



Manufacturing of DRY BULK TANKS

“DRY BULK TANKS”





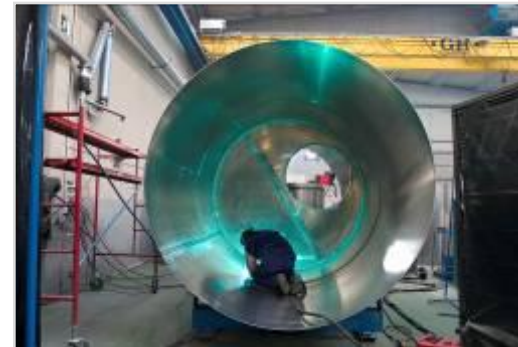
## Production Process



Partial view of the production process.



Shell manufacturing by means of a three-roller bending machine.



Assembly process, shell and central reinforcement welding.



## Production Process



On this turning gear, the different parts which shape the tank are welded together on the inside and outside.



Work post of front and rear welding of pre-assembled chassis, according to specifications under pulsed MIG welding process.



Work bench for welding of Tridem supports.



## Production Process



Parts from leading brands assembled in all our vehicles: BPW axles, MICHELIN and CONTINENTAL tyres, HALDEX and WABCO ABS, EBS brake systems, JOST / HAAKON landing legs, etc.



Chamber for surface preparation, degreasing, sanding, priming and painting.

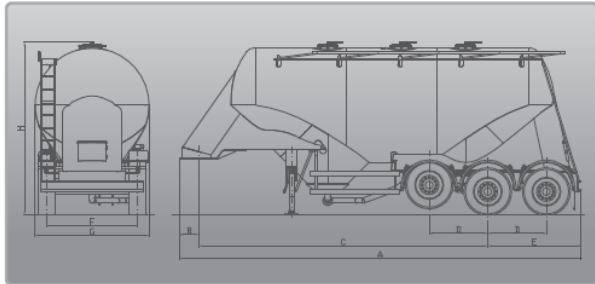


Assembly of electrical, suspension and brake systems of the tanker. After all the systems have been assembled, an overall operation audit is carried out.



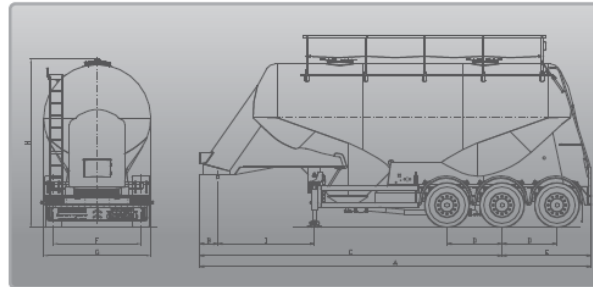
## Technical Characteristics

**CISTERNA (Baryval) CB/3AL-32-N**



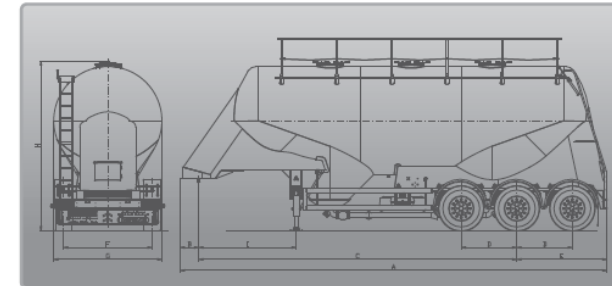
Total length (A) – Longueur totale (A) .....	8.990 mm.
Rear overhang (B) – Saillie antérieure (B).....	440 mm.
Distance 2nd axle and tank (E) – Distance 2e essieu fin citerne (E) .....	2.090 mm.
Distance king-pin to 2nd axle (C) – distance king-pin à 2e essieu (C) .....	6.460 mm.
Distance between 1st and 2nd axle(D) – Distance entre 1er et 2e axes (D) .....	1.310 mm.
Distance between 2nd and 3rd axle (D) – Distance entre 2e et 3e axes (D) .....	1.310 mm.
Height empty (H) – Hauteur à vide (D) .....	3.870 mm.
Maximum width (G) – Largeur maximale (G).....	2.550 mm.
Track (f) – Voie (F).....	2.040 mm.
Distance king-pin to supports (I) – Distance king-pin aux appuis(I) ..	2.060 mm.
Volume – Volume.....	32 m <sup>3</sup>
Tare (approx.) - Tare (approx.).....	4.200 Kg.
Tare on king-pin (approx.) – Tare sur king-pin (approx.) .....	980 Kg.
Tare on rolling carriage (approx.) – Tare sur train de roulement (approx.) ...	3.220 Kg.
M.M.A. – M.M.A.....	34.000 Kg.
Load on king-pin (approx.) – Charge sur king-pin (approx.).....	9.800 Kg.
M.T.M.A. on king-pin - M.T.M.A. sur king-pin.....	12.000 Kg.
Load on running gear (approx.) – Charge sur train de roulement (approx.) ..	20.000 Kg.
G.V.W.R. on running gear – M.T.M.A. sur train de roulement. ....	27.000 Kg.
Useful load – Charge utile. ....	29.800 Kg.
Tyres - Pneus.....	385/65 R22,5
Service pressure – Pression de service.....	2 Kg/cm <sup>2</sup>

**CISTERNA (Baryval) CB/3AL-36**



Total length (A) – Longueur totale (A) .....	9.330 mm.
Rear overhang (B) – Saillie antérieure (B).....	440 mm.
Distance 2nd axle and tank (E) – Distance 2e essieu fin citerne (E) .....	2.125 mm.
Distance king-pin to 2nd axle (C) – distance king-pin à 2e essieu (C) .....	6.765 mm.
Distance between 1st and 2nd axle(D) – Distance entre 1er et 2e axes (D) .....	1.310 mm.
Distance between 2nd and 3rd axle (D) – Distance entre 2e et 3e axes (D) .....	1.310 mm.
Height empty (H) – Hauteur à vide (D) .....	3.995 mm.
Maximum width (G) – Largeur maximale (G).....	2.550 mm.
Track (f) – Voie (F).....	2.140 mm.
Distance king-pin to supports (I) – Distance king-pin aux appuis(I) .....	2.300 mm.
Volume – Volume.....	36 m <sup>3</sup>
Tare (approx.) - Tare (approx.).....	4.400 Kg.
Tare on king-pin (approx.) – Tare sur king-pin (approx.) .....	990 Kg.
Tare on rolling carriage (approx.) – Tare sur train de roulement (approx.) ...	3.410 Kg.
M.M.A. – M.M.A.....	34.000 Kg.
Load on king-pin (approx.) – Charge sur king-pin (approx.).....	9.300 Kg.
M.T.M.A. on king-pin - M.T.M.A. sur king-pin.....	12.000 Kg.
Load on running gear (approx.) – Charge sur train de roulement (approx.) ..	20.300 Kg.
G.V.W.R. on running gear – M.T.M.A. sur train de roulement. ....	27.000 Kg.
Useful load – Charge utile. ....	29.600 Kg.
Tyres - Pneus.....	385/65 R22,5
Service pressure – Pression de service.....	2 Kg/cm <sup>2</sup>

**CISTERNA (Baryval) CB/3AL-38**



Total length (A) – Longueur totale (A) .....	10.065 mm.
Rear overhang (B) – Saillie antérieure (B).....	440 mm.
Distance 2nd axle and tank (E) – Distance 2e essieu fin citerne (E) .....	2.125 mm.
Distance king-pin to 2nd axle (C) – distance king-pin à 2e essieu (C) .....	7.500 mm.
Distance between 1st and 2nd axle(D) – Distance entre 1er et 2e axes (D) .....	1.310 mm.
Distance between 2nd and 3rd axle (D) – Distance entre 2e et 3e axes (D) .....	1.310 mm.
Height empty (H) – Hauteur à vide (D) .....	3.995 mm.
Maximum width (G) – Largeur maximale (G).....	2.550 mm.
Track (f) – Voie (F).....	2.140 mm.
Distance king-pin to supports (I) – Distance king-pin aux appuis(I) .....	2.300 mm.
Volume – Volume.....	38 m <sup>3</sup>
Tare (approx.) - Tare (approx.).....	4.600 Kg.
Tare on king-pin (approx.) – Tare sur king-pin (approx.) .....	950 Kg.
Tare on rolling carriage (approx.) – Tare sur train de roulement (approx.) ...	3.650 Kg.
M.M.A. – M.M.A.....	34.000 Kg.
Load on king-pin (approx.) – Charge sur king-pin (approx.)... ..	10.700 Kg.
M.T.M.A. on king-pin - M.T.M.A. sur king-pin.....	12.000 Kg.
Load on running gear (approx.) – Charge sur train de roulement (approx.) ..	23.300 Kg.
G.V.W.R. on running gear – M.T.M.A. sur train de roulement. ....	27.000 Kg.
Useful load – Charge utile. ....	29.400 Kg.
Tyres - Pneus.....	385/65 R22,5
Service pressure – Pression de service.....	2 Kg/cm <sup>2</sup>



## Advantages



### "Innovation, Quality & Service Worldwide"

- > **Safety: Latest technology.**
  - > **Experience.**
  - > **Tests carried out:**
    - > Finite element analysis.
    - > Stress tests.
    - > Fatigue tests.
- } *Very satisfactory results*
- > **Fast load times and quick exhaust of material.**
  - > **Great stability and manoeuvrability when loaded.**
    - > Excellent load distribution between axles and kingpin, thereby avoiding excessive load on certain parts of the tank.
    - > Low centre of gravity. Greater safety and stability during transport.
    - > Ease of operation. Easy access to all work areas.
  - > **It has easy accessibility** to work zones thanks to its design characteristics.
  - > **Includes components from leading international brands.**