# SBS Tanks®







MS SIRIM · IMESA · ASIB · steel Southern African Institute of Steel Construction · WISA Water Institute of Southern Africa · ISF · Proudly South African · SABS ISO 45001 · SABS ISO 9001

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# COMPANY OVERVIEW

The SBS® Group is a leading provider of innovative water storage tanks and solar energy solutions. The company was established in South Africa over 25 years ago, in September 1998, and now has offices across South Africa, in East Africa and the USA and an extensive dealer and distributor network in other regions across the globe.

Water storage reservoirs from SBS Tanks have been engineered, designed, and developed to harness and secure resources anywhere in the world and are compliant with the highest internationally recognised quality and safety standards. In addition to ISO 9001:2015 and ISO 45001:2018, SBS is also accredited with various industry bodies relevant to the regions and sectors we serve including MS SIRIM, ISF, NFPA 22 and ASIB.

With a staff complement of over 150 people, SBS is focused on delivering effective, custom designed water tank solutions to a wide range of sectors, employing professionals who have an in-depth understanding of the compliance requirements, international logistics and challenges faced.

## WHY CHOOSE SBS®?

- **Technologically advanced design:**
  Manufactured under ISO 9001:2015 standards, SBS® Tanks meet NFPA, AWWA, and other stringent industry regulations for fire protection, construction, water infrastructure, and industrial storage, ensuring durability, safety, and long-term reliability.
- **World-class production with international compliance:**
  Manufactured under ISO 9001:2015 standards, SBS® Tanks meet NFPA, AWWA, and other stringent industry regulations for fire protection, construction, water infrastructure, and industrial storage, ensuring durability, safety, and long-term reliability.
- **Expert engineering and project management:**
  Our in-house engineering team collaborates with leading industry experts to design customised, high-performance storage reservoirs. With over two decades of experience, SBS® Tanks' dedicated project managers and specialised installation teams ensure on-time delivery and flawless execution.
- **Professional accreditation and affiliations:**
  SBS® Tanks meet onerous Health & Safety standards in Oil & Gas, Mining, Fire, Agricultural and other Industrial sectors, demonstrating our capacity and ability to deliver certified, sector-specific solutions for demanding applications.
- **Long-term partnerships:**
  With 4,500+ global installations, SBS® Tanks is a trusted partner, fostering long-term relationships with clients, engineers, and municipalities to deliver quality, innovation, and performance.
- **Dedicated to employee development and transformation:**
  We aim to Work Smart, Commit Wholeheartedly and Build for Better in everything we do.

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# SBS® TANKS OVERVIEW

Water is needed for every process in business. Access to clean water and sanitation for all has become a global priority. However, water scarcity is a global concern. Climate change, population growth, the rising costs of water and rapid urban expansion have resulted in increased demand for alternative water supply solutions. Sustainable and responsible water consumption, rainwater harvesting, and the recycling of water need to become global business and community priorities.

SBS® Tanks offers a comprehensive range of water security solutions proven to be effective and reliable for use in the **Mining, Fire Protection, Municipal, Water Conservation and Commercial sectors.** The SBS Tanks water storage range includes the Standard, Cyclonic, Elevated Tank, Engineered Solution, and Lite ranges suitable for the storage of potable water, effluent, leachate, saltwater, and several other industrial liquids.

With over 25 years' experience, SBS® has become the preferred provider for sustainable water and liquid storage solutions across several sectors. We embrace innovation and as a result, we remain at the forefront of the water storage space, introducing and developing technologically advanced systems such as our Galvalume steel panel water reservoirs and tanks, liquid storage liners, time- and cost-effective on-site build and cyclone, earthquake and extreme weather resistant structures.

## PRODUCT FEATURES

The SBS® Tanks range offers capacities ranging from 12 000 litres to an impressive 4.2 million litres. The modular nature of the tank allows for quick installation, no matter how remote the site, with no heavy equipment and minimal site preparation required. In addition to an expected lifespan of 60+ years, SBS® provides an industry standard 12-month workmanship and materials guarantee. Liquids are stored in a multi-layer woven liner (PVC or NSF/ANSI 61 accredited), preventing contact with the tank structure, and further reducing corrosion risk factors. A conditional 20-year No-Leak guarantee is applicable provided that the tank is installed by an approved SBS® installation team.

SBS® Tanks have been developed in collaboration with skilled engineering professionals, adept at dealing with extreme weather and site access conditions. The Standard range has a wind rating of 43m/sec (154kph or 96mph) while the Cyclonic range is designed to withstand wind speeds of up to 67m/sec (240kph or 150mph), rated for regions with a high incidence of meteorological hazards. Any SBS water tank can be designed to suit earthquake zones and cyclonic regions experiencing tropical storms, hurricanes, typhoons and other high-velocity wind events. Roof sheets, trusses and body panels undergo stress-tests and seismic evaluation, and are adapted to meet the specific climatic conditions on site to ensure a durable and robust reservoir body and storage solution

## PRODUCT APPLICATIONS

| | |
|---|---|
| Fire Protection | - Fire sprinkler and hydrant water storage. |
| Commercial | - Emergency back-up water supply, wastewater collection, storage and processing and liquid and chemical storage. |
| Mining | - Water and liquid/chemical storage. |
| Municipal | - Bulk raw, seawater and potable water storage and effluent and wastewater treatment storage plants. |
| Water Conservation | - Rainwater harvesting and storage. |
| Agricultural | - Irrigation, aquaculture, process water and potable water storage |

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# HOW TO CHOOSE THE RIGHT TANK

## SBS Galvalume Steel Bolted Tanks vs. Concrete Reservoirs

## SBS GALVALUME TANK BENEFITS

**Rapid Installation:** ***Speed is King.*** Our modular design allows for quick on-site assembly, reducing project timelines and enabling immediate commissioning.

**Flexibility & Customisation:** ***Tailor-made Solutions.*** With various sizes and the ability to relocate and expand capacities for future growth, our tanks fit your specific needs when you need it.

**Durability & Longevity:** ***Built to Last.*** Enjoy up to 60+ years of service with minimal degradation, thanks to our durable construction.

**Lightweight & Eco-Friendly:** ***Portable & Eco,*** our tanks are designed for a better tomorrow.

**Low Maintenance & Superior Sanitation:** ***Save on upkeep*** while ensuring the purity of your water, thanks to our non-porous, contamination-resistant design.

**Remote site access:** ***Easy to transport*** to remote sites with no need for access roads.

**Cost-Effective:** ***Quicker ROI recovery.*** More cost-effective in terms of construction and maintenance.

## CONCRETE RESERVOIRS

**Slow to Install:** Time-consuming construction, with extended periods needed for pouring and curing.

**Limited Flexibility:** What you see is what you get. Fixed sizes and structures offer no room for adjustments.

**Prone to Damage:** Over time, the structure is compromised due to cracking and erosion

**Heavy & High Maintenance:** Difficult to transport and elevate and demanding in upkeep, leading to increased long-term costs.

**Contamination Risks:** The porous nature raises concerns for water quality, requiring vigilant monitoring.

**Limited site access:** Access road needed for mixers and trucks adding difficulty and extra logistics to installation.

**Expensive:** Longer ROI recovering. Higher initial construction costs and increased maintenance expenses.

# THE SHAPE OF EFFICIENCY

## Circular vs. Rectangular/Square Tanks

When it comes to storing liquids, the shape of the tank significantly impacts its efficiency and cost-effectiveness. Lucky, circular tanks stand out for their superior performance compared to square or rectangular tanks when comparing on factors such as strength, maintenance and cost-effectiveness.

### SBS Circular Tank Advantages

#### SEISMIC RESISTANCE

Dissipate seismic forces due to structure resulting in lower risk of damage in earthquake-prone regions.

#### MATERIAL EFFICIENCY & COST SAVINGS

Cost savings due to optimal use of materials and reduced waste. Less concrete needed for pre-engineered Ring Beam with reduced overall maintenance costs.

#### STRUCTURAL STRENGTH

Uniform distribution of load and pressures, providing enhanced structural strength. Liquid enclosed in an internal liner/bladder with no structural components in direct contact with water, thus reducing likelihood of corrosion.

#### EASE OF MAINTENANCE

Smooth and continuous surface allows for easy inspection and fewer hard-to-reach areas.

#### OPTIMAL WATER CIRCULATION

Reduced risk of water quality issues due to better circulation in round tank with an internal bladder.

### Regular Square Tank Downsides

#### COMPLEX MAINTENANCE

Difficult to inspect and maintain with challenging corners that potentially hide corrosion and damage.

#### INEFFICIENT WATER CIRCULATION

Stagnant corners lead to water stratification and quality concern with risk of contamination due to submerged steel components.

#### SEISMIC CONCERNS

Concentration of stress in corners increases vulnerability to seismic activity, requires additional reinforcement.

#### INCREASED COSTS

Longer ROI recovering higher initial construction costs for complex dwarf-walls and increased maintenance expenses overall.

#### STRUCTURAL WEAKNESSES

Stress concentration at corners, requiring thicker walls/additional materials. Structural panel tank steelwork is in direct contact with water which expedites corrosion and rusting.

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# SBS LIQUID STORAGE TANK DATA SHEET

| | Standard Range (ST) | Cyclonic Range (CY) | Lite Range (LT) |
|---|---|---|---|
| **WALL STRUCTURE**<br>Galvalume steel panels with thickness conforming to SANS 9364 and profiled to SBS Tanks unique design | 0,8 - 4,8mm (22-6 gauge) | 1.2 - 8.0mm (18-3 gauge) | 0,9mm (20 gauge) |
| **STEEL GRADE**<br>G300 Galvalume | X | X | X |
| **PROTECTIVE COATING**<br>Galvalume (Zinc/Aluminum Alloy), AZ150 heavy duty coating. Additional coatings available to meet varying environmental conditions and applications | X | X | X |
| **COLOUR RANGE**<br>Mill finish – silver, standard. All SBS Tanks can be supplied epoxy powder coated or painted with approved primers and paints. | X | X | X |
| **ESTIMATED LIFE**<br>60+ Years under normal climate and operational conditions | X | X | X |
| **LINER**<br>Multi-layer woven PVC liner. Tested to NSF/ANSI 61 (Potable water) specifications and AS/NZS 4020-2005 (Drinking water) standards. Ethylene-based chemical resistant liners available on request, for storage of various liquids. | PVC 720g, PVC 1000g, NSF61, XR5 | PVC 720g, PVC 1000g, NSF61, XR5 | PVC 720g |
| **BOLT SPECIFICATIONS**<br>Proprietary SBS® bolt design M10 (7/16") & M12 (1/2") with serrated flange head. Hot dipped galvanized to SANS 121:201150 & ISO 1461:2022 standards. All bolts are high tensile 8.8 grade. Bolt test certifications available on request. | X | X | X |
| **DOME ROOF**<br>Galvalume steel corrugated sheets. G550 high tensile grade with AZ150 coating. All trusses are hot dipped galvanized after fabrication. Clear span self-supporting roof with no center post. | 0.47mm (26 gauge) | 0.47mm (26 gauge) | 0.47mm (26 gauge) |
| **OUTLETS/INLETS**<br>All fittings/nozzles are manufactured from mild steel and hot dipped galvanized to SANS 121:201150 & ISO 1461:2022 standards after fabrication. Stainless steel and HDPE fittings are available on request. | X | X | X |
| **GUARANTEE**<br>SBS Tanks® carry an industry standard 12-month workmanship and materials guarantee and a 10-year non-leak warranty is applicable, provided that the tank is installed by an approved SBS® installer. | Conditional 10 year no-leak. 12 month workmanship guarantee. | Conditional 10 year no-leak. 12 month workmanship guarantee. | N/A due to DIY nature |
| **WEATHER, WIND & SEISMIC SPECIFICATION**<br>SBS Tanks are designed and suited for regions with varying incidence of meteorological hazards. With standard wind ratings across our ranges, our SBS Tanks® can be individually designed to suit earthquake zones, cyclonic regions, heavy industrial or highly specialised environments. | Wind rating 154km/h (96mph) Seismic Capabilities | Wind rating 240km/h (150mph) Seismic Capabilities | Average regional wind speed |
| **MANUFACTURING TIME**<br>Standard range, ex-stock, immediately available. Nonstock items typically 4-8 weeks ex-factory, quantity, and model dependent. | X | X | X |
| **DELIVERY TIME**<br>Typically, 6-8 weeks, ex-factory. Sea freight times vary based on port & carrier capacity | X | X | X |
| **INSTALLATION TIME**<br>Typically – 1-day ST05/02, 20kl (on site work)<br>3 days ST18/02, 253kl (on site work)<br>20-22 days ST35/09, 4212kl (on site work) | X | X | Quicker |
| **SITE PREPARATION**<br>Level site capable of supporting 100 kPa with sand bed or concrete ring beam as required. Site preparations to be arranged by client in accordance with engineers' recommendations prior to installation of SBS Tanks. | Concrete Ring Beam | Concrete Ring Beam | Compacted Sand Bed/Concrete Ring Beam |

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# LINER SPEC DATA SHEET

## SBS POTABLE LINER Data Sheet AS/NZS4020 approved

**DESCRIPTION** Potable water liner/bladder consisting of high-density polyester yarn coated on both sides with PVC.

**MANUFACTURING** The potable liner fabric is manufactured for SBS Tanks in an ISO 9001:2015 certified facility.

**APPROVALS** Approved by the Australian water quality centre standard AS/NZS 4020-2005: Testing of products for use in contact with Drinking Water

**END USE** As an internal liner/bladder for sole use with SBS Tanks

| TEST | METHOD | UNIT | WARP | WEFT |
|---|---|---|---|---|
| Tensile strength | SANS 1421: 1998 | N/50mmm | 2500 | 2200 |
| Tear strength | ISO 4674-1 : 2016 Method B | N | 300 | 250 |
| Weld Adhesion | ISO 2411: 2017 | N/25mm | 40 | |
| Flame Retardancy | SANS 1287-1: 2007 | s | NA | |
| Electrical Resistance | SANS 5880: 2008 | MΩ | NA | |
| Fusion | 5min in Acetone | | No flaking | |

## SBS POTABLE LINER Data Sheet – NSF/ANSI 61

**DESCRIPTION** Potable water liner/bladder consisting of high-density polyester yarn coated on both sides with PVC.

**MANUFACTURING** The potable liner fabric is manufactured for SBS Tanks in an ISO 9001:2015 certified facility.

**APPROVALS** Approved by NSF/ANSI 61 (Potable water)

**END USE** As an internal liner/bladder for sole use with SBS Tanks

| PROPERTIES | | |
|---|---|---|
| TEST & METHOD | ENGLISH | METRIC |
| Base Fabric | Polyester 1,000 Den 5.9 [Oz/yd$^2$] | Polyester 1,100 Dtx 200 [gr/m] |
| Total Weight ASTDM D 751 | 21.8 [Oz/yd$^2$] | 740 [gr/m$^2$] |
| Breaking Strength – Strip ASTM D 751 method B | 315 / 315 [lbs/inch] | 2800 / 2800 [N/5 cm] |
| Breaking Strength – Grab ASTM D 751 method A | 440 / 400 [lbs] | 2000 / 2000 [N] |
| Tear Strength – Single Rip ASTM D 751 method B, DIN 53356 | 70 / 45 [lbs] | 300 / 300 [N] |
| Tear Strength – Double Rip ISO 4674 | 130 / 120 [lbs] | 600 / 550 [N] |
| Tear Strength – Trapez DIN 53363 | 55 / 55 [lbs] | 250 / 250 [N] |
| Adhesion (HF Welding) ASTM D 751 | 13.5 / 13.5 [lbs/inch] | 120 / 120 [N/5 cm] |
| Blocking Resistance Fed. St. 191-5872, 6 hrs @ 70°C | #1 | |
| Seam Strength, ASTM D 751 Procedure B, 2" overlap seam (1" width seam) | Break outside seam | |
| Heat Resistance | Up to 158°F | Up to 70°C |
| Cold Bend ASTM D2136 | | |
| Abrasion (Tabler) ASTM D 3389 Weight loss (H-22, 1,000 gr) | <250 [mg/1000 cycles] | |
| Weathering – 7,500 hours ASTM G 154 UVA 8 hrs, 60°C, 4 hrs. cond. 50°C | Very slight color change | |

# SBS POWDER COATING DATA SHEET

The Ferro Vedoc, is a series of polyester based powder coatings designed for the exterior environment, offering excellent light and weather resistance. This superior UV resistant coating is ideally suited where colour retention on surfaces exposed to continuous heat is required.

| PROPERTIES | TEST & METHOD | GLOSS | SATIN | MATT |
|---|---|---|---|---|
| Qualicoat | | P-1251 | - | P-1398 |
| Gloss 60 | SANS 2813 | 80 – 95 | 40 – 75 | 15 – 30 |
| Thickness | SANS 2808 | 60 – 80 µm | 60 – 80 µm | 60 – 80 µm |
| Adhesion | SANS 2409 | Coefficient rating of 0 | | |
| Indentation resistance | ISO 2815 | Minimum 80 | | |
| Erishsen cupping | ISO 1520 | No cracking or detachment at 5mm indentation | | |
| Flexibility | SANS 177 | No cracking or detachment at 5mm indentation | | |
| Reverse Impact | ASTM D 2794 | 2.5Nm | 2.5Nm | 2.5Nm |
| Permeability of coating | | No blistering or detachment of the coating | | |
| Resistance to atmospheres containing Sulphur dioxide | ISO 3231 | No blistering and corrosion creep < 1mm | | |
| Resistance to acetic acid salt fog | SANS 9227 | No blistering and delamination and corrosion creep < 4mm | | |
| Resistance to accelerated corrosion | | Maximum creep < 0.5mm on either side | | |
| Resistance to artificial weathering | ISO 11341 | Residual gloss > 50% of the original | | |
| Resistance to drilling and cutting | | No cracking or chipping of the coating | | |

## STANDARD POWDER COATING COLOUR OPTIONS

Our SBS tanks can come in a variety of colours to match existing infrastructure and the surrounding environment.

**Please Note:**
Colour represented may vary slightly to those depicted in the swatches below
Nonstandard colours: Lead times may vary due to colour development and availability of raw materials.

| | |
|---|---|
| Sea Spray | Chalk |
| Thunderstorm | Rain Forest |
| Savannah | Desert Sand |
| Island Sky | Deep Ocean |
| Rain Cloud | Slate |
| Sunset | Rustic Bark |

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# GROSS CAPACITY CHART (KL)

| MODEL | DIAMETER (m) | NUMBER OF RINGS AND WALL HEIGHTS (m) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | 2.14 | 3.17 | 4.20 | 5.24 | 6.28 | 7.31 | 8.34 | 9.39 | 10.41 | 11.45 |
| ST04 | 2.73 | 12 | | | | | | | | | |
| ST05 | 3.41 | 20 | 29 | 38 | 48 | 57 | | | | | |
| ST06 | 4.09 | 28 | 42 | 55 | 68 | 82 | 96 | | | | |
| ST07 | 4.78 | 38 | 57 | 75 | 94 | 112 | 131 | | | | |
| ST08 | 5.46 | 50 | 74 | 98 | 123 | 147 | 171 | 196 | | | |
| ST09 | 6.14 | 63 | 94 | 125 | 155 | 186 | 217 | 247 | | | |
| ST10 | 6.82 | 78 | 116 | 154 | 192 | 230 | 267 | 305 | 343 | 380 | 418 |
| ST11 | 7.51 | 94 | 140 | 186 | 232 | 278 | 324 | 369 | 416 | 461 | 507 |
| ST12 | 8.19 | 112 | 167 | 221 | 276 | 331 | 385 | 440 | 495 | 549 | 603 |
| ST13 | 8.87 | 132 | 196 | 260 | 324 | 388 | 452 | 516 | 580 | 644 | 708 |
| ST14 | 9.55 | 153 | 227 | 301 | 376 | 450 | 524 | 598 | 673 | 746 | 820 |
| ST15 | 10.24 | 176 | 261 | 346 | 431 | 516 | 602 | 687 | 773 | 858 | 943 |
| ST16 | 10.92 | 200 | 297 | 394 | 491 | 588 | 685 | 781 | 879 | 974 | 1,070 |
| ST17 | 11.60 | 226 | 335 | 445 | 554 | 663 | 773 | 882 | 993 | | |
| ST18 | 12.28 | 253 | 376 | 498 | 621 | 744 | 866 | 989 | 1,113 | | |
| ST19 | 12.97 | 282 | 419 | 555 | 692 | 829 | 965 | 1,102 | 1,240 | | |
| ST20 | 13.65 | 312 | 464 | 615 | 767 | 918 | 1,070 | 1,221 | 1,374 | | |
| ST21 | 14.33 | 344 | 511 | 678 | 845 | 1,012 | 1,179 | 1,346 | 1,515 | | |
| ST22 | 15.01 | 378 | 561 | 744 | 928 | 1,111 | 1,294 | 1,477 | 1,662 | | |
| ST23 | 15.70 | 413 | 613 | 814 | 1,014 | 1,214 | 1,415 | 1,615 | 1,817 | | |
| ST24 | 16.38 | 450 | 668 | 886 | 1,104 | 1,322 | 1,540 | 1,758 | 1,978 | | |
| ST25 | 17.06 | 488 | 725 | 961 | 1,198 | 1,435 | 1,671 | 1,908 | 2,147 | | |
| ST26 | 17.74 | 528 | 784 | 1,040 | 1,296 | 1,552 | 1,808 | 2,064 | 2,322 | | |
| ST27 | 18.43 | 569 | 845 | 1,121 | 1,397 | 1,673 | 1,949 | 2,225 | 2,504 | | |
| ST28 | 19.11 | 612 | 909 | 1,206 | 1,503 | 1,800 | 2,096 | 2,393 | 2,693 | | |
| ST29 | 19.79 | 657 | 975 | 1,294 | 1,612 | 1,930 | 2,249 | 2,567 | 2,889 | | |
| ST30 | 20.47 | 703 | 1,044 | 1,384 | 1,725 | 2,066 | 2,407 | 2,747 | 3,091 | | |
| ST31 | 21.16 | 751 | 1,114 | 1,478 | 1,842 | 2,206 | 2,570 | 2,934 | 3,301 | | |
| ST32 | 21.84 | 802 | 1,189 | 1,575 | 1,965 | 2,355 | 2,741 | 3,131 | 3,521 | | |
| ST33 | 22.53 | 853 | 1,264 | 1,675 | 2,089 | 2,504 | 2,915 | 3,329 | 3,744 | | |
| ST34 | 23.21 | 906 | 1,342 | 1,778 | 2,218 | 2,658 | 3,094 | 3,534 | 3,974 | | |
| ST35 | 23.89 | 960 | 1,422 | 1,884 | 2,350 | 2,817 | 3,279 | 3,745 | 4,212 | | |

ST & CY Range | ST Range Only | ES Range Only* | ET Range**

***Engineered Solution (ES)**
These tanks will require additional site information, and geotechnical studies and will be subject to final pricing and design confirmation.

****Elevated Tanks (ET)**
These tanks can be placed on an Elevated stand at either 6m,10m or 15m.

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# SBS TANKS LITE RANGE (LT RANGE)

The SBS Lite Range offers a high quality, value for money water storage tank with larger capacities and longer life span than plastic tanks along with a simple DIY installation.

These attractive and functional products are best suited for installation in agricultural & rainwater harvesting installations at small holdings, rural homes, nurseries, farms, and small businesses. SBS LT range is available ex-works (factory) DIY for tradesmen or assisted installation.

| TANK CAPACITY (kl) | | | | |
|---|---|---|---|---|
| MODEL | DIAMETER (m) | RINGS AND WALL HEIGHTS (m) | | Nozzle sizes |
| | | 2 2.03 | 3 2.95 | |
| LT03 | 2.05 | 7 | 10 | 50NB or 80NB |
| LT04 | 2.73 | 12 | 17 | |
| LT05 | 3.41 | 19 | 27 | |
| LT06 | 4.1 | 27 | 39 | |
| LT07 | 4.78 | 36 | 53 | |
| LT08 | 5.46 | 47 | 69 | |
| LT09 | 6.14 | 60 | 87 | 50NB, 80NB or 100NB |
| LT10 | 6.83 | 74 | 108 | |
| LT11 | 7.51 | 90 | 130 | |
| LT12 | 8.19 | 107 | 155 | |
| LT13 | 8.88 | 125 | 182 | |
| LT14 | 9.56 | 145 | 211 | 50NB, 80NB, 100NB or 150NB |
| LT15 | 10.24 | 167 | 243 | |
| LT16 | 10.92 | 190 | 276 | |
| LT17 | 11.61 | 214 | 312 | |
| LT18 | 12.29 | 240 | 349 | |

| TANK MASS (kgs) | | |
|---|---|---|
| MODEL | RINGS AND WALL | |
| | 2 | 3 |
| LT03 | 189 | 254 |
| LT04 | 259 | 346 |
| LT05 | 334 | 442 |
| LT06 | 423 | 552 |
| LT07 | 507 | 658 |
| LT08 | 622 | 795 |
| LT09 | 720 | 914 |
| LT10 | 837 | 1,053 |
| LT11 | 999 | 1,237 |
| LT12 | 1,168 | 1,428 |
| LT13 | 1,271 | 1,553 |
| LT14 | 1,390 | 1,693 |
| LT15 | 1,519 | 1,904 |
| LT16 | 1,685 | 2,095 |
| LT17 | 1,821 | 2,257 |
| LT18 | 1,970 | 2,431 |

**Accessory Kit**
1 x Inlet, 1 x Outlet, 1 x Over flow, Tank access hatch with hook-on ladder and a Water Level Indicator.

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**06-SLA_EC_05.05.2025** 05.05.2025

SBS Corporate Services (Pty) Ltd

P O Box 20795

DURBAN NORTH 4016

Att. : Mr Brendon Wortman, Engineering Manager, SBS Tanks

**RE: STRUCTURAL CERTIFICATION LETTER:**

We confirm that SBS Corporate Services (Pty) Ltd have supplied to us all the relevant documentation for the following tank range and variants thereof: -

1. STANDARD TANK RANGE 'ST' ST04 TO ST35
2. CYCLONIC RANGE CY04-CY31
3. ELEVATED TANK RANGE, 3 RINGS HIGH - ET05/07/10/12/14 in 3 height variants 6, 10 & 15m
4. ENGINEERED SOLUTION TANK RANGE "ES"

- VPE Engineering Services have reviewed the manufacturing documentation, previous operational records, and have completed an independent structural design assessments as required to Sound Engineering Practice and, as applicable, South African National Standards: -

- SANS 10160 – Basis of Structural Design & Actions for Buildings and Industrial Structures
- SANS 10162 – Structural Steelwork
- SANS 121 – Hot Dip Galvanized Coatings

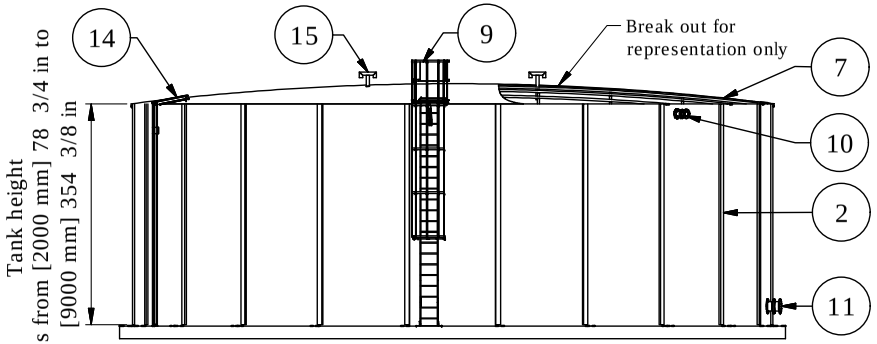
The certification is limited to tanks complying with the following: -
- Installation in accordance with the methods prescribed by SBS Corporate Services undertaken by competent personnel.
- Installation is limited to sites or locations which are within the environmental design limitations for wind and seismic.
- Engineered Solution tanks "ES" range and installation of single or multiple tanks on any site which may have any influence on the surrounding structures may require a review of the installation in line with national regulations.
- Foundations are to be prepared in accordance with the instructions of the approved Civil Engineering drawings.

Certification for installation of a tank other than in normal South African conditions is subject to additional and specific check design calculations for the individual location and conditions.

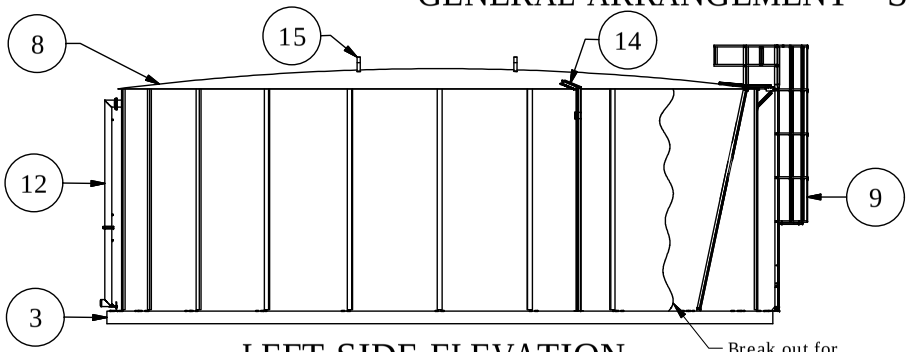
**Michael Georgiadis**

**Pr. Eng. ECSA # 20090060**

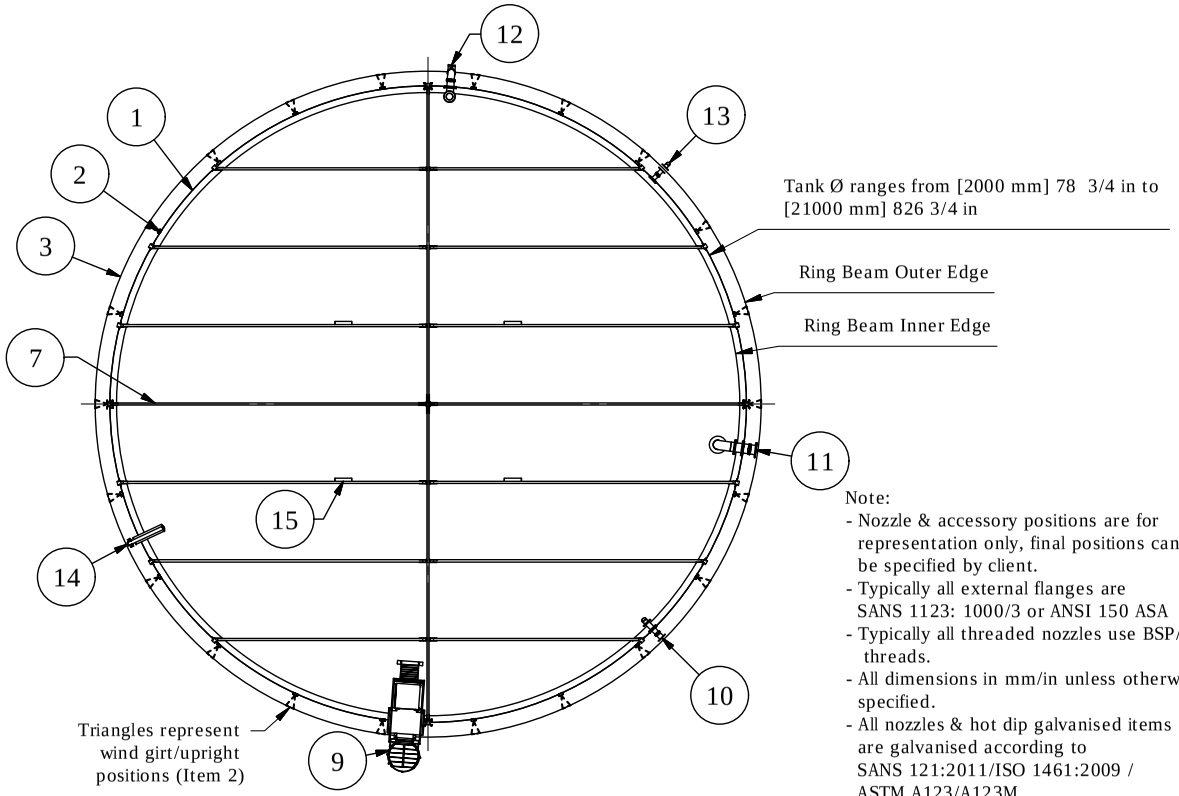
# GENERAL ARRANGEMENT - SBS TANK




FRONT ELEVATION




LEFT SIDE ELEVATION

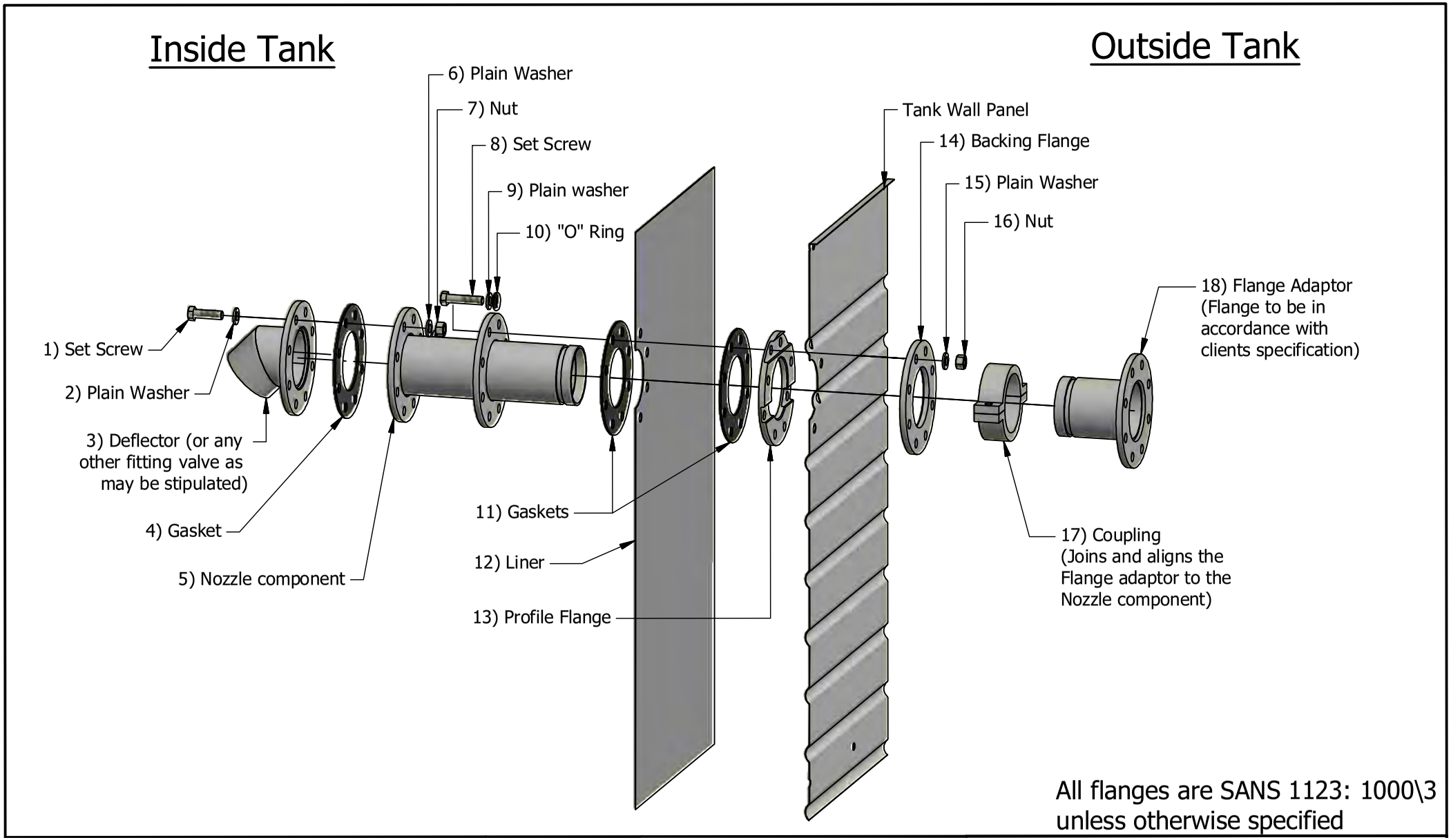


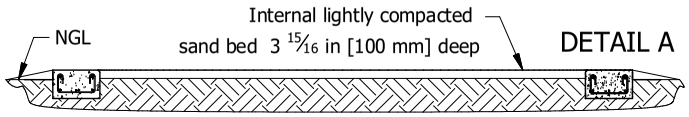

PLAN VIEW

Note:
- Nozzle & accessory positions are for representation only, final positions can be specified by client.
- Typically all external flanges are SANS 1123: 1000/3 or ANSI 150 ASA
- Typically all threaded nozzles use BSP/NPT threads.
- All dimensions in mm/in unless otherwise specified.
- All nozzles & hot dip galvanised items are galvanised according to SANS 121:2011/ISO 1461:2009 / ASTM A123/A123M.
- Drawing not to scale.

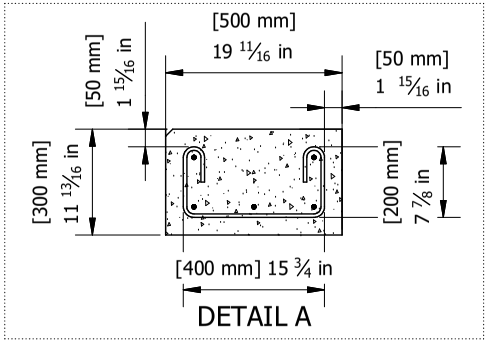
TANK & ACCESSORIES PARTS LIST

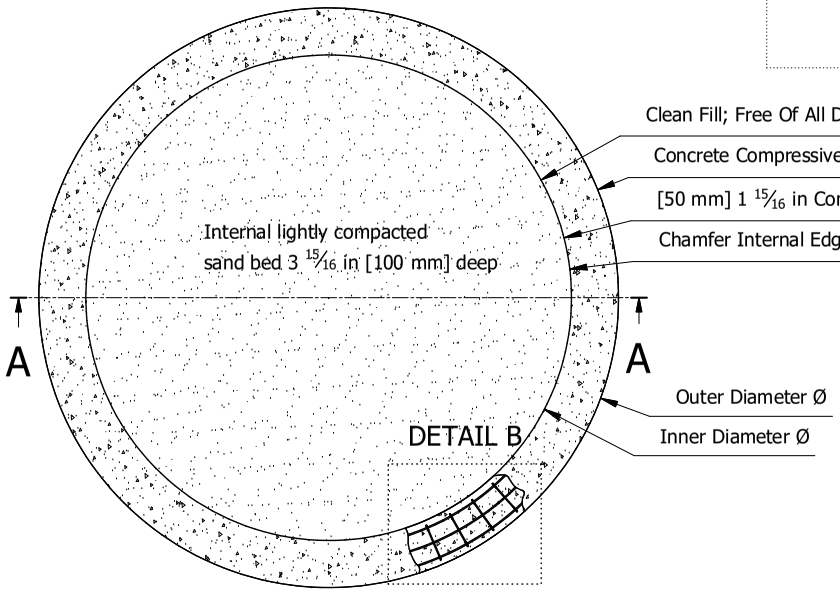
| ITEM | PART NUMBER | DESCRIPTION |
|---|---|---|
| 1 | Tank Wall Panels | Galvalume steel panels, steel grade G300, with AZ150 heavy duty coating. Panels are bolted together using class 8.8 HDG hex head flanged screws & nuts. |
| 2 | Wind Girts/Uprights & Covers | Wind Girts are made from [2.4 mm] 3/32 in hot dipped galvanised sheet metal, punched and bent into profile. |
| 3 | Concrete Ring Beam | Reinforced, 25 MPa min. |
| 4 | Tank Hold Down Brackets c/w Anchor Bolts | L shaped brackets complete with expansion type anchor bolts. |
| 5 | Polyester Geotextile | Fits between concrete ring beam/sand bed and PVC Liner/membrane. |
| 6 | Liner | Potable water liner/bladder consisting of high tenacity polyester yarn coated on both sides with grey PVC. The SBS [700 g] 1.54 lbs potable propriety liner meets AS/NZS 4020-2005. |
| 7 | Roof Truss Set | Fabricated from SHS & EA steel, 300 MPa min. Hot dipped galvanised after fabrication. |
| 8 | Dome Roof | Galvalume corrugated sheets, [0.47 mm] 1/32 in thick, grade G550, with AZ150 coating. |
| 9 | Roof Tank Access | Fixed, complete with internal & external ladders, safety cage with lockable door, platform, [600 mm] 23 5/8 in lockable access hatch, & hand rails. |
| 10 | Typical Inlet | Internal deflector, external flange. |
| 11 | Typical Outlet | Internal anti-vortex, external flange. |
| 12 | Typical Overflow | Internal bell mouth, external downpipe with roll groove termination. |
| 13 | Typical Dump Drain | External flange c/w geared butterfly valve & deflector. |
| 14 | Typical Water Level Indicator | Mechanical (True Read Type) |
| 15 | Typical Ventilator | Static, made from [76 mm] 3 in x [76 mm] 3 in SHS. |


Inside Tank
Outside Tank
6) Plain Washer
7) Nut
8) Set Screw
9) Plain washer
10) "O" Ring
Tank Wall Panel
14) Backing Flange
15) Plain Washer
16) Nut
18) Flange Adaptor (Flange to be in accordance with clients specification)
1) Set Screw
2) Plain Washer
3) Deflector (or any other fitting valve as may be stipulated)
4) Gasket
5) Nozzle component
11) Gaskets
12) Liner
13) Profile Flange
17) Coupling (Joins and aligns the Flange adaptor to the Nozzle component)
All flanges are SANS 1123: 1000\3 unless otherwise specified

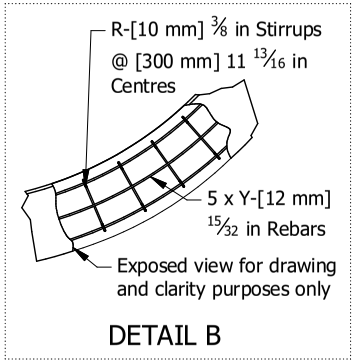



SECTIONAL FRONT VIEW ON A-A




PLAN VIEW




DETAIL B

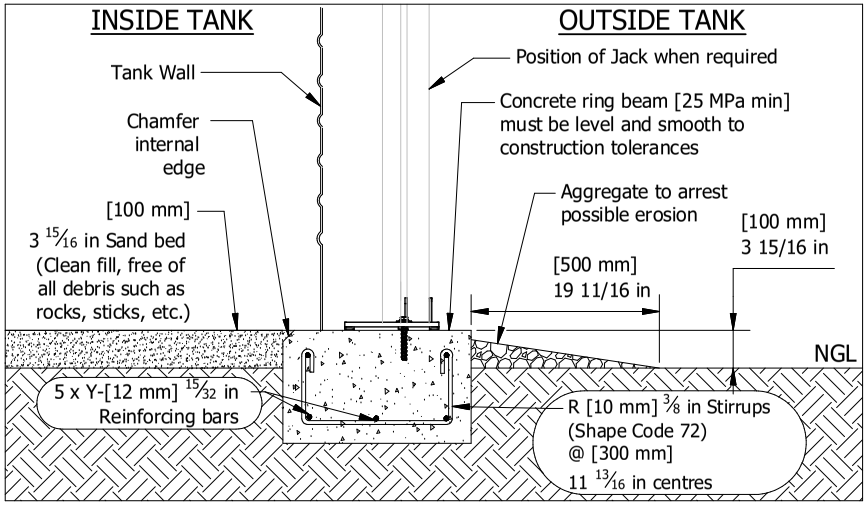
## Construction Tolerances

Outside Ø: - 25/32 in [20 mm]
+0
Inside Ø: - 0
+ 25/32 in [20 mm]

Level of top surface: ± 5/64 in [2 mm] over any 78 47/64 in [2 m] of circumference at tank wall position. ± 5/32 in [4 mm] over entire ring beam.

# GUIDELINES AND NOTES

1. This document contains the minimum required dimensions and guidelines and is not to be used for construction unless officially issued by an approved engineer or company representative.
2. SBS is not responsible for any loss or damage caused by an incorrectly designed or built ring beam.
3. Ring beam sizes shown are suitable for geographic areas which do not experience wind speeds exceeding 43 m/s [155 km/h] 96 mph. Should wind speeds in excess of this be expected, then special designs must be prepared.
4. It is very important for the client to ensure that foundation conditions are adequate. The requirements are
   - Safe bearing capacity should equal or exceed 14.5 PSI [100 kPa]
   - The founding material must be stable
   - Hand float top surface
5. Most sands and gravels that have been compacted to a reasonable level will be adequate, provided that there is stable soil underneath.
6. Should there be any doubt about the stability or strength of the foundation, site specific professional engineering advice should be sought.
7. In areas with corrosive soil conditions, special protective measures should be used.
8. Ring beam dimensions are typical and provided for costing purposes only. Final ring beam dimensions may vary depending on soil conditions, climatic conditions, etc.
9. Ring beam width and depth are tank model dependant and allow for specialised jacking when required. Ring beam dimensions must not be altered for any unapproved reason and without any consultation from the supplier.
10. Drawing is not to scale




FINISHED RING BEAM DETAIL

SBS Tanks®

**APPLICATION: MINING**
**TANK MODEL:** 2x ST 31/09,
**TOTAL CAPACITY:** 6 604 kl
**LOCATION:** Northern Cape, South Africa

**APPLICATION: WATER CONSERVATION**
**TANK MODEL:** ST06/02
**LOCATION:** On building rooftop, Cape Town, South Africa.

**APPLICATION: COMMERCIAL**
**TANK MODEL:** ST26/05
**TOTAL CAPACITY:** 1 295 kl
**LOCATION:** Texas, United States of America

**APPLICATION: FIXED FIRE PROTECTION**
**TANK MODEL:** 2 X ST 15/06
**TOTAL CAPACITY:** 1034 kl
**LOCATION:** Kenya, East Africa

**APPLICATION: MUNICIPAL**
**TANK MODEL:** 3 x ST31/09
**TOTAL CAPACITY:** 9 903kl
**LOCATION:** Emalahleni, Mpumalanga

**APPLICATION: ELEVATED, PUBLIC SECTOR**
**TANK MODEL:** ET05/03 at 6m
**TOTAL CAPACITY:** 29 kl
**LOCATION:** KwaCutshwayo, KZN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