



PRECISION
REDEFINED



Recon[®] ENGINEERING CO. PVT. LTD.

AN ISO 9001 : 2015 CERTIFIED

estd. 1965



Overview

With a legacy dating back to 1965, Recon Engineering Co. (P) Ltd. has established a strong presence in the railway and engineering sector, specialising in railway components, valves, spares and precision-engineered products.

Today, the organisation is led by Mr. Debjit Bhattacharya, Managing Director of Recon Engineering Co. (P) Ltd., with a vision to combine decades of engineering experience with modern manufacturing capabilities. Our core expertise includes **air-brake equipment, pneumatic and solenoid-operated valves, brake valves and cocks, reservoirs, brake cylinders, filters, compressor spares and precision-machined components.**

With capabilities in **CNC machining, fabrication, assembly, testing and quality documentation**, Recon serves the railway and rolling-stock sector with a focus on reliable, application-oriented engineering solutions. Recon Engineering operates across **three strategically located manufacturing units** in the Kolkata region, with a combined infrastructure of approximately **1,05,000 sq. ft.** Plant 1 in **Baltikuri, Howrah** spans 18,000 sq. ft., Plant 2 in **Baranagar** covers 17,000 sq. ft., and Plant 3 in **Dankuni-Begampur** extends across 70,000 sq. ft.

Our manufacturing capabilities are further strengthened by **IronFort Engineering LLP** covering an area of over 1,00,000 sqft, our associated steel casting foundry, providing a reliable source for castings and critical engineering components.

At the heart of our organisation is trust—built through consistent quality, technical expertise, reliable delivery and long-term relationships. Our heritage represents experience, our infrastructure represents capability, and our commitment to quality represents the trust placed in us by our customers.

HERITAGE | CAPABILITY | QUALITY | TRUST

We don't just manufacture components

We build engineering solutions and lasting relationships that move industries forward.

Group companies :

Fortecon Engineering LLP is a Kolkata-based engineering company specializing in railway wagon fabrication, structural engineering, and refurbishment of rolling stock. **Rehabilitation of BOXN Wagons** 200 wagons completed for South Eastern Railway **Structural Fabrication Projects** Over 1600+ units executed for industrial applications

Ironfort Engineering Limited: Established in 2023, Iron Fort Engineering LLP has rapidly emerged as a trusted manufacturer of high-quality steel castings and investment castings in India. Headquartered in Kolkata, West Bengal, the company combines modern foundry technologies with the experience of industry veterans who collectively bring decades of expertise in the casting and metal manufacturing sector.



GLOBAL PRESENCE

Excellence breeds leadership. Recon has led the way in India and has crossed the boundaries successfully making its foot print into global market. Recon supplies various items to Malaysia, South Africa, Sri Lanka, Brazil, Indonesia and Bangladesh.

QUALITY CERTIFICATION



Recon Engineering Co (P) Ltd was founded in 1965 to produce a wide range of components, spare parts, and global standard equipment for the railway and engineering sectors. The company operates a modern facility covering an area of 18,000 square feet located at Baltikuri, Howrah—a major industrial center in Kolkata, India—which offers strategic connectivity to the Bombay and Delhi highways.

Recon holds Quality Management System certification for the design, manufacture, and supply of various railway products, including:

Air & Vacuum Brake Equipment for wagons, coaches, and locomotives

Tri-Plate Panel Mounted Brake Systems for diesel and electric locomotives

Critical Brake Valves for diesel and electric locomotives

Air Spring Control Equipment for LHB, coaches, EMU, MEMU, and DEMU coaches

Pantographs for electric locomotives, EMU, and MEMU applications

Air Dryers for diesel and electric locomotives, as well as EMU and MEMU applications

Distributor Valves for wagons, coaches, and locomotives

Ducting for electric locomotives

Reservoirs for electric locomotives, coaches, and wagons

Brake Cylinders for coach and wagon applications

This quality system is audited by System Training and Assessment Registrar, accredited by ABCB in accordance with ISO 9001:2015 standards. Consistent quality and performance remain central to the company's growth and success.



PRODUCTS



BRAKE SUPPLY RESERVOIR 240 LTR.

The 240 Liter Reservoir is basically used for WAG9 Locomotives. It is used as a brake supply reservoir and is vertically mounted. It is basically used for braking system.



MAIN RESERVOIR 450 LTR.

The 450 Liter Reservoir is basically used for WAG 9 Locomotives. It is used as a main reservoir and is vertical mounted. It is basically used for pneumatic section purposes



D-1 EMERGENCY BRAKE VALVE

The D-1 Emergency Brake Valve is a manually operated device which provides a means of initiating an emergency brake application.



2/2-Way Normally Open (NO) Magnet Valve

For emergency applications, a 2/2-Way Normally Open (NO) Magnet Valve acts as a failsafe response mechanism. Because it is Normally Open, the valve permits continuous, unobstructed flow during standard operation without requiring any electrical power. When an emergency event or power failure occurs, the valve instantly responds based on how your safety system is configured



DUPLEX CHECK VALVE

This type of piston-operated Duplex Check valve, which is fitted with resilient-seated valves, is used to control the supply of air from a main reservoir to an auxiliary device reservoir for operating sanding or other pneumatic brakes apparatus, where it is desired to safeguard the main supply for operating brakes or other vital equipment against excessive use by the auxiliary equipment.



N-1 REDUCING VALVE

The N-1 Reducing Valve reduces the pressure of compressed air supply to a constant predetermined value and delivers the same usually for the operation of auxiliary device.



NON RETURNING VALVE

Non returning valve is basically used at the outlet of the main reservoir to exit the air pressure from the reservoir and stop the incoming air pressure into the reservoir through the outlet of the reservoir. It basically operates to flow the air pressure to one way directions only.



EMERGENCY BRAKE VALVE FOR HIGH SPEED

The Emergency Brake Valve for High speed Loco is a manually operated device which provides a means of initiating an emergency brake application. It is basically used for high speed Locomotives.



SAND TRAP

Sand Trap is basically used to exhaust the sanding particles into the rail to maintain the gripping between wheel and rail



PRODUCTS



AUTOMATIC DRAIN VALVE

The Automatic Drain Valve automatically discharges precipitated moisture from reservoir with each operating cycle of the control device. The drain valve may be installed on the main reservoir with a pump



J-1 SAFETY VALVE

The J-1 Safety Valve installed vertically in the main reservoir system vents pressure at a predetermined setting to atmosphere in order to prevent excessive main reservoir pressure buildup



STAINLESS STEEL AIR RESERVOIR

Stainless steel air reservoir manufactured in different sizes as per customer requirement. It starts from 9 Liters and used to made up to 200 Liters. Normally used in Coaches/EMU and in automobile vehicle.



AIR BRAKE HOSE COUPLING BP & FP

Air coupling hose are used in between the two adjacent coach/wagon for continuation of air flow between brake pipes and feed pipe liners.



BOGIE MOUNTED BRAKE CYLINDER WITH SLACK ADJUSTER

BMBC are manufactured in various and stroke length as per requirement of different railway. Application of this Brake Cylinder in Indian Railway Coaching Brake Systems eliminates use of separate slack adjuster and also reduces rigging considerable extent.



AIR BRAKE CYLINDER

This type of brake cylinder normally having three type of stroke length i.e. 9", 10" and 14". This Brake Cylinders used to receives pneumatic pressure from Auxiliary Reservoirs after being regulated by distribution valve for brake application and develops mechanical brake power by outward movement of piston assembly.



8" x 8" LOCOMOTIVE BRAKE CYLINDER

8" x 8" Brake Cylinder is used for locomotive brake application & can be manufactured and supply as per customers requirements. To apply brake outward force used to apply air pressure which will develop forces and due to outward movement of piston through push rod with right connected to suitable brake rigging it will provide brake force through the rigging.



DOUBLE ACTION AIR CYLINDER WITH FILTER & SOLENOID VALVE

Double acting air cylinder is used for operating door in carriage wagons (BOBRN/NTPC). The bottom discharge system is designed to unload coal/stone chips or other loose bulk material at speeds ranging from one to three mile per hour over trestles or into pits.



AUXILIARY RESERVOIR

Auxiliary Reservoirs manufactured in different sizes i.e. from 50 Ltrs, 75 liter, 80 Liters, 100 liters, 200 liters etc. Auxiliary reservoir feeds brake cylinder through distribution valve in brake application position. 100 liters capacity reservoir is used for freight wagon brake system & 200 liters capacity reservoir is used for coach brake system.

PRODUCTS



EMPTY LOAD DEVICE

It will function as modifier of the braking force transmitted to the car wheels so as to avoid wheel locking while rental cars capacity of weight effect to load factor of the car carries.



CUT-OFF ANGLE COCK.

Cut-off Angle Cocks are provided at the end of brake pipe and feed pipe on each vehicle to maintain flow of air in the air system during the Run of the vehicle. These cocks are closed while isolating the vehicle from the train



ISOLATING COCK

All type isolating cocks are used to provide facility for cutting off air supply to auxiliary reservoir from feed pipe as well as isolation of brake cylinder.



PARKING BRAKE CYLINDER

It is used specially to ensure non moments of carriages/locomotives while it is in non used condition. Which ensure safe parking.



SINGLE WAGON TESTING RIG

This testing rig is easy movable at any place and convenient for testing of air lines and air connections of isolated wagons and coaches.



FABRICATED BRAKE BEAM

This Brake beam used with composite brake system for the application of brake force to the wheel of carrier



CHECK VALVE

Check valve is used between feed pipe and auxiliary reservoir to permit flow of air in one control.



CENTRIFUGAL DIRT COLLECTOR

Centrifugal Dirt Collector is provided for removal of dirt and dust particles prior to the entry of air in the system by centrifugal action.



C2W RELAY VALVE

Relay type C-2 is a diaphragm operated, self lapping valve which supplies or exhausts brake cylinder air pressure during brake application or release and is piloted by Driver's brake valve in the system by centrifugal action.

PRODUCTS



T2 SAFETY VALVE

It is a important small valve used for protecting pneumatic equipment against excess pressure



E1 SAFETY VALVE

These pop type safety valves are fitted in the pneumatic system to relieve components from excess pressure.



A9 AUTOMATIC BRAKE VALVE

A-9 Automatic Brake Valve is a self-lapping capable of graduating the application or release of locomotive and train brakes. It consists of a self lapping regulating portion and vent valve.



F1 SELECTOR VALVE

F1 Selector Valve acts as a regulating valve. Its output is connected to the MU2B Valve. Both HB-5 Relay valve & C2 Relay Valve are connected to it as input.



SA9 INDEPENDENT BRAKE VALVE

The Quick release position of the independent brake valve provides a means of releasing an automatic brake application on the locomotive without affecting the automatic brake application on train brakes.



MU-2B VALVE

MU-2B acts as a regulating valve which when the knob is in LEAD POSITION, directs compressed air from F-1 Selector Valve to A-9 Auto Brake Valve or SA-9 Independent Brake valve.



A PNEUPHONIC HORN

A pneuphonic horn is a compressed air-operated alarm signal and horn used primarily on railway locomotives, electric multiple units (EMUs), and transit vehicles.



3 WAY MAGNET VALVE Type NW-10C

It is a heavy-duty, 3-way electrically operated magnet valve engineered for precise pneumatic control in demanding environments. Featuring a rugged, space-saving design with an integrated pipe bracket, this Normally Closed (NC) solenoid valve delivers exceptional sealing performance, rapid response times, and maximum reliability for industrial and transit automation.



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