

1500 Group Tips

One-Piece Acetylene



1502 Series

Hand or Machine Cutting Tips

Metal Thickness		Tip Size		Part Number	Number Preheat Holes	Cleaning Preheat	Drill Size Cutting	
in.	mm	in.	mm				in.	m
1/4	6	1/4	6	08Z67	6	69	68	1.7
1/2	13	1/2	24	15Z17	6	66	60	1.5
1-1/2	38	1-1/2	38	15Z18	6	65	53	1.3
2-4	50-100	4	102	15Z19	6	61	46	1.2
6-8	150-200	8	203	15Z20	6	57	39	1.0
9-12	230-300	12	305	15Z21	6	56	31	0.8
16-18	400-460	18 ¹	457	13A97	6	54	15	0.4
20	500	20 ²	508	13A98	6	54	8	0.2

- General purpose
- Medium preheat sufficient for cutting dirty plate and for beveling



Operating Data

Metal Thickness		Tip Size	Part Number	Gas Pressure			Cutting Speed		Gas Consumption		Average Kerf Width	
				Cutting Oxygen	Preheat Oxygen	Acetylene			Total Oxygen	Acetylene		
in.	mm			psig	psig	psig	ipm	mm/min	cfh	cfh	in.	mm
1/4	6	3	08Z67	20-25	20-25	5-7	17-25	432-635	35-45	6-8	.045	1.1
1/2	13	4	15Z17	30-35	20-25	5-7	15-23	381-584	65-75	8-10	.065	1.7
3/4	19	6	15Z18	30-35	20-25	5-7	13-21	330-533	80-135	14-16	.075	1.9
1	25	6	15Z18	35-40	20-25	5-7	12-18	305-457	90-140	14-16	.080	2.0
1-1/2	38	6	15Z18	40-50	20-25	5-7	11-16	279-406	100-170	16-20	.090	2.3
2	51	8	15Z19	30-35	20-25	6-8	10-14	254-356	185-210	16-20	.095	2.4
2-1/2	63.5	8	15Z19	30-45	25-30	6-8	9-12	229-305	190-235	16-20	.095	2.4
3	76.1	8	15Z19	30-50	25-30	6-9	8-11	203-279	200-255	16-20	.100	2.5
4	102	8	15Z19	35-55	25-30	6-10	6-9	225-285	235-285	19-22	.105	2.7
6	152	10	15Z20	35-70	25-30	6-12	4.5-6.5	395-500	395-460	20-25	.157	4.0
8	203	10	15Z20	55-75	30-35	6-12	3.5-5.0	89-127	545-625	30-35	.170	4.3
10	254	12	15Z21	65-75	30-35	8-10	2.9-3.8	74-96.5	630-710	40-45	.190	4.8
12	305	12	15Z21	55-65	30-35	10-12	2.4-3.0	61-76	790-905	45-55	.210	5.3
18	457	18 ¹	13A97	40-45	35-40	11-13	3.0-3.5	76-89	1,300-1,695	75-80	.320	8.1
20	508	20 ²	13A98	45-75	40-60	11-13	2-3	51-76	1,600-1,900	80-90	.360	9.1

¹Not recommended for acetylene pressure less than 5 psig.

²Sizes 18 and 20 recommended only for use with C-39.

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

1500 Group Tips

One-Piece Alternate Fuels



1564 Series Propylene Tips

Hand or Machine Cutting Tips

Metal Thickness		Tip Size		Part Number	Number Preheat Holes	Cleaning Preheat	Drill Size Cutting	
in.	mm	in.	mm				in.	m
1/8-1/2	10-19	1/2	13	638983	8	67	60	1.5
3/4-1-1/2	19-50	1-1/2	38	638984	8	64	53	1.3
2-4	50-100	4	100	638985	8	62	46	1.2
4-8	100-200	8	200	638986	8	59	39	1.0
8-12	200-300	12	300	638987	8	56	31	0.8

- General purpose
- Medium preheat sufficient for cutting dirty plate and for beveling



Operating Data

Metal Thickness		Tip Size		Part Number	Gas Pressure			Cutting Speed		Gas Consumption		Average Kerf Width	
					Cutting Oxygen	Preheat Oxygen	Propylene			Total Oxygen	Propylene		
in.	mm	in.	mm		psig	psig	psig	ipm	mm/min	cfh	cfh	in.	mm
1/4	6	1/2	13	638983	20-25	20-50	3-5	18-24	457-610	55-60	3-4	.050	1.3
1/2	13	1/2	13	638983	30-35	20-50	3-5	14-22	356-559	70-80	4-5	.065	1.7
3/4	19	1-1/2	38	638984	30-35	20-50	3-5	12-20	305-508	135-155	7-8	.080	2.0
1	25	1-1/2	38	638984	35-40	20-50	3-5	11-17	279-432	150-155	7-8	.090	2.3
1-1/2	38	1-1/2	38	638984	40-45	20-50	3-5	10-15	254-381	160-210	8-9	.095	2.4
2	51	4	102	638985	25-30	20-50	3-5	9-13	229-330	215-245	8-10	.100	2.5
3	76	4	102	638985	30-35	25-55	3-5	8-10	203-254	235-290	8-10	.105	2.7
4	102	4	102	638985	35-40	25-55	3-5	6-9	152-229	270-320	10-11	.115	2.9
5	127	8	203	638986	25-35	25-55	5-10	5-7	127-178	325-410	10-11	.125	3.2
6	152	8	203	638986	35-45	25-55	5-10	4-6	102-152	410-480	11-13	.170	4.3
8	203	8	203	638986	55-65	30-60	5-10	3.5-4.5	89-114	580-670	15-17	.187	4.7
10	254	12	305	638987	40-50	30-60	10-15	2.5-3.5	63.5-89	680-805	20-23	.210	5.3
12	305	12	305	638987	55-65	30-60	10-15	2.0-3.0	51-76	845-975	22-28	.240	6.1

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

1500 Group Tips

One-Piece Alternate Fuels



1515 Series Natural Gas & Propane Tips

Hand or Machine Cutting Tips

Metal Thickness		Tip Size		Part Number	Number Preheat Holes	Cleaning Preheat	Drill Size Cutting	
in.	mm	in.	mm				in.	m
1/8-1/2	10-13	1/2	13	08Z85	8	67	60	1.5
3/4-1-1/2	19-38	1-1/2	38	08Z86	8	64	53	1.3
2-4	50-100	4	100	08Z87	8	42	46	1.2
4-8	100-200	8	200	08Z88	8	59	39	1.0
8-12	200-300	12	300	08Z89	8	56	31	0.8
12-16	300-400	16	400	65Z12	12	54	20	0.5
16-18	400-450	18	450	65Z13	12	53	15	0.4
18-20	450-508	20	508	65Z14	12	52	8	0.2

■ One-piece natural gas or propane, long preheat flames



Operating Data

Metal Thickness		Tip Size		Part Number	Gas Pressure			Cutting Speed		Gas Consumption		Average Kerf Width	
					Cutting Oxygen	Preheat Oxygen	Propane or Natural Gas			Total Oxygen	Propane or Natural Gas		
in.	mm	in.	mm		psig	psig	psig	ipm	mm/min	cfh	cfh	in.	mm
1/4	6	1/2	13	08Z85	20-25	20-50	3-5	18-24	457-610	55-60	5-8	.050	1.3
1/2	13	1/2	13	08Z85	30-35	20-50	3-5	18-24	457-610	70-80	5-8	.065	1.7
3/4	19	1-1/2	38	08Z86	30-35	20-50	3-5	12-20	305-508	135-155	8-12	.080	2.0
1	254	1-1/2	38	08Z86	35-40	20-50	3-5	11-17	279-432	150-165	8-12	.090	2.3
1-1/2	38	1-1/2	38	08Z86	40-45	20-50	3-5	10-15	254-381	160-210	8-12	.095	2.4
2	51	4	100	08Z87	25-30	25-55	3-5	9-13	229-330	215-245	8-12	.100	2.5
3	76	4	100	08Z87	30-35	25-55	5-10	7-10	178-254	235-290	12-18	.105	2.7
4	100	4	100	08Z87	35-40	25-55	5-10	6-9	152-229	270-320	12-18	.115	2.9
5	127	8	200	08Z88	25-35	25-55	5-10	5-7	127-178	325-410	12-18	.125	3.2
6	152	8	200	08Z88	35-45	25-55	5-10	4-6	102-152	410-480	12-18	.170	4.3
8	200	8	200	08Z88	55-65	30-60	5-10	3.5-4.5	89-114	580-670	18-20	.187	4.7
10	254	12	300	08Z89	40-50	30-60	10-15	2.5-3.5	63.5-89	680-805	20-23	.210	5.3
12	300	12	300	08Z89	55-65	30-60	10-15	2.0-3.0	51-76	845-975	22-28	.240	6.1
16	400	16	400	65Z12	60-70	40-70	20-25	2.0-3.0	51-76	1,490-1,600	35-40	.300	7.6
18	450	18	450	65Z13	50-60	60-90	22-26	1.5-2	38-51	1,640-1,900	40-45	.340	8.6

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

1500 Group Tips

Two-Piece Alternate Fuels



1566 Series Alternate Fuels High Speed Tips

Machine Cutting Tips

Metal Thickness		Tip Size		Number Preheat Holes or Slots	Cleaning Preheat	Drill Size Cutting
in.	mm	in.	mm			
1/2	13	1/2	13	12	◇	#
3/4	19	3/4	19	12	◇	#
1	25	1	25	12	◇	#
1-1/2	38	1-1/2	38	12	◇	#
2	50	2	50	12	◇	#
2-1/2	64	2-1/2	64	12	◇	#
4	100	4	100	12	◇	#
6	150	6	150	12	◇	#
8	200	8	200	12	◇	#
10	250	10	250	16	◇	#
14	350	14	350	16	◇	#

■ Two-piece, high-speed, high preheat for machine cutting, alternate fuels



◇ To clean preheat slots, remove external sleeve and use a soft bristled brush.

Clean cutting orifice only with high speed tip cleaning kit #755F00.

Ordering Information

Metal Thickness		Natural Gas or Propane			Propylene			Propylene - High Preheat ¹		
in.	mm	Set Part Number	Internal	External	Set Part Number	Internal	External	Set Part Number	Internal	External
1/2	13	0558005072	639600	639322	0558005083	639600	998277	0558005094	639600	998557
3/4	19	0558005073	639601	639322	0558005084	639601	998277	0558005095	639601	998557
1	25	0558005074	639602	639322	0558005085	639602	998277	0558005096	639602	998557
1-1/2	38	0558005075	639603	639322	0558005086	639603	998277	0558005097	639603	998557
2	50	0558005076	639604	639322	0558005087	639604	998277	0558005098	639604	998557
2-1/2	64	0558005077	639605	639322	0558005088	639605	998277	0558005099	639605	998557
4	100	0558005078	639606	639322	0558005089	639606	998277	0558005100	639606	998557
6	150	0558005079	639607	639322	0558005090	639607	998277	0558005101	639607	998557
8	200	0558005080	998739	14Z39	0558005091	998739	114Z08	0558005102	998739	998561
10	250	0558005081	998740	14Z77	0558005092	998740	639755	0558005103	998740	998558
14	350	0558005082	998741	14Z77	0558005093	998741	639755	0558005104	998741	998558

¹Use where high preheat intensity is desired.

Operating Data

Metal Thickness		Tip Size		Internal Part Number	Gas Pressure			Cutting Speed		Gas Consumption		Average Kerf Width	
					Cutting Oxygen	Preheat Oxygen	Fuel			Total Oxygen	Fuel		
in.	mm	in.	mm	Number	psig	psig	psig	ipm	mm/min	cfh	cfh	in.	mm
1/2	13	1/2	13	639600	90	20-50	3-5	21-26	533-660	60-80	5-10	.045	1.1
3/4	19	3/4	19	639601	90	20-50	3-5	20-25	508-635	110-130	5-10	.055	1.4
1	25	1	25	639602	90	20-50	3-5	18-23	457-584	120-140	8-15	.060	1.5
1-1/2	38	1-1/2	38	639603	90	20-50	3-5	13-18	330-457	175-195	8-15	.080	2.0
2	50	2	50	639604	90	20-50	3-5	12-17	305-432	265-285	8-15	.090	2.3
2-1/2	64	2-1/2	64	639605	90	25-55	3-5	10-17	254-432	275-295	8-15	.105	2.7
3	76	4	100	639606	90	25-55	5-10	8-15	203-381	275-295	15-20	.110	2.8
4	100	4	100	639606	90	25-55	5-10	7-13	178-330	315-325	15-20	.115	2.9
6	150	6	150	639607	90	25-55	5-10	6-10	152-254	330-350	15-20	.150	3.8
8	200	8	200	998739	90	30-60	5-10	4-6	102-152	670-690	20-25	.160	4.1
10	250	10	250	998740	90	30-60	10-15	3-4	76-102	705-730	25-30	.190	4.8
12	305	14	350	998741	90	30-60	10-15	3-4	76-102	850-875	25-30	.210	5.3
14	350	14	350	998741	90	35-65	15-20	2-4	51-102	1,110-1,135	25-30	.250	6.4

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

ESAB Welding and Cutting Products

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1500 Group Tips

Two-Piece Alternate Fuels



1567 Series

Hand or Machine Cutting Tips

Metal Thickness		Tip Size		Number Preheat Holes or Slots	Cleaning Preheat	Drill Size Cutting	
in.	mm	in.	mm			in.	m
1/4	6	1/4	6	12	◇	69	1.8
1/2	13	1/2	13	12	◇	65	1.7
3/4	19	3/4	19	12	◇	61	1.5
1	25	1	25	12	◇	54	1.4
2	50	2	50	12	◇	51	1.3
3	75	3	75	12	◇	49	1.2
4	100	4	100	16	◇	46	1.1
8	200	8	200	16	◇	39	1.0
12	300	12	300	16	◇	31	0.8
16	400	16	400	20	◇	20	0.5
18	500	18	500	20	◇	8	0.2

■ Two-piece, high preheat for machine cutting, alternate fuels



◇ To clean preheat slots, remove external sleeve and use a soft bristled brush.

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

Ordering Information

Metal Thickness		Natural Gas or Propane			Propylene			Propylene-High Preheat ¹		
in.	mm	Set Part Number	Internal	External	Set Part Number	Internal	External	Set Part Number	Internal	External
1/4	6	0558005016	639615	639322	0558005028	639615	998277	0558005040	639615	998557
1/2	13	0558005017	639616	639322	0558005029	639616	998277	0558005041	639616	998557
3/4	19	0558005018	639617	639322	0558005030	639617	998277	0558005042	639617	998557
1	25	0558005019	639618	639322	0558005031	639618	998277	0558005043	639618	998557
2	50	0558005020	639619	639322	0558005032	639619	998277	0558005044	639619	998557
3	75	0558005021	639620	639322	0558005033	639620	998277	0558005045	639620	998557
4	100	0558005022	998734	14Z39	0558005034	998734	114Z08	0558005046	998734	998561
8	200	0558005023	998735	14Z77	0558005035	998735	639755	0558005047	998735	998558
12	300	0558005024	998736	14Z77	0558005036	998736	639755	0558005048	998736	998558
16	400	0558005025	998737	14Z69	0558005037	998737	998269	0558005049	998737	998559
18	500	0558005026	998738	14Z69	0558005038	998738	998269	0558005050	998738	998559

¹Use where high preheat intensity is desired.

Operating Data

Metal Thickness		Tip Size		Internal Part Number	Gas Pressure		Cutting Speed		Gas Consumption		Average Kerf Width	
in.	mm	in.	mm		Cutting Oxygen	Fuel	ipm	mm/min	Total Oxygen	Fuel	in.	mm
					psig	psig			cfh	cfh		
1/4	6	1/4	6	639615	40	3-5	20-25	508-635	45-65	5-10	.050	1.27
1/2	13	1/2	13	639616	40	3-5	18-25	457-635	65-85	5-10	.065	1.7
3/4	19	3/4	19	639617	40	3-5	15-24	381-610	70-90	5-10	.080	2.0
1	25	1	25	639618	40	3-5	14-20	356-508	95-115	5-10	.090	2.3
1-1/2	38	2	50	639619	40	3-5	12-16	305-406	175-200	8-15	.095	2.4
2	50	2	50	639619	40	3-5	10-14	254-356	175-200	8-15	.100	2.5
2-1/2	64	3	76	639620	40	3-5	8-12	203-305	235-260	8-15	.105	2.7
3	76	3	76	639620	40	5-10	7-11	178-279	235-260	15-20	.105	2.7
4	100	4	100	998734	40	5-10	6-10	152-254	300-335	15-20	.115	2.9
6	150	8	200	998735	39	5-10	4-6	102-152	450-480	15-20	.170	4.3
8	200	8	200	998735	55-60	5-10	3-5	76-127	560-590	20-25	.187	4.7
10	250	12	305	998736	50-60	10-15	3-4	76-102	840-900	25-30	.210	5.3
12	305	12	305	998736	60-70	10-15	3-4	76-102	900-970	25-30	.240	6.1
14	350	16	400	998737	50-60	15-20	3-4	76-102	1,120-1,340	25-30	.270	6.9
16	400	16	400	998737	60-70	15-20	2-3	51-76	1,340-1,480	30-35	.300	7.6
18	500	18	500	998738	50-60	15-20	2-3	51-76	1,560-1,890	30-35	.340	8.6

1500 Group Tips Specialty



1539 Series Alternate Fuels Tips

Special Tips Propylene, Natural Gas, Propane

Tip Size		Number Preheat Holes	Part Number	Cleaning Preheat	Drill Size Cutting	
in.	mm				in.	mm
19 ¹	483	10	65Z55	62	3/16	4.8
19 ²	483	10	65Z50	62	3/16	4.8
25	635	10	65Z56	62	1/4	6.4

- Unsurpassed for washing off rivet heads and then piercing rivet to facilitate removal
- Each tip is equipped with a spud, which produces a low-velocity oxygen stream

Operating Data

Tip Size			Part Number	Gas Pressure	
				Cutting Oxygen	Fuel
in.	mm			psig	psig
19 ³	483		65Z55	80-90	5-7
19 ⁴	483		65Z50	50-60	5-7
25	635		65Z56	50-60	5-7



¹Spudded for maximum useful oxygen flow at 80-90 psi.

²Spudded for maximum useful oxygen flow at 50-60 psi.

³The cutting oxygen throat diameter is 0.055 in. (1.4 mm) on #65Z55; 0.125 in. (3.2 mm) on #65Z50.

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

1516 Series Acetylene Tips

Special Tips Acetylene

Tip Size		Number Preheat Holes	Part Number	Cleaning Preheat	Drill Size Cutting	
in.	mm				in.	m
6	152	4	65Z22	65	53	1.3

- For cutting and trimming



Operating Data

Metal Thickness		Tip Size		Part Number	Gas Pressure		Gas Consumption	
					Oxygen	Acetylene	Total Oxygen	Acetylene
					psig	psig	cfh	cfh
3/4-1-1/2	19-38	6	152	65Z22	35-40	5-7	120-150	15-20

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

1500 Group Tips Specialty



1510 Series Acetylene Tips

Special Tips Acetylene

Tip Size		Number Preheat Holes	Cleaning Preheat	Drill Size Cutting	
in.	mm			in.	m
8	203	12	◇	76	1.9
10	254	12	◇	68	1.7
12	305	6	◇	46	1.2

- For riser removal
- Except in length, comparable to 1502
- Supplied straight, with instructions for bending



◇For preheat cleaning size, reference 1502 group series cleaning preheat column.

Operating Data

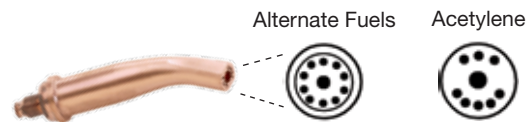
Metal Thickness		Tip Size		Part Number	Gas Pressure			Cutting Speed		Gas Consumption		Average Kerf Width	
					Cutting Oxygen	Preheat Oxygen	Acetylene			Total Oxygen	Acetylene		
in.	mm	in.	mm		psig	psig	psig	ipm	mm/min	cfh	cfh	in.	mm
2	50	8	203	08Z40	25-30	15-25	6-8	10-14	254-355	185-210	16-20	.095	2.4
3	76	8	203	08Z40	30-40	15-25	6-8	8-11	203-280	205-255	16-20	.100	2.5
4	100	8	203	08Z40	35-40	15-25	6-8	6-9	152-229	235-285	19-22	.105	2.7
6	150	10	250	08Z41	35-40	20-30	6-10	5-7	127-178	395-460	20-25	.157	4.0
8	203	10	250	08Z41	55-65	20-30	6-10	4-5	102-127	545-625	30-35	.170	4.3
10	250	12	300	08Z42	40-55	20-30	6-10	3-4	76-102	630-710	40-55	.190	4.8
12	300	12	300	08Z42	55-65	20-30	10-12	3-4	76-102	790-905	45-55	.210	5.3

1511, 1520 & 1568 Tips

Special Tips Acetylene, Propylene, Natural Gas & Propane

Tip Size		For Acetylene	For Propane Natural Gas	Propylene	Propylene	Cleaning Preheat	Drill Size Cutting	
in.	mm	1511 Series	1520 Series	1568 Series	1569 Straight Series		in.	m
13	330	15X14	15X33	998273	0558012162	56	55	1.4
19	483	15X15	15X34	998274	0558012163	55	49	1.2
25	635	-	15X35	-	-	54	41	1.0
25	635	-	-	998275	-	54	41	1.0

- For gouging, grooving plate edges for welding, removing defects from castings, pad washing; bent 20°
- 1511 and 1568 tips have stellite wear skirts



Operating Data for Series 1511

Tip Size		Part Number	Approximate Groove Dimensions				Gas Pressure-PSIG		Approximate Speed		Gas Consumption	
			Width		Depth		Cutting Oxygen	Acetylene			Oxygen	Acetylene
in.	mm		in.	mm	in.	mm	psig	psig	ft/min	m/min	cfh	cfh
13	330	15X14	5/16	8.0	1/8-1/4	3.2-6.4	65-75	5-10	1.0-1.8	0.3-0.5	160-180	35-80
19	483	15X15	3/8-7/16	9.5-11	3/16-1/8	4.8-3.2	80-90	5-10	1.6-2.2	0.5-0.7	270-300	50-55

Given pressures are torch inlet pressures, not what to set regulator at; hose length, diameter, flash arrestor use, and many other factors affect pressure. Use test gauge adaptors to check pressure at back of torch.

When using tips larger than 6 in. (152 mm), ESAB recommends using straight (hand) cutting torches, not combination torches.

ESAB Welding and Cutting Products

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