

Robotics

DressPack Application Equipment & Accessories

DressPacks

The need for well integrated cable and hose packages on the robot, DressPacks, has made ABB develop flexible packages to support applications like material handling and spot welding.

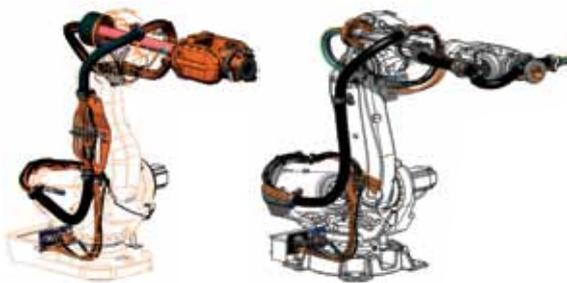
As there are big differences in the need for flexibility by different users, depending on the complexity of the operation, ABB has designed three major levels of DressPack solutions as shown in the pictures below.

With its modular systems for DressPacks, ABB has a very broad offer covering most needs in the market.

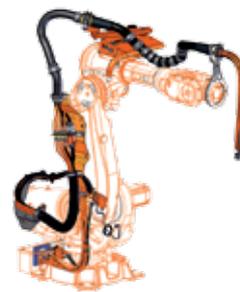
ABB has long experience in the development of dress packs and is continuously working on improvements. All ABB DressPacks are developed in close conjunction with the development of the mechanical arm and are, therefore, well synchronized with the robot.

Choosing an ABB DressPack brings a lot of advantages in terms of features and performance. Furthermore, ABB's global presence makes it a safe choice due to local service support and training availabilities.

A DressPack originally designed and developed for an ABB robot always provides the optimal solution that gives best results in your product line.



1 Integrated DressPack – ID and LeanID

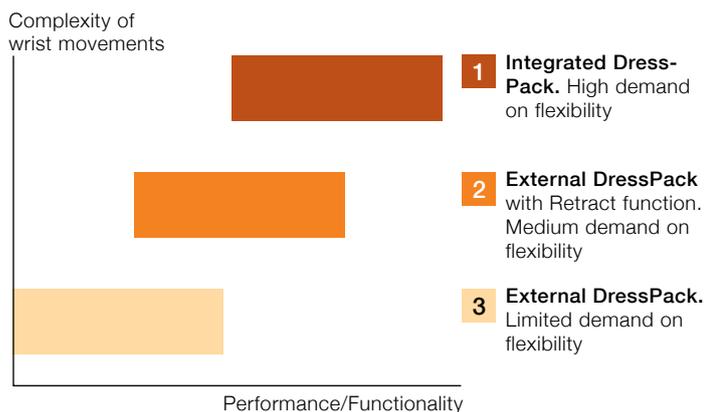


2 External DressPack with Retract function



3 External DressPack

Three variants of DressPack



Integrated DressPack – ID and LeanID

This type of DressPack creates flexibility for today's and tomorrow's production demands. It is intended for production where there are high demands on flexibility and accessibility. For operations with many complex wrist movements and where the need for flexibility in changing products is high.

Longer lifetime

The robot has its process cables routed inside the upper arm and through the robot wrist. The cables follow every motion of the robot arm, instead of coming into swing in irregular patterns. Swinging cables can wear fast depending on the movements. When routed inside the upper arm, the cables are firmly in place during robot operation, which results in reduced wear. They are also protected from weld spatters, heat and collisions. So, the service life is substantially increased to 6–8 years (ID) in 3-shift operation, compared to 1–2 years for an external DressPack. This gives an important advantage in lower costs for both purchasing and downtime.

Offline programming is very advantageous with Internal DressPack. Programmers can focus on optimizing the process. This is an advantage both when programming a new line and when introducing new work pieces into an existing line. The time for fine tuning programs in the line is minimized.

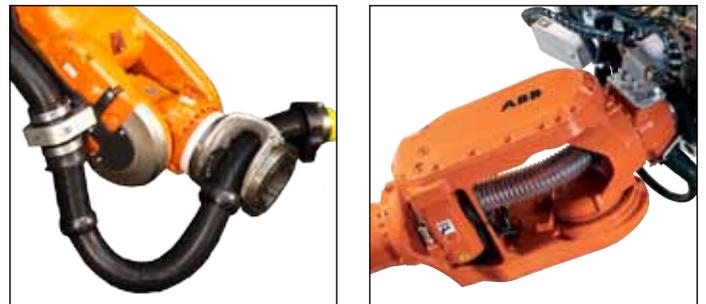
Compactness is obvious as there are no external cables. This allows the process wrist to enter narrow parts of e.g. a car body. The risk of interference with other robots in high-density installations is also reduced. Integrating the cabling in the upper arm then taking it through the special robot wrist is a unique feature of ABB robots.

High media capacity at tool flange for even the most demanding applications. Servo guns with tool change, field bus support, process signals, etc, in combination.

Easy to maintain as there is no need to remove tool at exchange of package. Exchanging a package is easy and fast.

Detailed capacity are specified on the last page.

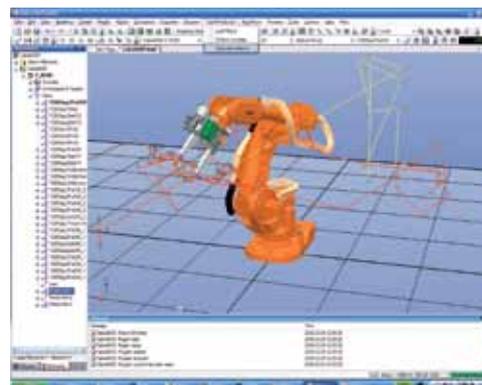
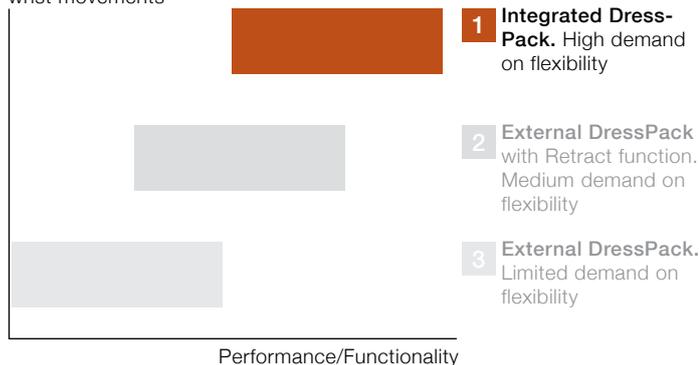
Available for IRB 6640.



The special robot wrist with integrated ID (right) or semi-integrated LeanID (left) cabling is part of the DressPack offer.

Three variants of DressPack

Complexity of wrist movements



With Offline programming you can easily program a new line or introducing new work pieces into an existing line.

External DressPack with Retract function

This type of DressPack is ideal for applications where there is a limited complexity in wrist movements. This normally occurs when a few different products are run in the same production cell.

The cables and hoses are pulled backwards during the robot movement and this keeps them close to the robot arm. This is a clear benefit if you want to avoid interference with the tool, workpiece or if you have robots close to each other.

Engineered for ABB robots

The solution is designed and longterm tested to be optimized with the power robot family. The retract function in combination with the bracket at axis 6 can be optimized individually for each robot cycle.

Short replacement time upper and lower arm

The cables and hoses are routed along the lower and upper arm by means of clamps and brackets. These clamps are designed so that you can quickly and accurately remove/replace the complete package to minimize stop time in production. The repair can then be done later at a more convenient time.

Easy-to-adjust Retractor Arm

The retracting arm can be adjusted. Simple, yet still robust, design of the upper arm components.

For easy access, the connection point between the lower and upper arm DressPacks has been placed at the lower arm. It is also convenient when you want to change the upper arm Dress pack.

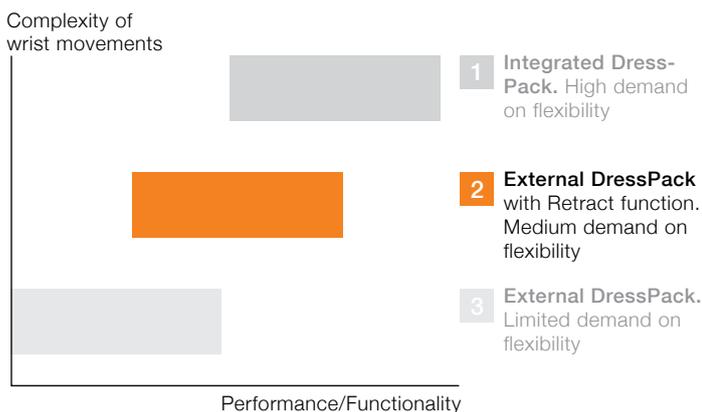
Minimum number of spare parts

The same DressPack can be used for different mechanical arms. This has been made possible by orienting DressPack attachment brackets in different ways on different manipulator arms.

Detailed capacities are specified on the last page.

Available for: IRB 6620, IRB 6640, IRB 6650S, IRB 7600

Three variants of DressPack



External DressPack

This type of DressPack is recommended for production with limited demand for complexity in wrist movements. This is normally the case when there are a few different products running in the same production cell. This package requires more individual adjustment to optimize the robot program at set up.

The robot for material handling application has its process cables routed partly inside the lower and upper arm. The connection point is located between the lower arm and upper arm sections to reduce the risk of interference when leaning forward with robot.

Easy to install

- Standard interface connectors to tools.
- Cable free length can be adjusted.
- Standard connector (Sourieau) at tool end.
- Protection hose and air hose for material handling can be cut to proper length.

Easy replacement of upper and lower arm DressPack

The cables and hoses are routed along the lower and upper arms by means of clamps and brackets. These clamps are designed so that you can quickly and accurately remove/replace the complete package to minimize stop time in production.

Easy to maintain

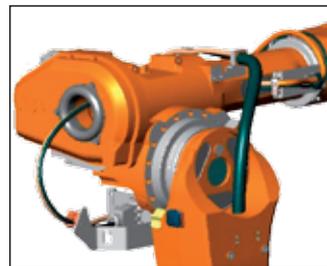
The protection hose at the robot wrist can easily be replaced.

Minimized number of spare parts

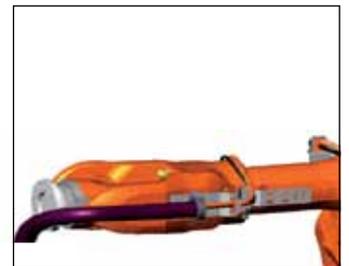
The same DressPack can be used for different mechanical arms.

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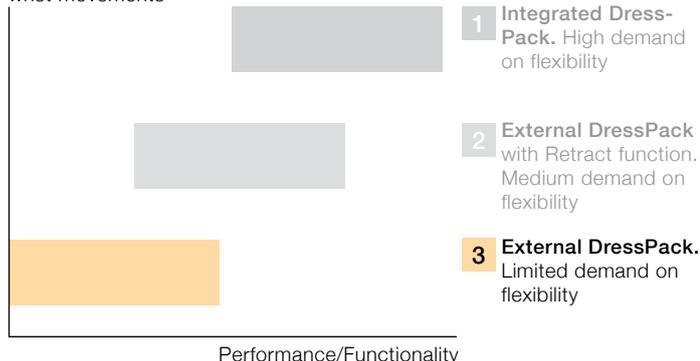
Connection point for material handling



The cable can be adjusted at the bracket

Three variants of DressPack

Complexity of wrist movements



Common features

The different DressPack solutions have a number of features in common, which is beneficial from many points of view, e.g. design quality and spare parts.

The module based design with upper arm and lower arm systems has proven very successful and user friendly. It is possible to buy each of the systems for floor, lower arm, and upper arm separately.

Compact solution

Compact production stations with a risk of interference with other robots or production equipment require a compact solution. This has been possible to achieve as the DressPacks have been designed and tested together with the different mechanical arms.

Flexible design

Different applications have different process demands. The DressPack is of modular design to minimize the number of unique parts. With this as a base, the number of common parts has been maximized for SpotWelding with pneumatic or servo guns, material handling or combinations.

Predictable movement

The compact solution gives good possibilities to work with offline CAD simulation. CAD models of all DressPack variants

are available as downloads from ABB's website. However, it is important to observe that external DressPack movements are difficult to predict.

Factory installed

The DressPack is assembled, mounted and tested on the relevant robot before delivery. Connection kits can be supplied to match the different interfaces with the DressPack.

Easy DressPack replacements

The strong need for the highest possible uptime in the production system is supported by easy replacement and minimized adjustment of the individual robot cable package.

Easy to maintain and repair

To make it easy to own a DressPack over the lifetime a number of features have been built in:

- Easy adjustments of DressPack with no special tools.
- Individual parts can be replaced.
- High degree of modularity gives fewer spare parts.
- Standard spare part support.



The DressPack components as well as complete packages are tested in rigs during the design phase.

Application Equipment & Accessories

Technical details

In this overview you will see which DressPack variant supports which applications and which robot models. You will also see the contents of each DressPack package.

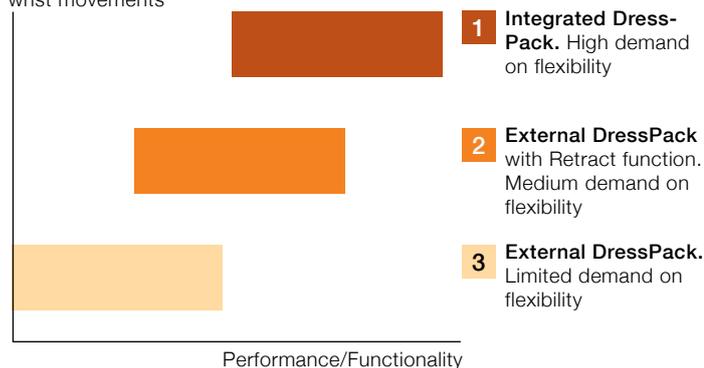
The DressPacks described in this folder are optimized for the following robot types: IRB 6620, IRB 6640, IRB 6650S, IRB 7600.

For detailed information please see the Product Specification on each robot.

	Material Handling Application				Spot Welding Application		
	External DressPack	External DressPack with retract function	Integrated DressPack ID	Integrated DressPack LeanID	External DressPack with retract function	Integrated DressPack ID	Integrated DressPack LeanID
CONTENTS of EACH PACKAGE							
Customer signal capacity							
Number of wires for power feeding	4	4	4	4	4	4	4
Number of signals with twisted pair	8	20	20	13	20	20	13
Number of signals with twisted pair and separate shielding	8	8	8	8	8	8	8
Media capacity							
Number of media hoses for air or water. (Allows more than 10 bar pressure)	1	1	1	1	4	4	4
Welding power							
Weld power 3x25 sqmm							X
Weld power 3x35 sqmm					X	X	
Options							
Field bus (CanDeviceNet/Ethernet or Profibus)	X	X	X	X	X	X	X
Servo gun control signals					X	X	X
Connection kit	X	X	X	X	X	X	X

Three variants of DressPack

Complexity of wrist movements



Contact us

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