

## FIG. 7250

### Suction Diffuser

The Fig. 7250 Gruvlok Suction Diffuser protects your pump and saves you money on your overall installed cost while offering you these advantages:

#### SAVES SPACE:

Mounts directly to the pump. Length is ideal for header spacing, reducing the need for additional fittings.

#### SAVES LABOR AND MATERIAL:

The lightweight compact design is easily installed with no need for welding.

#### IMPROVES PUMP PERFORMANCE:

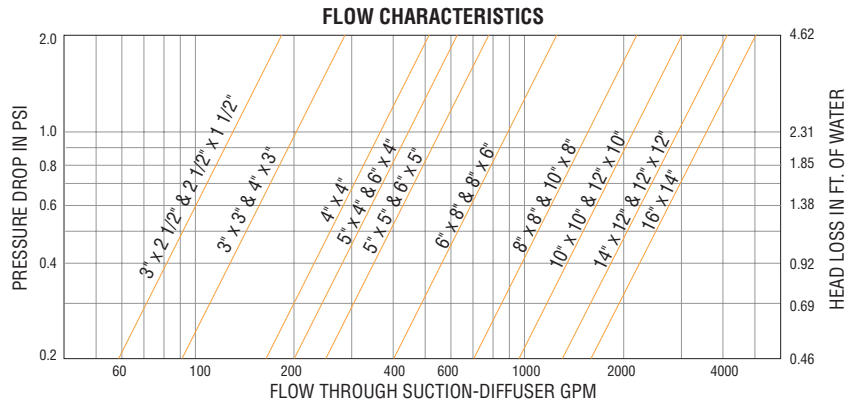
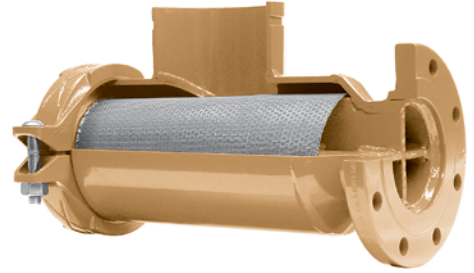
The one-piece diffuser vane and strainer design reduces flow turbulence, streamlines the flow, and traps any hazardous foreign material to better protect your pump.

#### PIPE SUPPORT LUG STANDARD

#### FLOW DATA:

**NOTE 1.** Most U.S. piping engineers specify system startup instructions for new systems which include removing the pre-filter screen after system flushing of the main piping before the system is put into normal operation. Flow data values are based on flow of clean water at ambient temperatures. The pressure drop across the diffuser basket strainer, 50% clogged, is approximately twice as great as that of a clean strainer.

**NOTE 2.** Suction Diffuser baskets need a routine maintenance program to maintain system efficiency.



## MATERIAL SPECIFICATIONS

#### BOLTS:

SAE J429, Grade 5, Zinc Electroplated  
ISO 898-1, Class 8.8, Zinc Electroplated followed by a Yellow Chromate Dip

#### HEAVY HEX NUTS:

ASTM A563, Grade A, Zinc Electroplated  
ISO 898-2, Class 8.8, Zinc Electroplated followed by a Yellow Chromate Dip

#### STAINLESS STEEL BOLTS & NUTS:

Stainless steel bolts and nuts are also available. Contact an Anvil Representative for more information

#### HOUSING:

Sizes 2 1/2" x 2 1/2" through 10" x 8":

Carbon steel Schedule 40 conforming to ASTM A 53, Grade B.

Sizes 10" x 10" through 16" x 14":

Carbon steel .375" standard weight wall conforming to ASTM A 53, Grade B.

#### DIFFUSER BASKET:

Stainless steel type 304, #16 perforated plate with 3/16" diameter holes. (51% open area). Pre-Filter: Stainless steel type 304 screen - 16 mesh. (removable).

#### COUPLINGS:

Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

#### FLANGES:

Carbon steel class 150# conforming to ASME B 16.5.

#### DRAIN & GAGE PLUGS:

Carbon steel square head plugs conforming to ASME B16.11.

#### COATINGS:

Rust inhibiting paint Color: ORANGE (standard)

#### GASKETS: Materials

Properties as designated in accordance with ASTM D 2000

##### Grade "E" EPDM (Green color code)

-40°F to 230°F (Service Temperature Range)(-40°C to 110°C)

Recommended for water service, diluted acids, alkalis solutions, oil-free air and many other chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS.

##### Grade "EP" EPDM (Green and Red color code)

-40°F to 250°F (Service Temperature Range)(-40°C to 121°C)

Recommended for water service, diluted acids, alkalis solutions, oil-free air and many other chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS.

For hot water applications the use of Gruvlok Extreme Temperature lubricant is recommended. NSF-61 Certified for cold and hot water applications up through 12".

##### Grade "T" Nitrile (Orange color code) -20°F to 180°F

(Service Temperature Range)(-29°C to 82°C)

Recommended for petroleum applications. air with oil vapors and vegetable and mineral oils.

NOT FOR USE IN HOT WATER OR HOT AIR.

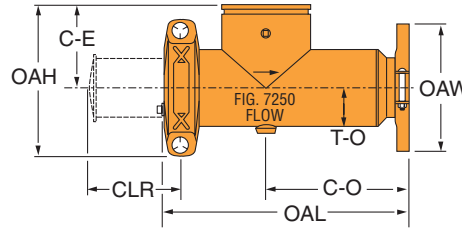
### PROJECT INFORMATION

### APPROVAL STAMP

<b>Project:</b>	<input type="checkbox"/> Approved
<b>Address:</b>	<input type="checkbox"/> Approved as noted
<b>Contractor:</b>	<input type="checkbox"/> Not approved
<b>Engineer:</b>	<b>Remarks:</b>
<b>Submittal Date:</b>	
<b>Notes 1:</b>	
<b>Notes 2:</b>	

## FIG. 7250

### Suction Diffuser



SIZES 2 1/2" X 2 1/2" thru 16" x 14"

### FIGURE 7250 SUCTION DIFFUSER

Nominal Size	O.D.	System Side (Grooved)	Pump Side (Flanged)	C-E	C-O	OAL	OAH	OAW Flange O.D.	CLR	T-O	Orifice Cylinder Open Area	Max. Working Pressure	Approx. Wt. Each
In./DN(mm)	In./mm	In./DN(mm)	In./DN(mm)	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In. Sq./cm. Sq.	PSI/bar	Lbs./Kg
2 1/2 x 2 1/2 65 x 65	2.875 x 2.875 73.0 x 73.0	2 1/2 65	2 1/2 65	5 127	8 203	13 1/2 343	9 229	7 178	13 1/2 343	2 1/4 57	48 310	300 20.7	32 14.5
3 x 2 80 x 50	3.500 x 2.375 88.9 x 60.3	3 80	2 50	5 127	8 203	13 1/2 343	9 229	6 152	13 1/2 343	2 1/4 57	42 271	300 20.7	34 15.4
3 x 2 1/2 80 x 65	3.500 x 2.875 88.9 x 73.0	3 80	2 1/2 65	5 127	8 203	13 1/2 343	9 229	7 178	13 1/2 343	2 1/4 57	48 310	300 20.7	34 15.4
3 x 3 80 x 80	3.500 x 3.500 88.9 x 88.9	3 80	3 80	5 127	8 203	13 1/2 343	9 229	7 1/2 191	10 1/4 260	2 13/16 71	58 374	300 20.7	35 15.9
4 x 2 100 x 50	4.500 x 2.375 114.3 x 60.3	4 100	2 50	5 127	8 203	13 1/2 343	9 229	6 152	13 1/2 343	2 1/4 57	48 310	300 20.7	35 15.9
4 x 2 1/2 100 x 65	4.500 x 2.875 114.3 x 73.0	4 100	2 1/2 65	5 127	8 203	13 1/2 343	9 229	7 178	13 1/2 343	2 1/4 57	48 310	300 20.7	36 16.3
4 x 3 100 x 80	4.500 x 3.500 114.3 x 88.9	4 100	3 80	5 127	8 203	13 1/2 343	9 229	7 1/2 191	10 1/4 260	2 13/16 71	58 374	300 20.7	37 16.8
4 x 4 100 x 100	4.500 x 4.500 114.3 x 114.3	4 100	4 100	6 1/2 165	10 1/2 267	17 1/2 445	11 3/4 298	9 229	13 1/2 343	3 5/16 607	94 607	300 20.7	70 31.8
5 x 4 125 x 100	5.563 x 4.500 141.3 x 114.3	5 125	4 100	6 1/2 165	10 1/2 267	17 1/2 445	11 3/4 298	9 229	13 1/2 343	3 5/16 607	94 607	300 20.7	72 32.7
5 x 5 125 x 125	5.563 x 5.563 141.3 x 141.3	5 125	5 125	6 1/2 165	10 1/2 267	17 1/2 445	13 3/4 349	10 254	13 1/2 343	4 5/16 110	117 755	300 20.7	75 34.0
6 x 3 150 x 80	6.625 x 3.500 168.3 x 88.9	6 150	3 80	6 1/2 165	10 1/2 267	17 1/2 445	11 3/4 298	7 1/2 191	13 1/2 343	3 3/16 84	94 607	300 20.7	72 34.0
6 x 4 150 x 100	6.625 x 4.500 168.3 x 114.3	6 150	4 100	6 1/2 165	10 1/2 267	17 1/2 445	11 3/4 298	9 229	13 1/2 343	3 5/16 84	94 607	300 20.7	73 33.1
6 x 5 150 x 125	6.625 x 5.563 168.3 x 141.3	6 150	5 125	6 1/2 165	10 1/2 267	17 1/2 445	13 3/4 349	10 254	13 1/2 343	4 5/16 110	117 755	300 20.7	75 34.0
6 x 6 150 x 150	6.625 x 6.625 168.3 x 168.3	6 150	6 150	7 3/4 197	13 1/4 337	21 1/2 546	14 3/4 375	11 279	16 1/4 413	4 5/16 110	167 1,077	300 20.7	120 54.4
8 x 5 200 x 125	8.625 x 5.563 219.1 x 141.3	8 200	5 125	7 3/4 197	13 1/4 337	21 1/2 546	14 3/4 375	10 254	16 1/4 413	4 5/16 110	167 1,077	300 20.7	128 58.1
8 x 6 200 x 150	8.625 x 6.625 219.1 x 168.3	8 200	6 150	7 3/4 197	13 1/4 337	21 1/2 546	14 3/4 375	11 279	16 1/4 413	4 5/16 110	167 1,077	300 20.7	130 59.0
8 x 8 200 x 200	8.625 x 8.625 219.1 x 219.1	8 200	8 200	9 229	15 1/4 387	24 1/2 622	17 3/4 451	13 1/2 343	19 3/4 502	5 3/8 137	266 1,716	300 20.7	190 86.2
10 x 6 250 x 150	10.750 x 6.625 273.1 x 168.3	10 250	6 150	9 229	15 1/4 387	24 1/2 622	17 1/2 445	11 279	19 3/4 502	5 3/8 137	266 1,716	300 20.7	195 88.5
10 x 8 250 x 200	10.750 x 8.625 273.1 x 219.1	10 250	8 200	9 229	15 1/4 387	24 1/2 622	17 1/2 445	13 1/2 343	19 3/4 502	5 3/8 137	266 1,716	300 20.7	200 90.7
10 x 10 250 x 250	10.750 x 10.750 273.1 x 273.1	10 250	10 250	10 254	17 1/4 438	28 711	19 5/8 498	16 406	23 3/4 603	6 3/8 162	384 2,477	300 20.7	225 102.1
12 x 8 300 x 200	12.750 x 8.625 323.9 x 219.1	12 300	8 200	10 254	17 1/4 438	28 711	19 5/8 498	13 1/2 343	23 3/4 603	6 3/8 162	384 2,477	300 20.7	225 102.1
12 x 10 300 x 250	12.750 x 10.750 323.9 x 273.1	12 300	10 250	10 254	17 1/4 438	28 711	19 5/8 498	16 406	23 3/4 603	6 3/8 162	384 2,477	300 20.7	230 104.3
12 x 12 300 x 300	12.750 x 12.750 323.9 x 323.9	12 300	12 300	11 279	24 1/4 616	36 914	20 1/2 521	19 483	34 1/4 870	8 203	695 4,484	300 20.7	382 173.3
14 x 10 350 x 250	14.000 x 10.750 355.6 x 273.1	14 350	10 250	11 279	24 1/4 616	36 914	20 1/2 521	16 406	34 1/4 870	8 203	695 4,484	300 20.7	382 173.3
14 x 12 350 x 300	14.000 x 12.750 355.6 x 323.9	14 350	12 300	11 279	24 1/4 616	36 914	20 1/2 521	19 483	34 1/4 870	8 203	695 4,484	300 20.7	382 173.3
14 x 14 350 x 350	14.000 x 14.000 355.6 x 355.6	14 350	14 350	12 305	26 1/4 667	39 991	23 584	21 533	36 914	9 229	817 5,271	300 20.7	467 211.8
16 x 14 400 x 350	16.000 x 14.000 406.4 x 355.6	16 400	14 350	12 305	26 1/4 667	39 991	23 584	21 533	36 914	9 229	817 5,271	300 20.7	467 211.8

Other sizes available on special request. Contact an Anvil Rep. for ordering information.  
 Dimensions may vary Contact an Anvil Rep. for certified values.  
 Not for use in copper systems.  
 Product must be supported by pipe supports (supports not included).

- "CLR" Dimension indicates clearance needed for diffuser basket removal.
- Drain Holes: (End Cap)  
 - 3/4" NPT for sizes 2 1/2 x 2 1/2 thru 6 x 5, -1" NPT for sizes 6 x 6 thru 16 x 14.
- Pipe Support - Use 1 1/4" SCH. 40 Pipe for 2 1/2" thru 10" pipe and 2" SCH. 40 Pipe for 12" and larger diffusers.
- "Orifice Cylinder Open Area" is the total area of the opening in the diffuser basket after the pre-filter screen has been removed.