



Sealing solutions for speed and simplicity

REPORT FROM PAINT ROBOT PLANT IN DETROIT, USA

FANUC Robotics America strives, like other manufacturers, to reduce business costs. Over the years, they have also reduced installation time of their painting robots from four weeks to just four

days. One of the keys to this success is the use of Roxtec cable seals. The seals minimize the risk of field installation failure, protect the equipment and improve the robot life cycle.

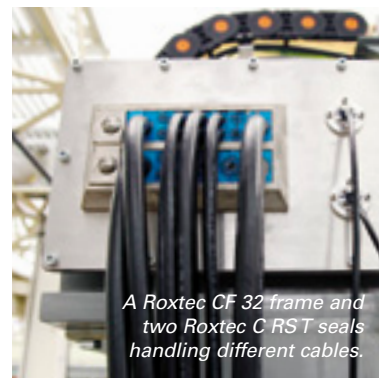
"We are talking huge cost-savings," says Randall Schroeder, Manager Controls Engineering & Product Operations at Paint Shop Automation Group of FANUC Robotics.

Efficiency built on flexibility

FANUC Robotics has experienced both instant and long-term benefits from the Roxtec sealing system. Quick installations increase productivity, while higher quality reduces the risk of costly downtime for customers in the automotive industry.



The Roxtec CF 16 installed above a robot arm.



A Roxtec CF 32 frame and two Roxtec C RST seals handling different cables.

FANUC Robotics designs, assembles, programs, and ships robots to automotive players all over the world. The acrobatic robots can paint a vehicle from the inside and out in just a couple of minutes. There are small ones for components and large-scale models for heavy trucks. The robots can handle up to 24 colors, located in the arm of the robot, and spray more than 60 cars per hour!

Eliminating dangers

Given the demand for speed, automation and efficiency in the industry, suppliers must be best-in-class, offer global support and never cause reworks in the field. Each and every component must be approved for hazardous areas and contribute to nonstop operation. Roxtec seals are specified in order to secure operational reliability in motors and controls and to help ensuring overall cost-efficiency.

Professional design

At EDSI, Engineering Design Services Inc, where the main control enclosures are made, managing director Rock Haas find "Roxtec seals all good". EDSI uses the neat Roxtec EzEntry™ 4 cable entry seal on top of the enclosures to simplify cable routing:

"For us, it is important to deliver cabinets and enclosures that keep tight, look clean and withstand the washing of the paint booth. What we supply must also be worth its price."

Quick installation

One of Schroeder's missions at FANUC Robotics is to reduce costs. After analyzing labor time and materials used, he replaced a great number of cable glands and cord grips with a few practical Roxtec seals. Sealing multiple pre-terminated cables in each opening was much faster than cutting off connectors and making new holes for each one.

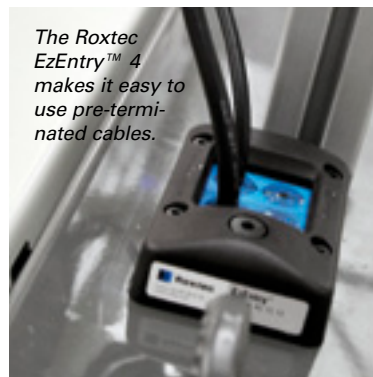


Randall Schroeder
of FANUC Robotics.

” Roxtec products
and services are
in the frontline

BENEFITS

- Gas-tight
- Reliable protection
- Quick and safe installation
- Neat and area efficient
- Spare capacity for upgrades
- Splash/hose directed water protection



*The Roxtec
EzEntry™ 4
makes it easy to
use pre-termi-
nated cables.*

Meeting industry needs

Installation time is not everything. It is also important to secure operational reliability. Grips and glands required cutting, which meant a constant risk of errors in re-wiring. Roxtec EzEntry™, for example, that entered the market in 2009, allows for safe routing of pre-terminated cables. Now, the robots come as pre-tested plug-and-play systems. “We have increased quality,

doubled life time and eliminated maintenance for ten years.”

Useful spare capacity

The adaptability and built-in spare capacity of the Roxtec seals make it possible to open them up and run new or additional cables of different sizes – whenever the need occurs. If a FANUC customer introduces a bigger car or truck model that requires more robots in the booth, they can easily add cables and equipment instead of setting up a new unit.

Securing business continuity

The pressurized paint robots must be gas-tight. If a cable seal fails during operation, all production goes down. The entire automotive supply chain is affected – and losses accumulated. Roxtec seals in controls and motors bring peace of mind to FANUC and its customers.

Facts

Project type	Manufacturing of industrial paint robots and robotic systems for automotive industry
Involved companies	FANUC Robotics – owner, design and engineering EDSI, Engineering Design Services Inc – enclosure manufacturer
Applications	Cable entries in main robot control enclosure, control cabinets and robot arms
Sealing requirements	Gas-tight IP 66/67
Roxtec products	Roxtec CF 8, 16, 16 open, 24 and 32 Roxtec C RS T Roxtec EzEntry™ 4 Roxtec adaptable sealing modules
Reasons for choosing Roxtec	Demands for gas-tightness Major time and cost-savings Ability for pre-terminated cables Built-in spare capacity Multidiameter™ by Roxtec – adaptability to cables of many sizes through sealing modules with removable layers
Roxtec OEM references	ABB, Alstom, Bombardier, Cegelec, Cummins, Emerson, Fibro, GE, Herrenknecht AG, Hitachi, Komatsu Mining, Krauss Maffei Wegmann, Kuka, MAN Turbo, Siemens, Tetra Pak, ThyssenKrupp Fördertechnik.

