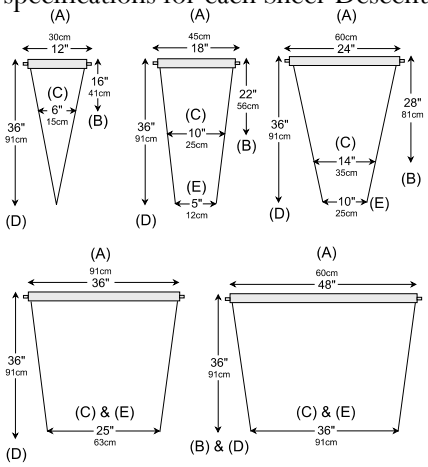
SHEER DESCENT® TECHNICAL INFORMATION

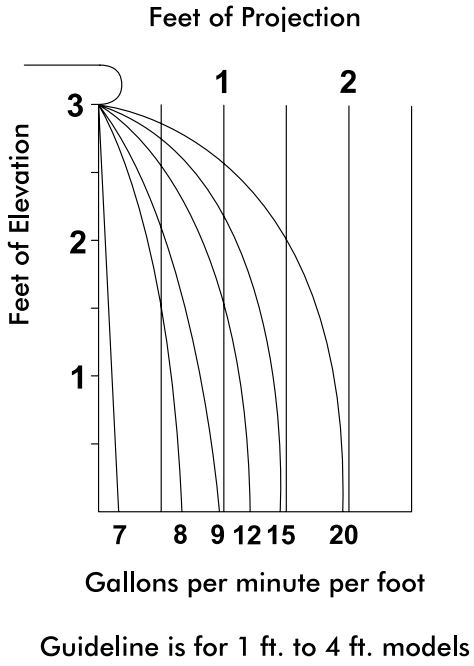
Waterfall Height Specification

Waterfalls naturally narrow as they fall. Waterfall height specifications for each Sheer Descent Waterfall unit are represented below.

A) Length of Sheer Descent Waterfall fixture.
B) Recommended waterfall height from the lip of the Sheer Descent fixture to the pool water surface.
C) Width of the sheet of water at the pool water surface (when installed at the recommended height) mentioned in item B.
D) Maximum waterfall height.
E) Width of sheet of water at the maximum waterfall height.



Water Flow Requirement Chart



Guideline is for 1 ft. to 4 ft. models

Hydraulic Guideline Chart

- Use minimum of 1½" pipe.
- Use minimum of 2" pipe for runs over 60' or if Sheer Descent unit is over 5'.
- Dedicated plumbing lines are recommended.

Maximum recommended flow (In U.S. Gallons)

1½"	for	60 GPM
2"	for	100 GPM
2½"	for	140 GPM
3"	for	225 GPM

Typical pump performance at 50 feet of head

½ HP	=	26 GPM
¾ HP	=	58 GPM
1 HP	=	68 GPM
1½ HP	=	93 GPM
2 HP	=	106 GPM
3 HP	=	140 GPM

Pump Sizing and Installation Options

One of the advantages of the Sheer Descent Waterfall is the ability to provide a continuous sheet of water with a minimum of water flow. A standard four foot model, for example, requires only 40 U.S. gallons per minute to operate. In order to size your pump properly, refer to the Water Flow Requirement Chart. In most cases, a properly sized standard swimming pool pump will operate the Sheer Descent Waterfall and filter the pool with little loss of total water turnover. As a general rule of thumb, the Sheer Descent Waterfall requires approximately 10 U.S. gallons per minute per foot with little head loss. For a more dramatic

effect, more water gallonage can be applied to project the waterfall further away from the wall. **NOTE: When plumbing multiple falls, add the total length of waterfalls together to determine GPM required.** e.g. When plumbing two 6 foot units, you now have 12 feet of waterfall, which requires 120 U.S. gallons per minute.

EXISTING POOL FILTER PUMP INSTALLATION

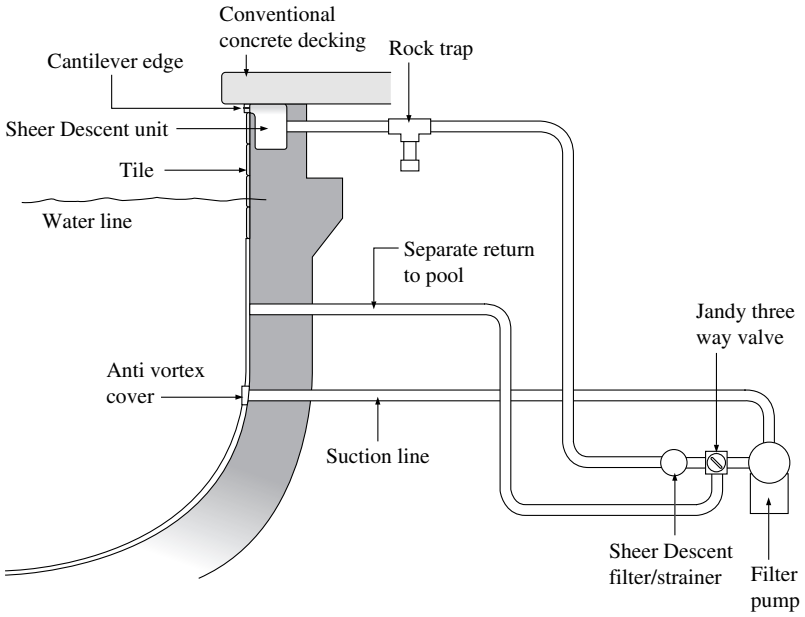
The installation of the Sheer Descent Waterfall using the main pool filter pump is the most common plumbing system, due to the unique low flow aspect of the waterfall system. Simply plumb a three way valve on the return line, after the filter, and plumb the waterfall feed line in a minimum of 1½ inch PVC schedule 40 pipe. Units above 5 feet in length need a minimum of 2 inch plumbing.

SEPARATE PUMP FOR THE SHEER DESCENT WATERFALL

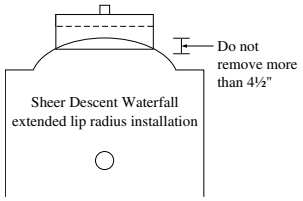
If multiple waterfalls are being installed, or a Sheer Descent Waterfall 6 feet or longer is being installed, we recommend installing a separate pump. When plumbing a pump dedicated for use by the Sheer Decent, a separate suction line to the pool must be plumbed. This should be plumbed in a minimum of 2 inch schedule 40 pipe.

NOTE: At least one anti-vortex safety suction cover must be installed at pool side as a safety precaution. The anti-vortex suction cover is recommended to be positioned 18 inches above the floor of the pool.

Next, a Sheer Descent filter/strainer (part #3456), or equivalent, must be installed on the return side of the pump, between the pump and the Sheer Descent Waterfall. **A FILTER IS REQUIRED** for separate pump installation, as large debris must not be allowed to enter the Sheer Descent unit. For installations requiring up to 60 U.S. gallons per minute, use one Sheer Descent filter. For higher water requirements, use two or more filters plumbed in parallel. A separate return line, with a three way valve plumbed in such a way that water can be balanced between the Sheer Descent Waterfall and return back to the pool, is also required. **See plumbing diagram below.**



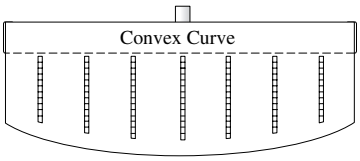
Sheer Descent Waterfall Radius Cut Guidelines

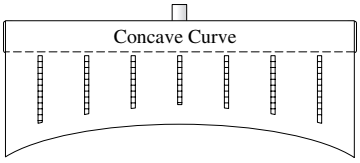


Extended lip Sheer Descent Waterfalls can be custom cut in the field to meet specific needs such as curves, irregular shapes, etc. In order to custom fit the waterfall, carefully measure the amount of extended lip to be removed. Remember to leave enough room for tile and thin set, so the deepest edge of the radius cut will not be recessed from the tile line. **NOTE: Never remove more than 4½" of the extended lip, leaving a minimum of 1½" of lip. See figure 12. Remove the protective tongue prior to cutting the waterfall.**
Remember to REPLACE THE TONGUE after cutting the radius to protect the fall from construction debris. An additional tongue is provided in product packaging.
When designing custom curves for the Sheer Descent Extended Lip models, please refer to the Minimum Radius Guidelines Table below to select the correct Sheer Descent model. Super Radius models accommodate very tight radius curves and are available by special order.

Table Key

Sheer Descent Model	Abbreviation	Customized Cut
Extended Lip	EL	Field Cut or Factory Cut
Super Radius	SR	Factory Cut Only





Sheer Descent Waterfall Length

	1'	1.5'	2'	3'	4'	5'	6'	7'	8'
Radius									
1'	EL	-	-	-	-	-	-	-	-
1.5'	EL	EL	-	-	-	-	-	-	-
2"	EL	EL	EL	*SR*					
2.5'	EL	EL	EL	*SR*	-	-	-	-	-
3'	EL	EL	EL	*SR*	*SR*	-	-	-	-
3.5'	EL	EL	EL	*SR*	*SR*	-	-	-	-
4'	EL	EL	EL	EL	*SR*	-	-	-	-
4.5'	EL	EL	EL	EL	*SR*	*SR*	-	-	-
5'	EL	EL	EL	EL	*SR*	*SR*	-	-	-
5.5'	EL	EL	EL	EL	*SR*	*SR*	-	-	-
6'	EL	EL	EL	EL	EL	*SR*	*SR*	-	-
6.5'	EL	EL	EL	EL	EL	*SR*	*SR*	-	-
7'	EL	EL	EL	EL	EL	*SR*	*SR*	-	-
7.5'	EL	EL	EL	EL	EL	*SR*	*SR*	-	-
8'	EL	EL	EL	EL	EL	*SR*	*SR*	-	-
8.5'	EL	EL	EL	EL	EL	*SR*	*SR*	*SR*	-
9'	EL	EL	EL	EL	EL	*SR*	*SR*	*SR*	-
9.5'	EL	EL	EL	EL	EL	EL	*SR*	*SR*	-
10'	EL	EL	EL	EL	EL	EL	*SR*	*SR*	-
10.5'	EL	EL	EL	EL	EL	EL	*SR*	*SR*	-
11'	EL	EL	EL	EL	EL	EL	*SR*	*SR*	-
12'	EL	EL	EL	EL	EL	EL	*SR*	*SR*	-
12.5'	EL	EL	EL	EL	EL	EL	EL	*SR*	*SR*
13'	EL	EL	EL	EL	EL	EL	EL	*SR*	*SR*