

# Performance Data



## USR52 Series

Duct Size	Core Eff. Area (ft <sup>2</sup> )	Neck Velocity (FPM) Velocity Pressure	300		400			500			600			700			800			1000			1200			1400		
			0.004	0.008	0.013	0.018	0.025	0.033	0.051	0.074	0.100																	
10x3	0.150	CFM	45		60			75			90			105			120			150			180			210		
		NC	<20		<20			<20			20			25			30			35			40			40		
		Throw (ft.)	3	4	5	5	6	7	6	7	8.5	9	7.5	8.5	8	9	12.5	9	10	13	11	11.5	19	12	13	21	15	17
12x3	0.181	CFM	54		72			91			109			127			145			181			217			254		
		NC	<20		<20			<20			20			20-25			25			30			35			40		
		Throw (ft.)	4	4.5	5.5	5	6	7.5	7	8	9	7	8	10	9	10	14	10	11	14.5	12	13	20	13	14.5	23	17	19
10x4 14x3	0.210	CFM	63		84			105			126			147			168			210			252			293		
		NC	<20		<20			<20			20			25			30			35			40			45		
		Throw (ft.)	4	5	6	5	6.5	8.5	8	8.5	9.5	7	8.5	11	10	11	15	11	12	16	13	14	20	14	16	24	18	20
12x4 16x3	0.254	CFM	76		101			127			152			178			203			254			304			355		
		NC	<20		<20			<20			20			25			30			35			40			45		
		Throw (ft.)	5	5.5	6.5	6	7	9	8	9	11	9	10	14	11	12	16	12	13.5	18	14	16	24	16	18	28	19	22
18x3	0.276	CFM	83		110			138			165			193			220			276			331			386		
		NC	<20		<20			<20			20			25			30			35			40			45		
		Throw (ft.)	5	6	7	8	8	10	9	10	12	10	11	15	12	13	18	12	14	19	15	17	26	18	20	31	20	23
10x6	0.329	CFM	99		132			165			198			231			264			329			395			461		
		NC	<20		<20			<20			20			25			30			35			40			45		
		Throw (ft.)	5	6.5	7.5	7	8	10	10	11	13	11	12	16	13	14.5	20	14	16	22	17	19	29	19	22	34	22	26
16x4	0.342	CFM	103		137			171			205			239			273			342			410			479		
		NC	<20		<20			<20			20			25			30			35			40			45		
		Throw (ft.)	5	6.5	7.5	7	8	10	10	11	13	11	12	16	13	14.5	20	14	16	22	17	19	29	19	22	34	22	26
12x6	0.399	CFM	120		159			199			239			279			319			399			478			558		
		NC	<20		<20			<20			20			25			30			35			40			45-50		
		Throw (ft.)	6	7	9	9	10	12	10	11.5	14.5	12	13.5	18	14	16	22	16	18	24	19	22	32	22	26	38	25	30
14x6	0.468	CFM	140		187			234			281			328			374			468			561			655		
		NC	<20		<20			<20			20			25			30			35			40			45-50		
		Throw (ft.)	7	8	10	10	11	13	11	13	16	14	16	21	15	17	23	18	20	27	20	23	35	24	28	42	27	33
30x3	0.464	CFM	139		186			232			279			325			372			464			557			650		
		NC	<20		<20			<20			20			25			30			35			40			45-50		
		Throw (ft.)	8	7.5	8.5	9	9.5	13	11	13	16	12	14	20	14	16	25	17	19	26	20	23	37	26	30	42	26	32
16x6 24x4	0.537	CFM	161		215			269			322			376			430			537			645			752		
		NC	<20		<20			<20			20			25			30			35			40			45-50		
		Throw (ft.)	8	8.5	11	10	11.5	13.5	12	13.5	17	14	16	22	16	18	25	18	20	28	21	24	36	25	29	45	28	34
18x6 36x3	0.606	CFM	182		243			303			364			424			485			606			728			849		
		NC	<20		<20			<20			20			25			30			35			40			45-50		
		Throw (ft.)	8	8.5	11	10	11.5	14.5	12	14.5	18	15	17	23	18	20	27	19	22	30	22	26	38	26	31	47	29	36
14x8	0.638	CFM	191		255			319			383			447			510			638			766			893		
		NC	<20		<20			<20			20			25			30			35			40			45-50		
		Throw (ft.)	8	9	11.5	11	13	16	14	16	19	16	18	24	19	21	28	20	23	31	23	27	39	27	32	48	30	37
20x6 30x4	0.676	CFM	203		270			338			405			473			540			676			811			946		
		NC	<20		<20			<20			20			25			30			35			40-45			45-50		
		Throw (ft.)	8	9	11.5	11	13	16	14	16	19	16	18	24	19	21	28	20	23	31	23	27	39	27	32	48	30	37
18x8 24x6	0.827	CFM	248		331			413			496			579			661			827			992			1158		
		NC	<20		<20			<20			20			25			30			35-40			40-50			>50		
		Throw (ft.)	9	10	12.5	12	14	18	16	18	21	18	20	26	20	23	34	23	26	35	26	30	46	30	36	55	34	42
20x8	0.921	CFM	276		368			461			553			645			737			921			1105			1290		
		NC	<20		<20			<20			20			25			30			35-40			40-50			>50		
		Throw (ft.)	9	11	13.5	13	15	19	17	19	23	19	21	28	21	24	35	24	28	38	27	33	50	33	41	59	38	47

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Duct Size	Core Eff. Area (ft <sup>2</sup> )	Neck Velocity (FPM) Velocity Pressure	300		400			500			600			700			800			1000			1200			1400		
			0.004		0.008		0.013		0.018		0.025		0.033		0.051		0.074		0.100									
30x6	1.022	CFM	307		409			511			613			715			817			1022			1226			1430		
		NC	<20		<20			20			25			30			30-35			35-40			40-45			>50		
		Throw	9	11	13.5	13	15	19	17	19	23	19	21	28	21	24	35	24	28	38	27	33	50	33	41	59	38	47
20x10	1.167	CFM	350		467			583			700			817			934			1167			1400			1634		
		NC	<20		<20			20			25			30			30-35			35-40			40-45			>50		
		Throw (ft.)	10	11.5	14.5	14	16	20	18	20	24	19	22	30	23	26	37	25	30	40	29	35	53	34	42	62	40	49
18x12	1.268	CFM	380		507			634			761			887			1014			1268			1521			1775		
		NC	<20		<20			20			25			30			30-35			35-40			40-45			>50		
		Throw (ft.)	11	12.5	15	14	16	20	18	20	24	20	23	32	23	27	38	26	31	42	29	35	55	35	43	65	43	53
30x8	1.393	CFM	418		557			697			836			975			1115			1393			1672			1951		
		NC	<20		<20			<20			20			25			30			35-40			40-50			>50		
		Throw	11	13	16	16	17.5	22	19	22	27	22	25	34	25	29	40	28	34	45	32	39	59	37	46	70	45	56
24x12	1.702	CFM	511		681			851			1021			1191			1362			1702			2042			2383		
		NC	<20		<20			20			25			30			30-35			35-40			40-45			>50		
		Throw (ft.)	13	14.5	18	17	19	23	20	23	28	23	27	37	27	32	43	29	36	48	34	42	64	41	50	76	48	59
30x12	2.136	CFM	641		855			1068			1282			1495			1709			2136			2564			2991		
		NC	<20		<20			20			25			30			30-35			35-40			45-50			>50		
		Throw (ft.)	14	16	20	19	22	26	22	26	32	25	30	40	29	35	47	32	40	54	38	47	71	46	57	85	53	66
36x12	2.571	CFM	771		1028			1285			1542			1799			2056			2571			3085			3599		
		NC	<20		<20			20			25			30			30-35			35-40			45-50			>50		
		Throw (ft.)	15	17	21	20	23	29	24	29	35	27	33	45	31	38	52	36	44	60	42	52	78	50	62	94	60	73

### Performance Notes:

- 1) Performance data calculated with blades set at 0°
- 2) Engineering based off nominal face dimension
- 3) Throw values are measured in feet for terminal velocities of 150/100/50 FPM
- 4) Throw data is based on supply air and room air both at isothermal conditions
- 5) Effective core areas listed in chart are defined as the measurement of space between the blades actually utilized by the air
- 6) Data obtained from tests conducted in accordance with ANSI/ASHRAE standard 70-2006