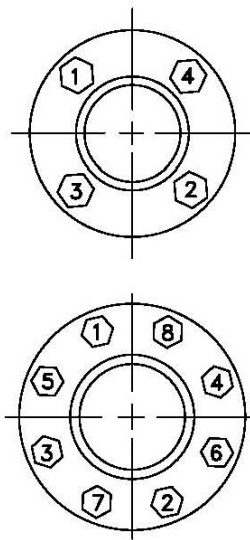


Hair & Lint Strainer Installation & Operation Instructions

STRAINER INSTALLATION

- 1.) The strainer must be installed so that the flow of the water agrees with the flow on the directional arrow on the strainer.
- 2.) The piping attached to this strainer must be adequately supported and restrained to avoid excessive stresses to the strainer and associated pumping equipment.
- 3.) When connecting to the flanges, the bolts must be tightened in the proper sequence, and to the proper torque ratings, as shown below.



PIPING SIZE	BOLT CIRCLE DIAMETER	BOLT SIZE	RECOMMENDED TORQUE (FT./LBS.)
1/2"	2 3/8"	1/2"-13UNC	15 - 20
3/4"	2 3/4"	1/2"-13UNC	15 - 20
1"	3 1/8"	1/2"-13UNC	15 - 20
1 1/2"	3 1/2"	1/2"-13UNC	15 - 20
1 1/2"	3 7/8"	1/2"-13UNC	15 - 20
2"	4 3/4"	5/8"-11UNC	20 - 30
2 1/2"	5 1/2"	5/8"-11UNC	20 - 30
3"	6"	5/8"-11UNC	20 - 30

PIPING SIZE	BOLT CIRCLE DIAMETER	BOLT SIZE	RECOMMENDED TORQUE (FT./LBS.)
4"	7 1/2"	5/8"-11UNC	20 - 30
5"	8 1/2"	5/8"-11UNC	25 - 35
6"	9 1/2"	3/4"-10UNC	33 - 50
8"	11 3/4"	3/4"-10UNC	33 - 50

STRAINER BASKET & COVER REMOVAL

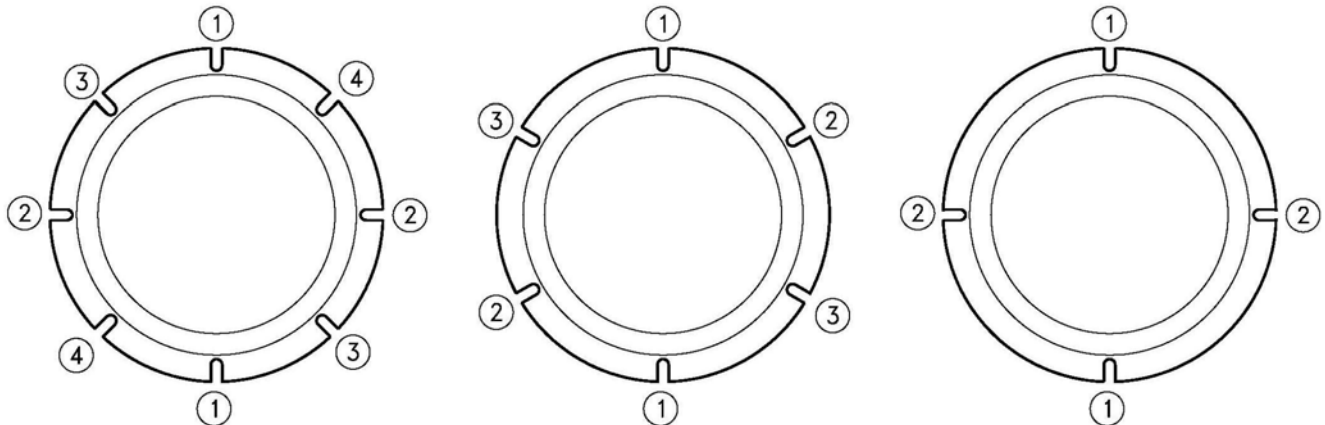
- 1.) Turn off pump.
- 2.) Close the strainer "isolation valves".
- 3.) Loosen all of the hold down clamp assemblies until you are able to rotate them to the down position below the cover. Do not remove knob from hold down assembly. NOTE : some strainer covers have a S.S. brace on top of them. These braces are held in place by the same hold down clamp assemblies. Remove brace, once the hold down clamp assemblies have been "dropped down".
- 4.) Lid should now be able to be removed. Note : sometimes the cover can be held in place under a vacuum. If this occurs, loosen the drain plug at the bottom of the strainer body until the vacuum pressure is alleviated.

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- 5.) Pull basket straight out of the strainer body, rotating the basket back and forth as you are doing this.
- 6.) Hose off the basket from the outside to remove all of the loose material. Then clean the basket with a wire brush or other utensil to remove all of the debris that is caught in the perforations. **DO NOT** turn basket upside down and hit the handle on the ground to remove debris. **DO NOT** hit the bottom of the basket to remove debris.
- 7.) Inspect the basket to make sure that there is no damage and/or broken welds. If so, replace basket with a “spare” and have damaged basket replaced or repaired.

STRAINER BASKET & COVER INSTALLATION

- 1.) While holding the basket by the handle, slowly drop the basket into the opening in the strainer body, rotating the basket back and forth slightly to make sure that the angled oval ring of the basket seats completely against the angled oval ring inside the strainer body.
- 2.) “Center” the cover gasket on top of the strainer body. Note : coating the gasket with an approved lubricant will make for a better “seal” and extend the life of the gasket.
- 3.) Place the cover on top of the body, aligning the groove in the cover for the gasket and the slots in the cover for the hold down assemblies on the body of the strainer. Note : check that the handle of the strainer basket does not hit the cover. If it does, repeat step 1.
- 4.) Flip up all of the “hold down clamp” assemblies so that they pass through the slots and are sitting on top of the cover. If necessary, rotate the cover back and forth slightly to assist with the alignment of the clamp assemblies and the slots in the cover. NOTE : some strainers have a S.S. brace on top of the cover. If this is the case, then place S.S. brace on top of the cover, aligning the slots in the brace with the slots in the cover.
- 5.) Tighten the hold down clamp knobs until they are barely snug.
- 6.) Per the diagram below, tighten the hold down clamps 2 at a time, based on your style of cover, until they are all hand tight.

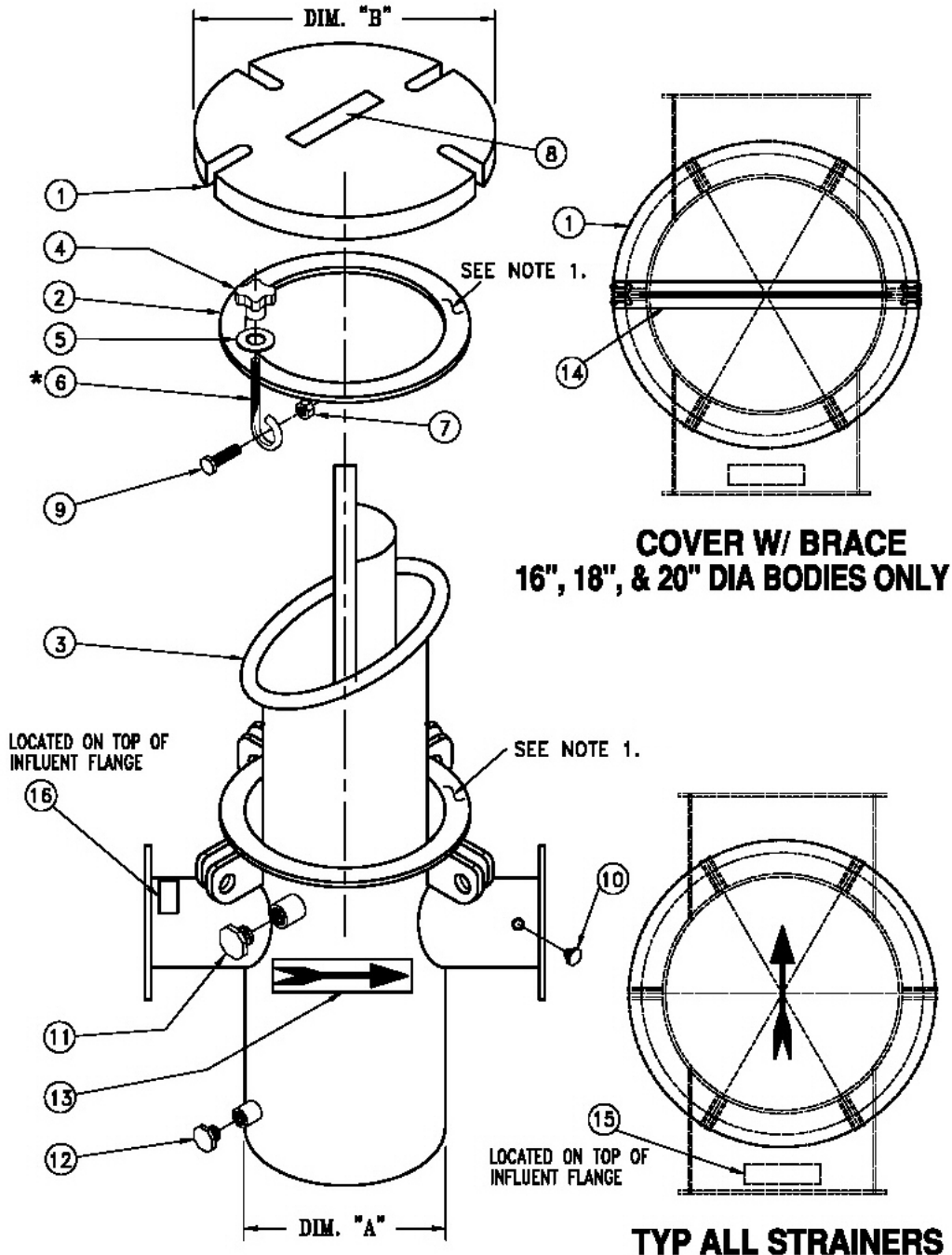


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- 7.) Open the “isolation valves” slowly to fill the strainer body up to the underside of the cover. If necessary, loosen a couple of the strainer knobs on the cover to allow the air to be released as the water level climbs to the underside of the strainer cover. Once the water comes up to the cover, re-tighten the knobs that were loosened previously.

NOTE : This applies to strainers that are installed “below grade”. Strainers installed in “On grade”, or “Above grade”, applications may not fill all the way to the underside of the cover.

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*** MEASURED FROM TOP OF EYE BOLT
TO THE BOTTOM OF THREAD**

NOTE! PIPING ATTACHED TO THIS STRAINER MUST BE ADEQUATELY SUPPORTED AND RESTRAINED TO AVOID EXCESSIVE STRESSES TO THE STRAINER AND ASSOCIATED PUMPING EQUIPMENT.

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BILL OF MATERIAL

ITEM	QTY. REQ'D	STRAINER SIZE	BODY SIZE DIM. "A"	COVER DIA. DIM. "B"	DESCRIPTION	PART NUMBER
1		3", 4"	8 5/8"	12 5/8"	COVER STRAINER	150NBCVR13R1
		5" – 8"	10 3/4"	14 3/4"	COVER STRAINER	150NBCVR48R1
		10", 12"	16"	20 1/2"	COVER STRAINER (8) hold downs	150NBCVR20R2
		14"	18"	23"	COVER STRAINER (8) hold downs	150NBCVR18R2
		16"	20"	25 1/2"	COVER STRAINER (8) hold downs	150NBCVR22R2
		10", 12"	16"	20 1/2"	COVER STRAINER (6) hold downs	150NBCVR20R1
		14"	18"	23"	COVER STRAINER (6) hold downs	150NBCVR18R1
2		16"	20"	25 1/2"	COVER STRAINER (6) hold downs	150NBCVR22R1
		3", 4"	8 5/8"	12 5/8"	GASKET STRAINER 10.125"OD X 8.75"ID	150NBGSK08R1
		5" – 8"	10 3/4"	14 3/4"	GASKET STRAINER 12.25"OD X 10.875"ID	150NBGSK48R1
		10", 12"	16"	20 1/2"	GASKET STRAINER 18.00"OD X 16.375"ID	150NBGSK16R1
		14"	18"	23"	GASKET STRAINER 20.50"OD X 18.25"ID	150NBGSK18R1
3		16"	20"	25 1/2"	GASKET STRAINER 22.75"OD X 20.25"ID	150NBGSK20R1
		3", 4"	8 5/8"	12 5/8"	BASKET NEP-BEN H&L	NBBSK04EP
		5" – 8"	10 3/4"	14 3/4"	BASKET NEP-BEN H&L	NBBSK08EP
		10", 12"	16"	20 1/2"	BASKET NEP-BEN H&L	NBBSK10EP
		14"	18"	23"	BASKET NEP-BEN H&L	NBBSK14EP
	16"	20"	25 1/2"	BASKET NEP-BEN H&L	NBBSK14EP	
4				KNOB SECURING	11210	
5				WASHER .375" X 1.25" OD X .125" THK NYLON	3.8PLAWASH	
6				EYEBOLT 3/8" X 3 3/4"	1509489T73	
7				NUT HEX .500 NYLON SELF LOCK	654S08LNUT	
8				LABEL NEPTUNE BENSON	LABELNB1x4.5	
9				BOLT HEXHD 0.500 X 1.5-13UNC	652S080150	
10				PLUG PIPE 0.25" SCH.40 PVC	210450-002	
11				PLUG 1.50" SCH.40 PVC MPT	210450-015	
12				PLUG 0.75" SCH.40 PVC MPT	210450-007	
13				LABEL STRAINER FLOW L&R SET	LABELSTRNARO	
14		10", 12"	16"	20 1/2"	BRACE FOR COVER	BRACESTRCVR16
		14"	18"	23"	BRACE FOR COVER	BRACESTRCVR18
		16"	20"	25 1/2"	BRACE FOR COVER	BRACESTRCVR20
15				LABEL PIPING NOTE		

NOTES:

1. A lubricant such as petroleum jelly, applied to these surfaces, will enhance gasket sealing capability.
2. Measure cover O.D. and provide that information to Neptune~Benson with eyebolt quantity when ordering replacements.
3. Older strainers may require a 6 hold down cover. Call for pricing.