

Advantges of Al pipe over conventional MS/GI pipe for compressed air applications			
Parameters	Conventional Pipe	Instamod Airpipe - Al Pipe	Remarks
Type of flow	Turbulent resulting pressure drop	Laminar Flow - Reduces pressure drop	Less vibration in system in Al pipe network
Surface Finish	Uneven surface resulting to friction	Smooth surface finish - No friction	Internal Surface of corroded steel is 0.1 mm to 0.15 mm, wherer as Al pipe internal surface finishing is 0.015mm
Leakages	Leakages from joints, connections are normal	No leakage	A 6.4 mm orifice can results in 12 kw power loss resulting to a loss of INR 6,31,550 per year
Pressure Drop	Significant pressure drop resulting to extra load on compressor	Reduced or nominal pressure drop resulting to optimal performance of compressor	Compressor life & performance improves
Air Quality	Poor as due to corrosion rust particles mixed with air	Clean	Al pipe only can ensure clean air required for critical applications
Power Cost	Due to leakages & pressure drops more power is consumed to meet demand	Due to zero leakages & reduced pressure drop, optimal power is consumed	1 kg pressure drop increases load on compressor by 7%. Means for one 30 kw machine which is running 20 hrs per day & 320 days in a year, will consume electricity approx INR 1,07,520 Per year extra considering INR 8 Rs/ Unit
Rusting & Corrosion	Rusting is very common which results in blocking / choking of down stream components like , dryer, filters & other tools & critical equipments	No Corrosion	The loose particles which comes out flows along with the air & penetrate to the sophistacated machines parts & reduce the life or leads to break down
Guarantee / Warrantee	No Guarantee / Warrantee	10 years Guarantee from leakages	Typically every 3 years conventional pipes needs replacement / maintenance
Installation Time	Significant time & manpower goes into installations	Very less time required to install	For a typical lay out, Al pipe will take 405 less time than conventional pipes
Installation Cost	More	Less	Due to less manpower & procedural work.
Material Cost (payback time)	Less	Comparatively more	For a ideal layout, payback time is 1 to 1.5 years
Flexibility	Rigid & once installed can not be easily dismantled & refitted in diferent location or layout	Easy to dismantle & resused in different location or layout.	Modular design helps Al pipe to be re-usable
Color code	No standard color coding	Standard color codes are applicable	Blue for Air, Grey for inert gas etc.