

COMMONLY USED DRAIN COVERS (updated 2024)
(REFER TO MANUFACTURER'S DATA FOR OTHER MODELS)

Florida Department of Health - Bureau of Environmental Public Health - Water Programs

PIPING VELOCITY LOSSES (GPM)

PIPE	UPSA	CHARLOTTE PIPE	SPEARS	Geo FISCHER	UPSA	CHARLOTTE PIPE	SPEARS	Geo FISCHER	UPSA	CHARLOTTE PIPE	SPEARS	Geo FISCHER
	Gravity				Suction				Pressure			
Velocity	3ft/sec				6ft/sec				10ft/sec			

Diameter	GPM				GPM				GPM			
0.75"	4	4	4	5	8	8	9	10	14	16	15	17
1"	7	8	7	8	15	16	15	16	24	27	25	27
1.5"	17	18	18	19	33	37	37	38	55	62	61	64
2"	29	32	30	32	59	62	61	64	98	102	102	106
2.5"	46	48	44	45	92	87	87	91	153	147	146	151
3"	66	67	68	70	132	138	136	140	220	226	226	233
4"	117	117	117	120	235	235	235	241	392	391	391	402
5"	184	185	184	189	368	369	370	379	612	616	616	631
6"	264	267	267	274	529	533	535	547	881	889	891	912
8"	470	462	464	474	940	925	928	947	1567	1543	1545	1579
10"	734	738	732	746	1489	1461	1462	1494	2448	2436	2439	2488
12"	1057	1038	1038	1060	2115	2076	2076	2120	3525	3460	3462	3532
14"	1439	1254	1254	1280	2879	2508	2512	2564	4798	4179	4184	4273
16"	1880	1636	1642	1673	3760	3279	3279	3346	6266	5458	5469	5578

MAIN DRAINS

AEGIS (EVOQUA - NEPTUNE/BENSON)					
Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
3030AEC	30" X 30"	128.21	1432gpm	600gpm	Floor
3030AEC	30" X 30"	128.21	1120gpm	600gpm	Wall

AFRAS INDUSTRIES					
Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
10058Axxx	7.375" Ø	12.48	86gpm	58gpm	Cover & Sump - Floor
10058Axxx	7.375" Ø	12.48	68gpm	58gpm	Cover & Sump - Wall
10064xxx	7.375" Ø	12.48	86gpm	58gpm	Drain Cover Only - Floor
10064xxx	7.375" Ø	12.48	68gpm	58gpm	Drain Cover Only - Wall
10064Axxx	11.125" Ø	25.8	188gpm	121gpm	Cover & Sump - Floor
10064Axxx	11.125" Ø	25.8	160gpm	121gpm	Cover & Sump - Wall
10064AWDxxx	11.125" Ø	25.8	188gpm	121gpm	Sumpless
10064ACW	12" x 12"	25.8	188gpm	121gpm	Floor

AQUASTAR POOL PRODUCTS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
4HPxxx	4" Ø	5.2	56gpm @ 3.5ft/sec	24gpm	Floor - Sumpless
4HPxxx	4" Ø	5.2	56gpm @ 3.5ft/sec	24gpm	Wall - Sumpless
6HPHAxxx	6" Ø	10.4	160gpm @ 4.9ft/sec	49gpm	Floor - Sumpless
6HPHAxxx	6" Ø	10.4	92gpm @ 2.8ft/sec	49gpm	Wall - Sumpless
8MFxxx	8" Ø	16.6	160gpm @ 3.2ft/sec	75gpm	Floor
8MFxxx	8" Ø	16.6	112gpm @ 2.2ft/sec	75gpm	Wall
R8MFxxx	8" Ø	16.1	146gpm @ 2.9ft/sec	75gpm	Floor
R8MFxxx	8" Ø	16.1	130gpm @ 2.6ft/sec	75gpm	Wall
A8Rxxx	8" Ø	16.0	140gpm @ 2.8ft/sec	75gpm	Floor - Sumpless
A8Rxxx	8" Ø	16.0	84gpm @ 1.7ft/sec	74gpm	Wall - Sumpless
LP8AVWRxxx	8" Ø	13.1	100gpm @ 2.0ft/sec	75gpm	Floor
LP8AVWRxxx	8" Ø	13.1	70gpm @ 1.7ft/sec	62gpm	Wall
CC8xxx	8" Ø	15.6	Contact manufacturer	73gpm	Floor/Wall
CC10xxx	10" Ø	26.5	Contact manufacturer	124gpm	Floor/Wall
10AVRxxx	10" Ø	11.2	166gpm @ 4.8ft/sec	52gpm	Floor
10AVRxxx	10" Ø	11.2	96gpm @ 2.8ft/sec	51gpm	Wall
A10RCFRxxx	10" Ø	31.5	170gpm @ 1.7ft/sec	150gpm	Floor - Sumpless
A10RCFRxxx	10" Ø	31.5	170gpm @ 1.7ft/sec	150gpm	Wall - Sumpless
9MFxxx	9" x 9"	36.8	258gpm @ 2.3ft/sec	172gpm	Floor
9MFxxx	9" x 9"	36.8	274 gpm @ 2.4ft/sec	172gpm	Wall
WAV9WRxxx	9" x 9"	48.4	224gpm @ 1.5ft/sec	224gpm	Floor
WAV9WRxxx	9" x 9"	48.4	224gpm @ 1.5ft/sec	224gpm	Wall
914xxx	14" x 14"	84.0	560gpm @ 2.1ft/sec	400gpm	Floor
914xxx	14" x 14"	84.0	300gpm @ 1.2ft/sec	300gpm	Wall
R9MFxxx	9" x 9"	35.8	258gpm @ 2.3ft/sec	172gpm	Floor
R9MFxxx	9" x 9"	35.8	274 gpm @ 2.5ft/sec	164gpm	Wall
10MFxxx	10" Ø	31.3	158gpm @ 1.6ft/sec	148gpm	Floor
10MFxxx	10" Ø	31.3	162gpm @ 1.7ft/sec	143gpm	Wall
12MFxxx	12" x 12"	71.2	274 gpm @ 1.2ft/sec	274gpm	Floor
12MFxxx	12" x 12"	71.2	278gpm @ 1.3ft/sec	278gpm	Wall
R12MFxxx	12" x 12"	69.1	274 gpm @ 1.3ft/sec	274gpm	Floor
R12MFxxx	12" x 12"	69.1	278gpm @ 1.3ft/sec	278gpm	Wall
18MFxxx	19.25" x 19.25"	147.1	293gpm @ 0.6ft/sec	293gpm	Floor Only
1216xxx	12" x 12"	101.0	460gpm @ 1.5ft/sec	460gpm	Floor
1216xxx	12" x 12"	101.0	445gpm @ 1.4ft/sec	445gpm	Wall
24xxx	24" x 24"	352.0	1531gpm @ 1.4ft/sec	1531gpm	Floor/Wall
FCxxx	20" Ø	42.0	158gpm @ 1.2ft/sec	158gpm	Floor Only
32CDVxxx	32" x 3"	22.6	236gpm @ 3.4ft/sec	105gpm	Floor
32CDVxxx	32" x 3"	22.6	136gpm @ 1.9ft/sec	105gpm	Wall
32DFLxxx	32" x 4"	25.9	316gpm @ 3.9ft/sec	121gpm	Floor
32DFLxxx	32" x 4"	25.9	208gpm @ 2.6ft/sec	121gpm	Wall
914xxx	14" x 14"	84.0	560gpm @ 2.1ft/sec	393gpm	Floor
914xxx	14" x 14"	84.0	300gpm @ 1.2 ft/sec	300gpm	Wall
P12xxx	12" x 12"	101.0			discontinued, use 12MF
P18xxx	20.25" x 20.25"	160.8	740gpm @ 1.5ft/sec	740gpm	Floor/Wall
WAV12WRxxx	12" x 12"	90.8	361gpm @ 1.3ft/sec	361gpm	Floor/Wall

AQUASTAR POOL PRODUCTS (cont.)

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
R1216xxx	16" x 16"				discontinued, use 1216xxx
WAV18WRxxx	18" x 18"	176.80	628gpm @ 1.1ft/sec	628gpm	Floor/Wall
WAV24xxx	24" x 24"	340.8	1444gpm @ 1.3ft/sec	1444gpm	Floor/Wall
1824xxx	24" x 24"	253.0	1182gpm	1182gpm	Floor

BRADFORD PRODUCTS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
S/S Channel Drain	32" X 6"	59.09	90gpm	90gpm	Fabricated drain for steel pools

CUSTOM MOLDED PRODUCTS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
25506-320-000	32" x 3.6"	38.79	184gpm	168gpm	Floor
25506-320-000	32" x 3.6"	38.79	184gpm	168gpm	Wall
25506-330-000	20" Ø	46.27	216gpm	216gpm	Floor/wall
25508-180-000	18" X 18"	155.6	424gpm	424gpm	727gpm @ 1.5ft/sec use lower flow
25531-000-000	8" Ø	13.2	62gpm	62gpm	
25539-600-000	8" Ø	14.57	68gpm	68gpm	

DALDORADO

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
DalMAX-SG-242430	24" x 24"	357	1734gpm	1669gpm	Floor
DalMAX-SG-242430	24" x 24"	357	1600gpm	1600gpm	Wall
DalMAX-SG-183625	18" x 36"	401	1984gpm	1875gpm	Floor
DalMAX-SG-183625	18" x 36"	401	1440gpm	1440gpm	Wall
DalMAX-SG-183628	18" x 36"	401	2480gpm	1875gpm	Floor
DalMAX-SG-183628	18" x 36"	401	1990gpm	1875gpm	Wall
DalMAX-SG-183634	18" x 36"	401	2869gpm	1875gpm	Floor
DalMAX-SG-183634	18" x 36"	401	2080gpm	1875gpm	Wall
DalMAX-SG-185427	18" x 54"	602	2872gpm	2815gpm	Floor
DalMAX-SG-185427	18" x 54"	602	2872gpm	2815gpm	Wall
DalMAX-SG-185429	18" x 54"	602	2944gpm	2815gpm	Floor
DalMAX-SG-185429	18" x 54"	602	2872gpm	2815gpm	Wall

DALDORADO (cont.)

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
DalMAX-SG-185434	18" x 54"	602	4412gpm	2815gpm	Floor
DalMAX-SG-187234	18" x 72"	803	7715gpm	3756gpm	Floor
DalMAX-SG-187242	18" x 72"	803	7715gpm	3756gpm	Floor
DalMAX-SG-244834	24" x 48"	714	6456gpm	3339gpm	Floor
DalMAX-SG-244842	24" x 48"	714	6456gpm	3339gpm	Floor
DalMAX-SG-242412-06	24" x 24"	357	1644gpm	1644gpm	Floor
DalMAX-SG-242412-04	24" x 24"	357	715gpm	715gpm	Floor
DalMAX-SG-242412-03	24" x 24"	357	408gpm	408gpm	Floor

EUREKA MANUFACTURING

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
DSF24X24-FLOOR	24" x 24"	165	555gpm @ 1.09ft/sec	555gpm	Floor
DSF30X36-FLOOR	30" X 36"	277	2080gpm	1294gpm	Floor
DSF30X36-WALL	30" X 36"	277	2056gpm	1294gpm	Wall
DSF30X48-FLOOR	30" X 48"	369	3589gpm	1822gpm	Floor
DSF30X48-WALL	30" X 48"	369	2398gpm	1822gpm	Wall

HAYWARD POOL PRODUCTS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
WGX1031BHF	9" X 9"	23.96	172gpm	112gpm	Floor
WGX1031BHF	9" X 9"	23.96	184gpm	112gpm	Wall
WGX1031BLV	9" X 9"	23.96	172gpm	112gpm	Floor
WGX1031BLV	9" X 9"	23.96	184gpm	112gpm	Wall
WGX1032BHF	12" X 12"	41.07	416gpm	192gpm	Floor
WGX1032BHF	12" X 12"	41.07	308gpm	192gpm	Wall
WGX1032BLV	12" X 12"	41.07	416gpm	192gpm	Floor
WGX1032BLV	12" X 12"	41.07	308gpm	192gpm	Wall
WGX1033BHF	18" X 18"	124.10	484gpm	484gpm	Floor
WGX1033BHF	18" X 18"	124.10	484gpm	484gpm	Wall
WGX1033BLV	18" X 18"	124.10	484gpm	484gpm	Floor
WGX1033BLV	18" X 18"	124.10	484gpm	484gpm	Wall

LAWSON AQUATICS (EVOQUA-NEPTUNE BENSON)

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
MLD-FGD-0909	9" x 9"	42.12	261gpm	197gpm	Floor
MLD-FGD-0909	9" x 9"	42.12	248gpm	197gpm	Wall
MLD-FGD-1212	12" x 12"	81.30	365gpm	365gpm	Floor

LAWSON AQUATICS (EVOQUA-NEPTUNE BENSON) (cont.)

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
MLD-FGD-1212	12" x 12"	81.30	340gpm	340gpm	Wall
MLD-FGD-1818	18" x 18"	183.06	816gpm	816gpm	Floor
MLD-FGD-1818	18" x 18"	183.06	712gpm	712gpm	Wall
MLD-SG-0909	9" x 9"	42.12	261gpm	197gpm	Floor with sump
MLD-SG-0909	9" x 9"	42.12	248gpm	197gpm	Wall with sump
MLD-SG-1212	12" x 12"	81.30	365gpm	365gpm	Floor with sump
MLD-SG-1212	12" x 12"	81.30	340gpm	340gpm	Wall with sump
MLD-SG-1818	18" x 18"	183.06	816gpm	816gpm	Floor with sump
MLD-SG-1818	18" x 18"	183.06	712gpm	712gpm	Wall with sump
MLD-GO-1818	18" x 18"	167.74	1040gpm	784gpm	Floor - Grate Only
MLD-GO-1818	18" x 18"	167.74	748gpm	748gpm	Wall - Grate Only
MLD-GO-2424	24" x 24"	216	810gpm	810gpm	Floor - Grate Only
MLD-GO-2424	24" x 24"	216	810gpm	810gpm	Wall - Grate Only
MLD-GO-2436	24" x 36"	324	2954gpm	1515gpm	Floor - Grate Only
MLD-GO-2436	24" x 36"	324	2954gpm	1515gpm	Wall - Grate Only
MLD-GO-2448	24" x 48"	432	5132gpm	2400gpm	Floor - Grate Only
MLD-GO-2448	24" x 48"	432	5132gpm	2400gpm	Wall - Grate Only
FI-SG-1836 -15	18" x 36"	343.44	2080gpm	1605gpm	Floor
FI-SG-1836 -15	18" x 36"	343.44	1496gpm	1496gpm	Wall
FI-SG-1836 -24	18" x 36"	343.44	2080gpm	1605gpm	Floor
FI-SG-1836 -24	18" x 36"	343.44	1496gpm	1496gpm	Wall
FI-SG-1836 -28	18" x 36"	343.44	2080gpm	1605gpm	Floor
FI-SG-1836 -28	18" x 36"	343.44	1496gpm	1496gpm	Wall
FI-SG-1836 -33	18" x 36"	343.44	2080gpm	1605gpm	Floor
FI-SG-1836 -33	18" x 36"	343.44	1496gpm	1496gpm	Wall
FI-SG-1854-24	18" x 54"	514.66	3120gpm	2406gpm	Floor
FI-SG-1854-28	18" x 54"	514.66	3120gpm	2406gpm	Floor
FI-SG-1854-34	18" x 54"	514.66	3120gpm	2406gpm	Floor
FI-SG-1854-38	18" x 54"	514.66	3120gpm	2406gpm	Floor
FI-SG-1872-28	18" x 72"	686.88	4260gpm	3211gpm	Floor
FI-SG-1872-33	18" x 72"	686.88	4260gpm	3211gpm	Floor
FI-SG-1872-42	18" x 72"	686.88	4260gpm	3211gpm	Floor

PARAMOUNT POOL PRODUCTS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
SDX2	10" Ø	43.2	100gpm	100gpm	Floor - Certified at lower flow
SDX2	10" Ø	43.2	100gpm	100gpm	Floor - Certified at lower flow

PENTAIR POOL PRODUCTS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
500108	8" Ø	15.35	136gpm	72gpm	Cover Only - Floor
500108	8" Ø	15.35	88gpm	72gpm	Cover Only - Wall
500103	8" Ø	15.35	88gpm	72gpm	Cover Only - Floor
500103	8" Ø	15.35	88gpm	72gpm	Cover Only - Wall

PENTAIR POOL PRODUCTS (cont.)

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
500110	8" Ø	15.35	88gpm	72gpm	Cover & Sump - Floor
500110	8" Ø	15.35	88gpm	72gpm	Cover & Sump - Wall
501120	8" Ø	15.35	88gpm	72gpm	Cover & Sump - Floor
501120	8" Ø	15.35	88gpm	72gpm	Cover & Sump - Wall

WATERWAY PLASTICS

Model Number	Size	Open Area (sq.in.)	ASME Rating (gpm)	FDOH Max Flow (gpm)	Comments
640-134xV	32" x 5"	37.7	320gpm	110gpm	Floor
640-134xV	32" x 5"	37.7	320gpm	110gpm	Floor
640-134xV	32" x 5"	37.7	216gpm	110gpm	Wall
640-136xV	32" x 5"	37.7	320gpm	110gpm	Floor
640-136xV	32" x 5"	37.7	216gpm	110gpm	Wall
640-137xV	32" x 5"	37.7	320gpm	110gpm	Floor - Grate Only
640-137xV	32" x 5"	37.7	216gpm	110gpm	Wall - Grate Only
640-180xV	8" Ø	14.8	120gpm	68gpm	Floor
640-180xV	8" Ø	14.8	80gpm	68gpm	Wall
640-190xV	10' Ø	30.9	200gpm	143gpm	Floor
640-190xV	10' Ø	30.9	136gpm	136gpm	Wall
640-472xV	12" x 12"	62.4	356gpm	292gpm	Floor
640-472xV	12" x 12"	62.4	280gpm	280gpm	Wall
640-476xV	24" x 24"	249.6	2035gpm	1168gpm	Floor
640-477xV	18" x 18"	174.4	540gpm	540gpm	Floor - Certified at lower flow
640-479xV	9" x 9"	43.6	240gpm	203gpm	Floor
640-479xV	9" x 9"	43.6	208gpm	203gpm	Wall