## INDUSTRIAL SPARK ARRESTING CHAMBER SILENCER 12 to 20 dBA Noise Reduction

#### **MSA10 OVERVIEW**

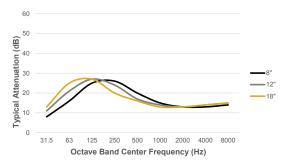
The MSA10 silencer is engineered to provide an industrial grade attenuation with a highly efficient spark arrestor. Designed for use on the exhaust system of internal combustion engines where a fire hazard or dirt nuisance would exist from particles of carbon or ash in the exhaust stream.

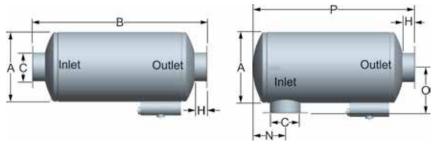
Typical Applications: Internal combustion engine exhausts, marine service, refineries/hazardous environments, and offshore drilling/production platforms

#### **FEATURES**

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Easily installed in any position
- High heat silicone black finish
- Connections: ANSI pattern flanged
- Two chambers
- Drain connection

- Explosion relief cover
- Flexible connectors
- Companion flanges
- Cleanout openings
- Custom inlet/outlet size, location and multiple orientations available
- Horizontal or vertical support arrangements
- Aluminized steel, Stainless Steel 304 or 316 construction available
- Special paints and finishes available
- Complete range of exhaust accessories

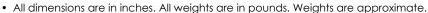




Type 1 - EIEO

Type 2 - SIEO

MSA10									
Part No.*	Size / ØC	ØA	В	N Min	N Max	0	P	Н	Est Wt
MSA10-4	4	10	30	5		9	26	4	40
MSA10-5	5	12	34	6		10	30	4	51
MSA10-6	6	14	41	6.5	<b>;</b>	11	37	4	75
MSA10-8	8	16	48	8.5	<del>j</del> o	12	44	4	108
MSA10-10	10	18	50	9.5	Ř	13	46	4	138
MSA10-12	12	22	60	11.5	± 5	15	56	4	203
MSA10-14	14	30	70	13.5	Ö	20	65	5	394
MSA10-16	16	36	80	16.5	Ÿ	23	75	5	535
MSA10-18	18	40	90	17.5		25	85	5	858



- Listed sound data is based on typical performance and should not be considered absolute.
- \*See <u>nomenclature guide</u> for additional information on part number creation.



# RESIDENTIAL SPARK ARRESTING CHAMBER SILENCER 20 to 25 dBA Noise Reduction

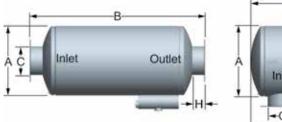
## **MSA11 OVERVIEW**

The MSA11 silencer is engineered to provide a residential grade attenuation with a highly efficient spark arrestor. Designed for use on the exhaust system of internal combustion engines where a fire hazard or dirt nuisance would exist from particles of carbon or ash in the exhaust stream.

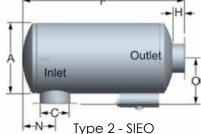
Typical Applications: Internal combustion engine exhausts, marine service, refineries/hazardous environments, and offshore drilling/production platforms

#### **FEATURES**

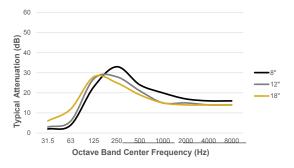
- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Easily installed in any position
- High heat silicone black finish
- Connections: Sizes 3.5 and under MNPT, 4 and up ANSI pattern flanged
- Two chambers
- Drain connection



Type 1 - EIEO



- Explosion relief cover
- Flexible connectors
- Companion flanges
- Cleanout openings
- Custom inlet/outlet size, location and multiple orientations available
- Horizontal or vertical support arrangements
- Aluminized steel, Stainless Steel 304 or 316 construction available
- Special paints and finishes available
- Complete range of exhaust accessories



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MSA11									
Part No.*	Size / ØC	ØA	В	N Min	N Max	0	P	H	Est Wt
MSA11-1.5	1.5	9	20	3.5		7.5	1 <i>7</i>	3	20
MSA11-2	2	9	20	4		7.5	17	3	21
MSA11-2.5	2.5	10	24	4.5		8	21	3	28
MSA11-3	3	12	26	5		9	23	3	41
MSA11-3.5	3.5	14	30	5.5		10	27	3	55
MSA11-4	4	14	36	6		11	32	4	64
MSA11-5	5	16	43	7	<b>خ</b>	12	39	4	88
MSA11-6	6	18	49	7.5	-Consult Factory-	13	45	4	110
MSA11-8	8	22	59	9.5	ë	15	55	4	178
MSA11-10	10	26	64	11.5	<u> </u>	17	60	4	280
MSA11-12	12	30	77	13	nsı	19	73	4	416
MSA11-14	14	36	83	15.5	ပိ	23	78	5	558
MSA11-16	16	40	90	16.5	•	25	85	5	793
MSA11-18	18	45	96	18		27.5	91	5	950
MSA11-20	20	50	109	20.5		30	104	5	1392
MSA11-22	22	54	119	22.5		32	114	5	1806
MSA11-24	24	60	125	24		35	120	5	2187
MSA11-26	26	64	140	25.5		37	135	5	2586
MSA11-28	28	68	155	26.5		39	150	5	2984
MSA11-30	30	72	166	28		41	161	5	3445

- All dimensions are in inches. All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- \*See <u>nomenclature guide</u> for additional information on part number creation.



## CRITICAL SPARK ARRESTING CHAMBER SILENCER 25 to 32 dBA Noise Reduction

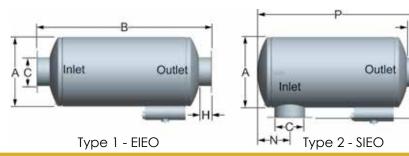
## **MSA22 OVERVIEW**

The MSA22 silencer is engineered to provide a critical grade attenuation with a highly efficient spark arrestor. Designed for use on the exhaust system of internal combustion engines where a fire hazard or dirt nuisance would exist from particles of carbon or ash in the exhaust stream.

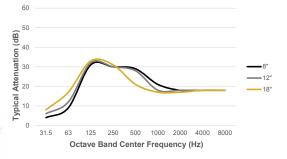
Typical Applications: Internal combustion engine exhausts, marine service, refineries/hazardous environments, and offshore drilling/production platforms

#### **FEATURES**

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Easily installed in any position
- High heat silicone black finish
- Connections: Sizes 3.5 and under MNPT, 4 and up ANSI pattern flanged
- Two chambers
- Drain connection



- Explosion relief cover
- Flexible connectors
- Companion flanges
- Cleanout openings
- Custom inlet/outlet size, location and multiple orientations available
- Horizontal or vertical support arrangements
- Aluminized steel, Stainless Steel 304 or 316 construction available
- Special paints and finishes available
- Complete range of exhaust accessories



Part No.*         Size / ØC         ØA         B         N Min         N Max         O         P         H         Est Wf           MSA22-1.5         1.5         9         30         4         7.5         27         3         27           MSA22-2         2         9         30         4.5         7.5         27         3         28           MSA22-2.5         2.5         10         34         5         8         31         3         37           MSA22-3         3         12         38         5.5         9         35         3         54           MSA22-3.5         3.5         14         42         6         10         39         3         70           MSA22-4         4         14         48         6         11         44         4         77           MSA22-5         5         16         57         7         7         2         12         53         4         108           MSA22-6         6         18         63         8         2         13         59         4         132           MSA22-10         10         26         87         11.5	MSA22									
MSA22-2       2       9       30       4.5       7.5       27       3       28         MSA22-2.5       2.5       10       34       5       8       31       3       37         MSA22-3       3       12       38       5.5       9       35       3       54         MSA22-3.5       3.5       14       42       6       10       39       3       70         MSA22-4       4       14       48       6       11       44       4       77         MSA22-5       5       16       57       7       7       12       53       4       108         MSA22-6       6       18       63       8       9       13       59       4       132         MSA22-8       8       22       74       9.5       9       15       70       4       205         MSA22-10       10       26       87       11.5       17       83       4       356         MSA22-12       12       30       102       13       2       19       98       4       518         MSA22-14       14       36       109       15.5	Part No.*	Size / ØC	ØA	В	N Min	N Max	0	P	Н	Est Wt
MSA22-2.5       2.5       10       34       5       8       31       3       37         MSA22-3       3       12       38       5.5       9       35       3       54         MSA22-3.5       3.5       14       42       6       10       39       3       70         MSA22-4       4       14       48       6       11       44       4       77         MSA22-5       5       16       57       7       7       12       53       4       108         MSA22-6       6       18       63       8       9       13       59       4       132         MSA22-8       8       22       74       9.5       9       15       70       4       205         MSA22-10       10       26       87       11.5       17       83       4       356         MSA22-12       12       30       102       13       9       19       98       4       518         MSA22-14       14       36       109       15.5       0       23       104       5       687         MSA22-16       16       40       119	MSA22-1.5	1.5	9	30	4		7.5	27	3	27
MSA22-3       3       12       38       5.5       9       35       3       54         MSA22-3.5       3.5       14       42       6       10       39       3       70         MSA22-4       4       14       48       6       11       44       4       77         MSA22-5       5       16       57       7       2       12       53       4       108         MSA22-6       6       18       63       8       9       13       59       4       132         MSA22-8       8       22       74       9.5       9       15       70       4       205         MSA22-10       10       26       87       11.5       17       83       4       356         MSA22-12       12       30       102       13       9       98       4       518         MSA22-12       12       30       102       13       9       98       4       518         MSA22-14       14       36       109       15.5       0       23       104       5       687         MSA22-16       16       40       119       16.5 </td <td>MSA22-2</td> <td>2</td> <td>9</td> <td>30</td> <td>4.5</td> <td></td> <td>7.5</td> <td>27</td> <td>3</td> <td>28</td>	MSA22-2	2	9	30	4.5		7.5	27	3	28
MSA22-3.5       3.5       14       42       6       10       39       3       70         MSA22-4       4       14       48       6       11       44       4       77         MSA22-5       5       16       57       7       2       12       53       4       108         MSA22-6       6       18       63       8       9       13       59       4       132         MSA22-8       8       22       74       9.5       15       70       4       205         MSA22-10       10       26       87       11.5       17       83       4       356         MSA22-12       12       30       102       13       19       98       4       518         MSA22-12       12       30       102       13       19       98       4       518         MSA22-14       14       36       109       15.5       23       104       5       687         MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5	MSA22-2.5	2.5	10	34	5		8	31	3	37
MSA22-4 4 14 48 6 11 44 4 77  MSA22-5 5 16 57 7 1 12 53 4 108  MSA22-6 6 18 63 8 13 59 4 132  MSA22-8 8 22 74 9.5 15 70 4 205  MSA22-10 10 26 87 11.5 17 83 4 356  MSA22-12 12 30 102 13 19 98 4 518  MSA22-14 14 36 109 15.5 0 23 104 5 687  MSA22-16 16 40 119 16.5 25 114 5 976  MSA22-18 18 45 127 18 27.5 122 5 1169  MSA22-10 20 50 137 20.5 30 132 5 1676  MSA22-22 22 54 149 22.5 32 144 5 2127  MSA22-24 24 60 162 24 35 157 5 2627  MSA22-26 26 64 183 25.5 37 178 5 3106	MSA22-3	3	12	38	5.5		9	35	3	54
MSA22-5 5 16 57 7	MSA22-3.5	3.5	14	42	6		10	39	3	70
MSA22-6       6       18       63       8       9       13       59       4       132         MSA22-8       8       22       74       9.5       9       15       70       4       205         MSA22-10       10       26       87       11.5       17       83       4       356         MSA22-12       12       30       102       13       19       98       4       518         MSA22-14       14       36       109       15.5       23       104       5       687         MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5 <td>MSA22-4</td> <td>4</td> <td>14</td> <td>48</td> <td>6</td> <td></td> <td>11</td> <td>44</td> <td>4</td> <td>77</td>	MSA22-4	4	14	48	6		11	44	4	77
MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5       37       178       5       3106	MSA22-5	5	16	57	7	<b>&gt;</b>	12	53	4	108
MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5       37       178       5       3106	MSA22-6	6	18	63	8	<u>5</u>	13	59	4	132
MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5       37       178       5       3106	MSA22-8	8	22	74	9.5	ë	15	70	4	205
MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5       37       178       5       3106	MSA22-10	10	26	87	11.5	Ę	17	83	4	356
MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5       37       178       5       3106	MSA22-12	12	30	102	13	nsı	19	98	4	518
MSA22-16       16       40       119       16.5       25       114       5       976         MSA22-18       18       45       127       18       27.5       122       5       1169         MSA22-20       20       50       137       20.5       30       132       5       1676         MSA22-22       22       54       149       22.5       32       144       5       2127         MSA22-24       24       60       162       24       35       157       5       2627         MSA22-26       26       64       183       25.5       37       178       5       3106	MSA22-14	14	36	109	15.5	ပိ	23	104	5	687
MSA22-20 20 50 137 20.5 30 132 5 1676 MSA22-22 22 54 149 22.5 32 144 5 2127 MSA22-24 24 60 162 24 35 157 5 2627 MSA22-26 26 64 183 25.5 37 178 5 3106	MSA22-16	16	40	119	16.5	•	25	114	5	976
MSA22-22 22 54 149 22.5 32 144 5 2127 MSA22-24 24 60 162 24 35 157 5 2627 MSA22-26 26 64 183 25.5 37 178 5 3106	MSA22-18	18	45	127	18		27.5	122	5	1169
MSA22-24 24 60 162 24 35 157 5 2627 MSA22-26 26 64 183 25.5 37 178 5 3106	MSA22-20	20	50	137	20.5		30	132	5	1676
MSA22-26 26 64 183 25.5 37 178 5 3106	MSA22-22	22	54	149	22.5		32	144	5	2127
	MSA22-24	24	60	162	24		35	157	5	2627
MSA22-28 28 68 200 26.5 39 195 5 3561	MSA22-26	26	64	183	25.5		37	178	5	3106
	MSA22-28	28	68	200	26.5		39	195	5	3561
MSA22-30 30 72 216 28 41 211 5 4140	MSA22-30	30	72	216	28		41	211	5	4140



- All dimensions are in inches. All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- \*See <u>nomenclature guide</u> for additional information on part number creation.

## SUPER CRITICAL SPARK ARRESTING CHAMBER SILENCER 30 to 38 dBA Noise Reduction

#### **MSA33 OVERVIEW**

The MSA33 silencer is engineered to provide a super critical grade attenuation with a highly efficient spark arrestor. Designed for use on the exhaust system of internal combustion engines where a fire hazard or dirt nuisance would exist from particles of carbon or ash in the exhaust stream. Great for quiet residential areas where background noise is relatively low and super critical grade silencing with a spark arresting feature is required.

Typical Applications: Internal combustion engine exhausts, marine service, refineries/hazardous environments, and offshore drilling/production platforms

#### **FEATURES**

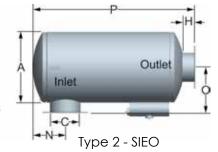
- Advanced acoustical design
- Heavy duty, all welded construction and long service life

Outlet

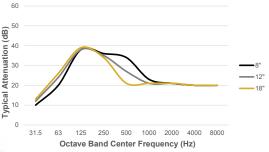
- Easily installed in any position
- High heat silicone black finish
- Connections: ANSI pattern flanged

Type 1 - EIEO

- Two chambers
- Drain connection



- Explosion relief cover
- Flexible connectors
- Companion flanges
- Cleanout openings
- Custom inlet/outlet size, location and multiple orientations available
- Horizontal or vertical support arrangements
- Aluminized steel, Stainless Steel 304 or 316 construction available
- Special paints and finishes available
- Complete range of exhaust accessories



	, ı			7 1					
MSA33									
Part No.*	Size / ØC	ØA	В	N Min	N Max	0	P	Н	Est Wt
MSA33-4	4	16	51	6.5		12	47	4	94
MSA33-5	5	18	62	7		13	58	4	130
MSA33-6	6	22	69	8.5		15	65	4	186
MSA33-8	8	26	82	10		17	78	4	318
MSA33-10	10	30	102	12		19	98	4	494
MSA33-12	12	36	112	15	ory	22	108	4	690
MSA33-14	14	40	120	15.5	Factory	25	115	5	968
MSA33-16	16	45	126	17		27.5	121	5	1155
MSA33-18	18	50	135	19.5	-Consult	30	130	5	1636
MSA33-20	20	54	149	21.5	Ÿ	32	144	5	2086
MSA33-22	22	60	157	23		35	152	5	2492
MSA33-24	24	64	164	24.5		37	159	5	2831
MSA33-26	26	68	184	25.5		39	179	5	3316
MSA33-28	28	72	205	27		41	200	5	3821
MSA33-30	30	78	220	28.5		44	215	5	5324

- All dimensions are in inches. All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- \*See <u>nomenclature guide</u> for additional information on part number creation.



# HOSPITAL SPARK ARRESTING CHAMBER SILENCER 35 to 42 dBA Noise Reduction

## **MSA44 OVERVIEW**

The MSA44 silencer is engineered to provide a hospital grade attenuation with a highly efficient spark arrestor. Designed for use on the exhaust system of internal combustion engines where a fire hazard or dirt nuisance would exist from particles of carbon or ash in the exhaust stream. Suitable for use where background noise is extremely low, such as residential or hospital locations away from busy streets.

Typical Applications: Internal combustion engine exhausts, marine service, refineries/hazardous environments, and offshore drilling/production platforms

#### **FEATURES**

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Easily installed in any position
- · High heat silicone black finish

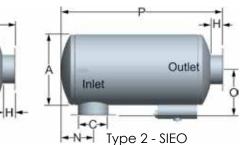
nlet

Type 1 - EIEO

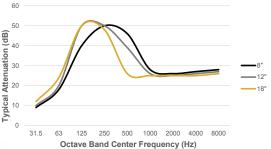
- Connections: ANSI pattern flanged
- Sizes 6 and under are two chambered, 8 and above are three chambers

Outlet

Drain connection



- Explosion relief cover
- Flexible connectors
- Companion flanges
- Cleanout openings
- Custom inlet/outlet size, location and multiple orientations available
- Horizontal or vertical support arrangements
- Aluminized steel, Stainless Steel 304 or 316 construction available
- Special paints and finishes available
- Complete range of exhaust accessories



MSA44									
Part No.*	Size / ØC	ØA	В	N Min	N Max	0	P	н	Est Wt
MSA44-4	4	18	62	7		13	58	4	119
MSA44-5	5	22	74	9		15	70	4	189
MSA44-6	6	26	85	11		17	81	4	305
MSA44-8	8	30	103	12		19	99	4	517
MSA44-10	10	36	118	14		22	114	4	730
MSA44-12	12	36	130	14	<u>-</u>	22	126	4	820
MSA44-14	14	40	145	17	-Consult Factory	25	140	5	1188
MSA44-16	16	45	156	19	<u>⊬</u>	27.5	151	5	1461
MSA44-18	18	50	171	21	nsu	30	166	5	2111
MSA44-20	20	54	185	22	ပို	32	180	5	2664
MSA44-22	22	60	199	24		35	194	5	3237
MSA44-24	24	64	212	26		37	207	5	3693
MSA44-26	26	66	235	27		39	230	5	4313
MSA44-28	28	72	268	29		41	263	5	5053
MSA44-30	30	78	278	32		44	273	5	6866

- All dimensions are in inches. All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- \*See <u>nomenclature guide</u> for additional information on part number creation.



## HOSPITAL PLUS SPARK ARRESTING CHAMBER SILENCER 35 to 50 dBA Noise Reduction

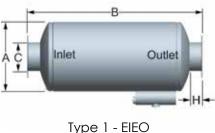
## **MSA55 OVERVIEW**

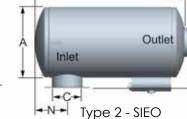
The MSA55 silencer is engineered to provide the highest grade attenuation with a highly efficient spark arrestor. The MSA55 is a reactive silencer with absorptive type features without resorting to multiple silencers in series or custom designed silencers. Designed for use on the exhaust system of internal combustion engines where a fire hazard or dirt nuisance would exist from particles of carbon or ash in the exhaust stream. Suitable for use where background noise is extremely low, such as residential or hospital locations away from busy streets.

Typical Applications: Internal combustion engine exhausts, marine service, refineries/hazardous environments, and offshore drilling/production platforms

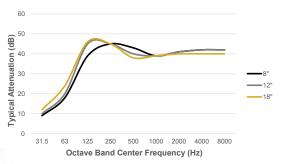
#### **FEATURES**

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Easily installed in any position
- High heat silicone black finish
- Connections: ANSI pattern flanged
- Three chambers
- Drain connection





- Explosion relief cover
- Flexible connectors
- Companion flanges
- Cleanout openings
- Custom inlet/outlet size, location and multiple orientations available
- Horizontal or vertical support arrangements
- Aluminized steel, Stainless Steel 304 or 316 construction available
- Special paints and finishes available
- Complete range of exhaust accessories



MSA55									
Part No.*	Size / ØC	ØA	В	N Min	N Max	0	P	н	Est Wt
MSA55-4	4	18	62	7		13	58	4	200
MSA55-5	5	22	74	9		15	70	4	314
MSA55-6	6	26	85	11		17	81	4	382
MSA55-8	8	30	103	12		19	99	4	590
MSA55-10	10	36	118	14	2	22	114	4	829
MSA55-12	12	36	130	14	ţ	22	126	4	953
MSA55-14	14	40	145	17	Factory	25	140	5	1345
MSA55-16	16	45	156	19	onsult R	27.5	151	5	1628
MSA55-18	18	50	171	21	ons	30	166	5	2371
MSA55-20	20	54	185	22	Ÿ	32	180	5	2969
MSA55-22	22	60	199	24		35	194	5	3562
MSA55-24	24	64	212	26		37	207	5	4048
MSA55-26	26	68	235	27		39	230	5	4737
MSA55-28	28	72	268	29		41	263	5	5692
MSA55-30	30	78	278	32		44	273	5	7573

- All dimensions are in inches, All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- \*See <u>nomenclature guide</u> for additional information on part number creation.

