

(SEE SHEET 2 OF 3)

NOMENCLATURE

- D₁ - DIAMETER OF UNDERGROUND PLASTIC PIPE.
- D₂ - DIAMETER OF PLASTIC RISER PIPE.
- D₃ - DIAMETER OF REDUCED SIZE RISER PIPE. MINIMUM SIZE SAME AS VALVE OPENING.

⌀ CROSS SECTION

PIPELINE DIAMETER D ₁ (INCHES)	RISER TEE MIN. DIAMETER D ₂ (INCHES)	MINIMUM NOMINAL DIAMETER D ₃ (INCHES)	
		LOW PRESSURE*	HIGH PRESSURE**
4	3	3/4	1/2
6	5	1-1/4	1
8	6	1-3/4	1
10	8	2-1/4	1
12	10	2-3/4	1-3/4
14	10	3-1/4	1-3/4
15	12	3-1/2	1-3/4

* MINIMUM NOMINAL ORIFICE OPENING (DIA.) AND RISER DIA. FOR LOW PRESSURE UNDERGROUND PLASTIC PIPELINES.

** MINIMUM NOMINAL ORIFICE OPENING (DIA.) AND RISER DIA. FOR HIGH PRESSURE UNDERGROUND PLASTIC PIPELINES.



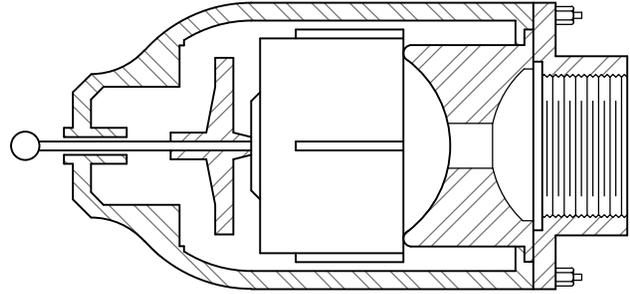
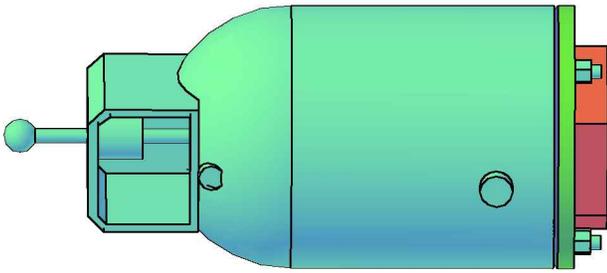
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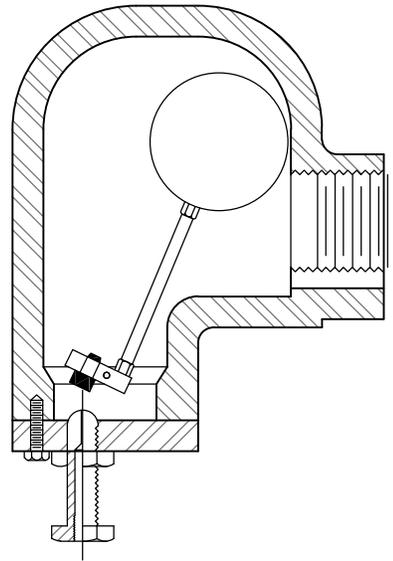
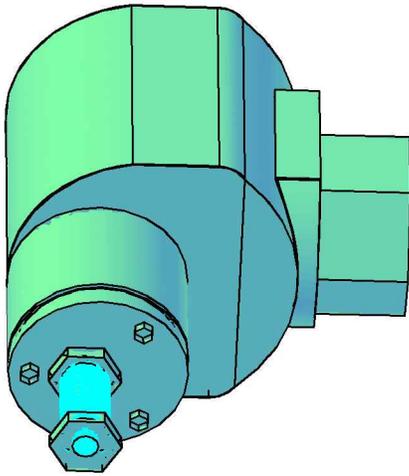
AIR RELEASE VALVES FOR PLASTIC PIPELINES

(REVISED LAST ON 10-09)

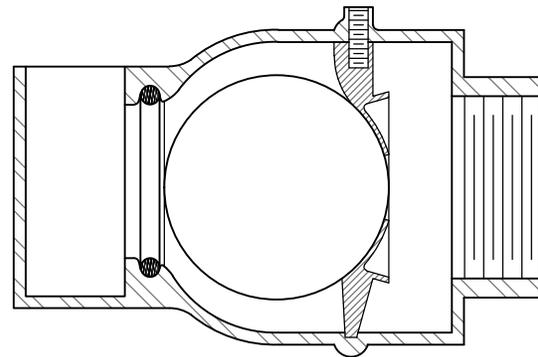
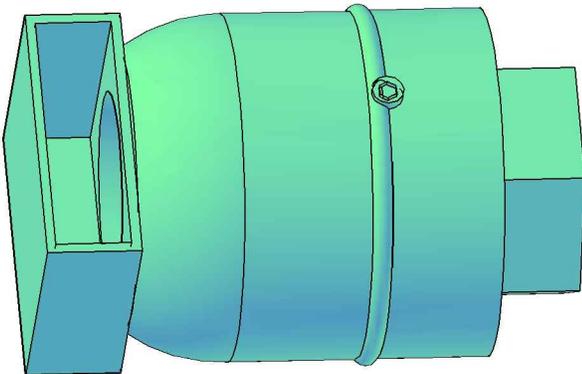
	Date	File Name
Designed <u>BEB, AJS</u>	8-80	
Drawn <u>DDD</u>	9-09	Drawing Name
Checked <u>BEB</u>	9-80	CO-SSP-70
Approved <u>J.E. ANDREWS</u> S.C.E.	10-09	Sheet 1 of 3



TYPICAL
COMBINATION
AIR VALVE



TYPICAL
AIR RELEASE
VALVE



TYPICAL
AIR AND VACUUM
VALVE



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**AIR RELEASE VALVES
FOR PLASTIC PIPES**

(REVISED LAST ON 10-09)

Designed	BEB, AJS	Date	8-80
Drawn	DDD	Date	9-09
Checked	BEB	Date	9-80
Approved	J.E. ANDREWS S.C.E.	Date	10-09

File Name	
Drawing Name	CO-SSP-70
Sheet	2 of 3

AIR RELEASE VALVES SPECIAL NOTES

1. THE RISER PIPE SHALL HAVE A CROSS SECTIONAL AREA AT LEAST ONE-HALF THE CROSS SECTIONAL AREA OF THE PIPELINE. (SEE TABLE ON SHEET 1 OF 3.) THIS SIZE RISER PIPE CAN BE REDUCED AT A DISTANCE OF ONE PIPELINE DIAMETER (D_1) OR HIGHER ABOVE THE CENTERLINE OF THE PIPELINE. ABOVE THIS ELEVATION, THE RISER PIPE MAY BE REDUCED TO THE SIZE OF THE ORIFICE IN THE AIR RELEASE VALVE.
2. THE RISER PIPE SHALL BE MADE OF PLASTIC, STEEL, OR OTHER MATERIAL THAT IS COMPATIBLE WITH THE PIPELINE AND THE AIR RELEASE VALVE. THE MANUFACTURER OF THE AIR RELEASE VALVE AND/OR THE PIPELINE SHALL BE CONSULTED FOR RECOMMENDATIONS WHEN THERE IS ANY DOUBT AS TO THE COMPATIBILITY OF MATERIAL. RISER PIPES SHALL HAVE A PRESSURE RATING EQUAL TO OR EXCEEDING THE PIPELINE PRESSURE RATING AFTER THE RISER IS THREADED FOR INSTALLATION OF THE VALVE.
3. ALL FITTINGS, SUCH AS AIR RELEASE VALVE, COUPLERS, REDUCERS, BANDS, TEES, AND CROSSES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL FITTINGS SHALL HAVE A PRESSURE RATING EQUAL TO OR EXCEEDING THE PIPE WITH WHICH THEY ARE USED. THEY SHALL BE MADE OF MATERIAL THAT IS RECOMMENDED FOR USE WITH THE PIPE BY THE MANUFACTURER.
4. THREE BASIC TYPES OF AIR RELEASE VALVES ARE AVAILABLE FOR USE ON IRRIGATION PIPELINES. THEY ARE REFERRED TO AS FOLLOWS:
 - a. AIR RELEASE VALVE – IS A CONTINUOUS ACTING VALVE WHICH HAS A SMALL VENTING ORIFICE GENERALLY VARYING BETWEEN 1/16" AND 3/8" IN SIZE. THE PURPOSE OF THIS TYPE OF VALVE IS TO RELEASE POCKETS OF AIR FROM THE PIPELINE ONCE THE LINE IS FILLED AND UNDER WORKING PRESSURE.
 - b. AIR AND VACUUM VALVE – HAS A LARGE VENTING ORIFICE, EXHAUSTS LARGE QUANTITIES OF AIR FROM THE PIPELINE WHEN IT IS FILLING AND ALLOWS AIR TO RE-ENTER THE LINE AND PREVENTS A VACUUM FROM FORMING WHEN THE PIPELINE IS EMPTYING. THIS TYPE OF VALVE IS SOMETIMES CALLED AN AIR-VACUUM RELEASE VALVE OR AN AIR VENT AND VACUUM RELIEF VALVE. IT IS NOT CONTINUOUS ACTING SINCE IT WILL NOT ALLOW FURTHER ESCAPE OF AIR AT THE WORKING PRESSURE OF THE PIPELINE ONCE THE VALVE CLOSES.
 - c. COMBINATION AIR VALVE – SOMETIMES CALLED A COMBINATION AIR RELEASE AND AIR VACUUM VALVE OR COMBINATION AIR AND VACUUM RELIEF VALVE. IT IS CONTINUOUS ACTING AND COMBINES THE FUNCTIONS OF BOTH THE AIR RELEASE VALVE AND THE AIR AND VACUUM VALVE DISCUSSED IN a AND b ABOVE.
5. STANDARDIZED DESIGNS – MUST BE ADAPTED TO THE SPECIFIC SITE.



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AIR RELEASE VALVES FOR PLASTIC PIPELINES

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