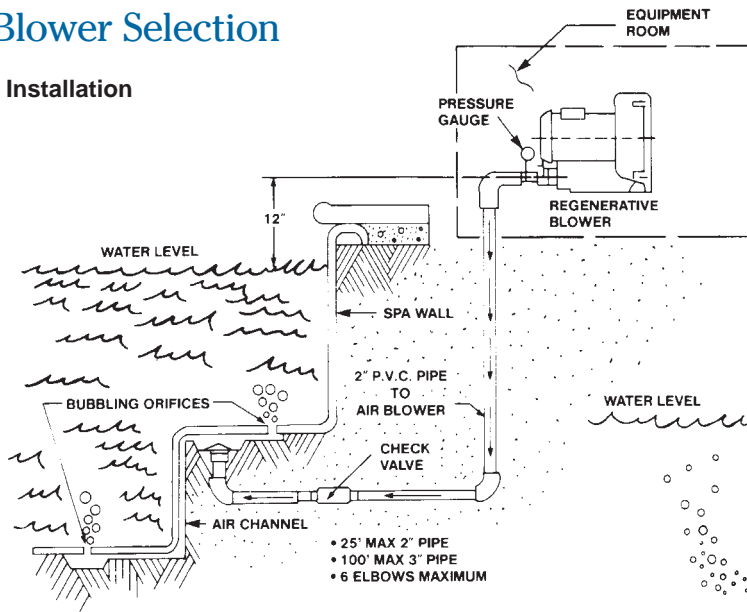


Systems

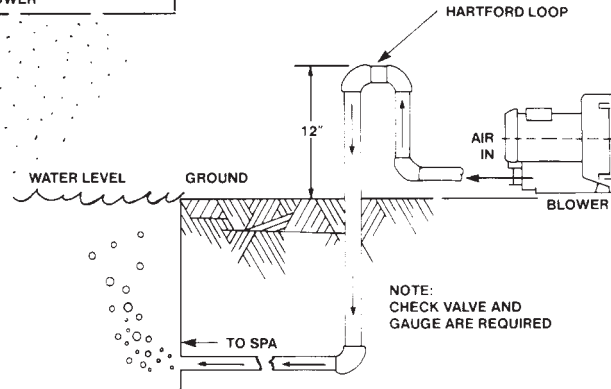
Spa Blower Selection

Typical Installation



Hartford Loop Installation

WHEN BLOWER IS LOCATED AT WATER LEVEL OF SPA, HARTFORD LOOP IS REQUIRED; OTHERWISE, ELEVATE BLOWER AT LEAST 12" ABOVE LEVEL OF POOL.



NOTE: DO NOT SIZE BLOWERS BY HORSEPOWER. BLOWERS SHOULD BE SIZED FOR AIRFLOW AND IMPEDANCE. LARGER HP BLOWERS ARE NOT ALWAYS BETTER.

There are many variables that must be considered when selecting a blower for spa agitation. The depth of the spa, the size, the quantity and location of the air holes and/or jets and the size and length of the supply line are all important. The requirements of each and every system can be precisely calculated but this is a very long and tedious process. By defining and limiting several of the system parameters a "standard" selection chart can be created. The following Blower Selection Chart gives the maximum spa size that can be supplied by each blower.

Blower Selection Chart

Max. Recommended Spa Surface Area

Spa Depth	Blower Model			
	DR 404 (1 hp)	DR 454 (1.5 hp)	DR 505 (2 hp)	DR 606 (3 hp)
30"	60 sq. ft.	88 sq. ft.	100 sq. ft.	135 sq. ft.
36"	50 sq. ft.	82 sq. ft.	95 sq. ft.	125 sq. ft.
42"	45 sq. ft.	76 sq. ft.	90 sq. ft.	115 sq. ft.
48"	0 sq. ft.	68 sq. ft.	85 sq. ft.	110 sq. ft.

Number of Jets

The number of jets that can be driven by the various blower sizes are as follows:

Blower Size	Number of Jets
DR 404 (1 HP)	3-6
DR 454 (1.5 HP)	5-10
DR 505 (2 HP)	8-12
DR 606 (3 HP)	12-17

Installation Recommendations

An above the surface piping loop (Hartford Loop) should be used on all installations. A check valve should also be installed as close to the pool as possible.

System Requirements By Blower Size

All Blowers Listed	Supply and bubbler pipe to be 2.0 inch I.D. or greater. Supply pipe to be no longer than 25 ft. with no more than 6 elbows.
DR 404	Total hole area must be 1.0 square inches or greater but not greater than the cross section of the supply pipe.
DR 454	Total hole area must be 1.5 square inches or greater but not greater than the cross section of the supply pipe.
DR 505	Total hole area must be 2.0 square inches or greater but not greater than the cross section of the supply pipe.
DR 606	Total hole area must be 2.4 square inches or greater but not greater than the cross section of the supply pipe.

$$\text{Total hole area} = (\text{number of holes}) \times (.785) \times (\text{hole diameter})^2$$

or

$$\text{Total hole area} = (\text{number of holes}) \times (\text{hole area})$$

Areas for Standard Hole Diameters Are:

Hole Diameter In Inches	Fractional Size (Decimal Equivalent)	Hole Area In Sq. Inches
1/8	(.125)	.0123
5/32	(.156)	.0191
3/16	(.188)	.0277
7/32	(.219)	.0376
1/4	(.250)	.0491

NOTE: If your system deviates greatly from the above layouts, contact the Rotron factory application engineers for assistance.