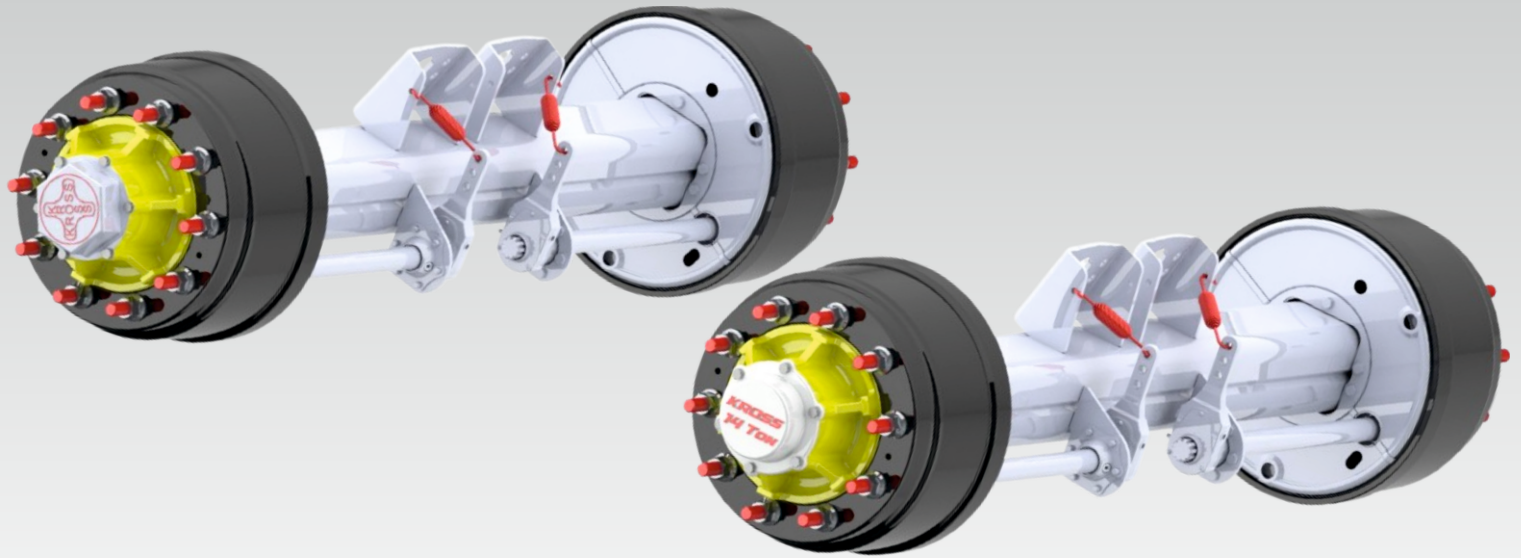




**TRAILER AXLES
TRAILER SUSPENSIONS
KING PIN**



TRAILER AXLE



Axle Capacity	Beam Size	Beam Manufacturing	Bearing Size Inboard	Bearing Size Outboard	Wheel Stud Size	Brake Size	Track Length
12 T	150 x 150 Sq 14mm thk	Welded	90 mm ID	65 mm ID	M22x105	420 x 180 mm	1850 / 1950
13 T	150 x 150 Sq 14mm thk	Welded	88.9 mm ID	88.9 mm ID	M22x105	420 x 180 mm	1850 / 1950
14 T	150 x 150 Sq 14mm thk	Seamless	88.9 mm ID	88.9 mm ID	M22x105	420 x 180 mm	1850 / 1950
15 T	150 x 150 Sq 16mm thk	Seamless	88.9 mm ID	88.9 mm ID	M22x105	420 x 180 mm	1850 / 1950
16 T	150 x 150 Sq 22mm thk	Welded	88.9 mm ID	88.9 mm ID	M24x105	420 x 180 mm	1850 / 1950
18 T	150 x 150 Sq 22mm thk	Welded	100 mm ID	88.9 mm ID	M24x105	420 x 180 mm	1850 / 1950
20 T	150 x 150 Sq 22mm thk	Welded	100 mm ID	88.9 mm ID	M24x105	420 x 220 mm	1850 / 1950

BUILT TO LAST

KROSS axles are designed and built to withstand the challenging Indian road and loading conditions. Our designs go through extensive simulation testing and are physically tested at our in-house test facility:

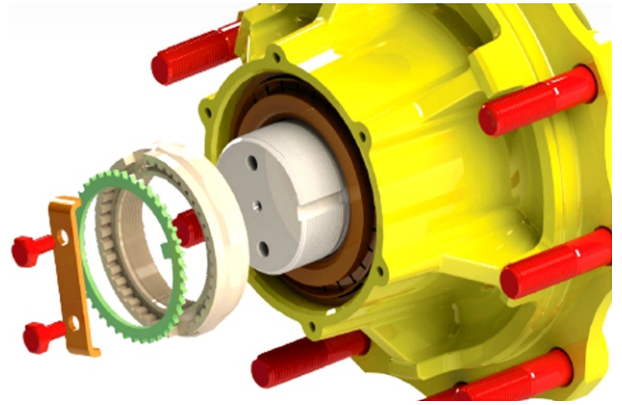
- Heavy Duty Tapered roller bearing for long service life
- Hardened and Ground Spindles
- Lithium Based high performance grease
- Seamless beam with 650 Mpa high tensile material for 14T and 15T axles



BEARING PRELOAD ADJUSTMENT (BPA) SYSTEM

KROSS axles use a unique Bearing Preload Adjustment (BPA) system on its wheel-end. Other axle manufacturers use conventional dial measurements or torque based measurements to tighten the wheel nut, reducing tire life and increasing maintenance cost of the axle. Our Unique BPA system has the following advantages:

- Improves Tire Life
- Increases bearing life
- Increases Wheel-Seal life
- Long Hub Greasing Life



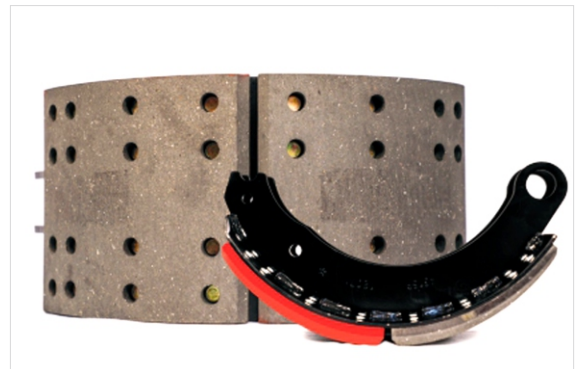
THREE-PIECE WHEEL- SEAL

Other axle manufacturers use radial seals that have a short service life and are prone to cuts and leakages. Our Three-piece Wheel- seal construction ensures a long Hub greasing life and that bearings will last longer giving our customers a low axle maintenance cost.

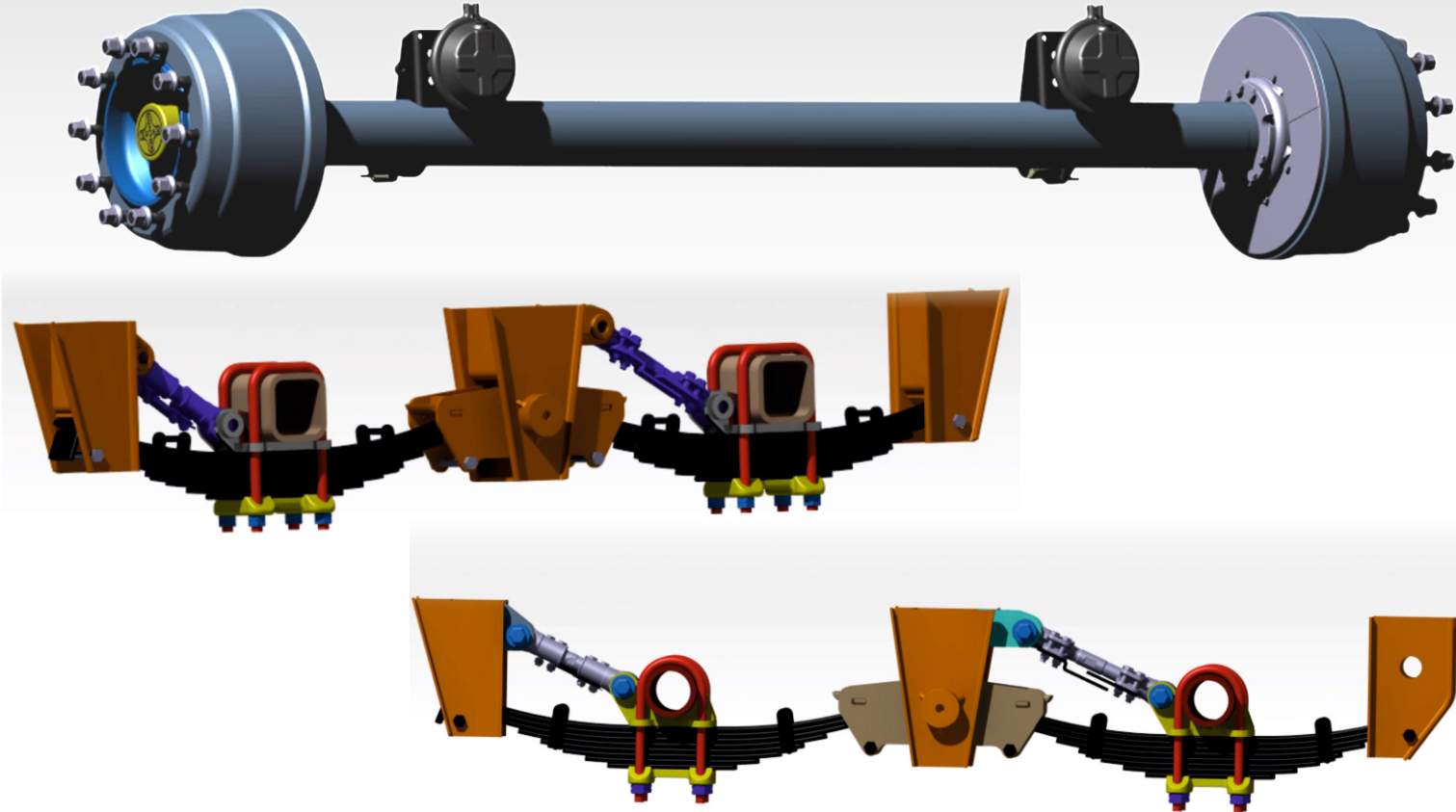
SUPERIOR QUALITY

For over 25 years KROSS has been known in the industry for maintaining the highest quality and manufacturing standards. We have taken our rich experience of manufacturing and are producing ALL MAJOR components of the axle, giving us complete control over quality.

- High pressure moulding line casting facility
- Upto 2500T mechanical press for forging
- Inhouse sheet metal processing plant



BIKE CARRIER & CAR CARRIER

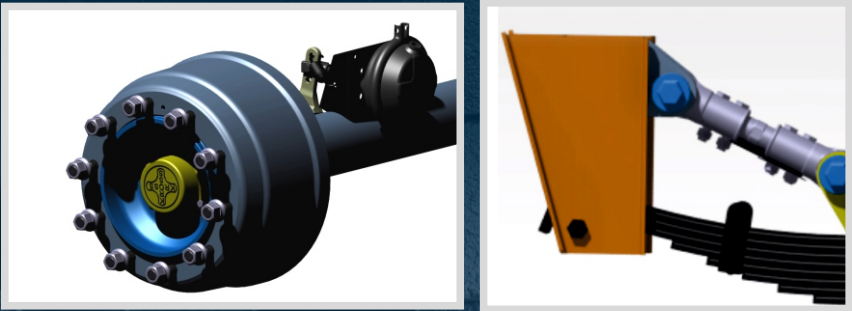


Axle Model	Beam Size	Beam Manufacturing	Bearing Size Inboard	Bearing Size Outboard	Wheel Stud Size	Brake Size	Track Length
Car Carrier	127 mm OD 19mm thk	Seamless	90 mm ID	65 mm ID	M22x105	420 x 180 mm	2400 mm
Bike Carrier	150 x 150 Sq 14mm thk	Welded	88.9 mm ID	88.9 mm ID	M22x105	420 x 180 mm	2050 mm

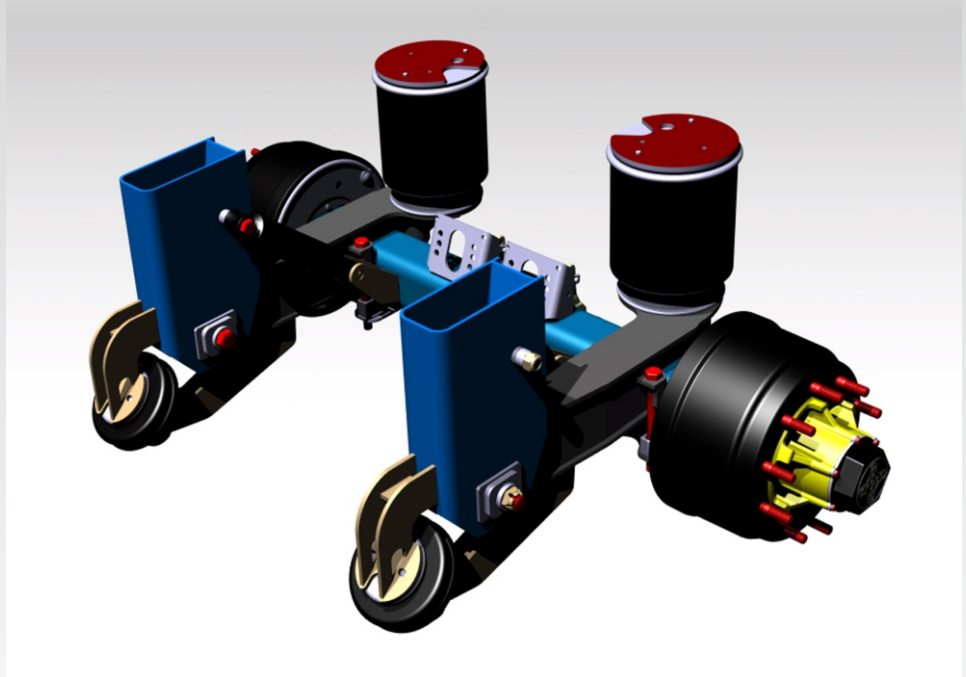
Suspension Model	Hanger Thickness	Equalizer Pin Size	Leaf Spring	Torque Arm Pins	Ride Height
Car & Bike Carrier	6 / 8 mm	53 mm OD	90 x 13 mm 9 Leaf (2 Main Leaf)	28 mm OD	210 mm

Key Features

- 90mm wide leaf spring
- 210mm ride height
- 20Mn2 grade seamless tube axle
- Axle available with auto-slack adjuster



AIR SUSPENSION



- »» **Durable & Strong**
- »» **Driver Comfort & Good Ride Quality**
- »» **Better Tire Life**
- »» **Higher Gross Vehicle Weight (GVW) allowed**

AIR BELLOWS

- 180 mm Air Spring Stroke
- Metal Pistons
- 100mm lift capacity

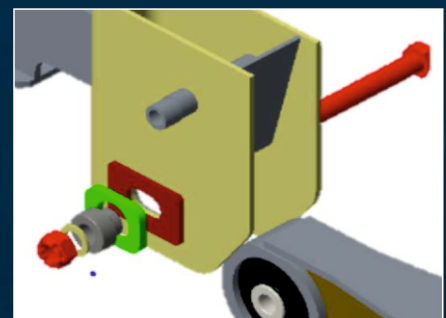


TRAILING ARMS

- Integrated trailing arm design for better stability
- Design is less prone to alignment issues
- Easy alignment procedure

ALIGNMENT LOCKING SYSTEM

- 20mm alignment adjustment
- Rigid alignment locking mechanism
- Removable bushes for alignment



HYDRAULIC TIPPING JACK



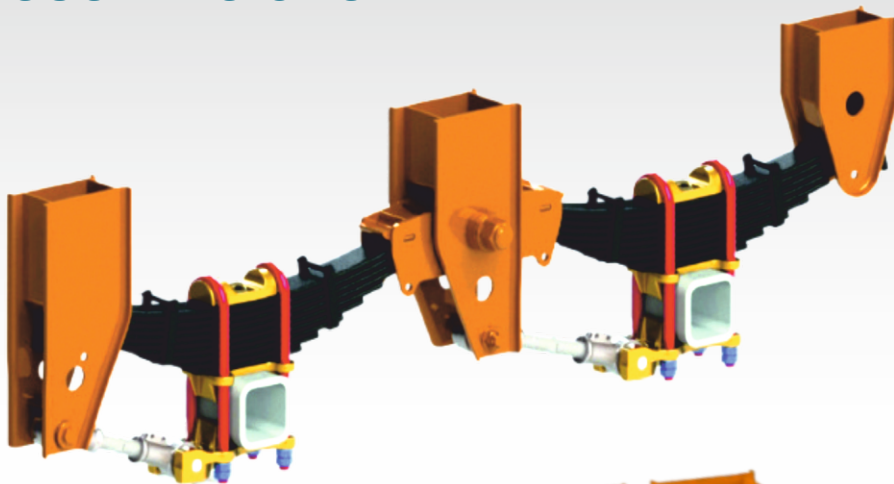
Tipping Jack Model	Stages (N)	Max. Tipping Load (Tons) @ 170 Bar	Max. Thrust 1st stage (Tons) @ 170 Bar	Closed Length (K) (mm)	Cylinder Stroke (mm)	Weight of Cylinder Only (kg)	Pump Flow Capacity (cc)	Oil Tank Size (Litres)
ET 176-4-4845	4	50	43	1529	4845	218	176/198	110
CT 176-4-4845	4	51	55	343	4845	287	176/198	110
ET 198-5-6050	5	50	43	1529	6050	280	176/198	158
CT 198-5-6050	5	51	55	343	6050	351	176/198	158

STRONGEST IN THE SEGMENT

- Skived & burnished tubes
- Seam welded tanks
- Rugged construction to withstand rough working condition
- Durable seals



MECHANICAL TRAILER SUSPENSIONS

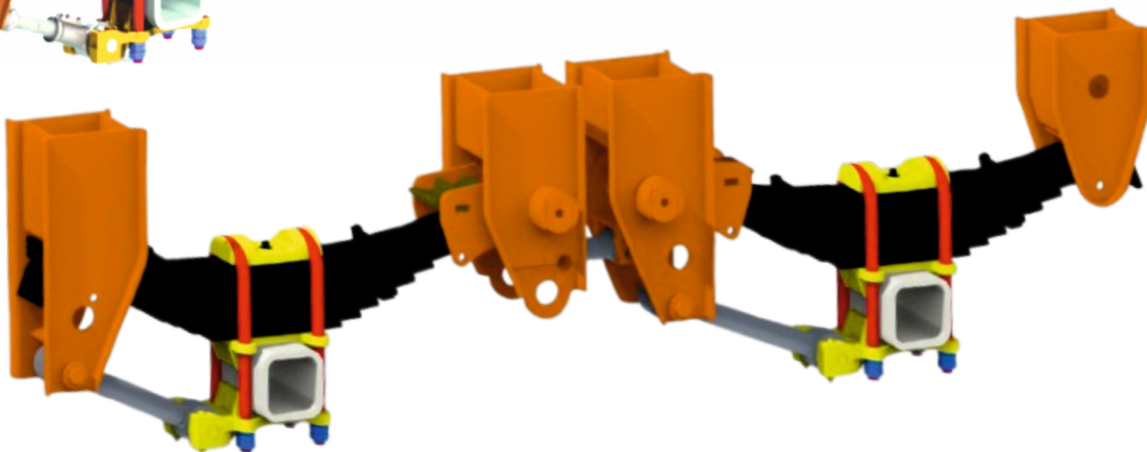


Wear resistant hardened wear pads

Hardened Pins for Long service life

Self Lubricating Bushes

Stronger & lighter Forged Brackets



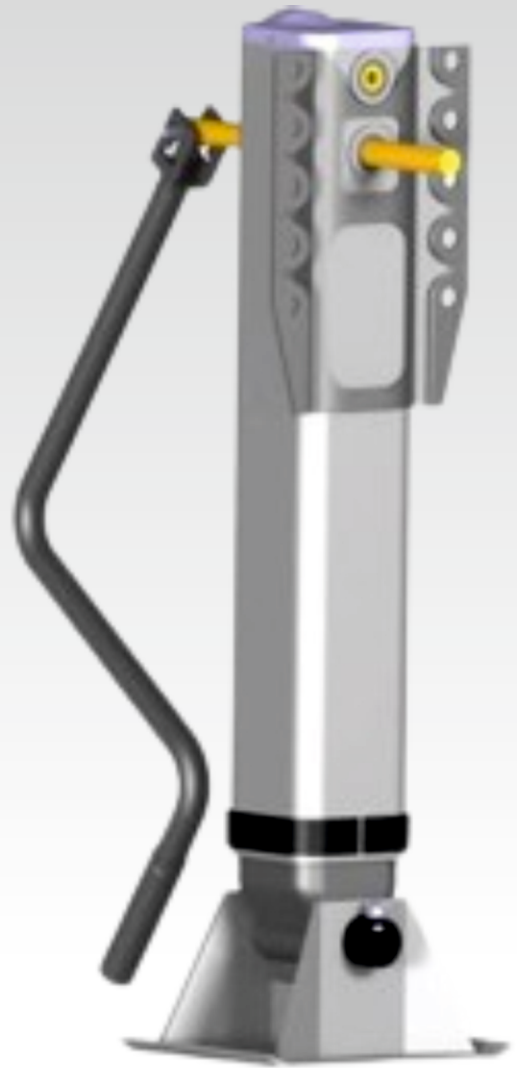
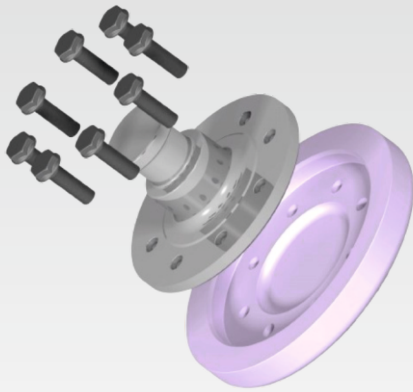
Model	13 Ton	14 Ton	16 Ton	16 Ton HD	18 Ton	20 Ton
Hanger Thickness	6mm / 8mm	6mm / 8mm	8mm / 10 mm	8mm / 10mm	8mm / 10mm	8mm / 10mm
Equalizer Pin Size	53mm OD	53mm OD	60mm OD	60mm OD	60mm OD	60mm OD
Leaf Spring Size	90mm x 16mm 8 Leaf (2 Main Leaf)	90mm x 16mm 8 Leaf (3 Main Leaf)	90mm x 16mm 9 Leaf (4 Main Leaf)	90mm x 16mm 10 Leaf (4 Main Leaf)	90mm x 16mm 11 Leaf (4 Main Leaf)	90mm x 18mm 11 Leaf (4 Main Leaf)
Torque Arm Pins	28mm OD	28mm OD	32mm OD	32mm OD	32mm OD	36mm OD

Forged Brackets

- Stronger & Lighter
- Superior raw material grade
- Superior weldability
- Long lasting



KING PIN & LANDING LEG

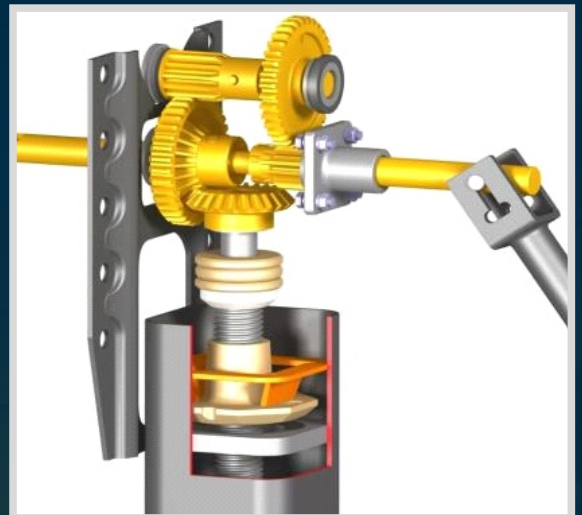


KING PIN

- Bolted and Welded type
- Material : EN 19
- Hardness: 36-39 HRC
- D rating: 162 KN
- Tested and verified by ARAI

LANDING GEAR

- Static Capacity: 52 Tons
- Lifting Capacity – 25 Tons
- Two speed Landing Gear
- Compact design with all gears housed inside the tube- protects against damage
- Case carburizing done on all gears
- 42mm diameter heavy duty lead screw



Single Piece Axle Beam



INDIA'S FIRST AND ONLY EXTRUSION MANUFACTURING PLANT FOR AXLES

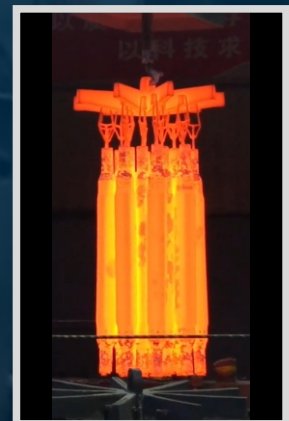
STRONGER

- Single pc axle beams are stronger than welded design
- Axle beam is heat treated to 260 BHN increasing durability
- Tensile strength greater than 650 Mpa
- Life time warranty on axle beam

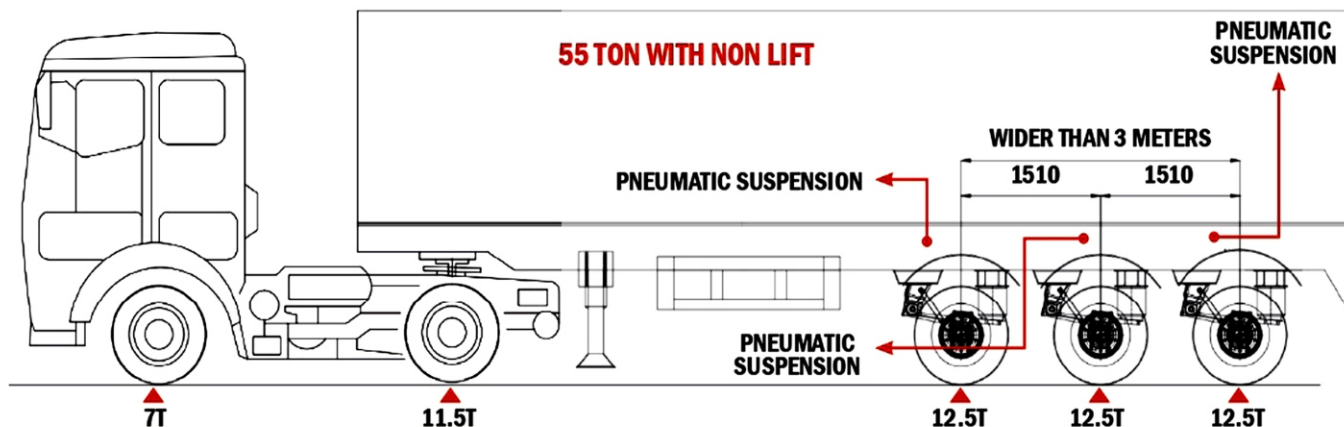
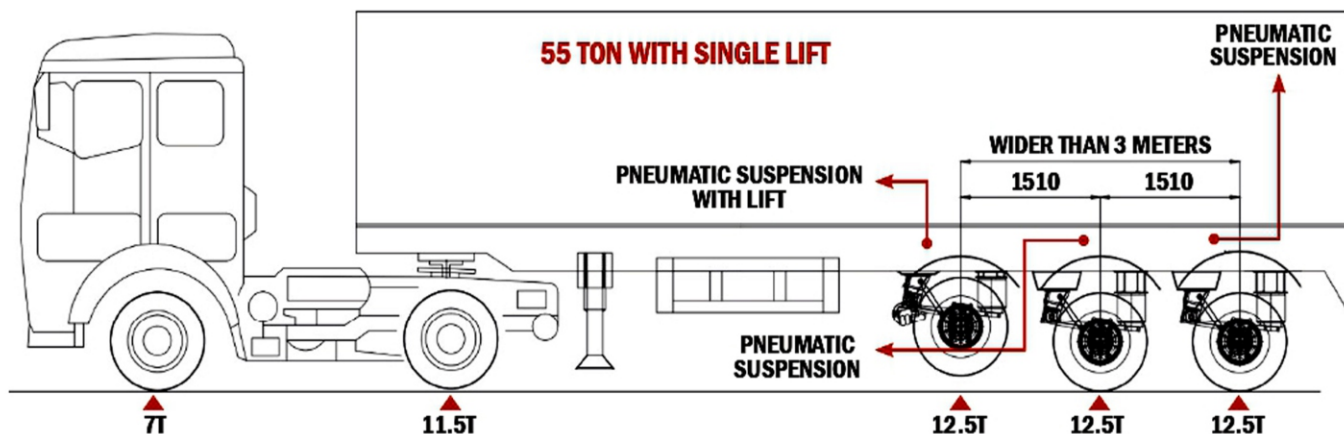


IMPROVE TIRE LIFE

- Stiffer than welded axles and less deflection
- Better straightness of axle
- Increased durability ensures axle maintains its shape throughout its life time

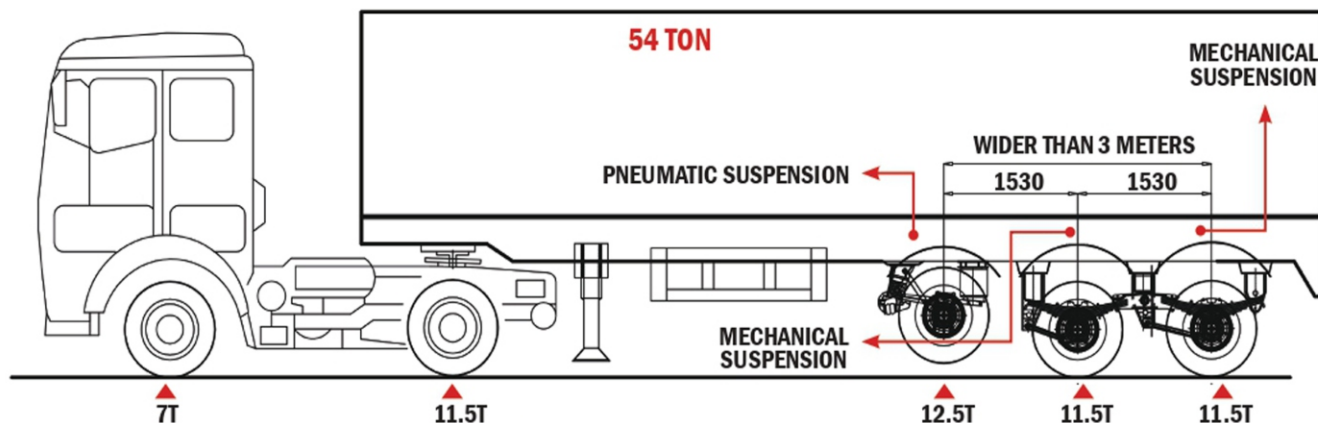


4X2 TRACTOR TRAILER CONFIGURATION WITH AIR SUSPENSION

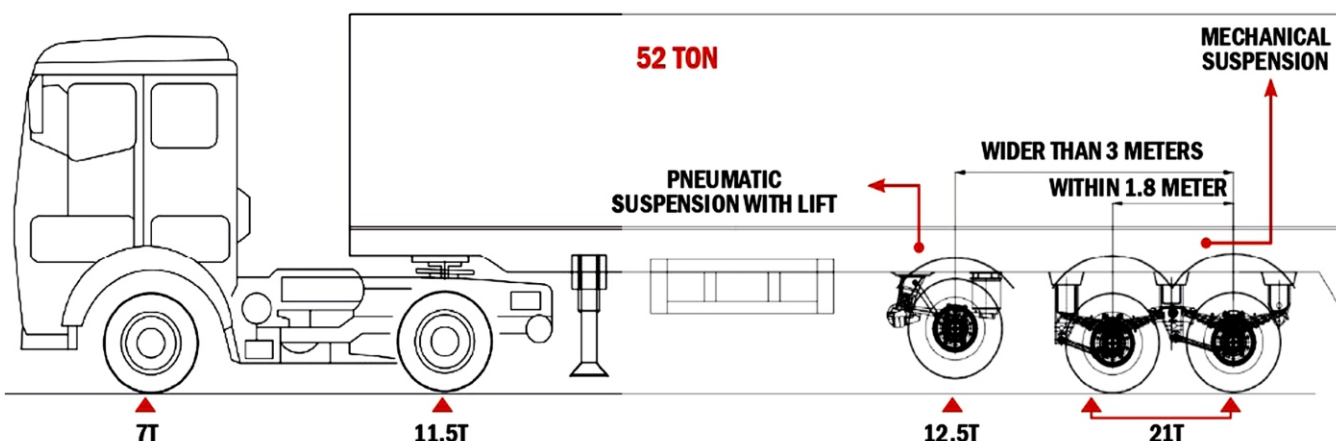


GVW TRACTOR = 7T + 11.5T = 18.5T GVW TRAILER = 12.5T + 12.5T + 12.5T = 37.5T
 TOTAL GCW = GVW TRACTOR + GVW TRAILER = 18.5T + 37.5T = 55TON*

* = Mathematically the GCW is 56 Ton, however maximum permissible GCW as per CMVR is 55 Ton



TOTAL GCW = GVW TRACTOR + GVW TRAILER = 18.5T + 35.5T = 54TON



GVW TRACTOR = 7T + 11.5T = 18.5T GVW TRAILER = 12.5T + 21T = 33.5T
 TOTAL GCW = GVW TRACTOR + GVW TRAILER = 18.5T + 33.5T = 52TON



ABOUT US

Established in the year 1994, Kross Limited is an acknowledged specialist in manufacturing components for the top OEMs and Tier 1 companies in India and abroad. An organization manned by qualified and highly skilled people with state-of-the-art manufacturing facilities, heat treatment and international levels of quality control, Kross Limited has a built up area of 270,000 sq ft and a strength of 800 employees.

We have used our 25 year experience in manufacturing and design to develop and manufacture a whole range of trailer parts that exceed our customer's expectation. From using the latest design and manufacturing software to validating all critical parts, Kross has excellence built into every product it makes.



OUR CUSTOMER



Our Service Network



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