

# TANK & RISER VALVES

## Vapor or Liquid Service Valves

•AL407, AL409, AL477, AL478, AL479 are service valves. AL407, and AL409 can be supplied with or without excess flow valve; the AL477, AL487 and AL479 have an excess flow valve. Besides NH3 applicator and nurse tank installations, the valves are also used on bulk plant or truck piping systems for NH3 service.  
 •AL477, AL478, AL487 and AL479 can be installed as an alternative to separate excess flow valve and angle valve on nurse tank load-out risers. In risers with a 2" tee fitting, the AL479 requires a special bushing(part number 479-5050).

## Liquid Withdrawl Rates

Valve	Differential Closing Pressure	Hose Size & Length	Withdrawl Rate NH3
AL477, AL478 & AL487	13 psig	None	70 gpm
	28 psig	1" - 12.5 FT.	
	33 psig	1" - 15 FT.	
AL479	8 psig	None	95 gpm
	17 psig	1-1/4" - 12 FT.	
	19 psig	1-1/4" - 15 FT.	



## Liquid Filling and Withdrawal Valves

•The A1592 series is a combination filling and liquid withdrawal valve along with an excess flow valve. It is inteded for NH3 Service  
 •Liquid withdrawl excess flow closing rate is 27 gpm at 9 psig differential closing pressure.

## Liquid Filling Rate

Differential Pressure, PSIG (NH3 Service)					
5	10	20	30	40	50
25 gpm	38 gpm	52 gpm	61 gpm	70 gpm	78 gpm

## Liquid Withdrawal Valves



## Liquid Filling & Vapor Return Valve



The A1590 consists of a service valve, a filling connection, and an excess flow valve. Vapor closing flow(NH3) of excess flow valve is 19,000 cfh at 100 psig inlet.

## Filling Rate

Service	Differential Pressure, PSIG					
	5	10	20	30	40	50
NH3	46 gpm	62 gpm	85 gpm	98 gpm	114 gpm	119 gpm
LPG	39 gpm	56 gpm	76 gpm	90 gpm	104 gpm	114 gpm

The A1596, A1597, and A1598 valves consist of a service valve and an excess flow valve.

Built in Tri-Gard internal relief valve (A1596 & A1597) bleeds product back to the tank when hose pressure exceeds tank pressure by 50 psig. In this way hose life is extended, chance of hose rapture is reduced, and personnel are protected. The A1598 has a 1/4" FNPT plugged side outlet connection that can be used to install a hydrostatic relief valve.

## Liquid Withdrawal Rates

Valve	Service	Withdrawl Rate	Differential Closing Pressure
A1596R	NH3	30 gpm	13 psig
	LPG	35 gpm	13 psig
A1597R & A1598P	NH3	50 gpm	13 psig
	LPG	55 gpm	13 psig