



FCP TIMES

A MONTHLY NEWS LETTER FOR FLUID CONVEYANCE PRODUCTS INDUSTRY



Infrastructure Revolution: Fuelling India's Economic Growth

India's infrastructure sector has been shaping and further poised for growth, with planned investments amounting to \$1.4 trillion by 2025. The government's ambitious National Infrastructure Pipeline program outlines the injection of massive capital into various sub-sectors, including energy, roads, railways, and urban development. This unprecedented push is expected to spawn associated industries, create jobs, and stimulate the economy. The government's commitment is evident through

its allocation of 3.3% of GDP to the infrastructure sector in the fiscal year 2024, with particular focus on the transport and logistics segments.

Roads & Highways account for the highest share, followed by Railways and Urban Public Transport. The government has set ambitious targets for the transport sector, including development of 2 lakh-km national highway network by 2025 and expanding airports to 220. Additionally,

plans include operationalizing 23 waterways by 2030 and developing 35 Multi-Modal Logistics Parks (MMLPs). The total budgetary outlay for infrastructure-related ministries increased from around INR 3.7 Lakh Cr in FY23 to INR 5 Lakh Cr in FY24. Besides support from the central government and states across various schemes, India needs a significant push from Public-Private Partnerships to achieve its goal of reaching a \$5 Trillion economy by 2025.

HUGE INVESTMENTS

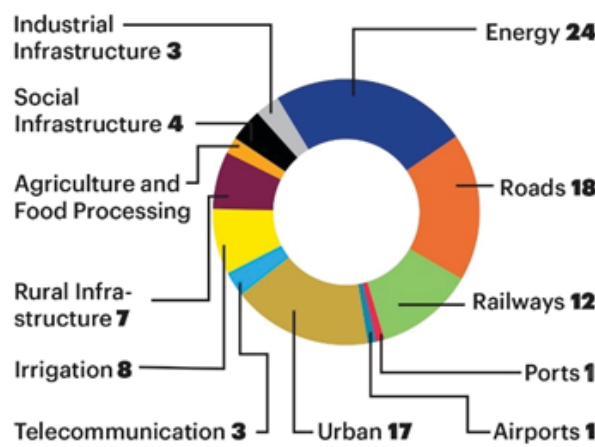
- Infrastructure spend to double in the next seven years
- More financing sources will be needed

SECTOR	FY17-FY23 E (₹LAKH CRORE)	FY24-30 P (₹LAKH CRORE)
Road	18.3	37.3
Railways	12.4	25.6
Urban infrastructure	8.6	18.9
Other infrastructure	11.1	15
Energy	15.5	39.1
Surface transport	0.8	7
Total	66.7	142.9

E: ESTIMATED; P: PROJECTED SOURCE CRISIL INFRASTRUCTURE YEARBOOK 2023

THE NATIONAL INFRA PLAN

- According to estimates, India needs to spend about \$1.4 trillion in the coming years on infrastructure
- Total project capex in infrastructure sectors during FY20 to FY25 is projected at over ₹102 lakh crore



% OF TOTAL EXPENDITURE SOURCE NATIONAL INFRASTRUCTURE PIPELINE

CURRENT CAPACITY



National highways
146,145

State highways
179,535



RAILWAY NETWORK

Total track length (in km)
127,000

Total number of stations
7,335



PORTS*

Cargo handled
500.82
million tonnes

Output per ship per day on berth
18,457 tonnes



AIRPORTS*

Number of airports
149

Passenger traffic
152 million in 2023

* DATA FOR APRIL-NOVEMBER 2023 SOURCE GOVERNMENT MINISTRIES

Major plans of Indian Infrastructure:

Roads: The Bharatmala Pariyojana is progressing with Phase I focusing on developing 34,800 km of National Highways. It emphasizes corridor-based development and is set to conclude by 2027-2028, covering 31 States/UTs and over 550 districts. Additionally, the government targets building 22 new greenfield expressways, signalling significant advancements in India's transportation infrastructure. The National Highways authority of India is looking to increase the total length of High-Speed corridors to 50,000 Kms by 2047 from about 3913 kms in the year 2023.

Airports: The Ministry of Civil Aviation's flagship Regional Connectivity Scheme UDAN (Ude Desh Ka Aam Nagarik) aims to enhance air connectivity to regional airports in small towns. Launched in 2016, UDAN focuses on making flight services accessible to common citizens by developing infrastructure and air connectivity. In its first 5 years, UDAN served over one crore passengers, inaugurating 425 new routes and 58 airports. The Budget for 2023-24 allocated INR 1,244.07 Cr to UDAN, doubling the previous year's budget, with plans to revive 22 airports. Additionally, the government outlined the revival of 50 additional airports, heliports, water aerodromes, and advanced landing grounds. The government is planning to increase number of airports in the country to about 220 from the current 149 in the next 5 to 7 years.

Railways: India's railway sector is undertaking ambitious projects such as the Mumbai-Ahmedabad Speed Rail Corridor, the world's highest pier bridge under construction, and the Chenab bridge in Jammu & Kashmir - the world's highest railway bridge. With a total Broad-Gauge network of 61,508 km electrified as of December 2023, the sector has also introduced 51 indigenously designed Vande Bharat Express

trains. The railway is looking to launch at least 3000 trains over the next 5 years and add 50,000 kms of new tracks in the next decade as it tries to de-congest the rail network and improve transport for both passengers and freight traffic.

Ports: Indian Ports "Turn Around Time" has reached 0.9 days which is better than USA (1.5 days), Australia (1.7 days) and Singapore (1.0 days), as per the World Bank's Logistics Performance Index (LPI) Report 2023. Sagarmala, the flagship Central Sector Scheme of the Ministry of Ports, Shipping and Waterways, promotes port-led development in the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes.

Way Forward:

The infrastructure sector plays a pivotal role in driving India's economic growth and overall development. As the country continues on its path towards becoming a global economic powerhouse, the need for robust infrastructure becomes increasingly apparent. Private sector partnerships have emerged as crucial enablers in this endeavour, bringing in much-needed investment, innovation, and efficiency. By leveraging public-private partnerships (PPPs), India can accelerate infrastructure development while ensuring sustainability and inclusivity. These partnerships not only help bridge the financing gap but also foster competition, encourage technological advancements, and promote best practices in project execution. Ultimately, the collaboration between the government and the private sector is essential for creating resilient, future-ready infrastructure that paves the way for a prosperous and sustainable future for all citizens of India.

Understanding Hydraulic Hose Failure and Prevention

Hydraulic hoses are an integral part of various industrial and mobile applications, transferring hydraulic fluid to power machinery and equipment efficiently. Although hydraulic hoses play a vital role, if not regularly checked, they are prone to failure.

Hydraulic hose failure can potentially lead to expensive downtime, safety concerns, and environmental threats.



Let's investigate the reasons behind hydraulic hose failures and examine proactive strategies to guarantee peak performance and safety within hydraulic systems.

Common Causes of Hydraulic Hose Failure:

1. Abrasion and Wear:

One of the leading causes of hydraulic hose failure is abrasion. Hoses operating in harsh environments, such as construction sites or mining operations, often come into contact with abrasive materials or rough surfaces, leading to the gradual deterioration of the hose cover. Over time, this abrasion weakens the hose's integrity, eventually leading to leaks or bursts.

Prevention: To prevent abrasion-related failures,

consider using protective sleeves or guards for hoses, made from materials like nylon or plastic. Routinely inspect hoses for signs of wear and replace them promptly if any damage is detected.

2. Excessive Pressure:

Operating hydraulic systems above their recommended pressure limits can cause hoses to fail catastrophically. High pressure can lead to hose ballooning, ruptures, or detachment from their fittings, endangering personnel and equipment.

Prevention: Ensure that the hydraulic system is designed and calibrated to operate within the recommended pressure range. Regularly inspect pressure gauges and relief valves to guarantee proper pressure regulation.

3. Incorrect Assembly and Installation:

Improper assembly and installation of hydraulic hoses can lead to leaks and hose blowouts. This includes using the wrong fittings, insufficiently tightening connections, or kinking the hoses during installation.

Prevention: Follow manufacturer guidelines and industry best practices for hose assembly and installation. Use compatible fittings and appropriate torque specifications. Provide adequate support and routing to avoid kinking or bending of hoses.

4. Fluid Compatibility:

Selecting the wrong hydraulic fluid or using incompatible fluids can cause chemical reactions that weaken the hose's inner tube or cover, leading to failure.

Prevention: Always use hydraulic fluids recommended by the equipment manufacturer. Store and handle fluids properly to prevent contamination or mixing of different fluids.

5. Age and Degradation:

Hydraulic hoses have a limited service life, and their materials degrade over time due to environmental factors like temperature fluctuations, UV exposure, and chemical exposure.

Prevention: Implement a proactive maintenance program that includes regular inspections and hose replacements based on age, service hours, or manufacturer recommendations.

Preventive Measures for Hydraulic Hose Failure:

1. Regular Inspections:

Implement a systematic inspection schedule to check hoses for signs of wear, abrasion, leaks, or any other damage. Early detection can help prevent catastrophic failures and reduce downtime.

2. Training and Education:

Ensure that all personnel handling hydraulic systems receive proper training on hose assembly, installation, and maintenance procedures. Knowledgeable employees are better equipped to identify potential issues and address them promptly.

3. Proper Routing and Support:

Carefully plan and route hydraulic hoses to avoid sharp bends, kinks, or entanglement with other components. Secure hoses with appropriate clamps and support to prevent excessive movement and wear.

4. Selecting High-Quality Hoses:

Invest in premium-quality hoses designed for specific applications and operating conditions. High-quality hoses are more durable, have better resistance to abrasion and chemicals, and ultimately result in longer service life and reduced failure risks.

In Review

Understanding the common causes of hydraulic hose failure and implementing preventive measures are essential to maintain efficient and safe hydraulic systems. By prioritizing regular inspections, proper installation, fluid compatibility, and training, businesses can significantly reduce downtime, enhance equipment reliability, and safeguard personnel and the environment.

Introducing the return of Aeroquip® premium hydraulic hoses!

Attention all industry professionals! Aeroquip's top-tier hydraulic hoses are BACK and better than ever before!

Looking for reliable, durable, and high-performance hydraulic hoses to power your machinery? Look no further! Aeroquip brings you premium quality hoses designed to withstand the toughest environments and deliver optimal performance.



Aeroquip® and Winner by Danfoss
Core hydraulic hose products catalog



Aeroquip
by Danfoss

Contact Danfoss regional sales teams at: FC-AP-SDM@danfoss.com

ENGINEERING
TOMORROW

Danfoss

Rajdhani Group inaugurates assembly manufacturing plants

Rajdhani Group, a prominent Udaipur-based hydraulic hose assembler, has taken a significant step towards expanding its operations with the inauguration of two cutting-edge assembly manufacturing facilities. Located in Ramagundam, Telangana, and Raniganj, Bengal, these facilities mark a strategic expansion to better serve the needs of diverse industries across India.



The newly inaugurated manufacturing facilities are equipped with state-of-the-art machinery dedicated to hose assembly production. This advanced equipment includes cutting-edge assembly making equipment, alongside robust testing and proof testing machines. This integration of technology ensures the highest standards of quality and reliability in every product manufactured.

One of the key highlights of these facilities is the emphasis on maintaining a sufficient stock of hose assemblies. This strategic decision is aimed at efficiently catering to the

demands of various sectors, including Original Equipment Manufacturers (OEMs), mining, steel plants, tunnels, cement, and infrastructure projects. By stocking an ample supply of hose assemblies, Rajdhani Group aims to enhance its responsiveness to customer needs, minimize lead times, and ensure uninterrupted supply to critical industries.



“The expansion of Rajdhani Group’s operations underscores its commitment to innovation, quality, and customer satisfaction. By leveraging cutting-edge technology and strategic location choices, the group aims to strengthen its position as a leading provider of hydraulic hose assemblies in India. Moreover, this expansion reflects the group’s proactive approach to meet the evolving needs of industries and contribute to the nation’s economic growth.” Informs Mr. Sourav Sikhwal, Managing Director of Rajdhani Group.

Aeroflex acquires 100% stake in Hyd-Air Engineering Pvt Ltd.

Aeroflex Industries Limited acquired 100% stake in Pune based Hyd-Air Engineering Private Limited.



Hyd-Air Engineering’s manufacturing facility is based out of MIDC Chakan, Pune with a land area of approx. 60,000 sq. ft, with a current built-up area of approx. 17,000 sq. ft. Additionally, there is potential for further expansion, available for future development with approx. 43,000 sq. ft. Aeroflex further plans to invest approx. Rs. 18 crores in Hyd - Air to increase the production capacity over the next 2-3 years.

Hyd-Air Engineering Private Limited is a manufacturer of products like Hydraulic Fittings, instrumentation fittings, Double Ferrule Fittings, Hose Clamps, SAE Flanges, Valves, Couplings etc.

“This acquisition is a crucial step in our journey of expansion and diversification. With Hyd-Air Engineering’s expertise and capabilities, we are well-positioned to deliver even more comprehensive solutions to our valued customers in Railways, Automotive, Energy & Power, Ship building and other heavy industries sectors” Informs Mr. Asad Daud, MD of Aeroflex Industries.

Jindal Stainless Announces ₹5,400 Crore Expansion Plans for Domestic and International Markets

Jindal Stainless, India’s largest stainless-steel manufacturer, has announced plans to invest ₹5,400 crore over the next three years, aiming for a significant capacity expansion both domestically and internationally. The company’s goal is to increase its annual production capacity by 40% to 4.2 million tonnes.



As part of the expansion, Jindal Stainless will invest ₹1,340 crore to acquire a 54% controlling stake in Chromeni Steels Pvt Ltd in Mundra, Gujarat. Additionally, Jindal Stainless

FCP Index Conducts Specialized Training for Mechanical Engineering Students at ICFAI University

In a bid to enhance the academic experience of mechanical engineering students, the FCP Index recently conducted a comprehensive three-week classroom teaching program at ICFAI University, Agartala, Tripura in the month of March/April 2024. The program, tailored for 7th-semester students, aimed to delve into the intricate aspects of Fluid Conveyance products and Hydraulics.



Mr. Ambarish Chatterjee, a seasoned expert in the field, took the helm in educating the students on various dimensions of Fluid Conveyance products. His insights and expertise provided the students with a deep understanding of this critical aspect of engineering.

Meanwhile, Mr. Sunil Hazarnis shared his profound knowledge

of basic and advanced Hydraulics, offering invaluable insights to the eager learners. His engaging sessions equipped the students with practical knowledge and real-world applications of hydraulic systems.

The program received widespread acclaim from both students and faculty members alike for its relevance and practical approach to learning. It not only enriched the academic curriculum but also provided a platform for students to interact with industry professionals, fostering a holistic learning environment.

Speaking on the occasion, Dr. P.K. Sinha, Principal, ITS, ICFAI University, expressed gratitude to the FCP Index for their initiative in enriching the educational experience of the students. He emphasized the importance of such collaborations in bridging the gap between academia and industry.

The successful culmination of the program stands as a testament to the commitment of both the FCP Index and ICFAI University in nurturing the next generation of mechanical engineers, poised to make significant contributions to the field.

Mini Excavators : New entrant in construction equipment segment

Backhoe loaders are the most popular type of construction equipment sold in India and the market scenario will remain like this in next few years. But there are signs that mini excavators, already so popular in more mature construction equipment markets like Western Europe, North America, Japan, and most recently China, are starting to gain in popularity, albeit gradually.

In 2018, they rose 29% year on year to 1,322 units but by 2023 that figure had more than doubled to 3000 units. While the mini Excavators, initially



proved to be popular for use in plantations in the southern part of the country, the growing scarcity of manual labour and the need for better productivity, combined with the confined nature of projects in urban and semi-urban environments, has driven demand.

Mini excavators remain a niche market in India, accounting only for around 3% of equipment sales currently. By comparison, in Europe they account for more than 40% of sales. Companies like JCB, Hyundai, Tata Hitachi, Bobcat etc are the major manufacturers of mini excavators.

will invest ₹700 crore in a joint venture with Zenith International Capital Pte Ltd, a Singapore-based company with ties to Eternal Tsingshan Group. This joint venture will establish a steel-melting shop in Indonesia, providing Jindal Stainless with a secure source of raw materials. The Indonesian facility is expected to

become operational within two years, with its products potentially being used at Jindal Stainless’ Jajpur facility in Odisha. An additional ₹1,900 crore will be invested in expanding the downstream facilities at Jajpur, while another ₹1,450 crore will be allocated for infrastructure enhancements, including road re-laying

COMMODITY INDEX

Months	Alloy Steel - Forging (20 MnCr5) Rs/Tonne	Alloy Steel - Forging (EN8) Rs/Tonne	Nickel US \$/ Tonne	Zinc US \$/ Tonne	Synthetic Rubber SBR	EPDM- Rs. Per Kg	Carbon Black- Rs. Per Kg
Apr-23	77000	76000	23756	2773	173	264	116
May-23	75500	74500	22229	2477	177	255	119
Jun-23	72800	71800	21193	2368	162	246	115
Jul-23	70500	69500	20862	2389	140	234	106
Aug-23	69000	68000	20548	2410	141	229	118
Sep-23	69400	68400	19629	2488	146	228	123
Oct-23	71000	70000	18275.7	2450	160.11	232.5	116.19
Nov-23	69250	68250	16894	2541	165.92	233.27	115.5
Dec-23	70600	69600	16388.7	2501.7	159.07	228.83	115.73
Jan-24	71000	70000	16091.4	2521.5	157.92	223.04	116.32
Feb-24	70750	69750	16307.6	2364.5	160.64	223.32	116.1
Mar-24	70400	69400	17432.8	2462.4	164.19	224.38	115.15

BACKHOE LOADERS SALES IN INDIA- 2024

Month	JCB	Excorts	Mahindra	Case	Tata Hitachi	Bull Machines	Bobcat	CAT	Manitou	ACE	Total 2024	Total 2023
Jan	4576	16	81	137	92	59	35	69	35	48	5148	4705
Feb	3610	57	86	133	117	31	54	108	39	35	4270	3938
Mar	4030	77	114	196	171	24	60	167	42	35	4916	4100

COMPACTORS SALES IN INDIA -2024

Month	Case	HAMM	Dynapac	JCB	L & T	Excorts	Volvo	AMMAN	Others	Total 2024	Total 2023
Jan	101	98	36	61	47	15	25	10	17	410	450
Feb	127	122	55	64	44	32	25	12	9	490	366
Mar	213	153	65	73	64	44	42	15	30	699	505

EXCAVATORS SALES IN INDIA- 2024

Month	Tata Hitachi	JCB	Hyundai	Sany	Kobelco	CAT	Komatsu	Volvo	Liugong	XCMG	CNH	Total 2024	Total 2023
Jan	614	561	680	510	166	123	140	82	32	207	8	3123	2658
Feb	661	557	531	405	169	130	169	76	36	229	6	2969	2505
Mar	819	580	537	514	232	156	186	97	142	209	6	3478	3159

TRACTORS SALES IN INDIA- 2024

Month	Mahindra Group	TAFE Group	Sonalika	Escorts Ltd	John Deere	New Holland	Kubota	Captain	VST	Others	2024	2023
Jan	36930	11003	11515	8185	5739	3501	1732	921	483	2436	82445	65635
Feb	31590	8307	9841	7449	5906	3016	1735	498	341	2577	71260	69034
Mar	24274	10878	8682	8054	5523	3062	1301	482	475	1022	63753	82450

Source : Industry Inputs



YUVRAJ
OVERSEAS PVT. LTD.



At Yuvraj Overseas Pvt Ltd, we take immense pride in being the industry's leading manufacturer of high-quality hydraulic hose-end fittings, adaptors, and customized cold-forged fittings. With a commitment to excellence, we specialize in producing a wide range of fittings, ranging from 1/8" ID to 4" in carbon steel. As a testament to our dedication to quality, we are proud to be an ISO 9001:2015 certified company and in process for IATF 16949:2016. What sets us apart is our complete in-house manufacturing process. From the initial processing of raw materials to the dispatch of finished goods, every step is carefully managed under our roof.










WHY US ?

- 30+ years of experience in the industry
- All fittings available in one-pc, two-pc and three-pc designs
- 100% Quality control with new parameters being added from time-to-time
- Testing and R&D facility in our manufacturing plant
- In-house cold-forging plant
- Direct & Indirect suppliers for various Global OEMs and Tier 1 customers
- In-house electroplating plant, with various options such as zinc and zinc/nickel



13, INDUSTRIAL AREA-C, KANGANWAL, LUDHIANA, PUNJAB, INDIA - 141010

✉ yuvrajoverseas@hotmail.com 🌐 www.yuvrajoverseas.com

Printed and Published by FCP Forum,
302 Pride Purple Square, Wakad, Pune 411057
+91 73506 51818 | +91 98229 12811