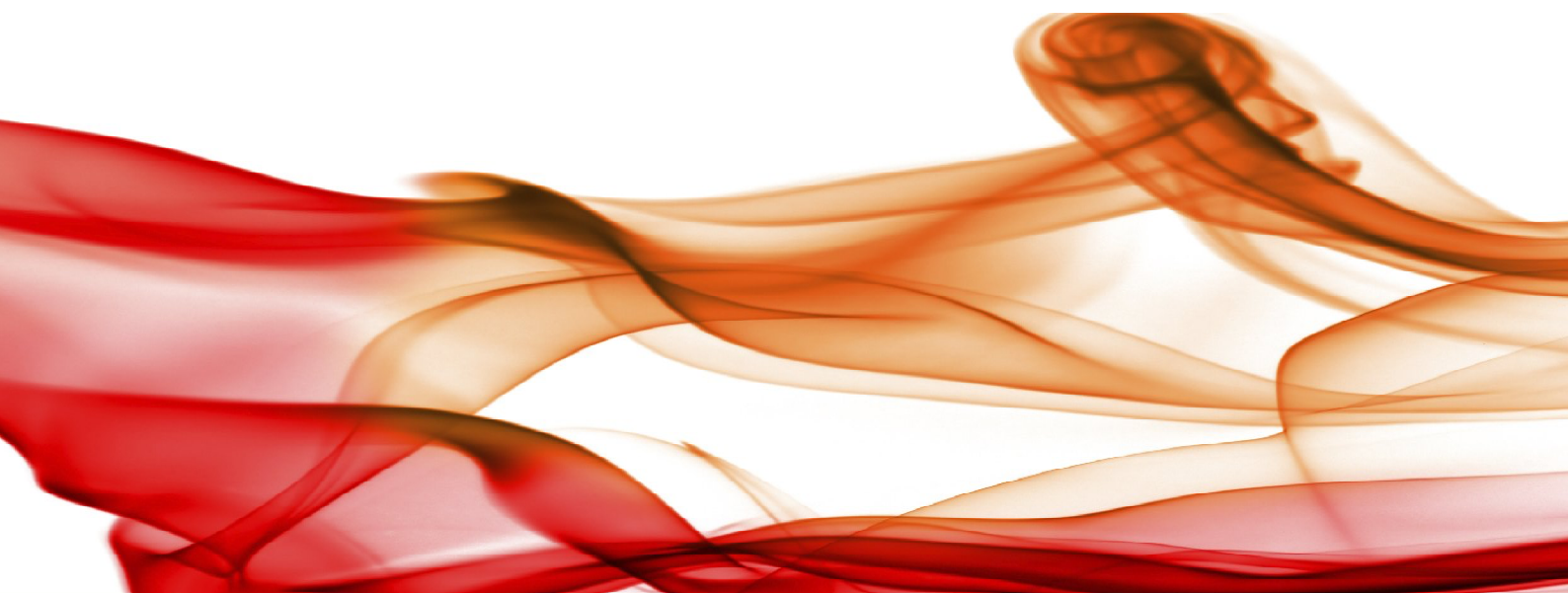


Thai Pollutech

Total Finishing Solution



In partnership with

ABB Robotics



Partner



ThaiPollutech

สาขาปทุมธานี: เลขที่ 49 หมู่ที่ 5 ตำบลคูบางหลวง

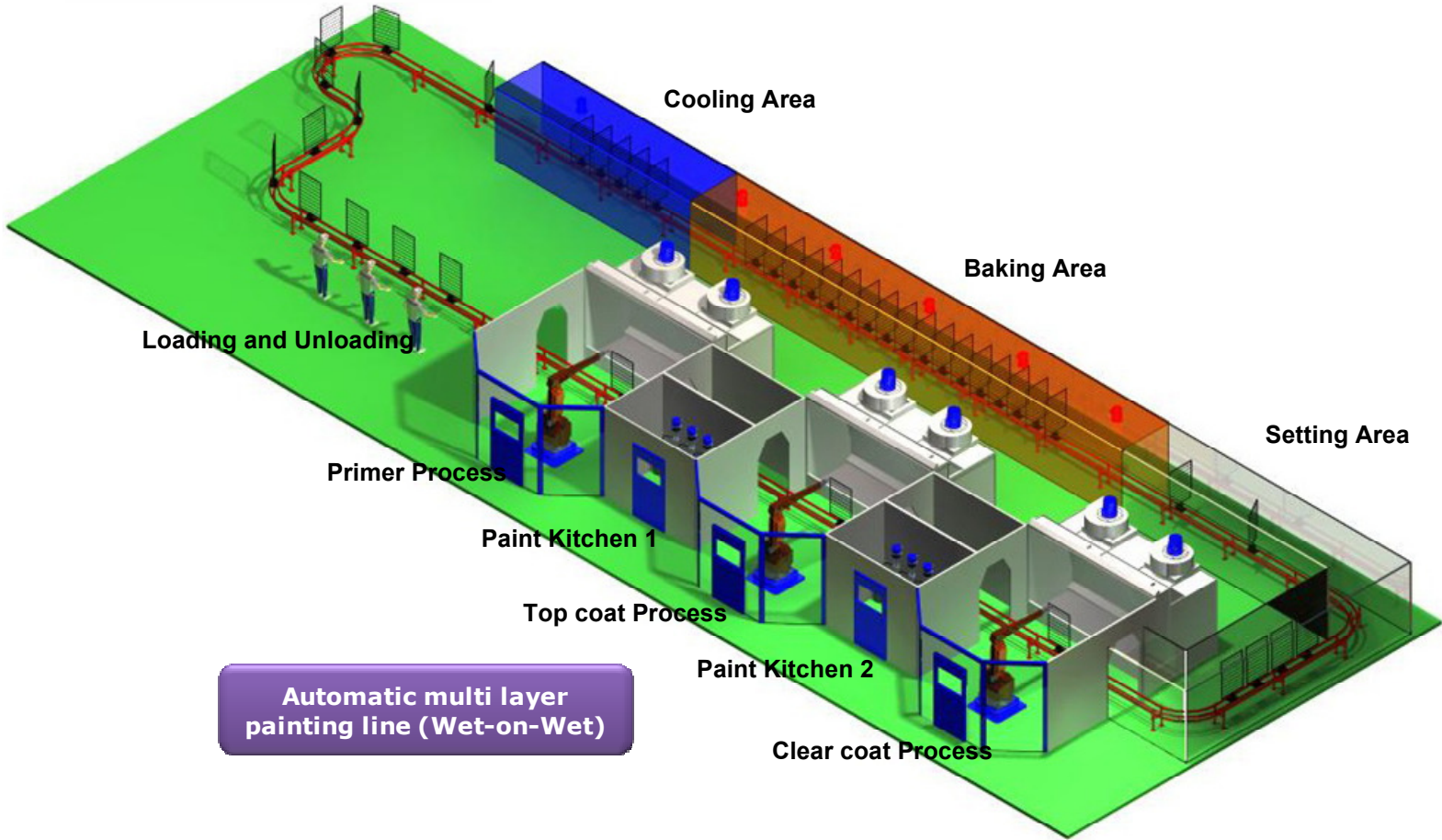
อำเภอลาดหลุมแก้ว ปทุมธานี 12140

โทร 0-2979-5175-77 (Auto) โทรสาร 0-2979-4172

สาขาสมุทรปราการ: 130 หมู่ 4 ซอยวัดมหารังษ์ ถนนปู่เจ้าสมิงพราย

ตำบลสำโรง อำเภอพระประแดง จังหวัดสมุทรปราการ 10130

โทร 02-748-5639, 02-393-6451 โทรสาร 02-743-5691



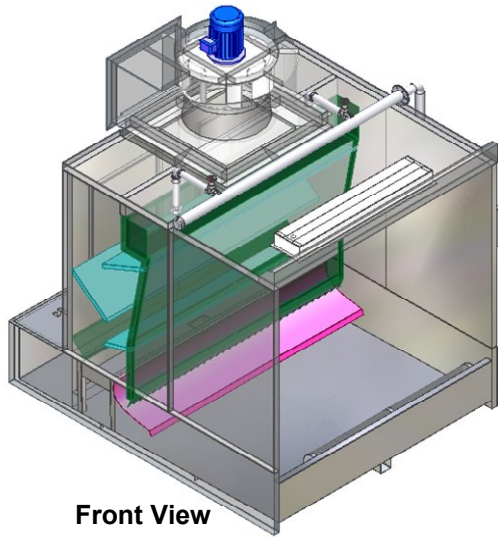
Our paint line for metal, wood and plastic surface is investment for the future. The most important view in design paint line is operation costs because this is where the true savings is. We work with customers step by step starting from a feasibility analysis stage to a project commissioning stage. Below is a our process solution to ensure the project success. Our experience from a large number of systems already delivered is a priceless asset for customers.

Our Solution includes

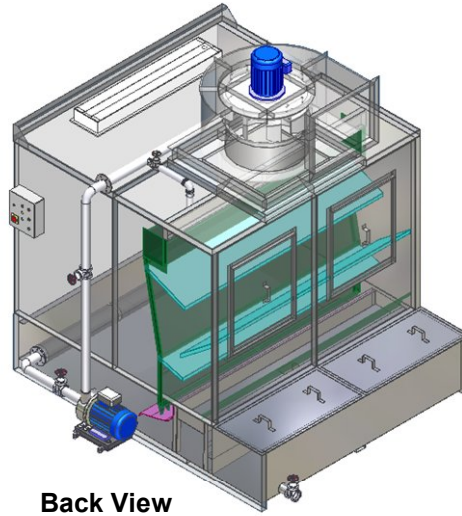
- ▼ Pretreatment facilities
- ▼ Paint line for powder and wet paint applications
- ▼ Floor and overhead conveyor system
- ▼ Baking oven / UV oven
- ▼ Paint sludge water treatment
- ▼ Paint robotic and automation
- ▼ E-Coat and Autodeposition coat line

Project-based process Solution





Front View



Back View

Picture on the right:

Standard VW series
Model VW-20

Summary of VW series Advantages

Disposal Tank in the back

Easy to clean out with the disposal tank in the back. The paint sludge can be taken out of the booth in the back. That means the users don't have to stop painting when the sludge is taken out. The result is less downtime and more productive

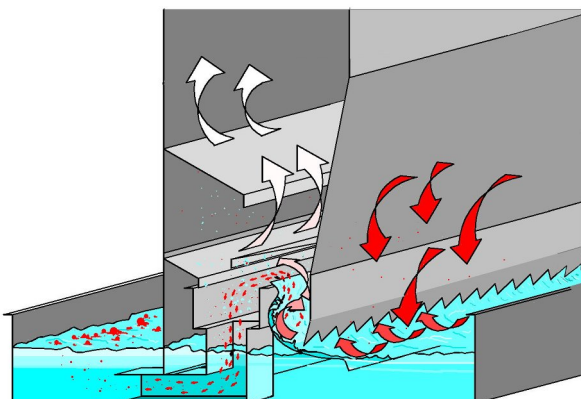
Completely knock-down structure

More convenience to move and re-install. Almost every part of the booth is knock-down from the factory. The panel is pre-punched and ready to do final assembly at customer's site. The booth is designed to easily disassembly whenever it's needed.

Complete stainless steel structure and stainless pump

Not like any other spray booth, VW series is made of stainless steel graded SUS-304 which is highly resistance to corrosion. The lifetime of the booth is more than a decade. This is truly worth for long-term investment.

100% Stainless Steel !No Rust



How the VW series works

The VW series spray booth uses the unique, patented venturi plate to provide continual mixing throughout the tank. A fan create a high velocity air stream across the surface of water tank. This causes the surface to shear and liquid is entrained by the air.

Overspray is drawn into air/liquid mixture and violently scrubbed in area of extreme turbulence caused by sharp changes in the direction of the air/liquid stream. Before the clear air is exhausted to atmosphere, a series of eliminator plates separate the air from the liquid mixture. Overspray is returned to the back of the water tank via the return pipe. This series is equipped with water curtain to provide the greater clean on the booth screen.

Main Structure

■ Stainless Steel Panel Construction

Washing chamber and booth made of first-grade stainless steel. Open end style panels with flanged side. Matching pre-punched holes bolt together easily

■ Stainless Steel Tank

Reinforced 2 mm. thickness stainless steel welded construction. Center sloping bottom for complete draining and easy cleaning.

■ Exhaust Fan

Correct size and capacity to produce required air velocity for booths with or without conveyor openings. TEFC motor is standard; Explosion-proof is also available.

■ Stainless Steel Pump

Capacity to furnish all water required at most efficient operating pressure: with standard operating pressure: with standard TEFC motor.

■ Stainless Steel Mist Eliminator

Removes free water from exhaust air, removable for cleaning or chamber inspection

■ Pipe and Water Systems

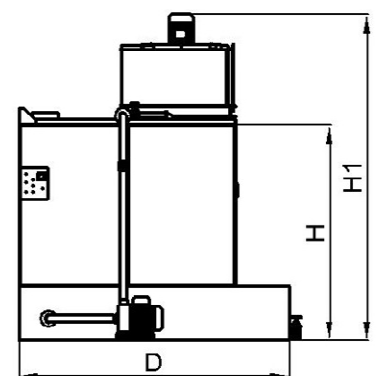
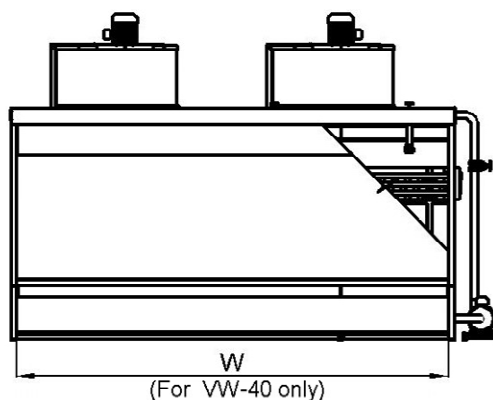
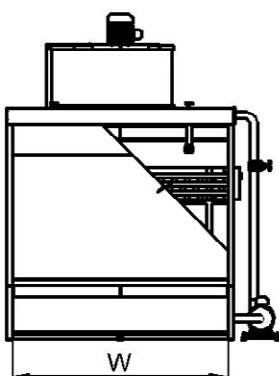
Galvanized steel pipe and Bronze valve (except water supply line to booth and drain line to sewer) are included as standard equipments.

ThaiPollutech
5-Year
Warranty

On Booth
Structure

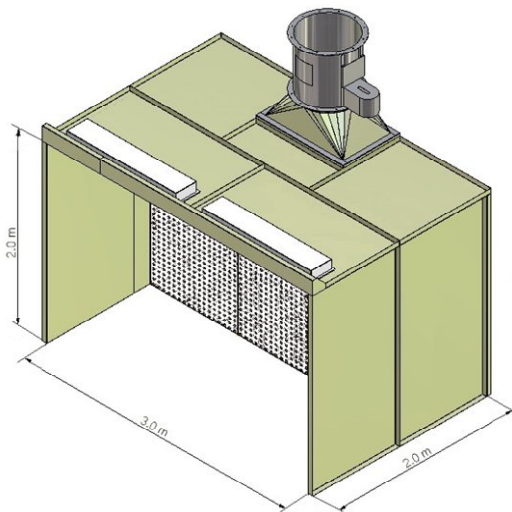
Models and Specifications

Model	W	D	H	H1	No. of Lights	No. of Exhaust Fan	Fan Motor KW (HP)	C.M.M. @ 0.6 m/sec (120 fpm) 100 mm. WG Static Press.	Pump KW (HP)
VW-15	1500	2500	2000	3000	1	1	3.7 (5.5)	108 (3900 cfm)	0.75 (1)
VW-20	2000	2500	2000	3000	1	1	3.7 (5.5)	141 (5100 cfm)	1.1 (1.5)
VW-25	2500	2500	2000	3100	1	1	5.5 (7.5)	179 (6450 cfm)	1.1 (1.5)
VW-30	3000	2500	2000	3100	2	1	5.5 (7.5)	215 (7740 cfm)	1.5 (2)
VW-40	4000	2500	2000	3000	2	2	3.7 (5.5)	286 (10300 cfm)	2.2 (3)



General Specifications

- Stainless Steel Structure
- Steel Blower with powder coating
- Booth face velocity = 120 FPM (Standard)
- Noise Level = 80-85 dB(A)
- Cleaning Door attached to panel : YES
- Blower Type: Direct-Driven Centrifugal Fan
- Operating Switch: DOL for 5.5 HP Fan Motor
Star-delta Magnet Switch for 7.5 HP Fan Motor



The ThaiPollutech dry filter spray booth has no washing chamber. Instead, the fan draws overspray into a paper filter at the back of the booth. This traps the paint and allows clean air to be exhausted. ThaiPollutech disposable paper filter consists of two sheets of heavy paper with corrugations of unequal sizes. The sheets are attached at the corrugations. Each sheet has rows of perforations staggered relative to the other – both vertically and horizontally. This give the paint laden air a tortuous passage through the filter and, in fact, it must strike at least four surfaces before leaving the filter. The result is that the sticky paint adheres and filtered air is discharged. The filter has a long life but when it is fully laden with paint it can be removed and replaced easily.

Picture on the right:

Standard DB series
Model DB-30

Summary of DB series Advantages

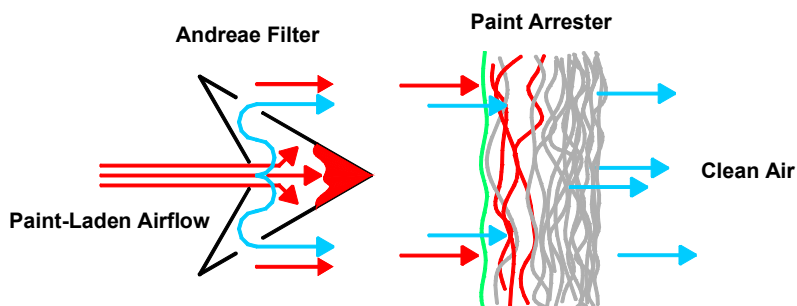
Economical and Cost Savings

DB Series is the most economical series in the market. The Series is ideally suited for limited or intermittent spray operations such as refinish shops, schools and production lines where paint consumption is moderate.

Completely knock-down structure

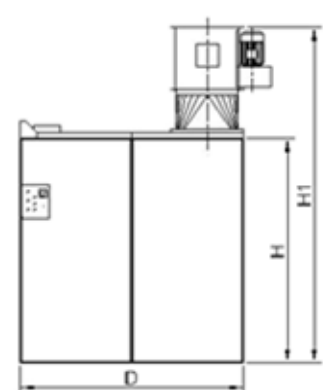
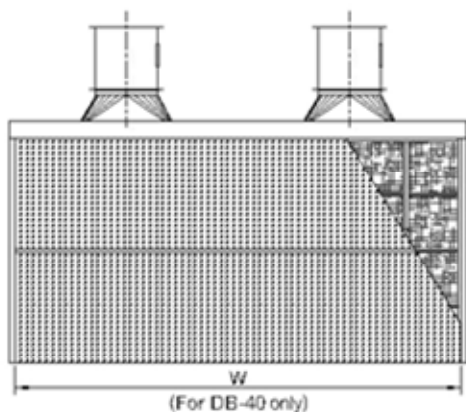
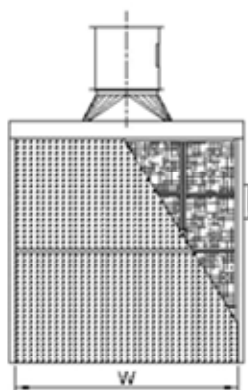
More convenience to move and re-install. Almost every part of the booth is knock-down from the factory. The panel is pre-punched and ready to do final assembly at customer's site. The booth is designed to easily disassembly whenever it's needed.

How DB Series Works



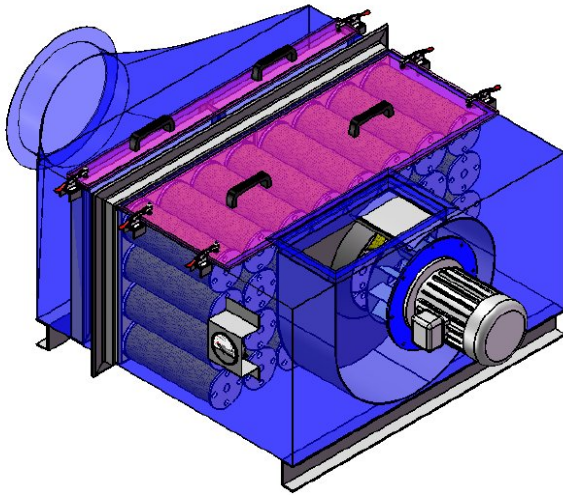
Models and Specifications

Model	W	D	H	H1	No. of Lights	No. of Exhaust Fan	Fan Motor KW (HP)	C.M.M. @ 0.6 m/sec (120 fpm) 50 mm. WG Static Press.
DB-15	1500	2000	2000	3000	1	1	1.1 (1.5)	108 (3900 cfm)
DB-20	2000	2000	2000	3000	1	1	1.5 (2.0)	141 (5100 cfm)
DB-30	3000	2000	2000	3100	2	1	2.2 (3.0)	179 (6450 cfm)
DB-40	4000	2000	2000	3100	2	2	1.5 (2.0)	215 (7740 cfm)



OCU Series – Absorption Unit

Activated Carbon Unit for paint odor treatment



ISOMETRIC VIEW

OCU series is an extremely versatile, high performance chemical filter for use in many odor control processes. The cylindrical geometry results in an extremely even airflow distribution throughout the entire filter and this ensures the longest possible lifetime for the media. The OCU Series can be filled with different molecular filtration medias to suit individual applications. The OCU Series is self-contained fan unit with primary filters.

Advantages:

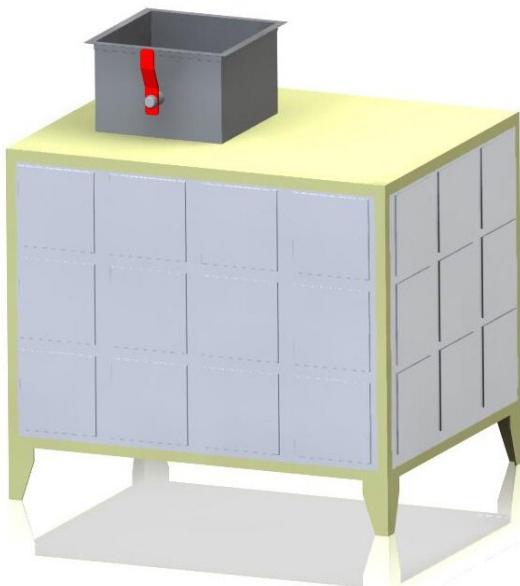
- * Very high mechanical efficiency (virtually no leakage)
- * Refillable with new media
- * High weight of molecular filtration media

Models and Specifications

Model	Weight of Carbon (Kg)	Carbon contact area (Sq.m)	Air Flow (CFM)
OCU-1	26	1.8	2000
OCU-2	52	3.6	4000
OCU-4	104	7.3	8000
OCU-6	156	11.0	12000

AR Series – Air Supply Unit

Air make-up unit for pressurized painting room



Model: AR-15
(Standard air supply unit without temperature and humidity control)

Air supply units replace contaminated air exhausted from spray booths with fresh outdoor air, maintaining a constant positive pressure all the time. Air supply units prevent dust entering painting room and contaminated your painted objects. The units can be equipped with cooling coil, spray nozzles or heaters in order to control temperature and humidity.

Multi-staged air filtration units also applied to air supply units. This provides a safe and efficient working environment for your operation.

Models and Specifications (non-temp and humid control)

Model	Air Flow (CFM)	Fan power (HP)	Blower Model
AR-15	4250	3 HP	AT-15-15
AR-15H	5320	4 HP	AT-15-15
AR-20	5680	4 HP	AT-15-15
AR-20H	7100	5 HP	AT-18-18
AR-25	7100	5 HP	AT-18-18
AR-25H	8870	7.5 HP	AT-20-20
AR-30	8510	7.5 HP	AT-20-20
AR-30H	10640	10 HP	AT-22-22
AR-40	11350	10 HP	AT-22-22
AR-40H	14190	15 HP	AT-25-25

ABB Robot Product Range



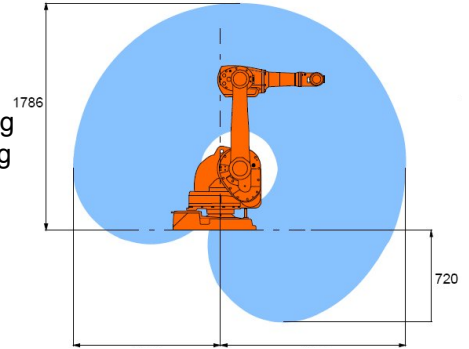
IRB 52

Main Applications:

Medium to small parts painting
Consumer electronics painting
Metal part painting
General industry painting

Main Benefits:

Cost effective
Space saving



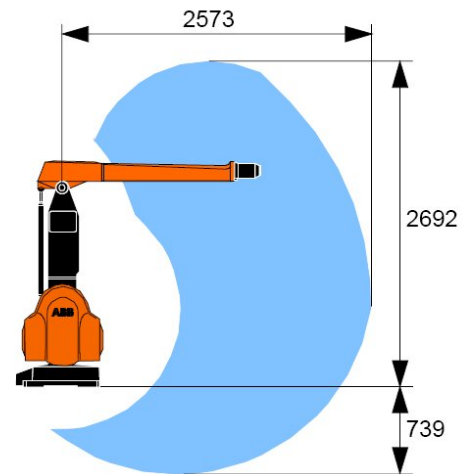
IRB 540

Main Applications:

General industry painting
Furniture
Sanitary

Main Benefits:

Cost effective
Easy programming
Versatile



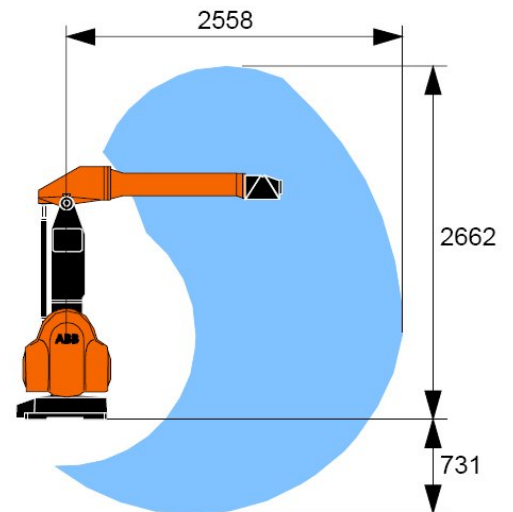
IRB 580

Main Applications:

Plastic parts painting
Electronics painting
Automotive parts painting
General industry painting

Main Benefits:

Cost effective
Precision painting
Hollow wrist



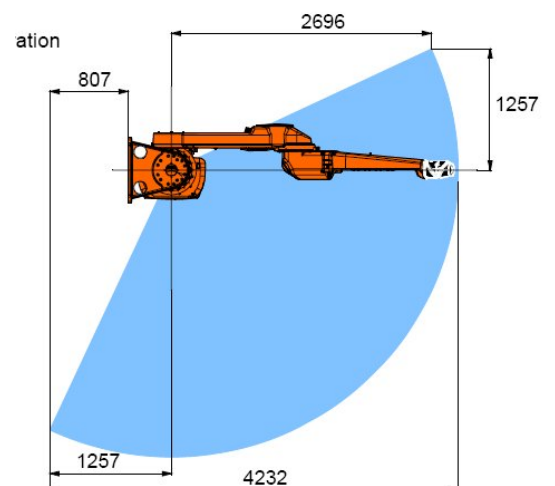
IRB 5500

Main Applications:

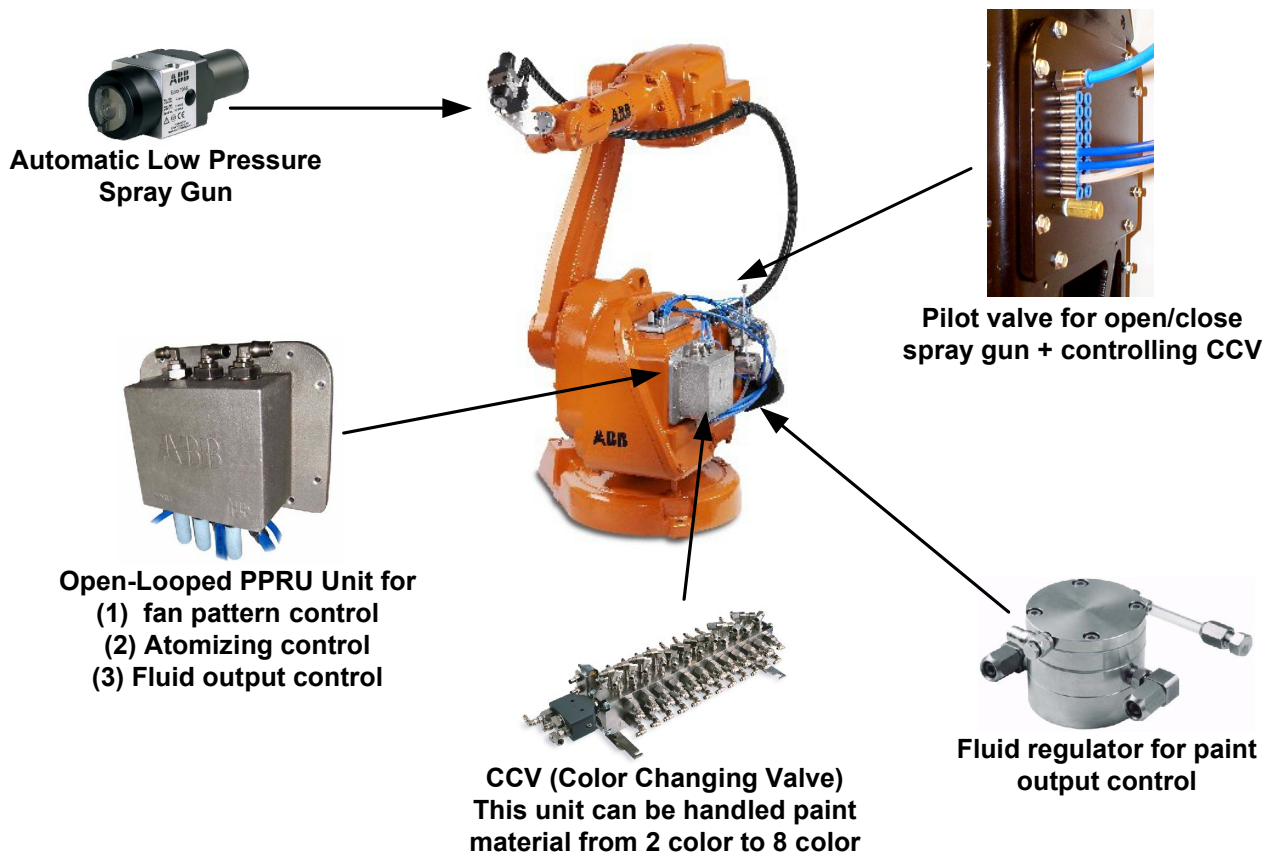
General industry painting
Large parts painting
Tier 1 painting

Main Benefits:

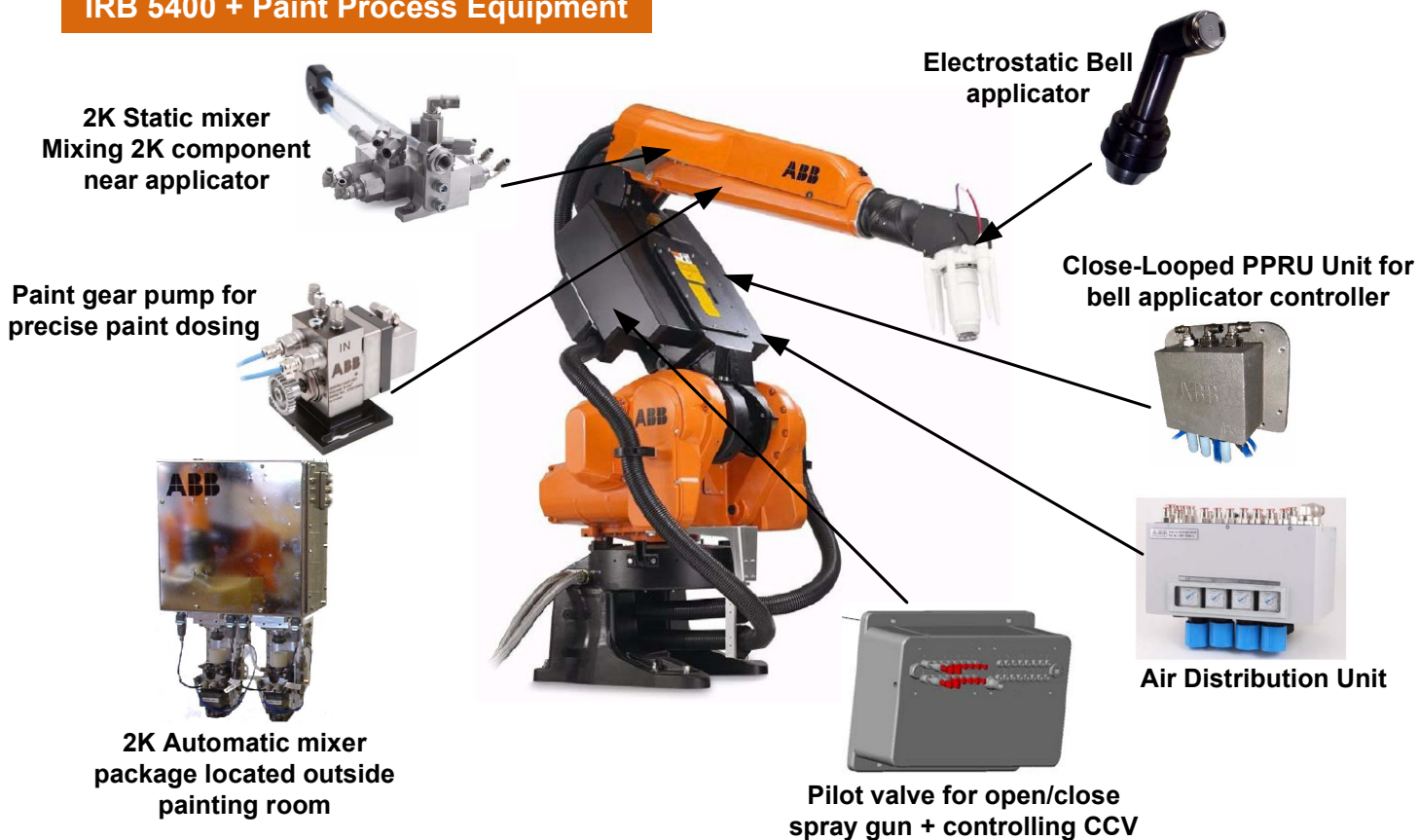
Cover large painting area
Reduced booth size
Versatile and flexible



IRB 52 + Paint Process Equipment



IRB 5400 + Paint Process Equipment





Paint Saving through superior control

Powered by IPS

To save paint, you need a system with fast and accurate control of the paint atomizer. ABB's Integrated Process System, IPS, is such a system.

Air control

One of the important factors in an IPS system is air regulation. Air is used to control the spray pattern (brush). Fast regulation is needed to avoid overspray and waste of paint material. Stable regulation is needed to achieve high finish quality.

Brush control

ABB's FlexBrush proportional pressure regulation unit (PPRU) is one of the fastest and most accurate air regulation units on the market.

It regulates air at millisecond speed with high process accuracy to provide fast brush changes and accurate applicator triggering.

Fast

IPS integrates our high speed process control with our superior motion technology. This tight synchronization provides full control of the paint process and cuts down cycle time.

Compact

The proportional pressure regulation unit controls up to three channels of air with closed loop pressure- and air flow measurement in one compact unit.

It enables the IPS system to have full control and supervision of the paint brushes.

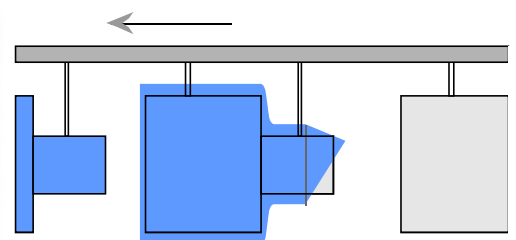
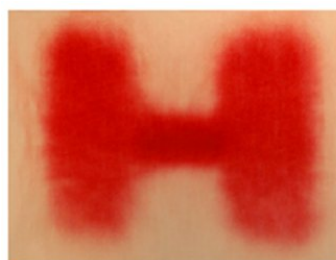
Paint savings

ABB's IPS system is designed to save paint. High acceleration painting robots combined with fast process regulation provide optimum use of paint material.

IPS will reduce your cost and make you more profitable.

The use of PPRU

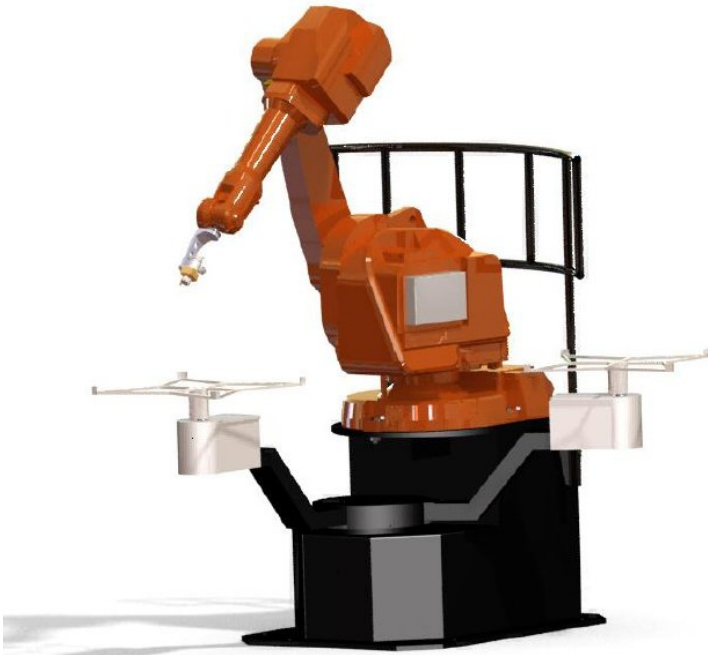
The FlexBrush proportional pressure regulation unit is typically used to control the air to an applicator, like a spray gun or a bell. The air channels are used to control things like the spray pattern, the paint flow, the rotation of the bell, etc.



ThaiPollutech and ABB offer 2 options for painting robot package. The packages is designed to provide a cost-effective, standardized paint robot package solution with specified functionality. It is an optimized, integrated process solution with state of the art technology to ensure excellent quality. It is pre-engineered, documented and designed to achieve quick installation and start-up.

Paint Application Package is based on the Integrated Process System (IPS) which features precision regulation and high-speed control of applicators (atomizers), accurately synchronized with the robot motion. This minimizes overspray and secures a uniform paint thickness.

Paint Robot Package-1 (PRP-1): IRB 52 + Twister Table



PRP-11: IRB52 + Servo Twister

PRP-12: IRB52 + Servo Twister + Brush Control

PRP-13: IRB52 + Servo Twister + Brush Control

+ Color Changing

PRP-14: IRB52 + Servo Twister + Brush Control

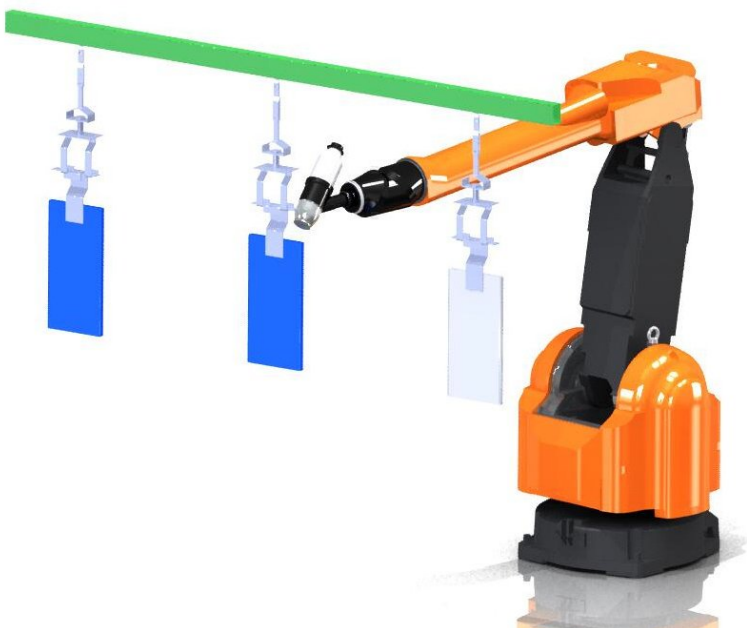
+ Color changing+ 2K automatic mixing

Advantage

- Small installation space
- Fast loading and unloading object
- Short installation time
- Rotary and spindle spraying capable
- Excellent in paint saving

Max. Table Load:	20 KG.
No. of control axes:	Robot 6 axes + Twister 3 axes
Driving Method:	Servo Control (Absolute)
Arm Length:	800 mm.
Arm Angle:	120 degree

Paint Robot Package-2 (PRP-2): IRB 580 + SAMES Bell Atomizer



PRP-21: IRB580 + Sames Bell + Brush Control

PRP-22: IRB580 + Sames Bell + Brush Control + Color Changing

PRP-23: IRB580 + Sames Bell + Brush Control + Color Changing + 2K automatic mixing

Advantage

- Small installation space
- Fast cycle time
- Short installation time
- Easy programming with ABB flex wrist
- Excellent in paint saving with electrostatic
- Large working envelop
- Conveyor tracking capable



Electrostatic Charge:	Max 70 KV (90 KV Option)
Rotation Speed:	Max: 45,000 RPM
Paint Flow Rate:	750 cc/min
Applicator Weight:	3 KG

SAMES Bell Atomizer

Automatic equipments for liquid paint

PPH 707 SB



PPH 707-SB is a sprayer dedicated to the electrostatic application with internal charge of **solvent based paint**. It is equipped with the **high speed turbine (HVT)** with magnetic bell. "SB" index means that this type of sprayer is dedicated to solvent based paint application. The high speed allows a high rotation (up to 65 000 rpm on charge). PPH 707-SB is dedicated to the Automotive Industry and Tier 1 for solvent based application. Which ever the product may be: primer, base, clear, it can be installed at any stage of an automotive paint line (car body exterior or interior), as well as on Tier 1 paint line (bumpers, car body parts).

nanobELL

The new Nanobell robotic rotary atomizer is able to spray solvent borne, water borne, single or multi-component materials. With Nanobell, manufacturers of small plastic parts, of the wood industry, of metal parts now have a robotic sprayer which significantly contributes to paint savings. It also improves the finish of their products. Lightweight, Nanobell can easily and advantageously be mounted on smaller robots.



PPH 308

[High speed rotary atomizer

PPH 308 & PPH 308-EXT

The PPH robotic rotary atomizers offer a better atomization of paint particles, a high transfer efficiency as well as ease of adjustments: They will improve productivity of your paint line with a much higher finishing quality. PPH308 sprays solvent or waterborne materials, depending on the version you choose. An external charge (EXT) is dedicated to waterborne materials and can permit a solvent installation to be switched quickly and easily to a waterborne installation.



TRP Automatic Gun

The TRP gun will spray liquid solvent or water based materials available in the automotive and general industrial markets. It provides a perfect finish and superior paint savings. Another feature of the TRP, is its capability for very high flows (up to 1200 cc/mn, in some cases). It is generally implemented on reciprocators or stationary in general industry, and on robots in the automobile industry. TRP is lightweight, compact and usable practically everywhere. Simple in design and construction, it is probably the most reliable and robust piece of equipment of its kind , available on the market place.





SPRAYMIUM® is a lightweight gun, which integrates controls on the back from where the operator can, with one hand, choose among 3 pre-programmed electrical characteristics and from where managing the flow of paint is instantaneous, through an adjusting knob.

REV 600 Reciprocator



RFV2000 reciprocator

The RFV 2000 is dedicated for automatic powder and paint installations. It drives vertical reciprocal movements of powder and liquid paint spray equipments.



Automatic application control of a painting installation

The REV600 and MCR control modules monitor precisely all the parameters of an automatic painting installation. REV600 and MCR are rack-mounted products, designed to be integrated into the FCR modular cabinet.



Wood

Particularly good for painting window frames, chairs, ...



Plastics

Screen frames
Auto bumpers
Telephone shells
Rearview mirrors ...



Glass

Perfume bottles
Bottles, ...



Steel

Any type of part, any type of surface
Handles,
Covers, ...



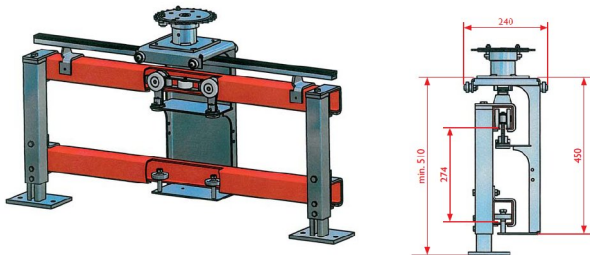
Bell Sample Application

Whatever you paint - we convey it!

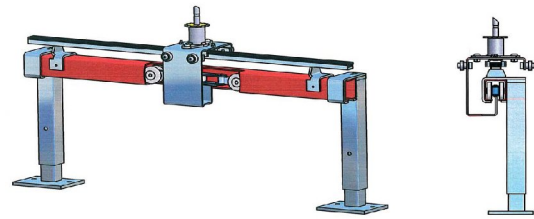


Caldan offer an extensive range of overhead and floor conveyor systems ranging from simple manual systems through powered single line to complex power & free system. All the systems have been developed first and foremost for the extremes of the surface finishing industry and are designed for operating at high efficiencies with minimum maintenance.

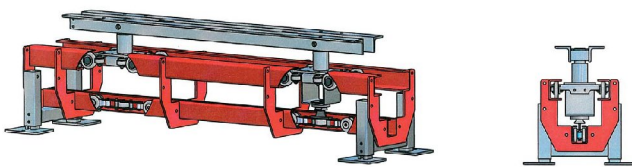
Single Line Floor Conveyor Type: SD



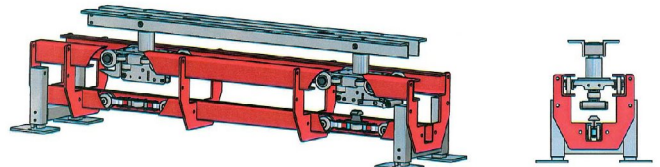
Single Line Floor Conveyor Type: LD



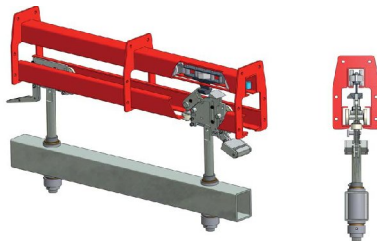
Single Line Floor Conveyor Type: HD



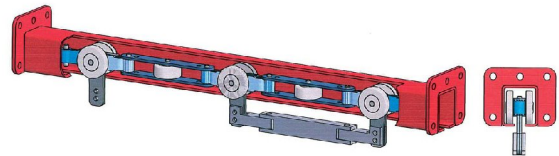
Power and Free Floor Conveyor Type: PF



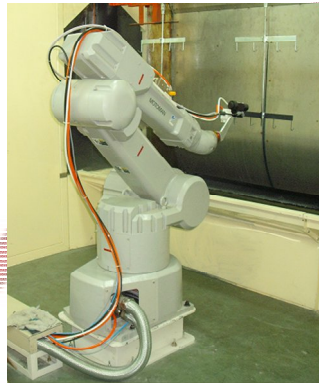
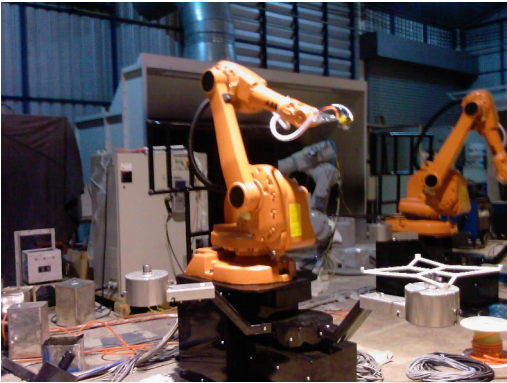
Power and Free Overhead Conveyor Type: PF



Single Line Overhead Conveyor Type: S



ThaiPollutech Project Reference



ThaiPollutech Project Reference



ThaiPollutech Project Reference

