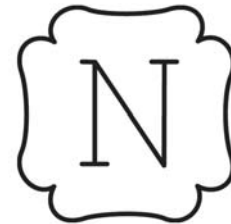




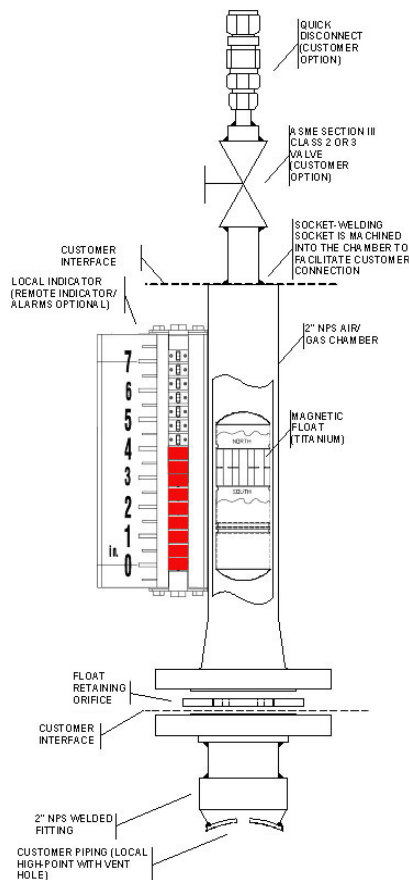
# NGAT-150N

## Nuclear Grade Air Trap™ (Patented. All Rights Reserved)

### Technical Data Sheet (for 150 lb Flange Class Systems)



Nuccorp's **NGAT-150N™** is the next generation NGAT that has been designed, fabricated and ships with the Quality Assurance of an ASME N-Stamp quality program. It is mounted at a local system high point and allows for constant and literal compliance with NRC GL08-01, NEI 09-10 Rev 1 and TSTF-523 Rev 2 requirements. The NGAT-150N™ consists of a vertically mounted stainless steel chamber into which a seismically-qualified and specially designed Titanium, magnetic float is inserted. A magnetic indicator, external to the pressure boundary, is attached to the chamber. The indicator flags follow a magnetic field produced by the float, thereby providing constant indication of the air/water level interface as gas voids are collected. Static components internal to the chamber properly direct flow inside the chamber and serve as travel stops for the float and serve as datum points, which allows for easy NGAT-150N™ calibration with the system. The minimum required water level is determined for each location by calculation. The determination of the minimum allowed indicated level sets the initial plant conditions which must be maintained to ensure the air/water level stays above the main piping following postulated plant design events (i.e., LOCA, etc.). During normal plant operations, when the actual level in the chamber is above the minimum allowed, then that portion of the subject system associated with the local high point where the NGAT-150N™ is installed is "full" by definition.



#### NGAT-150N SPECIFICATIONS:

NGAT™ Body Material:	ASME SA-182, F316 SST
Float Ret. Orifice Material:	ASME SA-240, Type 316 SST
Magnetic Float Material:	SB-265, GR 2 Titanium
Level Indicator Material:	Aluminum
Indicator Flag Color:	Florescent Orange (others available)
Chamber Volume:	28 in <sup>3</sup> (with the Float inserted)
Design Code:	ASME III, Class 2
Design Pressure / Temp A:	275 psig @ 100F (low temp)
Design Pressure / Temp B:	195 psig @ 400F (high temp)
Process Connection Type:	150 lb Class B16.5 Raised-Face Flange
Process Connection Size:	2 inch
Vent Connection Type:	B16.11 Socket Weld
Vent Connection Size:	¾ inch B16.11 Socket Weld
Indication:	Local, Remote or Both
Range:	7 inches
Volume Resolution:	1.7 in <sup>3</sup> (+/- 1/2 inch resolution)
Calibration:	Individual per plant operating conditions
Safety Classification:	SR – Safety Related
Seismic Category:	Seismically Qualified
QA Quality:	NQA-1, 10CFR50 App B, ASME N-Stamp
Assembled Weight: (empty)	13 lbs.
Assembled Weight: (full)	15 lbs.
Assembled Height:	15.5 inches
Mounting Options:	Direct to customer's piping system or Wall
Engineering Support:	As required by customer

Nuccorp reserves the right, without formal notification, to implement changes to the standard design and dimensions prior to an RFQ.

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#### Nuclear Grade Air Trap™ NGAT™ by Nuccorp

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# NGAT-600N

## Nuclear Grade Air Trap™

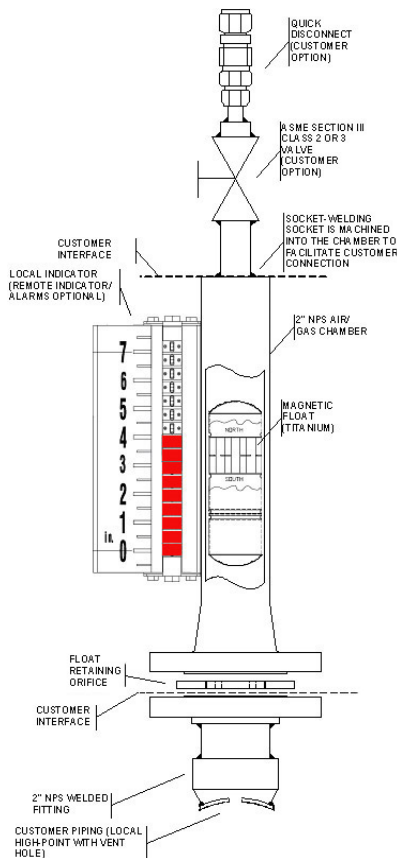
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## Technical Data Sheet

(for 600 lb Flange Class Systems)

Nuccorp's **NGAT-600N™** is the next generation NGAT that has been designed, fabricated and ships with the Quality Assurance of an ASME N-Stamp quality program. It is mounted at a local system high point and allows for constant and literal compliance with NRC GL08-01, NEI 09-10 Rev 1 and TSTF-523 Rev 2 requirements. The NGAT-600N™ consists of a vertically mounted stainless steel chamber into which a seismically-qualified and specially designed Titanium, magnetic float is inserted. A magnetic indicator, external to the pressure boundary, is attached to the chamber. The indicator flags follow a magnetic field produced by the float, thereby providing constant indication of the air/water level interface as gas voids are collected. Static components internal to the chamber properly direct flow inside the chamber and serve as travel stops for the float and serve as datum points, which allows for easy NGAT-600N™ calibration with the system. The minimum required water level is determined for each location by calculation. The determination of the minimum allowed indicated level sets the initial plant conditions which must be maintained to ensure the air/water level stays above the main piping following postulated plant design events (i.e., LOCA, etc.). During normal plant operations, when the actual level in the chamber is above the minimum allowed, then that portion of the subject system associated with the local high point where the NGAT-600N™ is installed is "full" by definition.



### NGAT-600N SPECIFICATIONS:

NGAT™ Body Material:	ASME SA-182, F316 SST
Float Ret. Orifice Material:	ASME SA-240, Type 316 SST
Magnetic Float Material:	Titanium
Level Indicator Material:	Aluminum
Indicator Flag Color:	Florescent Orange (others available)
Chamber Volume:	28 in <sup>3</sup> (with the Float inserted)
Design Code:	ASME III, Class 2, 2007-08a
Design Pressure / Temp:	1375 psig @ 460F
Process Connection Type:	600 lb Class B16.5 Raised-Face Flange
Process Connection Size:	2 inch
Vent Connection Type:	B16.11 Socket Weld
Vent Connection Size:	¾ inch B16.11 Socket Weld
Indication:	Local, Remote or Both
Range:	7 inches
Volume Resolution:	1.7 in <sup>3</sup> (+/- 1/2 inch resolution)
Calibration:	Individual per plant operating conditions
Safety Classification:	SR – Safety Related
Seismic Category:	Seismically Qualified
QA Quality:	NQA-1, 10CFR50 App B, ASME N-Stamp
Assembled Weight: (empty)	17 lbs.
Assembled Weight: (full)	19 lbs.
Assembled Height:	15.5 inches
Mounting Options:	Direct to customer's piping system or Wall
Engineering Support:	As required by customer

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### Nuclear Grade Air Trap™

#### NGAT™ by Nuccorp

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# NGAT-1500N-XL

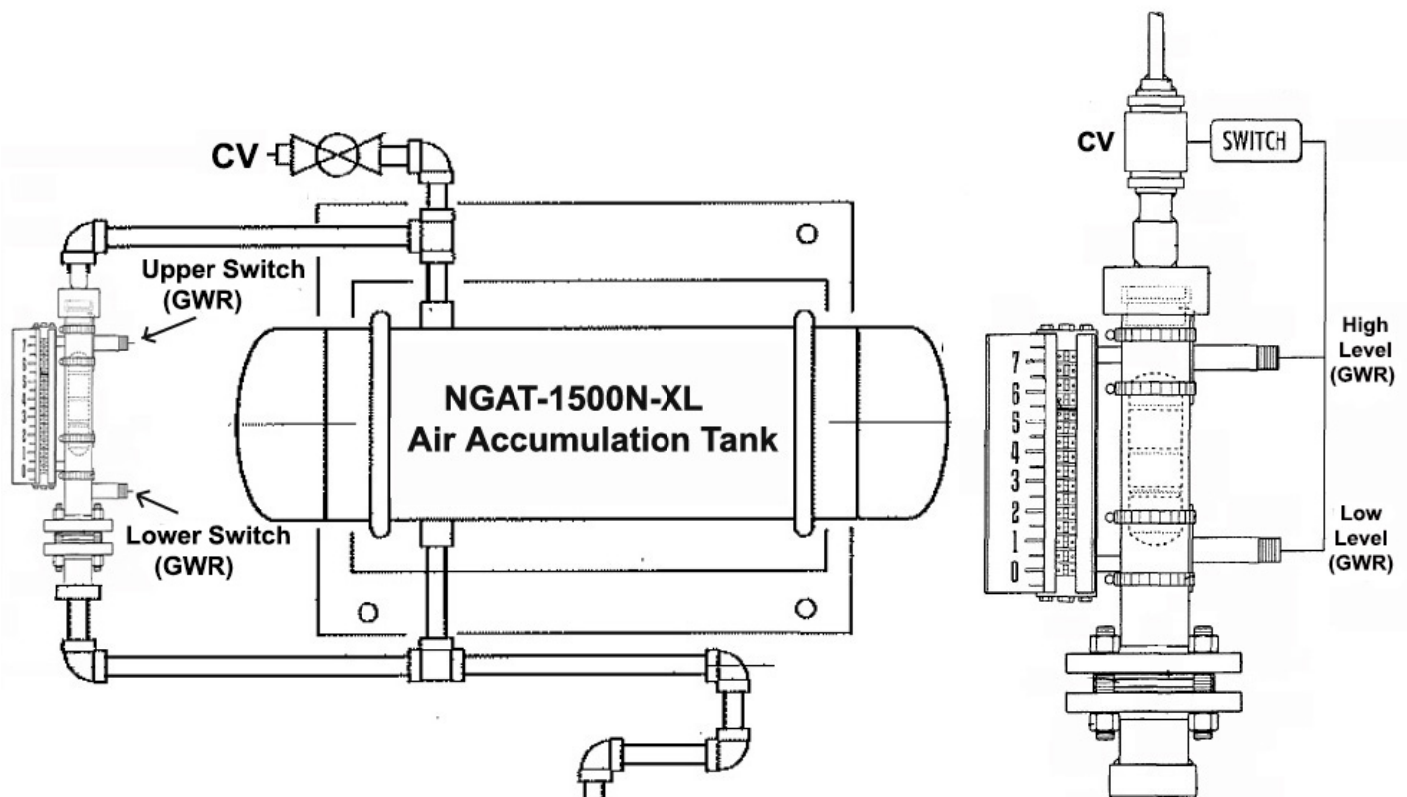
## Nuclear Grade Air Trap™

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### Technical Data Sheet

Nuccorp's **NGAT™-1500N-XL** is a combination of an NGAT-1500N mounted in parallel with an Air Accumulation Tank. This is a fully assembled, bolt-in-place, high capacity solution that allows for constant and literal compliance with Tech Specs and NRC GL08-01 requirements. The NGAT™ consists of a vertically mounted stainless steel chamber into which a seismically qualified and specially designed titanium, magnetic float is inserted. A magnetic indicator, external to the pressure boundary, is attached to the float chamber which is mounted in parallel with the Air Accumulation Tank. The indicator follows the magnetic field produced by the float, thereby providing constant indication of the air/water level interface. Venting can be performed manually or else optional Guided Wave Radar (GWR) or reed switches can be mounted at the top and bottom of the float chamber to send signals to the control room and/or plant computer. When a low level signal is received, the control valve (CV) automatically opens to vent the system. When the high level signal is received, the CV closes and venting stops. During normal plant operations, when the actual level in the chamber is above the minimum allowed, then that portion of the subject system associated with the local high point where the NGAT™ is installed is "full" by definition, and thus literal compliance with the Tech Specs is maintained.



SPECIFICATIONS FOLLOW ON THE NEXT PAGE

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Page 1 of 2



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# NGAT-1500N-XL

## Nuclear Grade Air Trap™

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### Technical Data Sheet

<b>SPECIFICATIONS:</b>	
NGAT™ Body (Float Chamber) Material:	ASME SA-182 (Type F316 SST or F348 SST) or SA-479 Type 316 SST
Float Retaining Orifice (FRO) Material:	ASME SA-240, Type 316 SST (if FRO is necessary)
Magnetic Float Material:	Titanium Grade 9, 3AL-2.5V
Level Indicator Material:	Aluminum
Indicator Flag Color:	Florescent Orange (others available)
Chamber Volume:	Min of 2 ft <sup>3</sup> (custom based on tank length)
Design Code:	ASME Section III, Section NC, Class 2 10CFR Part 21, 10CFR50 Appendix B, NQA-1
Design Pressure / Temp A:	3600 psig @ 100F (low temp)
Design Pressure / Temp B:	2520 psig @ 650F (high temp)
Process Connection Type:	1500 lb Class B16.5 Raised-Face Flange or Swagelok equivalent
Process Connection Size:	3 inch or smaller if Swagelok and tubing is used.
Vent Connection Type:	B16.11 Socket Weld or Swagelok
Vent Connection Size:	¾ inch B16.11 Socket Weld or Swagelok
Control Valve:	TBD based on installation configuration and geometry
Indication:	Local, Remote, Guided Wave Radar (GWR) and or Reed Switches
Vertical Indicator Range:	7 inches standard or custom as needed
Volume Resolution:	+/- 1/2 inch on indicator scale
Calibration:	Individual per local plant operating conditions
Safety Classification:	SR – Safety Related
Seismic Category:	Seismically Qualified
Mounting Options:	Wall brackets on vessel.
Engineering Support:	As required by customer

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