
Master	TESTVASTOUCH	19	2	100%	
SUB 1	UNTERJOB	1	0	100%	
SUB 2	UNTERJOB2	1	0	100%	
SUB 3	UNTERJOB3	1	0	100%	
SUB 4	UNTERJOBPAUER	7	0	100%	
SUB 5					
SUB 6					
SUB 7					

Task: Master / Job: UIMAINJOB	
Job Name:	UIMAINJOB
Jobtyp:	Arbeitsjob
letzte Änderung:	08.10.2018 13:52
<pre> 0000 NOP 0001 SET S000 "" 0002 SET S001 "" 0003 DOUT OT*(1) OFF 0004 *AUTO 0005 SET S001 "" 0006 TIMER T=0.20 0007 CALL JOB.UIPRODUCT1 IF S000="Product 1" 0008 CALL JOB.UIPRODUCT2 IF S000="Product 2" 0009 CALL JOB.UIPRODUCT3 IF S000="Product 3" 0010 CALL JOB.UIPRODUCT4 IF S000="Product 4" 0011 JUMP *AUTO 0012 END </pre>	

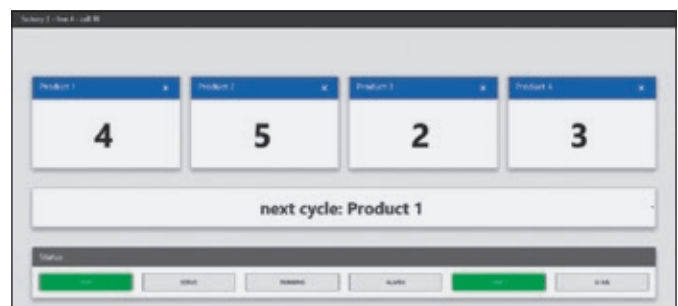
### Backup – Restoring with download and FTP

Einträge anzeigen		Suchen
#	Name	Typ
1	IFRPLUBI	API
2	TEST2112.JBI	API
3	PRMACRO.JBI	API
4	MROBMACLO.JBI	API
5	ROBMACRO.JBI	API
6	PRVALUJOBUSPIEL.JBI	API
7	MROBOF12345678.JBI	API
8	SYSTEMF000USPIEL.JBI	API
9	TESTVASTOUCH-2.JBI	API
10	TESTVASTOUCH-1.JBI	API

### Logging function



### HMI (Human Machine Interface) function



### Please contact TCS Service Sales:

Tel. +49 (0) 8166 90 - 2002, Fax +49 (0) 8166 90 - 225  
tcs-sales@yaskawa.eu

# FSU- Protocolmaker offline

Documentation Software  
for Functional Safety Controller



## Target group

This software is designed to be used by trained members of staff who are responsible for quality assurance, operation and system documentation for the functional safety controller of YASKAWA robot systems. The program is to be used to document the system status prior to first use, delivery and changes to safety-related data. This data can be used, for example, as proof/documentation of the relevant status of the FSU settings at the point of creation.

## KEY BENEFITS

- Creation of a complete FSU protocol file containing all data relating to safety
- Standardised format for recording safety-related data
- Ease of reading the data
- Documentation of responsible personnel
- Huge time savings thanks to the automated creation of FSU protocol files based on an FSU data backup

Controlled by  
**DX200**

Controlled by  
**YRC1000**



## DX200 FSU Protocol

YASKAWA

## Important features:

## Documentation of system data

- System settings
- Signal settings
- CRC checksum
- Absolute data

## Password protection

- Documentation of safety password
- Documentation of FSU authorised staff

## Tool documentation

- Tool data
- Tool interfere

## Documentation of FSU settings

- Term data of FSU including validity and signal settings
- Visualisation of limitations

## System requirements (min.):

Windows 7 or 10 (32 or 64 bit), USB 2.0

NO. 12.0	FSU CRC FILE	CHECK <input type="checkbox"/>
ALL.PRM: 869619876 AXRNGMT.DAT: 2764763989 AXSFIMON.DAT: 2155873973 RBKNGMT.DAT: 2786858021 SFDLMT.DAT: 3941984649 TLANGMON.DAT: 1558066036 TOOLINTF.DAT: 4243051367 TOOL.CND: 1908732103		

NO. 11.0	SAFETY MODE PASSWORD	CHECK <input type="checkbox"/>
The default password has been changed It has been restricted to those with valid safety control training YES ■ The new password is :5555555555555555		
Company/Department		Name (in block capitals)
		Signature

NO. 14.2	TOOL - TOOL INTERFERE DATA		CHECK
FILE NO. 3	The data was correctly defined and checked for function		U
NAME: TCP: [mm] [deg.] X1: 250 Rxi: 0 Y1: 250 Ryi: 0 Z1: 450 Rzi: 0 WEIGHT: 0 kg [mm] [kg·m2] Xg: 0 Ixi: 0 Yg: 0 Iyi: 0 Sgi: 0 Izi: 0		TOOL INTERFERE DATA 1. X1: 01 501 40 112.X1 501 1001 30 Y1: 01 501 1001 11 Y1 501 1001 Z1: 01 1001 11 Z1 1001 2001 2. X1: 1001 1501 20 114.X1 1501 2001 10 Y1: 1001 1501 11 Y1 1501 2001 Z1: 2001 3001 11 Z1 3001 4001 3. X1: 1501 2001 10 11 Y1 1501 2001 Y1: 1501 2001 11 Y1 3001 4001 Z1: 3001 4001 11	
465[mm]/DIV 		465[mm]/DIV 	
465[mm]/DIV 			

NO. 17.0		ROBOT RANGE LIMIT		CHECK <input type="checkbox"/>	
FILE NO. 1		The data was correctly defined and checked for function			
NAME:		<div><div>2000 [mm] / DIV</div><div><div>*Y</div><div><div><div><div><div><div>P1</div><div>P2</div><div>P3</div><div>P4</div><div>P5</div><div>P6</div><div>P7</div><div>P8</div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div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# YasXfer

## The Backup Unit for all Yaskawa Controllers!

You can perform with the YasXfer Backup Unit the data storage, restoration of programs, parameters and system data of the following controllers on customary SD Card, USB-Memory- or pen drive above 32 GB:



### Backup

The transfer method FC1 (4800 Baud) and FC2 (9600 Baud) are available with automatic Baud- and function identifier. FC1 enables via parameter change at the controller a faster adjustment for the data communication.

### DCI function

The DCI function offers the opportunity to load and store robot programs from an external memory. The robot memory can be almost endlessly extended through a logic change at the main program.

### FTP

Via Network is the access to the data of the storage media via FTP available.

### Scope of delivery

- 1 data storing device YasXfer
- 1 data storage card (SD Card) or pen drive
- 1 power supply primary 100 – 240V, 50 – 60Hz, secondary 6V 800mA
- 1 data cable 9-pole socket to 9-pole socket
- 1 data cable 9-pole socket to 25-pole plug

### Please contact Spare Parts Sales:

Tel. +49 (0) 8166 90 - 2000

Fax +49 (0) 8166 90 - 225

spare-parts-sales@yaskawa.eu

# YasXIO

With Yaskawa's YasXIO system 16 I/O from the robot controller can be routed directly to the robot arm through the media connection in the manipulator.



## KEY BENEFITS

- Direct transfer of 16 I/O to the manipulator
- Exchange against existing XIO02B
- Compact and stable construction
- Easy wiring
- Total current 4A, maximum current internally limited
- Short circuit protection
- LED for the display of the existing master/slave communication
- LED for displaying fault conditions
- Installation on DIN rail
- 2 slaves per master possible
- 16 inputs/outputs can be connected to slave terminal block

## Compatibility with controller generation:



Scope of delivery	A-No.
YasXIO Master	175634
YasXIO Slave	175637
YasXIO Set 16 I/O: 1 YasXIO Master (in controller) 1 YasXIO Slave (on manipulator) 1 main cable 1 bus cable	175654
Accessories: Connecting cable manipulator/master Connecting cable slave/manipulator (always media plugs are necessary)	5,0 m 0,5 m 180284 180286

## Please contact Spare Parts Sales:

Tel. +49 (0) 8166 90 - 2000, Fax +49 (0) 8166 90 - 225  
[spare-parts-sales@yaskawa.eu](mailto:spare-parts-sales@yaskawa.eu)

# Pendant Armor – Proactive Protection

## ADVANCED TECHNOLOGY TO PROTECT ADVANCED TECHNOLOGY

Protect your Yaskawa teach pendant with Pendant Armor®, an energy-absorbing frame designed to protect exposed components most often damaged when the pendant is dropped.

- Manufactured from shock absorbing, chemical resistant, Santoprene®, Pendant Armor is RoHS compliant and will shield your teach pendant from drops, spills and extreme manufacturing conditions.
- Pendant Armor® extends the operational life of your teach pendant by preventing broken buttons and damaged electronics, reduces potential repair costs and increases production uptime.
- Tailored to fit Yaskawa teach pendants for:

Controlled by  
**XRC**

Controlled by  
**NX100**

Controlled by  
**DX100**

Controlled by  
**DX200**

- Comprehensive shock testing completed by an independent ISO17025 accredited firm.
- **Available accessories:**
  - Unbreakable, HDPE hangers

## Please contact Spare Parts Sales:

Tel. +49 (0) 8166 90 - 2000

Fax +49 (0) 8166 90 - 225

[spare-parts-sales@yaskawa.eu](mailto:spare-parts-sales@yaskawa.eu)





## Technical Support\*



+49 1805-762683  
tcs@yaskawa.eu

**Call us!**

\* 14 ct/min. from landlines,  
mobile phones charges can vary.

## **TCS Customer Service (Support & Service Coordination)**

Monday to friday from 7.30 a.m. to 6.00 p.m.

Tel. +49 (0) 1805 76 26 83 \*

Fax +49 (0) 8166 / 90 - 670

tcs@yaskawa.eu

## **TCS Sales**

Monday to thursday from 8.00 a.m. to 4.30 p.m.

Friday from 8.00 a.m. to 2.00 p.m.

Tel. +49 (0) 8166 / 90 - 2002

Fax +49 (0) 8166 / 90 - 225

tcs-sales@yaskawa.eu

## **TCS Repair**

Monday to thursday from 8.00 a.m. to 4.30 p.m.

Friday from 8.00 a.m. to 2.00 p.m.

Tel. +49 (0) 8166 / 90 - 2005

Fax +49 (0) 8166 / 90 - 694

yeur-repair-sales@yaskawa.eu

## **TCS Spare Parts Sales**

Monday to thursday from 8.00 a.m. to 4.30 p.m.

Friday from 8.00 a.m. to 3.00 p.m.

Tel. +49 (0) 8166 / 90 - 2000

Fax +49 (0) 8166 / 90 - 225

spare-parts-sales@yaskawa.eu

## **Yaskawa Academy (Headquarters Hattersheim)**

Monday to thursday from 8.00 a.m. to 4.30 p.m.

Friday from 8.00 a.m. to 2.00 p.m.

Tel. +49 (0) 6196 777 25 - 70

Fax +49 (0) 6196 777 25 - 79

academy@yaskawa.eu

## Notes

[illegible]

The background of the image features a geometric design with several overlapping triangles in various shades of blue. These triangles are arranged in a way that creates a sense of depth and movement, with some triangles pointing upwards and others downwards. The colors range from a deep navy blue to a lighter, more vibrant blue. The overall effect is a modern and dynamic visual element.

**YASKAWA**

## YASKAWA GROUP

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robotics@yaskawa.eu  
www.yaskawa.eu

All drawing dimensions in mm.  
Technical data may be subject to change without previous notice.  
Please request detailed drawings at [robotics@yaskawa.eu](mailto:robotics@yaskawa.eu).

Total Customer Support  
E-05-2023, A-No. 150317



# YASKAWA