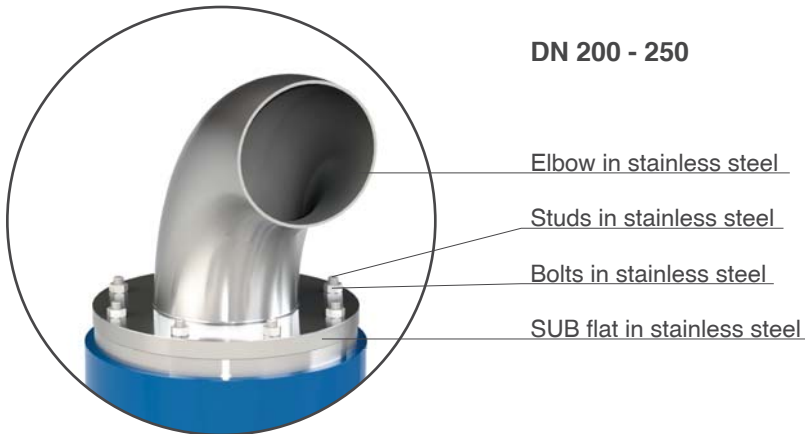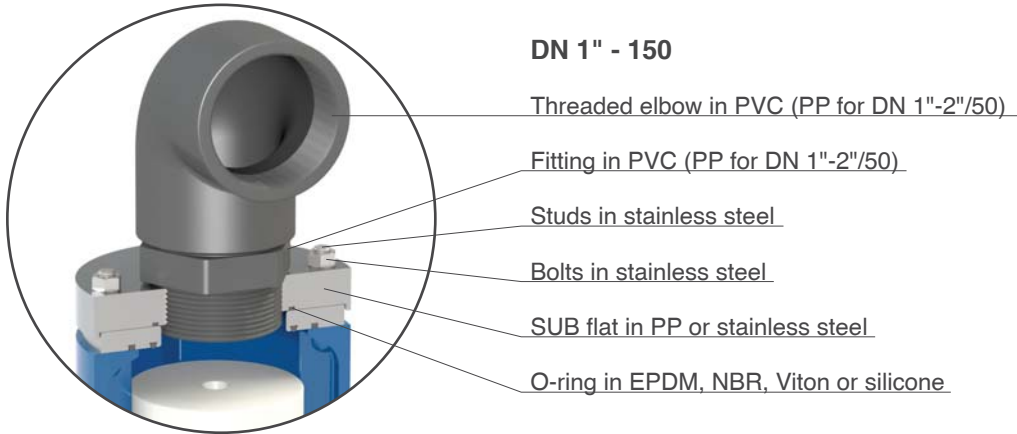# Combination air valve - Mod. FOX 3F
Version for submerged applications - SUB series

Version for submerged applications, **SUB series** available for all CSA FOX 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 to avoid the spray effect, reducing noise and conveying spurts coming from possible rapid closure of the air valve.

DN 1" - 150

Threaded elbow in PVC (PP for DN 1"-2"/50)

Fitting in PVC (PP for DN 1"-2"/50)

Studs in stainless steel

Bolts in stainless steel

SUB flat in PP or stainless steel

O-ring in EPDM, NBR, Viton or silicone

DN 200 - 250

Elbow in stainless steel

Studs in stainless steel

Bolts in stainless steel

SUB flat in stainless steel

Technical data

Working conditions

Treated water max. 60°C.
Max. pressure 40 bar. Min. pressure 0,3 bar.
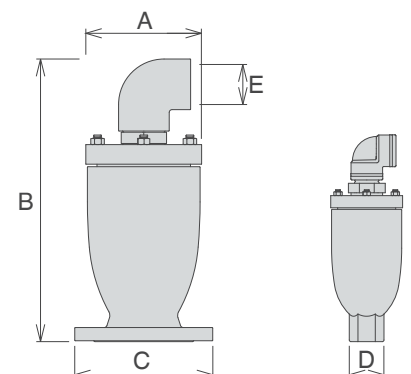Low pressure version to 0,19 bar on request.

Standard

Designed in compliance with EN-1074/4 and AWWA C-512.
Flanges according to EN 1092/2.
Epoxy painting applied through fluidized bed technology blue RAL 5005.
Changes on flanges and painting on request.

Weights and dimensions

CONNECTION inch/mm	A mm	B mm	C mm		D mm	E inch	Weight Kg
Threaded 1"	105	302	-	-	CH 45	1"	4,0
Threaded 2"	128	385	-	-	CH 70	2"	7,5
Flanged 50	128	395	165	-	-	2"	9,5
Flanged 80	158	432	210	205	-	2" 1/2	13,8
Flanged 100	192	507	235	220	-	3"	21,7
Flanged 150	272	641	300	285	-	4"	49,0
Flanged 200	359	828	375	340	-	6"	101,4
Flanged 250	429	1060	450	-	-	8"	133,8

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

FOX SUB - Air flow performance charts

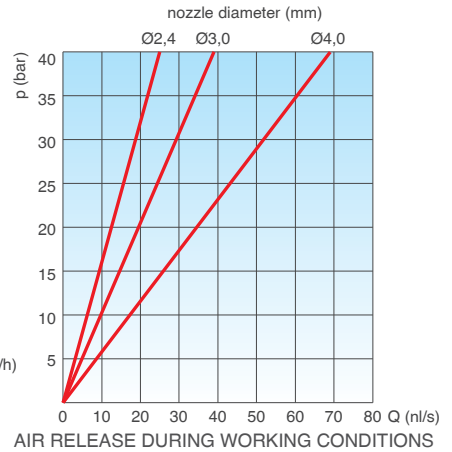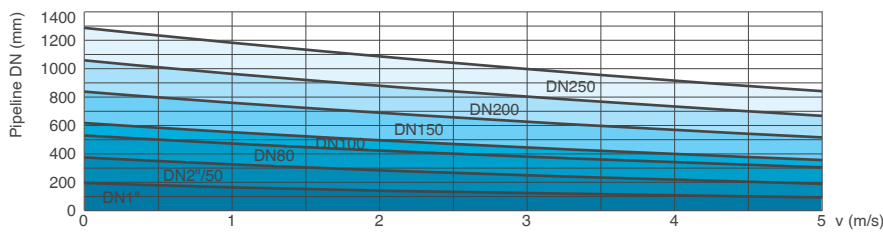AIR DISCHARGE DURING PIPE FILLING

nozzle diameter (mm)

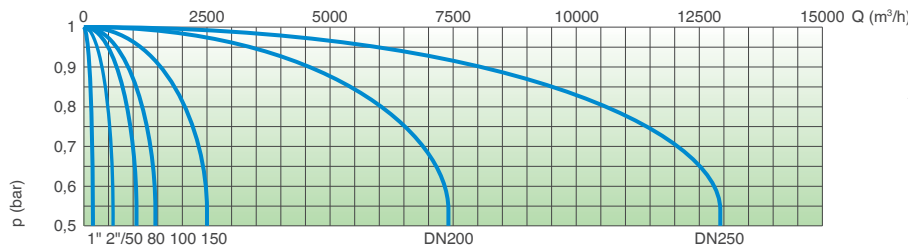AIR RELEASE DURING WORKING CONDITIONS
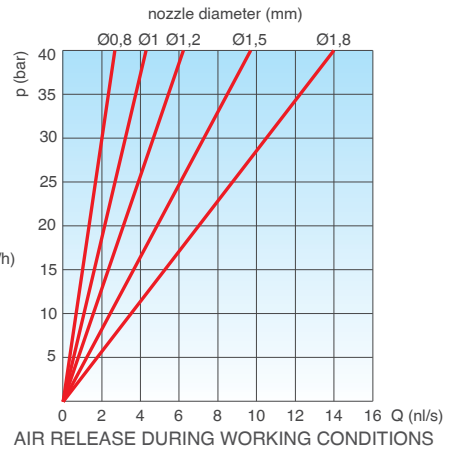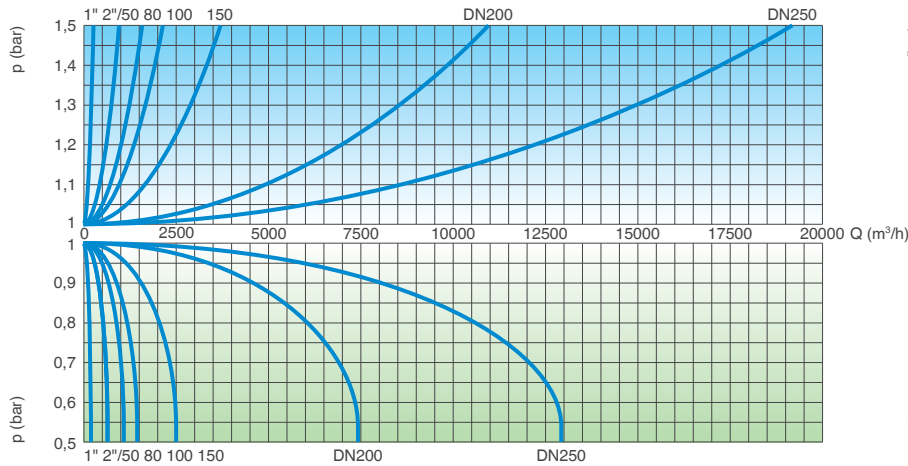
AIR ENTRANCE DURING PIPE DRAINING

FOX AS SUB - Air valve choice chart

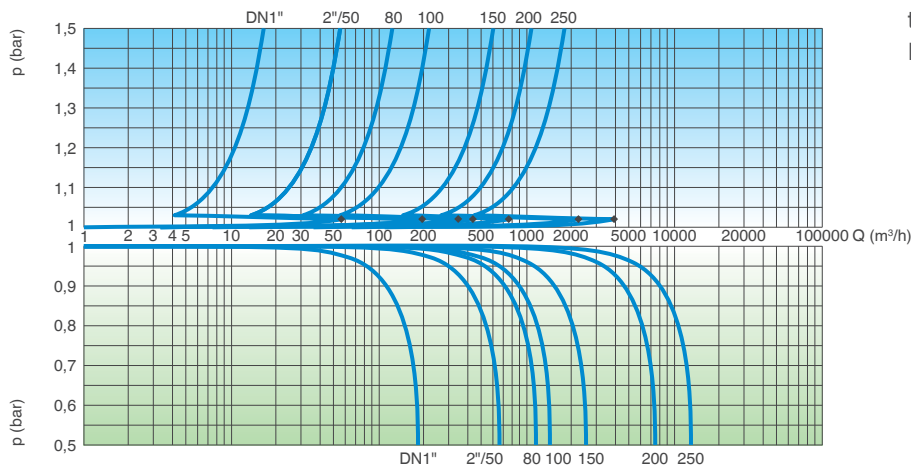Air valve size as a function of pipeline internal diameter and fluid flow velocity expressed in m/s.

nozzle diameter (mm)

FOX AS SUB - Air flow performance charts

AIR RELEASE DURING WORKING CONDITIONS

AIR ENTRANCE DURING PIPE DRAINING

FOX 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 FOX models.