

# Small Piston Air Compressor

## Standard Configuration

Ingersoll Rand's piston air compressors are highly reliable and efficient, which are flexible in use, robust in structure, and easy to maintain. Its SS and TS series air compressors are available in multiple configurations and applicable in all manufacturing and service industries using compressed air. Wherein, the single- and two-stage piston air compressors are designed for heavy industry applications with outstanding performance and compressed air quality that exceed customers' expectations.

By choosing Ingersoll Rand's piston air compressor, you choose high quality and reliability renowned worldwide. Our piston air compressors are designed for excellent performance, high reliability and efficiency, as well as ease of operation and maintenance.

- Heavy duty cast iron cylinder  
Efficient electric motor
  - Built-in thermal relay (single phase)
  - 1.15 S.F, TEFC, IP54 protection, Class F insulation (three phase)
- Highly reliable magnetic starter
  - Direct start (3hp-10hp)
- Durable parts & components
- Enclosed mesh belt guard
- Air tank with national standard certification



S10K10

## TS (Two-stage) Compressor Series

### TS Features and Benefits

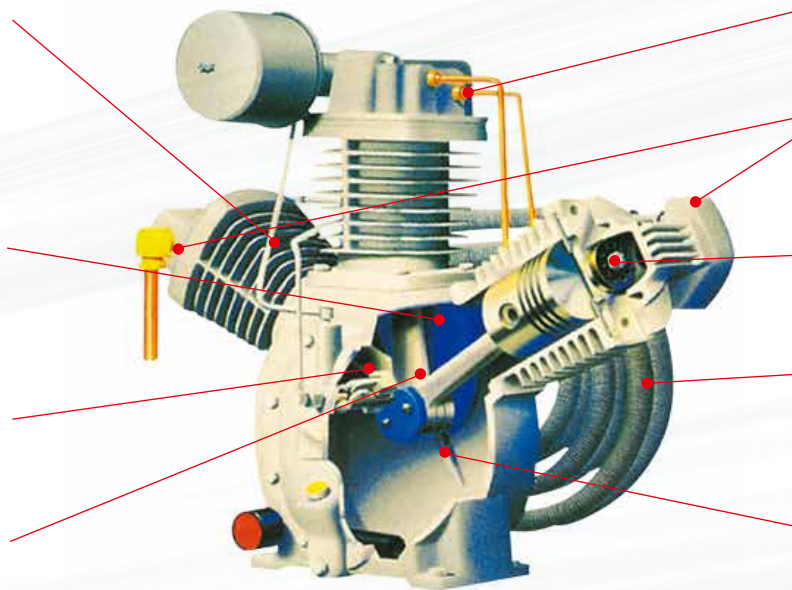
- 100% cast iron crank case and individually cast cylinder
  - High quality precision-machined cast iron cylinder with deep radial fins is applicable for heavy duty operation for an extended service life.
- Stainless steel finger valve assembly going through thermal treatment
  - A larger airflow area is formed to reduce heat and carbide accumulation. The assembly is easy to remove and maintain.
- High-efficiency inter-stage fin cooler
  - It enables more efficient cooling, higher compressor efficiency, lower electricity consumption and longer service life.
- Balanced cantilever type crankshaft
  - Precise balancing ensures smooth operation, and removable & replaceable crank pin metal protects the crankshaft from damages.
- Robust integral link
  - Integral ends are precisely designed to have no fastening pieces which may become loose.
- Centrifugal unloading device started under no load
  - This prevents starting under load and burning of the motor.
- Filling synthetic lubricant before leaving the factory
  - This reduces carbide accumulation, prolongs the oil change interval, improves performance and extends the service life of the compressor.

Removable cylinder – easy access, all-around cooling, no heat accumulation

Cantilever type crankshaft – precision balancing for low noise & balanced operation

Centrifugal unloading – extended service life of motor

Integral link – few wearable parts



Constant speed control – maintaining steady pressure in the system

Two-stage compression design – providing working pressure of 175psig

Simple combination valve – high reliability and ease of maintenance

Finned copper tube intercooler – reliable cooling of the unit even under tough conditions

Splash lubrication – no extra oil pump required, being affordable, simple, reliable and easy to maintain

## Standard

Ingersoll Rand “standard” TS air compressors are designed for rigorous working conditions where a reliable air source is a necessity, and are highly applicable in automobile industry and various commercial & industrial sectors.

Ingersoll Rand compressors are an ideal choice for superior performance defined as high working pressure, greater airflow and longer operating cycle.



2475L5/12

## Standard Configuration

- Heavy duty cast iron cylinder
- Efficient electric motor
  - Built-in thermal relay (single phase)
  - TEFC, IP55 protection, Class F insulation (three phase)
- Highly reliable magnetic starter
  - Direct start (3hp-10hp)
  - Star delta start (20hp-30hp)
- Durable parts & components
- Enclosed mesh belt guard
- Air tank with national standard certification



2545C10/12



2475K5/8

## Full Configuration

Ingersoll Rand TS air compressors with full configuration are designed and manufactured in response to the currently increasing industrial demands. Under rigorous working conditions where a reliable and stable air source is essential, these air compressors with high durability, high quality and full configuration are just what you need.

Each compressor with full configuration is integrated with a built-in magnetic starter, an air-cooled aftercooler, a low oil level switch and an enclosed metal plate belt guard, and is applicable in automobile industry and various commercial & industrial sectors.

Ingersoll Rand compressors offer an ideal choice for superior performance defined as high working pressure, greater airflow and longer operating cycle.

### Full Configuration

- Heavy duty cast iron cylinder
- Full-time low oil level protection switch
- Efficient electric motor - TEFC, IP55 protection, Class F insulation (three phase)
- Highly reliable magnetic starter  
-Star delta start (15hp-30hp)
- Air-cooled aftercooler
- Durable parts & components
- Enclosed metal belt guard
- Air tank with national standard certification



7100D15/12-FF



## Efficient & Reliable HP Series Air Compressors – specially designed for high pressure air system

For a century, Ingersoll Rand HP series piston air compressors have been renowned for its superior quality in the compressor market. These air-cooled multi-stage compressors using splash lubrication have a motor power range of 3-15 HP and a designed pressure range of 2.0MPa to 7.0MPa.

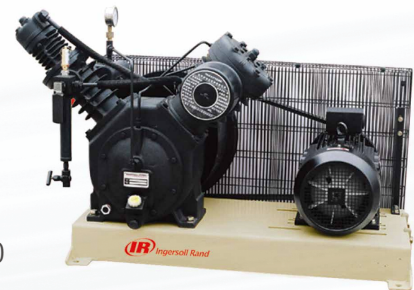
HP (high pressure) series air compressor is simple in design with high operational reliability and ease of repair & maintenance. Its heavy-duty design ensures excellent operating performance and lower repair costs of the unit. The HP series provides an optimal choice for applications where a high pressure air system with low operating cost and outstanding performance is needed.

### Standard Configuration

- Heavy duty cast iron cylinder
- Oil sight level
- Inter-stage safety valve & pressure gauge
- Discharge check valve & safety valve
- Manual drain trap mounted in inter-stage drain pipe
- Efficient TEFC motor, IP54, 1.15 S.F
- Heavy steel base
- Belt guard
- V-belt drive
- HP switch (delivered at random)
- Magnetic starter (delivered at random)
- 15HP and lower, direct start
- Filled with xL740HT synthetic lubricant

### Options

- Low oil level switch
- Automatic condensate trap
- Star delta starter



HP10-35



HP3-35

HP compressors are widely applied in various industrial sectors, as HP compressed air has a variety of applications, including military applications, as a source of compressed breathing air for commercial and recreational diving & firefighting use, and also as a pressure test medium in automobile and air conditioning industry.

Another important application of HP compressors is to provide compressed air for single- or two-step blow molding process. Ingersoll Rand HP15-30P air compressors are specifically designed to meet the requirements in plastics manufacturing industry.

### Scope of Supply of the Unit

- Heavy duty cast iron cylinder
- Oil sight level
- Inter-stage safety valve & pressure gauge
- Discharge check valve & safety valve
- Manual drain trap mounted in inter-stage drain pipe
- Efficient TEFC motor, IP54, 1.15 S.F
- High temperature alarm switch (optional)
- Constant speed control of the unit with inlet solenoid valve (optional)
- Heavy steel base
- Belt guard
- V-belt drive
- HP switch (delivered at random)
- Direct start magnetic starter (delivered at random)
- Filled with xL740HT synthetic lubricant before leaving the factory

### Options

- Low oil level switch
- Automatic condensate trap



HP15-30P

## Efficient & Reliable T30 Air Compressor Unit – specially designed for high pressure air system

For a century, Ingersoll Rand T30 series piston air compressors have been renowned for its superior quality in the compressor market. It is the same with HP air compressor unit. These air-cooled multi-stage compressors using splash lubrication have a motor power range of 15-20 HP and a designed pressure range of 300psig to 6,000psig. This T30 series are your optimal choice when a high pressure air system with low operating cost and outstanding performance is needed.

HP reciprocating compressors are widely applied in various industrial sectors, and play a key role in the fast-growing electric power industry as HP compressed air is necessary for airflow system in the high voltage circuit breaker, gas turbine and power generator start, and governor hydraulic system in hydropower station.

Ingersoll Rand 15T2 and H15T2 HP air compressors are specifically designed for the electric power industry commonly as the best HP air compressor choice worldwide.

### Scope of Supply of the Unit

- Heavy duty cast iron cylinder
- Low oil level switch
- Inter-stage safety valve & pressure gauge
- Discharge check valve & safety valve
- Automatic drain trap mounted in inter-stage drain pipe
- Efficient TEFC motor, IP55, 1.15 S.F
- Heavy steel base
- Enclosed metal guard
- V-belt drive
- HP switch (delivered at random)
- Magnetic starter (delivered at random)
- 15-20HP, star delta start, constant speed control
- Filled with xL740HT synthetic lubricant before leaving the factory



15T4XB15/245-FF



H15T2XB20/80-FF



HP compressed air plays a key role in making plastic bottles, cans and containers for food, beverage, pharmaceutical and other industries. Ingersoll Rand T-30 “PETAIR” HP air compressor with multiple compression stages is specifically designed to provide HP compressed air for blow molding process, e.g. blowing PET bottles or cans. Ingersoll Rand “PETAIR” is generally considered as the optimal HP air compressor by the world’s leading OEMs in PET industry. “PETAIR” is available as single unit or skid mounted multi-unit to meet your specific demands.

## Scope of Supply of the Unit

- Heavy duty cast iron cylinder
- Low oil level switch
- Inter-stage safety valve & pressure gauge
- Discharge check valve & safety valve
- Automatic drain trap mounted in inter-stage drain pipe
- Efficient TEFC motor, IP55, 1.15 S.F
- High temperature alarm switch
- Constant speed control of the unit with inlet solenoid valve
- Enclosed metal guard
- V-belt drive
- HP switch (delivered at random)

- Magnetic starter (delivered at random)
- 15HP, star delta start, constant speed control
- Filled with xL740HT synthetic lubricant before leaving the factory



15T2XB15/30-FF

## Features of the Unit

- Cast iron structure - cylinder and crank case is made of 100% cast iron material to guarantee long service life of the unit.
- Cylinder - individually cast cylinder with deep radial fins can remove the heat generated by the compressed air in 360 degrees. Cylinder and crank case is bolted for ease of routine repair and maintenance.
- Centrifugal unloading device - it prevents overload of the unit by automatically releasing the air from intercooler and cylinder.
- Intercooler - the finned tube intercooler is directly installed at the air blowing point of the flywheel.
- After-cooler - like the intercooler, the finned tube air-cooled after-cooler is also installed at the air blowing point of the flywheel. The temperature of compressed air discharged from the after-cooler is about 20°C higher than the ambient temperature.
- Flywheel - the flywheel blades generate a “whirlwind” airflow to cool the cylinder with deep radial fins, intercooler and after-cooler.
- Motor -TEFC, IP55 motor, 1,500 rpm, 1.15 S.F
- Drive - V-belt drive and enclosed metal guard ensures smooth operation.
- Base - a small groove is made on the heavy steel base, so that the motor can be moved to tighten the V-belt.
- Regulation - all HP units have auto start / stop control function, and optional constant speed control and dual control.



H15T6XB20/414-FF

## Standard Accessories

- “Full-time” low oil level protection switch - it prevents the unit from operating on low oil level. The compressor and motor may automatically stop below the safe oil level, and the unit cannot be restarted before lubricant is refilled.
- Automatic condensate drain system - the automatic condensate drain trap, mounted on the discharge separator / valve holder, automatically drains the condensate when the compressor stops or unloads under constant speed control mode, or when the time relay and solenoid valve interrupts the control pressure during the delayed period.
- High temperature alarm switch (only for PA unit) - when the discharge temperature is higher than the pre-set maximum value, the high temperature switch with a thermosensor automatically stops the unit.
- Inlet solenoid valve (only for PA unit) - it enables loading and unloading of the unit beyond the pre-set pressure range.

## SS (Single-stage) Air Compressor Performance

Model	Power		Capacity (0.86Mpa)	Rotation Speed	Air Tank	Dimensions	Weight
	HP	kW	m <sup>3</sup> /min	RPM	L	mm	kg
S1A1S	1	0.75	0.085	650	50	866 x 392 x 731	100
S1A1	1	0.75	0.085	650	50	866 x 392 x 731	100
S3A2S	2.2	1.64	0.18	740	50	866 x 392 x 731	120
S3A2	2.2	1.64	0.19	765	50	866 x 392 x 731	120
S3A3S	3	2.24	0.26	1060	50	866 x 392 x 731	125
S3A3	3	2.24	0.29	1160	50	866 x 392 x 731	125
S5B5	5.5	4.10	0.47	985	80	1220 x 560 x 920	160
S10K7	7.5	5.60	0.70	730	150	1550 x 600 x 900	230
S10K10	10	7.46	0.94	960	150	1550 x 600 x 900	230
S10K10-AC	10	7.46	0.94	960	150	1550 x 600 x 900	230

## TS Air Compressor (Standard) Performance

Model	Power		Capacity	Rotation Speed	Air Tank	Dimensions	Weight
	HP	kW	m <sup>3</sup> /min	RPM	L	mm	kg

### Horizontal Tank Type, 0.86MPa (125psig)

2340B3/8	3	2	0.27	1100	80	1220 x 560 x 820	170
2475K5/8	5.5	4	0.49	1060	150	1550 x 600 x 900	220
2475K7/8	7.5	6	0.61	1344	150	1550 x 600 x 900	240
2545K7/8	7.5	6	0.71	765	150	1550 x 650 x 1080	269
2545K10/8	10	7	0.97	1025	150	1550 x 650 x 1080	274

### Horizontal Tank Type, 1.2MPa (175psig)

2340K3/12	3	2.24	0.27	1100	150	1440 x 550 x 970	223
2475K5/12	5.5	4.10	0.48	1060	150	1440 x 500 x 1050	245
2475K7/12	7.5	5.60	0.60	1344	150	1440 x 500 x 1050	250
2545C7/12	7.5	5.60	0.70	765	230	1740 x 620 x 1130	355
2545C10/12	10	7.46	0.96	1025	230	1740 x 620 x 1130	374
7100D15/12	15	11.19	1.32	1030	303	1890 x 880 x 1325	583
7100D15/12	15	11.19	1.32	1030	303	1890 x 880 x 1325	583
7100D15/12-FF	15	11.19	1.32	1030	303	1890 x 880 x 1325	633

### Vertical Tank Type, 1.2MPa (175psig)

2340L3/12	3	2.24	0.27	1100	230	860 x 540 x 1850	257
2545N7/12	7.5	5.60	0.70	765	303	1050 x 640 x 2000	372
2545N10/12	10	7.46	0.96	1025	303	1050 x 640 x 2000	372

### Horizontal Tank Type, 1.8MPa (260psig)

H2340K3/18	3	2.24	0.25	1040	150	1440 x 550 x 970	223
H2475K5/18	5.5	4.10	0.39	910	150	1440 x 540 x 1000	250
H2545C7/18	7.5	5.60	0.54	585	230	1740 x 620 x 1170	374
H7100D10/18	10	7.46	0.93	692	303	1890 x 880 x 1325	583
H15TE15/18	15	11.19	1.30	624	445	1950 x 1100 x 1550	750
H15TE15/18-AC	15	11.19	1.30	700	445	1950 x 1100 x 1550	780
H15TE20/18	20	14.92	1.64	835	445	1950 x 1100 x 1550	770
H15TE20/18-AC	20	14.92	1.64	900	445	1950 x 1100 x 1550	790



## HP Piston Air Compressors Performance

Model	Power		Max. Pressure	Capacity	Rotation Speed	No. of Cylinders	No. of Compression Stages	Dimensions	Weight
	HP	kW	barg	m <sup>3</sup> /min	RPM			mm	kg
HP3-35	3	2.2	35	0.135	660	2	2	908 x 540 x 590	138
HP5-70	5.5	4.1	70	0.166	745	2	2	1270 x 810 x 830	276
HP7-35	7.5	5.6	35	0.41	550	2	2	1270 x 810 x 830	307
HP10-35	10	7.5	35	0.59	780	2	2	1270 x 810 x 830	325
HP15-30	15	11.2	30	1.08	850	3	3	1450 x 985 x 850	473
HP15-35	15	11.2	35	1.00	850	3	3	1450 x 985 x 850	473
HP15-55	15	11.2	55	0.87	785	3	3	1450 x 985 x 850	473
HP15-70	15	11.2	70	0.82	710	3	3	1450 x 985 x 850	473

Reference environment: 1 atm, ambient temperature of 20°C

## T30 HP Full-Configuration Piston Air Compressor Performance

Model	Power		Max. Pressure	Capacity	Rotation Speed	No. of Cylinders	No. of Compression Stages	Dimensions	Weight
	HP	kW	barg	m <sup>3</sup> /min	RPM			mm	kg
15T2XB15/30-FF	15	11.2	30	1.08	850	3	3	1400 x 860 x 1100	485
15T2XB15/35-FF	15	11.2	35	1.00	850	3	3	1400 x 860 x 1100	485
15T2XB15/55-FF	15	11.2	55	0.87	750	3	3	1400 x 860 x 1100	485
15T2XB15/70-FF	15	11.2	70	0.82	710	3	3	1400 x 860 x 1100	485
H15T2XB20/80-FF	20	14.9	80	0.93	900	3	3	1400 x 950 x 860	506
H15T2XB20/105-FF	20	14.9	105	0.926	900	3	3	1400 x 950 x 860	506
15T4XB15/245-FF	15	11.2	245	0.54	720	3	4	1200 x 900 x 1200	520
15T4XB20/245-FF	20	14.9	245	0.61	1010	3	4	1200 x 900 x 1200	540
H15T4XB15/344-FF	15	11.2	344	0.49	720	3	4	1200 x 900 x 1200	520
H15T4XB20/344-FF	20	14.9	344	0.59	1010	3	4	1200 x 900 x 1200	540
H15T6XB20/414-FF	20	14.9	414	0.54	900	3	4	1410 x 860 x 1200	650

Reference environment: 1 atm, ambient temperature of 20°C

## T30 HP Full-Configuration Piston Air Compressor Supply Scope

Configuration	PA	15T2	H15T2	15T4	H15T4	H15T6
Industrial grade inlet filter	√	√	√	√	√	√
Splash lubrication	√	√	√	√	√	√
Air-cooled intercooler and aftercooler	√	√	√	√	√	√
Inter-stage pressure gauge	√	√	√	√	√	√
Safety valve	√	√	√	√	√	√
Automatic condensate trap	√	√	√	√	√	√
Discharge check valve	√	√	√	√	√	√
High temperature alarm switch	√	*	*	*	*	*
Low oil level switch	√	√	√	√	√	√
Dual control	√	*	*	*	*	*

\* Options

## Maintenance & Service of the Unit

### Service Terms for Peace of Mind

- One-year standard warranty for the complete unit
- Extended warranty period

On the basis of standard maintenance & service, extended PackageCARE™ warranty services may be available as an option for all units. Please consult your local Ingersoll Rand Customer Center for details.

### Service and Support

#### Value for Money

Our promise for you is that: the compressed air system solution experts from Ingersoll Rand or our channel partners are around you to provide friendly accessory services and onsite maintenance service support.

#### Convenient Services

Whichever industry or region you are in, Ingersoll Rand is committed to year-around service support. Our global network distributors, engineers and technicians are only one call away to provide you with highly efficient and low cost service support, maintaining better performance of your system.

#### Special Coolant for Piston Compressors

Each compressor has been filled with Ingersoll Rand special coolant before leaving the factory for cost saving. With its superior separability and degradability, the coolant ensures good sealing and lubrication for air compressor system.



## User Follow-up - Comprehensive & Quick High-quality Services

By right of the professional, reliable and convenient services, the experienced service team of Ingersoll Rand is committed to providing better solutions for users, so as to improve operating efficiency of the units and profitability of their plants and lower the system operating cost.

Our professional service team provides timely system services to users from every customer center and liaison office within the territory of China. Ingersoll Rand Call Center is committed to 365x24 year-around service support for you.

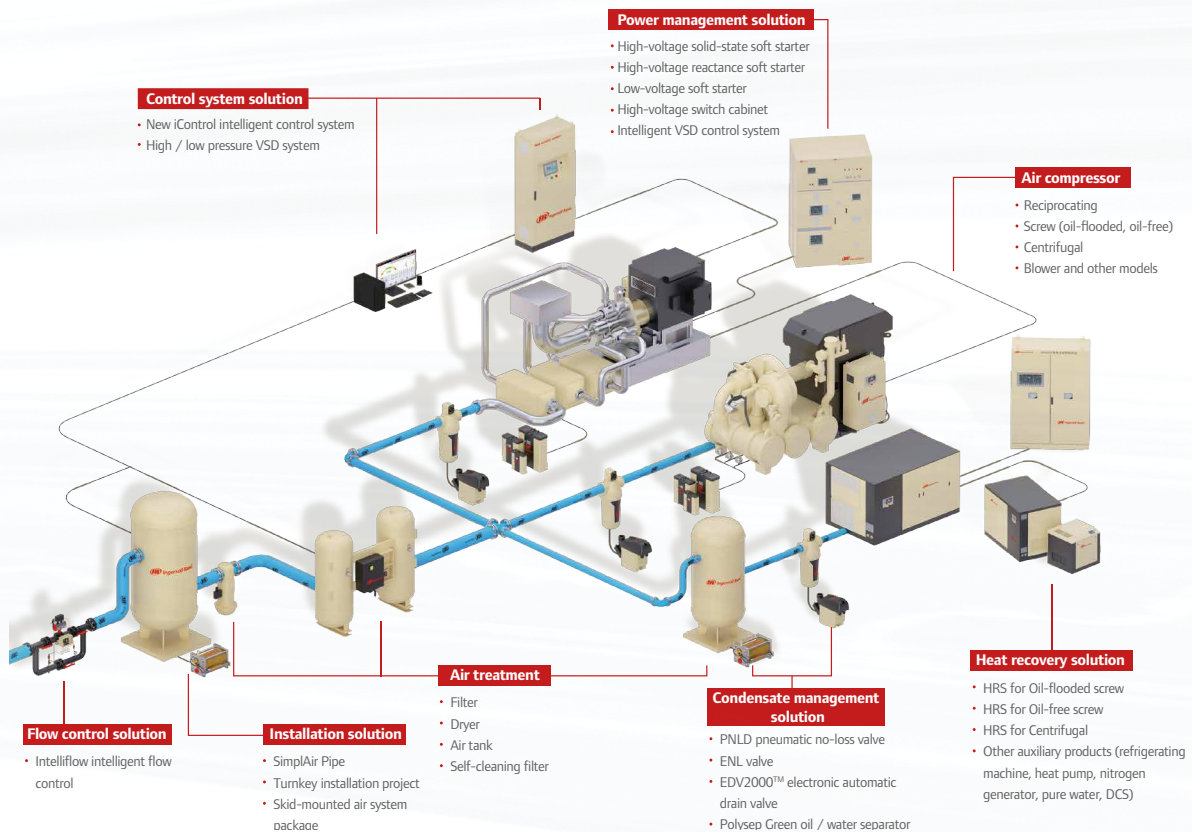
Besides our OEM compression technologies and services, Ingersoll Rand customer centers and liaison offices also provides services for non-Ingersoll Rand equipment in response to the specific needs of users, making it more convenient for you to enjoy the one-stop professional services from Ingersoll Rand.

### Nationwide Service Network

- 30-plus customer centers and liaison offices
- Well-equipped overhaul centers and spare parts operation centers
- Integrated call centers and dispatch centers



## Ingersoll Rand customizes solutions for the complete compressed air system, from compressors to system control





Ingersoll Rand Inc. (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to Making Life Better for our employees, customers, shareholders, and planet. Customers lean on us for exceptional performance and durability in mission-critical flow creation and industrial solutions. Supported by over 80+ respected brands, our products and services excel in very complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity, and efficiency. For more information, visit [www.IRco.com](http://www.IRco.com).



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