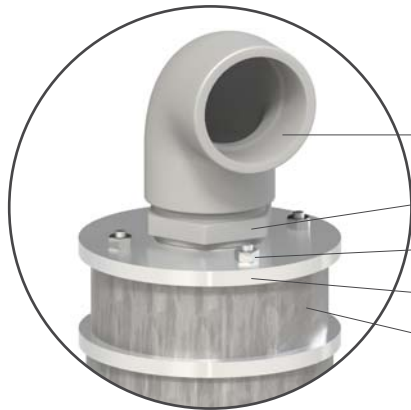




# Combination air valve - Mod. Golia 3F

## Version for submerged applications - SUB series

Version for submerged applications, SUB series available for all CSA Golia models except for EO version, with threaded elbow for air conveyance. The design sprang from the necessity of having an air valve performing also in case of flood, without the risk of contaminated water entering the pipeline. Another benefit of SUB is the possibility of conveying spurts coming from the rapid closure of the air valve.



### Plastic elbow for DN 1"-150R

- Threaded elbow in PVC (PP for DN 1"-65)
- Fitting in PVC (PP for DN 1"-65)
- Nuts in stainless steel
- SUB flat in stainless steel
- SUB extension in stainless steel



### Elbow in stainless steel for DN 200 and 250R (available on request for other DN)

- SUB flat and elbow in stainless steel
- Nuts in stainless steel
- SUB extension in stainless steel

## Technical data

### Working conditions

Treated water max. 60°C.  
 Max. pressure 40 bar.  
 Min. pressure 0,2 bar. Lower pressure on request.  
 Version for high temperatures on request.

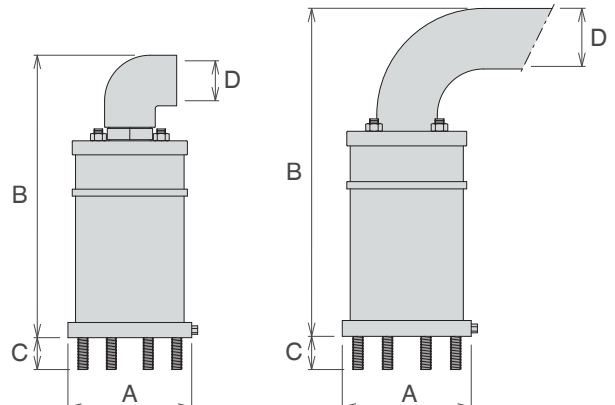
### Standard

Designed in compliance with EN-1074/4 and AWWA C-512.  
 Flanges according to EN 1092/2 or ANSI.  
 Gaskets in NBR, EPDM or Viton.  
 Changes and variations on the flanges and gaskets on request.

## Weights and dimensions

CONNECTION inch/mm	A mm	B mm	C mm	D inch	Weight Kg
Threaded 1"	165	285	-	1"	7,0
Threaded 2"	165	380	-	2"	7,7
Flanged 50	165	380	40	2"	9,3
Flanged 65	185	380	40	2"	9,3
Flanged 80	200	435	50	2" 1/2	13,4
Flanged 100	235	510	50	3"	19,7
Flanged 150R	235	560	50	3"	29,7
Flanged 150	300	650	70	4"	51,4
Flanged 200R	360	650	70	4"	55,4
Flanged 200	360	830	70	6"	78,3
Flanged 250R	405	830	70	6"	88,3

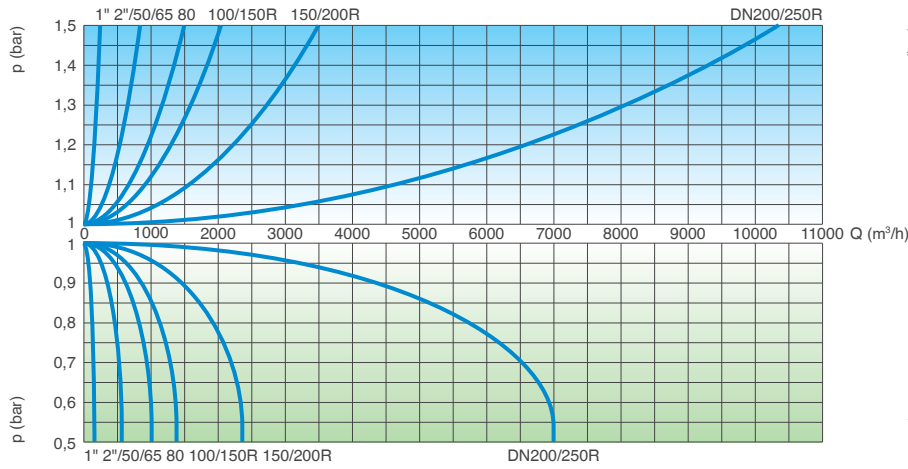
All values are approximate, consult CSA service for more details.



## Technical data

### Golia SUB - Air flow performance charts

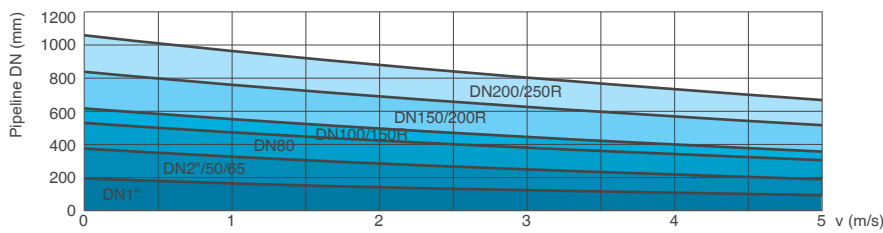
AIR DISCHARGE DURING PIPE FILLING



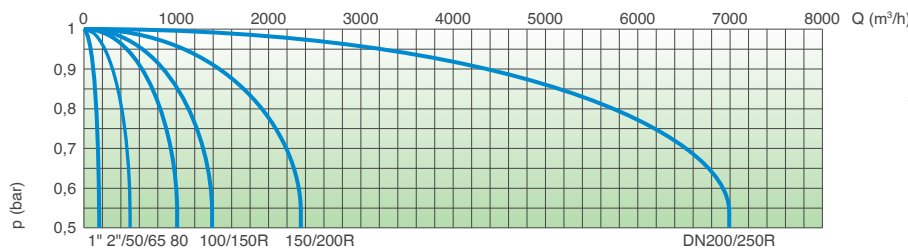
AIR ENTRANCE DURING PIPE DRAINING

### Golia AS SUB - Air valve choice chart

Air valve size as a function of pipeline internal diameter and fluid flow velocity expressed in m/s.



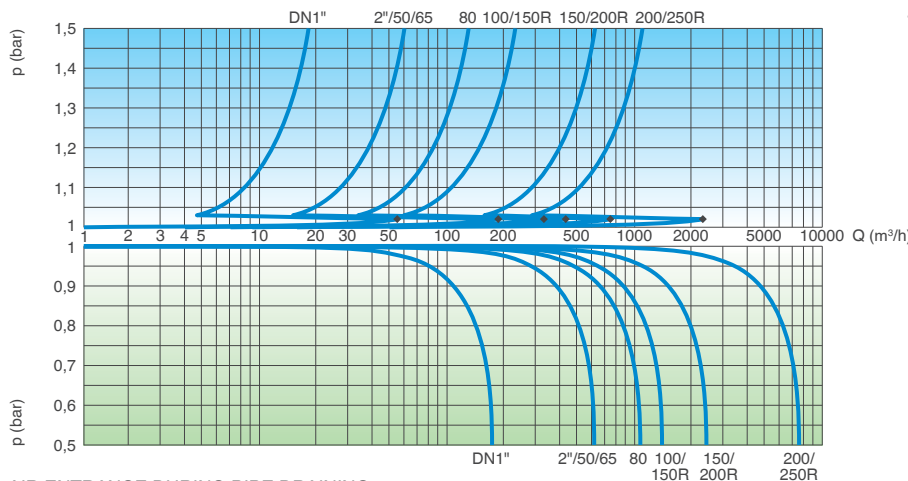
### Golia AS SUB - Air flow performance charts



AIR ENTRANCE DURING PIPE DRAINING

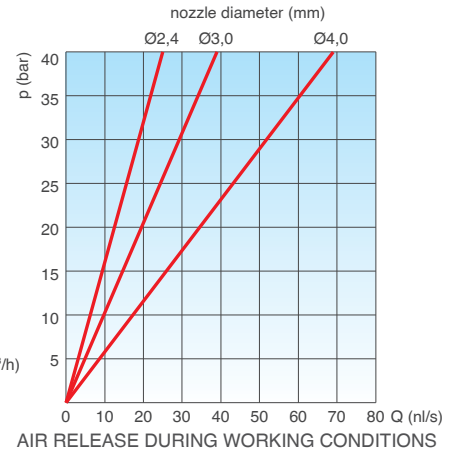
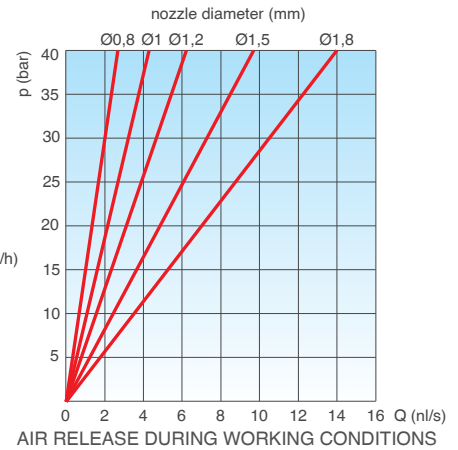
### Golia RFP SUB - Air flow performance charts

AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING

The air flow charts were created in Kg/s from laboratory tests and numerical analysis, then converted using a safety factor.



### Nozzle choice

For the nozzle choice make reference to the available technical data sheets of the Golia models.