

空气阀型号编制

Air Valves Figure Number System

种类Type	标准Standard	连接Connection	结构Style	材质Material
F-空气阀	G-GB A-API	1-外螺纹	0-自动排气阀	T-铜
		2-内螺纹	1-微量排气阀	Z-铸铁
		3-法兰	2-单口排气阀	C-铸钢
			3-双口排气阀	S-不锈钢
			4-快速排气阀	Q-球墨铸铁
			5-高速排气阀	
			6-污水排气阀	
			7-复合式排气阀	
			8-防水锤排气阀	
			9-注气微排阀(真空破坏阀)	

备注：卫生级排气阀型号：TEF-W；不漏液自动排气阀型号：AB050；螺旋微气泡处理器型号：P410X。
Remarks: sanitary exhaust valve type: TEF-W; zero leakage automatic exhaust valve type: AB050.

空气阀概述

Air Valves Overview

空气释放阀用于从管道中形成的气囊中释放空气。由于流体相的基本性质，在完全加压的管道的高点将形成气穴。排气阀对于管道效率和防止水锤是必需的。水管道中的空气会造成许多问题，主要是加速腐蚀过程（造成管道维护费用高昂）。系统中的弯头，三通和其他配件处的空气也会造成流量减少。水流甚至会因为水管中的“气锁”而停止。这种情况经常发生在自来水管的化学管道上。如果没有安装空气释放阀，则可能会发生不受控制的空气排放，导致系统中出现压力波动，从而增加气蚀危险的几率。或者，如果空气留在水管中，最终会导致客户的仪表不正常读取，从而向顾客收取经过水表的空气，而不是水。

Air release valves are used to release the air from pockets that are formed in pipelines. Due to the basic nature of fluid phases, air pockets will form at the high points of a fully pressurized pipeline. Air release valves are necessary for pipeline efficiency and to protect against water hammer. Air in the water lines can cause many problems, the main one speeding up the process of corrosion (Causing high costs in the maintenance of the pipeline). A reduction of flow is also created by air that has been trapped at the bends, tees and other fittings in the system. Flow can even stop due to an “air lock” in the water line. This often happens in chemical feed lines at a water plant. If air release valves are not installed, uncontrolled air releases may occur, causing pressure surges in the system, which can increase the chances of hazards from cavitation. Alternatively, if air is left in a water main, it will eventually cause customers’ meters to read improperly, thus charging the customer for air that is going through the meter, and not water.

管道系统中的图尔空气阀有两个主要功能。首先是释放压力管道内溶液的积聚空气。这种空气将导致气泡形成，这将聚集在沿管道轮廓的局部高点。当气泡的浮力大于传送气泡与液体的能量时，会发生这种空气积聚。用于释放这种自由空气的图尔空气阀被称为空气释放阀。

TOOE air valves in pipeline systems serve two primary functions. The first is the release of accumulated air that comes out of solution within a pressurized pipeline. This air will result in bubble formation, which will gather at localized high points along the pipeline profile. This air accumulation will occur when the bubble’s buoyancy is greater than the energy to convey the bubble with the liquid. The TOOE air valve used to release this free air is known as an air release valve.

空气阀的第二个功能是在管道的内部压力降至低于大气压力时使空气进入系统。随着内部真空条件的进展，通过将空气引入管道，可以减小真空压力的大小，从而有助于防止管道发生过度的挠曲和/或坍塌，并且有助于防止形成完全的真空条件其中蒸气腔可以由流体蒸发而形成。在这种情况下使用的图尔空气阀是图尔空气和真空阀。图尔空气和真空阀还用于在管道初始填充和水柱分离后从管道系统排出大量空气。

The second function of an air valve is to admit air into the system when the internal pressure of the pipeline drops below atmospheric pressures. By admitting air into the pipeline as the internal vacuum condition develops, the magnitude of the vacuum pressure can be reduced and as a result help prevent the pipeline from experiencing excessive deflection and/or collapse as well as help prevent the formation of a full vacuum condition in which vapor cavities may form from the fluid vaporizing. The TOOE air valve used in this situation is an TOOE air & vacuum valve. The TOOE air & vacuum valve is also used to discharge large volumes of air from the pipeline system when the pipeline is initially filled and after water column separation.

空气阀选型Air valves selection

