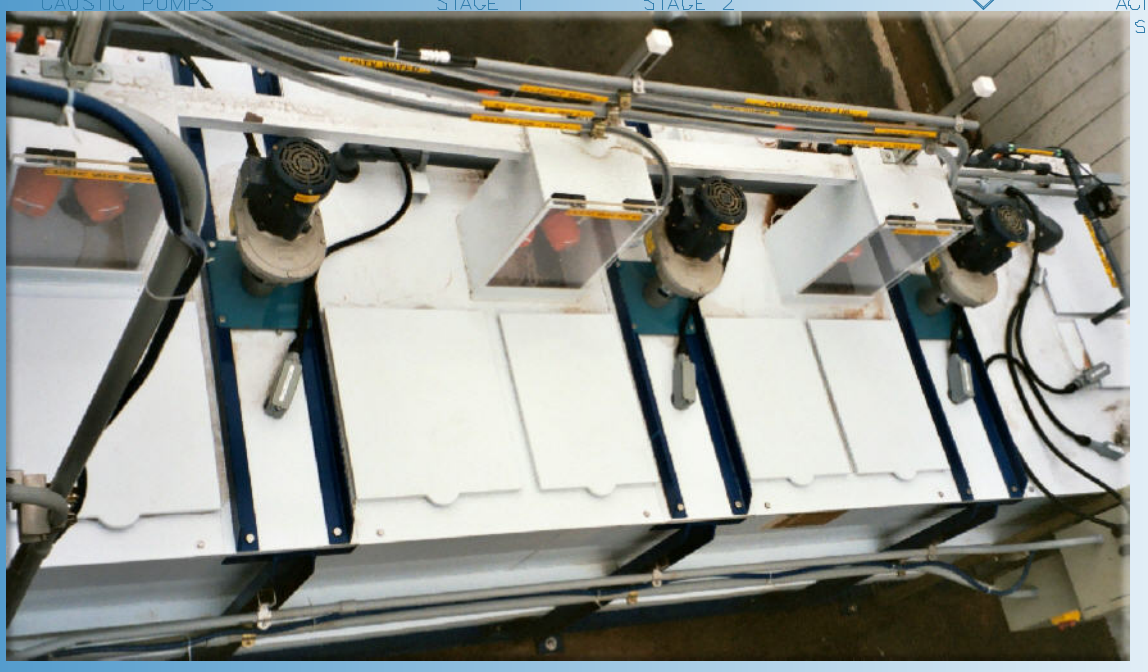
Waste Neutralization Systems

As one of the longest standing waste neutralization companies, W2 Systems has perfected the systems. Some of the features included in the systems are:

- Full double containment piping and tanks
- Fully integrated systems, self contained, including acid and caustic holding tanks
- Plug and play, our systems are complete when delivered and only need to be setup on delivery
- High efficiency waste waste neutralization
- Turn-key, computer controlled systems
- All of our systems are tested in our Brisbane facility before delivery

W2 Systems not only offers the best systems, but also the expertise behind the systems. Service contracts are also available for everything from general maintenance to chemical refill, instrument calibration and probe buffering.

All of our systems have a wide array of design and specification options to assure that every customer need is met in every possible way.



Simplex Batch WNS Series

These systems are batch treatment systems, meaning that the single tank fills up, and then the system neutralizes the wastewater, pumps it out and fills up for the next batch.

Included in the 1BNS model:

- One primary tank
- Secondary containment for treatment system
- Low speed, high mixing rate mixer
- Positive displacement chemical feed pumps (2)
- Acid storage tank and secondary
- Caustic storage tank and secondary
- Complete automatic control system with PLC
- PH control loop for alarm and recording
- Effluent pH loop for alarm and recording
- Effluent rate of flow indicator and totalizer
- Recording of effluent pH and rate of flow
- Each unit is completely assembled and tested in our Brisbane facility prior to delivery.

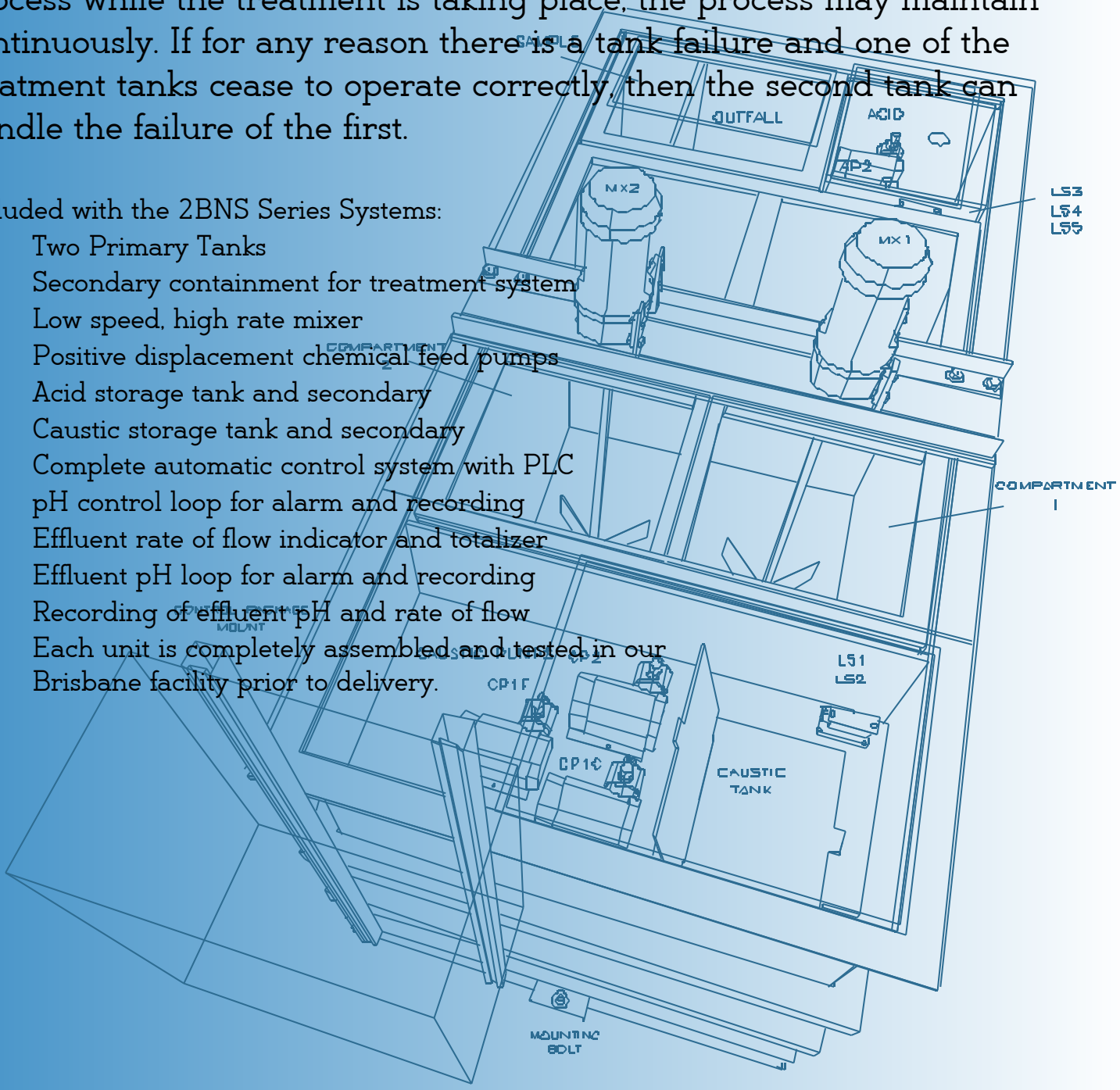
Model	*Flow*	*Compartment Size*	*Overall Size*	*Gallons Treated*	*Retention Time*
1BNS-5	5 gpm	2.5'x2.5'x4'h	4'x4'x4'h	150 gasl.	30 min.
1BNS-10	10 gpm	4'x3'x4'h	4'x4'x4'h	300 gal.	30 min.
1BNS-15	15 gpm	4'x5'x4'h	4'x6'x4'h	600 gal.	40 min.

Duplex Batch WNS Series

The duplex batch WNS Series systems work in the same fashion as the simplex systems, meaning that they fill up and treat one batch of wastewater at a time. The difference here is efficiency and fail-safe capability. Instead of having one tank fill and treat, there are two tanks; while one is filling, the other is treating. Instead of having to shut down process while the treatment is taking place, the process may maintain continuously. If for any reason there is a tank failure and one of the treatment tanks cease to operate correctly, then the second tank can handle the failure of the first.

Included with the 2BNS Series Systems:

- Two Primary Tanks
- Secondary containment for treatment system
- Low speed, high rate mixer
- Positive displacement chemical feed pumps
- Acid storage tank and secondary
- Caustic storage tank and secondary
- Complete automatic control system with PLC
- pH control loop for alarm and recording
- Effluent rate of flow indicator and totalizer
- Effluent pH loop for alarm and recording
- Recording of effluent pH and rate of flow
- Each unit is completely assembled and tested in our Brisbane facility prior to delivery.



Duplex WNS Series

The Duplex WNS Series system comes with an optional surge tank as a third compartment, this is used to mix Wastewater before the two-tank treatment. The way the treatment works, is instead of doing one batch at a time, the wastewater is continuously treated as it flows through the two compartments, it is treated along the way until it reaches the effluent tank, where it is tested and either pumped into the sewer, or retreated for a second time.

Included with 2NS Series Systems:

- Two Primary Tanks
- Secondary containment for treatment system
- Low sped, high rate mixer (2)
- Positive displacement chemical feed pumps
- Acid storage tank and secondary
- Complete automatic control system with PLC
- pH control loop for alarm and recording
- Effluent pH loop for alarm and recording
- Effluent rate of flow indicator and totalizer
- Recording of effluent pH and rate of flow
- Each unit us completely assembled and tested in our Brisbane facility prior to delivery.

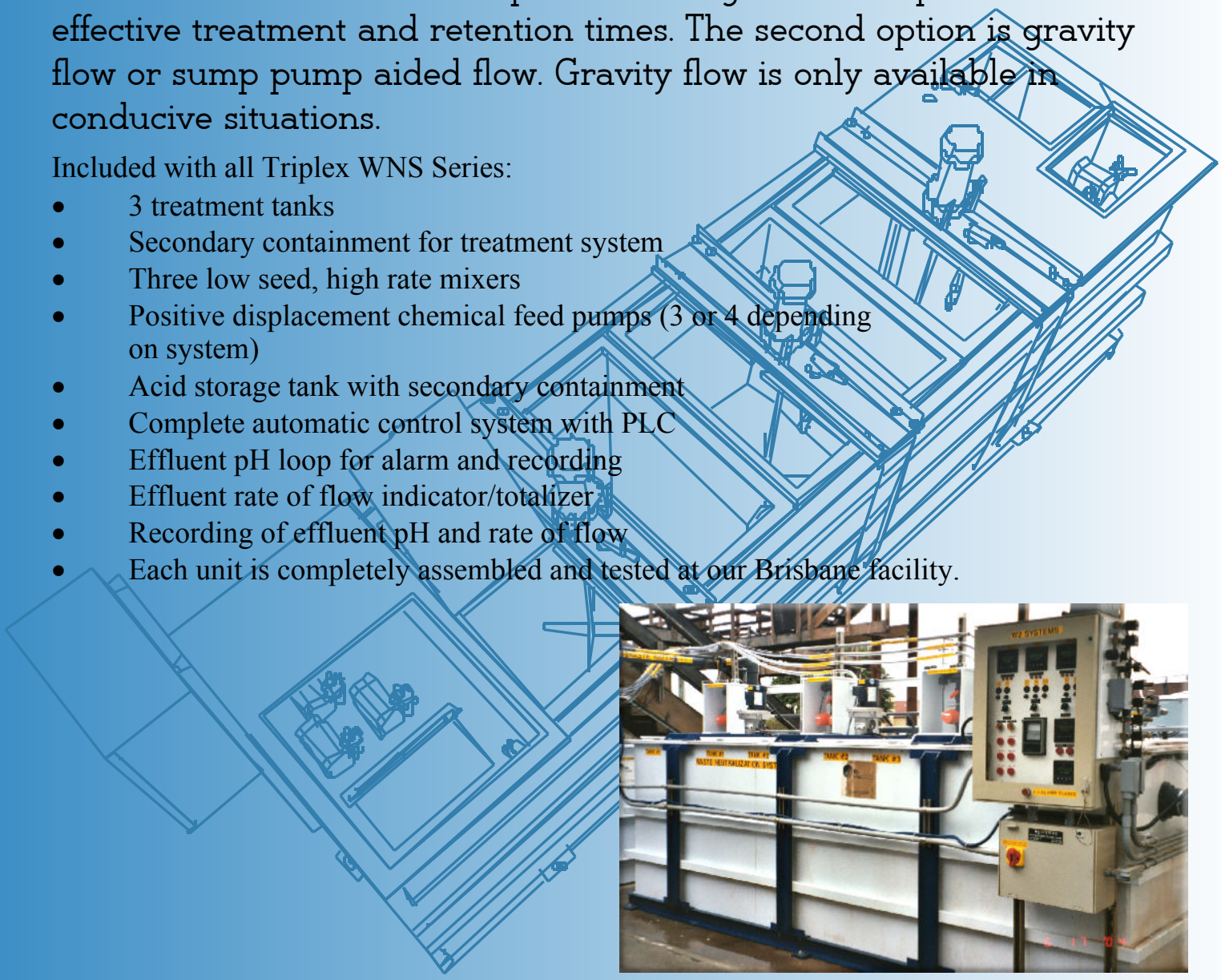
Model	*Flow*	*Compartment Size*	*Overall Size*	*Gallons Treated*	*Retention Time*
2NS-10	10 gpm	4'x2'x4'h	4'x8'x4'h	420 gal.	42 min.
2NS-20	20 gpm	4'x4'x4'h	4'x10'x4'h	840 gal.	42 min.
2NS-30	30 gpm	4'x5'x4'h	4'x12'x4'h	1200 gal.	40 min.
2NS-40	40 gpm	4'x6'x5'h	4'x13'x5'h	1980 gal.	49 min.
2NS-50	50 gpm	6'x5'x5'h	6'x11'x5'h	2200 gal.	44 min.
2NS-60	60 gpm	6'x6'x5'h	6'x13'x5'h	2630 gal.	43 min.
2NS-75	75 gpm	6'x7'x6'h	6'x15'x6'h	3700 gal.	49 min.
2NS-90	90 gpm	7'x7'x6'h	7'x15'x6'h	4000 gal.	44 min.

Triplex WNS Series

The Triplex WNS Series has two options in addition to the standard 3 treatment tanks. The first option is a surge tank for quicker, more effective treatment and retention times. The second option is gravity flow or sump pump aided flow. Gravity flow is only available in conducive situations.

Included with all Triplex WNS Series:

- 3 treatment tanks
- Secondary containment for treatment system
- Three low seed, high rate mixers
- Positive displacement chemical feed pumps (3 or 4 depending on system)
- Acid storage tank with secondary containment
- Complete automatic control system with PLC
- Effluent pH loop for alarm and recording
- Effluent rate of flow indicator/totalizer
- Recording of effluent pH and rate of flow
- Each unit is completely assembled and tested at our Brisbane facility.



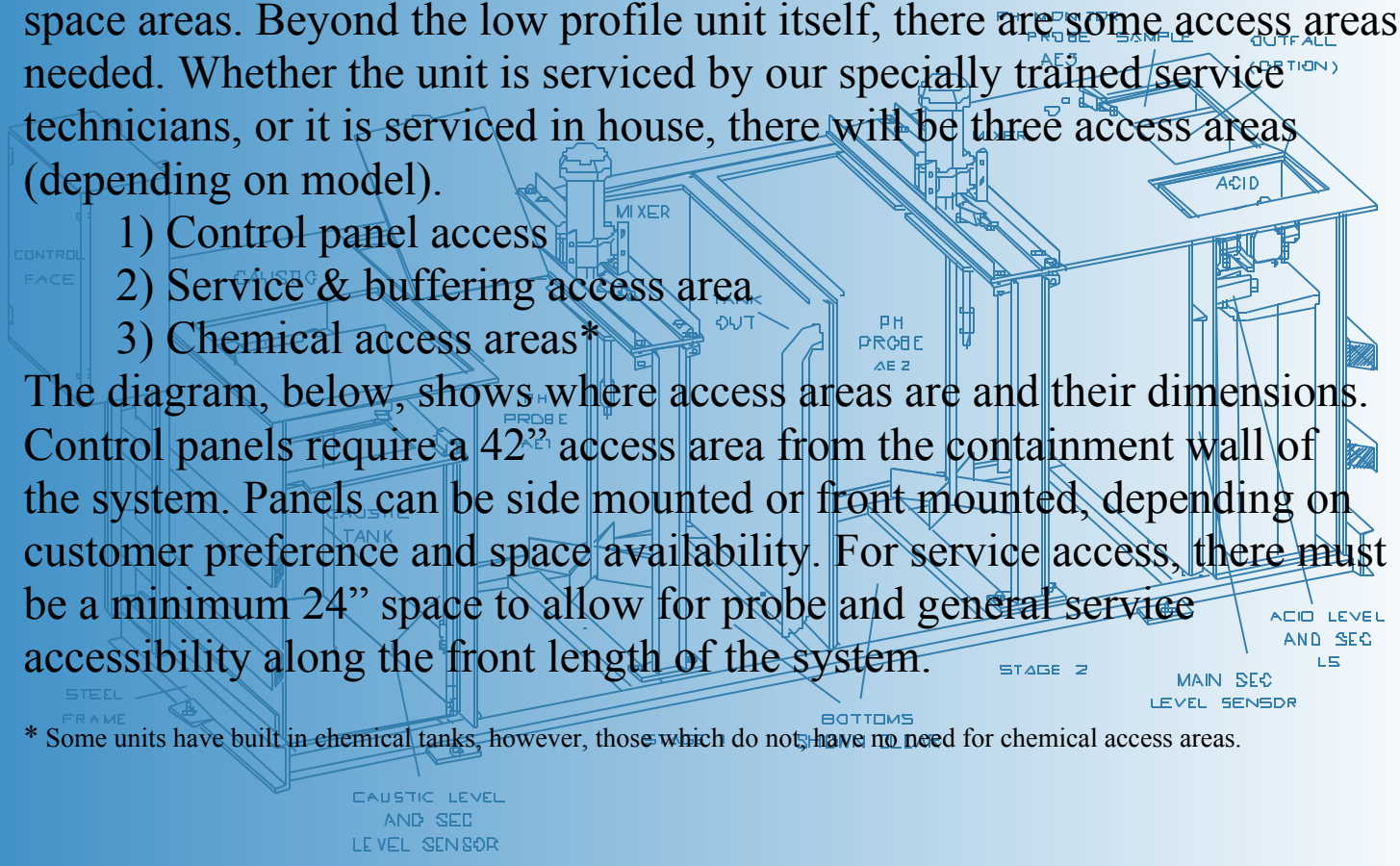
Model	*Compartment Size*	*Overall Size*	*Flow*	*Gallons Treated*	*Retention Time*
3NS-20	4'x3'x4'h	4'x12'x4'h	20 gpm	1,000 gal.	50 min.
3NS-30	4'x4'x4'h	4'x14'x4'h	30 gpm	1,260 gal.	45 min.
3NS-40	4'x5'x4'h	4'x16'x4'h	40 gpm	1,650 gal.	41 min.
3NS-50	4'x5'x6'h	4'x16'x6'h	50 gpm	2,500 gal.	50 min.
3NS-60	6'x5'x6'h	6'x16'x6'h	60 gpm	4,000 gal.	65 min.
3NS-75	6'x6'x6'h	6'x18'x6'h	75 gpm	4,700 gal.	62 min.
3NS-90	7x6'x6'h	7'x18'x6'h	100 gpm	5,600 gal.	56 min.

WNS Series Specifications

All of our systems are built with the intent of being used in minimal space areas. Beyond the low profile unit itself, there are some access areas needed. Whether the unit is serviced by our specially trained service technicians, or it is serviced in house, there will be three access areas (depending on model).

1) Control panel access
2) Service & buffering access area
3) Chemical access areas*

The diagram, below, shows where access areas are and their dimensions. Control panels require a 42” access area from the containment wall of the system. Panels can be side mounted or front mounted, depending on customer preference and space availability. For service access, there must be a minimum 24” space to allow for probe and general service accessibility along the front length of the system.



* Some units have built in chemical tanks, however, those which do not, have no need for chemical access areas.