



















# Bulbs

Edition 2015/2016



H1 Halogen									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P14.5s	170069	12	55	62.5 mm	8.5 mm		Single filament		
	171070	12	55	62.5 mm	8.5 mm		Single filament	<i>Gives up to 30% more light.</i>	
	171071	12	55	62.5 mm	8.5 mm	Xenon blue	Single filament		
	171136	12	55	62.5 mm	8.5 mm		Single filament	<i>Gives up to 50% more light.</i>	
	171068	12	100	62.5 mm	8.5 mm		Single filament		
	171404	12	130	59.8 mm	9.7 mm		Single filament		
	171072	24	70	62.5 mm	8.5 mm		Single filament		
Jahn									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P14.5s	170332	12	55	62.5 mm	8.5 mm		Single filament		
	170965	12	55	62.5 mm	8.5 mm		Single filament, Megalight	<i>Gives up to 30% more light.</i>	
	170493	12	100	62.5 mm	8.5 mm		Single filament		
	170449	24	70	62.5 mm	8.5 mm		Single filament		
	170494	24	100	62.5 mm	8.5 mm		Single filament		
OSRAM									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P14.5s	171686	12	55	58.9 mm	10.8 mm		Single filament, Nightbreaker	<i>Up to 90% more light. Up to 35 m longer beam. Up to 10% whiter light.</i>	
H2 Halogen									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 X511	171073	12	55	30 mm	9 mm		Single filament		
	170512	24	100	30 mm	9 mm		Single filament		
Jahn									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 X511	170576	12	55	30 mm	9 mm		Single filament		
H3 Halogen									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PK22s	171469	6	55	42 mm	11.5 mm		Single filament		
	170070	12	55	42 mm	11.5 mm		Single filament		
	171405	12	130	39 mm	11.5 mm		Single filament		
	170836	24	70	42 mm	11.5 mm		Single filament		
	171407	48	45	42 mm	11.5 mm		Single filament		
	171378	80	55	42 mm	11.5 mm		Single filament		
Jahn									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PK22s	170696	12	35	42 mm	11.5 mm		Single filament		
	170333	12	55	42 mm	11.5 mm		Single filament		
	170723	12	55	42 mm	11.5 mm		Single filament, All day	<i>Gives better visibility in poor weather conditions.</i>	
	170824	12	55	42 mm	11.5 mm	Xenon blue	Single filament	<i>Brighter light as standard.</i>	
	170412	24	70	42 mm	11.5 mm		Single filament		
	170362	24	100	42 mm	11.5 mm		Single filament		

<b>John</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
	170496	12	100	42 mm	11.5 mm		Single filament	
PKY22s								
<b>OSRAM</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
	171687	12	55	42 mm	10.8 mm		Single filament, Nightbreaker	Up to 90% more light. Up to 35 m longer beam. Up to 10% whiter light.
PK22s								
H4 Halogen								
<b>CAR GO</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
	171474	6	60/55	78 mm	16 mm		Double filament	
	170768	12	60/55	78 mm	16 mm		Double filament	
	171066	12	60/55	78 mm	16 mm		Double filament	Gives up to 30% more light.
	171067	12	60/55	78 mm	16 mm	Xenon blue	Double filament	Brighter light as standard.
	171113	12	60/55	78 mm	16 mm		Double filament, Longlife	
	171114	12	60/55	78 mm	16 mm	Gold	Double filament	Gives better visibility in poor weather. Not approved in Germany.
	171134	12	60/55	78 mm	16 mm		Double filament	Gives up to 50% more light.
	170803	12	100/80	78 mm	16 mm	Xenon blue	Double filament	Brighter light as standard.
	171065	12	100/80	78 mm	16 mm		Double filament	
	170513	12	130/90	76.4 mm	14.6 mm		Double filament	
	170514	12	165/120	78 mm	16 mm		Double filament	
	170792	24	75/70	78 mm	16 mm		Double filament	
	171125	24	75/70	78 mm	16 mm		Double filament, Heavy Duty	
	170071	12	60/55	78 mm	16 mm		Double filament	
	171473	6	35/35	78 mm	16 mm		HS1	
<b>John</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
	170718	12	35/35	78 mm	16 mm		Double filament	
	170334	12	60/55	78 mm	16 mm		Double filament	
	170657	12	60/55	78 mm	16 mm		Double filament, Longlife	
	170802	12	60/55	78 mm	16 mm	Xenon blue	Double filament	Brighter light as standard.
	170804	12	60/55	78 mm	16 mm		Double filament, Megalight	Gives up to 30% more light.
	171064	12	60/55	78 mm	16 mm		Double filament, Megalight plus	Gives up to 60% more light.
	170009	12	100/90	78 mm	16 mm		Double filament	
	170348	24	75/70	78 mm	16 mm		Double filament	
	170450	24	75/70	78 mm	16 mm		Double filament, Heavy Duty	
	170360	24	100/70	78 mm	16 mm		Double filament	
	170681	12	45/40	78 mm	16 mm		Double filament	
	170359	12	100/80	78 mm	16 mm		Double filament	
	170006	24	75/70	78 mm	16 mm		Double filament	

OSRAM		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		171688	12	60/55	82 mm			Double filament, Nightbreaker	Up to 90% more light. Up to 35 m longer beam. Up to 10% whiter light.
P43t									
MH6 Halogen									
CAR GO		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		170811	12	30/30	47 mm	20 mm		Double filament, Bilux	
PX15d		170812	12	30/30	55 mm	15 mm		Double filament	
H7 Halogen									
CAR GO		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		171077	12	55	58 mm	11.6 mm		Single filament	
PX26d		171079	12	55	58 mm	11.6 mm	Xenon blue	Single filament	Brighter light as standard.
		171081	12	55	58 mm	11.6 mm		Single filament	Gives up to 30% more light.
		171117	12	55	58 mm	11.6 mm		Single filament, Longlife	
		171137	12	55	58 mm	11.6 mm		Single filament	Gives up to 50% more light.
		170837	12	100	58 mm	11.6 mm		Single filament	
		171080	24	70	58 mm	11.6 mm		Single filament	
		171532	24	70	58 mm	11.6 mm		Single filament, Longlife	
Jahn		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		170720	12	55	58 mm	11.6 mm		Single filament	
PX26d		170825	12	55	58 mm	11.6 mm	Xenon blue	Single filament	Brighter light as standard.
		170800	24	70	58 mm	11.6 mm		Single filament	
OSRAM		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		171689	12	55	59 mm	11.4 mm		Single filament, Conventional, Nightbreaker	Up to 90% more light. Up to 35 m longer beam. Up to 10% whiter light.
PX26d									
H15 Halogen									
OSRAM		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		171691	12	60/19		12.9 mm		Double filament	
PGJ23T-1									
H6W Halogen									
CAR GO		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		171082	12	6	35 mm	9 mm		Single filament	
BAX9s									
Jahn		HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
		170741	12	6	33 mm	9 mm		Single filament	
BAX9s									

H21W Halogen									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 BAY9s	171083	12	21	40 mm	10 mm		Single filament		
	171084	24	21	40 mm	10 mm		Single filament		
 P26s	171135	12	15	36 mm	10 mm		Single filament		
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 BAY9s	170742	12	21	40 mm	10 mm		Single filament		
HB1 American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P29t	170692	12	65/45	95 mm	16.5 mm		Halogen		
HB3 American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P20d	170693	12	65	78 mm	16 mm		Halogen		
HB3 A American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P20d	171804	12	60	70.9 mm	11.9 mm		Halogen		
HB4 American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P22d	170694	12	55	78 mm	16 mm		Halogen		
HB4 A American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P22d	171794	12	51	80.3 mm	10.7 mm		Halogen		
HB5 American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PX29t	171039	12	65/55	102 mm	17 mm		Halogen		

H8 American Types									
<i>Jahn</i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PGJ19-1	171034	12	35	41 mm	11.7 mm		Halogen		
H9 American Types									
<i>Jahn</i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PGJ19-5	171035	12	65	41 mm	11.7 mm		Halogen		
H10 American Types									
<i>Jahn</i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PY20d	171036	12	42	31.5 mm	12.4 mm		Halogen		
H11 American Types									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PGJ19-2	172073	24	70	44 mm			Halogen		
<i>Jahn</i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PGJ19-2	171037	12	55	41 mm	11.7 mm		Halogen		
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PGJ19-2	171690	12	55	44 mm	11.4 mm		Single filament, Halogen, Nightbreaker	<i>Up to 90% more light. Up to 35 m longer beam. Up to 10% whiter light.</i>	
H13 Halogen									
<i>Jahn</i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 P26.4t	171796	12	60/55	86 mm	16.1 mm		Double filament		
H27W/1 American Types									
<i>Jahn</i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
 PG13	171009	12	27	44.5 mm	10.3 mm		Halogen		
 W2.5x16q	170710	12	27/7	53 mm	26.5 mm		Halogen, 3157		
	170711	12	27/7	53 mm	26.5 mm	Orange	Halogen, 3157NA		

## H27W/2 American Types

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 PGJ13	171953	12	50	62.7 mm	12.5 mm		Halogen	
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 PGJ13	171010	12	27	44.5 mm	10.3 mm		Halogen	
	170951	12	50	62.7 mm	12.5 mm		Halogen	
	170726	12	37.5	62.7 mm	12.5 mm		Halogen	

## High Intensity Discharge

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 P32d-2	171133	85	35	77 mm	13.7 mm	4150K	Electronic gas, D2S	
 P32d-3	171132	85	35	79.7 mm	13.7 mm	4150K	Electronic gas, D2R	
 P32d-5	171713	42	35	77 mm	13.7 mm	4150K	Electronic gas, D4S	
 P32d-6	171711	42	35	79.7 mm	12.4 mm	4150K	Electronic gas, D4R	
 PK-32d-6	171710	42	35	80 mm	13 mm	4150K	Electronic gas, D3R	
 PK32d-2	171613	85	35	82 mm	41x41 mm	4150K	Electronic gas, D1S	
 PK32d-3	171683	85	35	80 mm	13 mm	4150K	Electronic gas, D1R	
 PK32d-5	171712	42	35	80 mm	13 mm	4150K	Electronic gas, D3S	

## Stop and Tail Lamps

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 BAY15d	170770	12	21/5	50 mm	25 mm			
	171092	24	21/5	50 mm	25 mm			

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 BAZ15d	171093	12	21/4	50 mm	25 mm			
	<b>Jahn</b>							
 BAY15d	171476	6	21/5	52.5 mm	26.5 mm			
	170336	12	21/5	52.5 mm	26.5 mm		P21/5W	
	170659	12	21/5	52.5 mm	26.5 mm		Longlife	
	170453	24	20/5	52.5 mm	26.5 mm			
	170452	24	21/5	52.5 mm	26.5 mm			
 BAZ15d	170644	12	21/4	52.5 mm	26.5 mm			
	170850	24	21/4	52.5 mm	26.5 mm			
 T20	170776	12	21/5	44 mm	20 mm			
	<b>Festoon</b>							
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 S8.5	171487	6	10	36 mm	10.5 mm			
	171094	12	5	36 mm	10.5 mm			
	171097	12	5	41 mm	10.5 mm			
	171095	12	10	36 mm	10.5 mm			
	171098	12	10	41 mm	10.5 mm			
	171120	12	21	41 mm	15 mm			
	171096	24	5	36 mm	10.5 mm			
	171099	24	5	41 mm	10.5 mm			
	171100	24	10	41 mm	10.5 mm			
	<b>Jahn</b>							
 S6	170591	12	3	33 mm	8.5 mm			
	 S7	170590	12	3	28 mm	8 mm		
 S8.5		171484	6	5	36 mm	10.5 mm		
	171488	6	5	41 mm	10.5 mm			
	171486	6	15	41 mm	15 mm			
	171479	6	18	41 mm	15 mm			
	170341	12	5	36 mm	10.5 mm		C5W	
	170343	12	5	41 mm	10.5 mm			
	170005	12	10	28 mm	10 mm			
	170344	12	10	41 mm	10.5 mm			
	170411	12	10	36 mm	10.5 mm			
	170342	12	15	41 mm	15 mm			
	170588	12	18	41 mm	15 mm			
	171139	12	21	41 mm	15 mm			
	170414	24	5	36 mm	10.5 mm		C5W	
	170592	24	15	41 mm	15 mm			
170589	24	18	41 mm	15 mm				



Parking and Flasher - Postion									
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
BA15d	171102	24	5	35 mm	18.5 mm				
BA15S	170773	12	5	35 mm	18.5 mm				
	170794	24	5	35 mm	18.5 mm				
	171118	24	5	35 mm	18.5 mm				
BA7s	171119	12	2	19 mm	6.8 mm				
BA9s	171490	6	3	27.4 mm	8.6 mm				
	171103	12	2	23 mm	8.6 mm				
	170774	12	4	27.4 mm	8.6 mm				
	170822	12	4	27.4 mm	8.6 mm	Xenon blue		Brighter light as standard.	
	170796	24	2	23 mm	8.6 mm				
	170795	24	4	27.4 mm	8.6 mm				
T15	171401	12	5	36 mm	15 mm				
<b>Jahn</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment	
BA15d	170593	12	5	35 mm	18.5 mm				
BA15S	171481	6	5	35 mm	18.5 mm				
	171480	6	10	35 mm	18.5 mm				
	171472	6	18	45 mm	26.5 mm				
	170340	12	5	35 mm	18.5 mm		R5W		
	170660	12	5	35 mm	18.5 mm			Longlife	
	170339	12	10	35 mm	19 mm				
	170413	24	5	35 mm	18.5 mm		R5W		
	170455	24	5	35 mm	18.5 mm				
BA7s	171483	6	1.5	20.7 mm	6.8 mm	White			
	170448	12	2	20.7 mm	6.8 mm				
	170456	24	3	20.7 mm	6.8 mm				
BA9s	171491	6	2	27.4 mm	8.6 mm				
	171492	6	4	27.4 mm	8.6 mm				
	170345	12	2	23 mm	8.6 mm				
	170594	12	3	23 mm	8.6 mm				
	170346	12	4	27.4 mm	8.6 mm		T4W		
	170580	12	5	29 mm	15.5 mm				
	170416	24	2	23 mm	8.6 mm		T2W		
	170474	24	3	23 mm	8.6 mm				
	170417	24	4	27.4 mm	8.6 mm		T4W		

## Wedge Base

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
  T10	171121	12	2	26 mm	10 mm			
	171104	12	3	26 mm	10 mm			
	170948	12	5	26 mm	10.3 mm	Xenon blue		Brighter light as standard.
	171105	12	5	26 mm	10 mm			
	171122	12	5	26 mm	10 mm	Blue		
	171123	12	5	26 mm	10 mm	Orange		
	170810	12	8	26 mm	10 mm			
	171106	24	3	26 mm	10 mm			
  T5	171107	24	5	26 mm	10 mm			
	170775	12	1.2	20 mm	5 mm			
  T7	171108	24	1.2	20 mm	5 mm			
	171391	12	3	20 mm	7 mm			

**Jahn**

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
  T10	170725	12	2	26.7 mm	10.3 mm			
	170331	12	3	26.7 mm	10.3 mm		W3W	
	170778	12	3	26.7 mm	10.3 mm	Orange	W3W	
	170779	12	3	26.7 mm	10.3 mm	Green	W3W	
	170780	12	3	26.7 mm	10.3 mm	Blue	W3W	
	170781	12	3	26.7 mm	10.3 mm	Red	W3W	
	170347	12	5	26.7 mm	10.3 mm		W5W	
	170662	12	5	26.7 mm	10.3 mm		W5W, Longlife	
	170754	12	5	26.7 mm	10.3 mm	Orange	WY5W	
	170476	24	3	26.7 mm	10.3 mm		W3W	
	170805	24	3	26.7 mm	10.3 mm	Orange	W3W	
	170806	24	3	26.7 mm	10.3 mm	Green	W3W	
	170807	24	3	26.7 mm	10.3 mm	Blue	W3W	
	170808	24	3	26.7 mm	10.3 mm	Red	W3W	
  T5	170542	24	5	26.7 mm	10.3 mm		W5W	
	171283	12	2	20 mm	5 mm			
	170410	12	1.2	20 mm	5 mm			
	170617	12	1.2	20 mm	5 mm	Frosted		
	170684	24	0.7	20 mm	5 mm			
170477	24	1.2	20 mm	5 mm				

## Instrument Panel

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Socket colour	Comment
  B8.4d	171110	12	2	17.5 mm	5 mm		Light green	
	171109	12	1.2	17.5 mm	5 mm		Black	
	171381	12	1.2	17.5 mm	5 mm		Blue	
	171023	12	1.5	17.5 mm	5 mm		Beige	
  B8.5d	171379	12	1	21 mm	5 mm		Orange	
	171024	12	1.2	21 mm	5 mm		Blue	
	171383	12	1.5	21 mm	5 mm		Beige	
	171380	12	0.36	21 mm	5 mm		Purple	
	171028	24	1.2	21 mm	5 mm		Brown	
  B8.7d	171455	12	2	16.5 mm	5 mm		Green	







	HC-CARGO	Voltage	Watt	Length	OD	Colour	Socket colour	Comment
 BX2d	171284	12	1.2	21.5 mm	5 mm		Black	
 EBSN10	171377	24	1.2	20 mm	6 mm		Beige	<i>Alba- type.</i>
 EBSR11	171031	12	1.2	20 mm	5 mm		Green	<i>Alba- type.</i>
	170698	12	1.8	20 mm	5 mm		Blue	<i>Alba- type.</i>
	171025	24	1.2	21 mm	5 mm		Yellow	<i>Alba- type.</i>
	171026	24	1.2	21 mm	5 mm		Brown	<i>Alba- type.</i>
	171032	24	1.4	21 mm	5 mm		Green	<i>Alba- type.</i>
 F4.8	171112	14	1.2	13 mm	4.8 mm		Black	
 MFHZ	171382	12	1.2	38 mm	5 mm		Black	
 MFJF	171837	12	2	35 mm	5 mm		Black	
	171384	12	1.2	35 mm	5 mm		Black	
 T-1/4	170364	14	1.12	10.5 mm	4 mm			
 T-1/4NW	170762	14	0.8	9 mm	3.4 mm		Dark grey	
	171389	14	1.4	11 mm	3.5 mm		Black	
 T-3/4	170972	12	0.6	6.5 mm	2.5 mm			<i>Used as locating light bulbs in switches on Japanese vehicles.</i>
 T5	171388	12	0.4	20 mm	5 mm	Frosted	Grey	
 T7	171111	14	2	23 mm	7 mm		Pink	
<b>Jahn</b>	<b>HC-CARGO</b>	<b>Voltage</b>	<b>Watt</b>	<b>Length</b>	<b>OD</b>	<b>Colour</b>	<b>Socket colour</b>	<b>Comment</b>
 B8.3d	170612	12	1.2	23.5 mm	5 mm		Black	
	170613	24	1.2	23.5 mm	5 mm		Grey	

<b>Jahn</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Socket colour	Comment
 B8.4d	170756	12	2	17.5 mm	5 mm		Light green	
	170727	12	1.2	17.5 mm	5 mm		Black	
	171033	12	1.12	17.5 mm	5 mm		Orange	
 B8.5d	170610	12	2	23.5 mm	5 mm		Green	
	170357	12	1.2	23.5 mm	5 mm		Black	
	170358	24	1.2	23.5 mm	5 mm		Grey	
 B8.7d	170545	12	1.2	23.5 mm	5 mm		Grey	
 F4.8	170753	14	1.4	12 mm	5 mm		Black	
 T5	170755	12	0.5	19.5 mm	5 mm		Grey	
	170758	12	1.2	20 mm	5 mm		White	
	170782	12	1.2	20 mm	5 mm	Orange		
	170783	12	1.2	20 mm	5 mm	Green		
	170784	12	1.2	20 mm	5 mm	Blue		
	170785	12	1.2	20 mm	5 mm	Red		
 T7	170757	14	2	23.5 mm	5 mm		White	


**Conventional**

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 P45t	170771	12	45/40	77 mm	41 mm		Bilux	
 PG20/4	171869	12	24			Orange		300 lm.
 PGU20/4	172074	12	24	46.5 mm		Orange		


<b>Jahn</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 BA15S	170577	12	45	53 mm	36 mm			For US and UK systems.
	170578	24	45	53 mm	36 mm			For US and UK systems.
 BA20d	171531	6	35/35	70 mm	36 mm			
	170814	12	25/25	70 mm	36 mm			
	170815	12	35/35	70 mm	36 mm			
	170573	12	45/40	70 mm	36 mm			
	170574	24	45/40	70 mm	36 mm			

<b>John</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
  BA20s	170575	12	35	66 mm	36 mm			
	170579	12	50	66 mm	36 mm			For German and Italian systems.
  P26s	170816	12	15	46 mm	25.5 mm			
  P45t	171477	6	45/40	77 mm	41 mm		Bilux	
	170338	12	45/40	77 mm	41 mm		Bilux	
	170350	24	55/50	77 mm	41 mm		Bilux	




### Electric Vehicles and Forklifts





















<b>CARGO</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
  BA15S	171410	48	10	35 mm	16 mm			
	171408	48	25	50 mm	25 mm			
  BAY15d	171411	48	25/10	50 mm	25 mm			
  PK22s	171407	48	45	42 mm	11.5 mm		Halogen, H3	
	171378	80	55	42 mm	11.5 mm		Halogen, H3	

### Flash and Penlight

<b>CARGO</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
  E10	170509	12	3	24 mm	11.5 mm			
	170674#	24	2	24 mm	11.5 mm			
  P13.5s	171280	48		30 mm	11 mm		Krypton	

### Wedge Base - Covers

<b>John</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
	170731					Blue		
	170732					Green		
	171127					Orange		

<i><b>Jahn</b></i>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
	171128					Blue		
	171129					Green		
	171130					Red		
	171131					Orange		
<b>Halogen</b>								
	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
  BA9s	170470	12	5	33 mm	9 mm			
	170502	12	12	33 mm	9 mm			
	170380	12	20	35 mm	9 mm			
  G4	171425	12	5	30 mm	8 mm			
	170712	12	10	30 mm	8 mm			
	170749	12	20	30 mm	8 mm			
	170848	24	10	30 mm	8 mm			
  G4	170750	24	20	30 mm	8 mm			
	171124	12	5	33 mm	9 mm			
  T10								
<i><b>Jahn</b></i>	HC-CARGO	Voltage	Watt	Length	OD	Socket colour	Type	Comment
  B10d	170751	12	3	27.8 mm	8.8 mm	Brown		
	170752	12	5	27.8 mm	8.8 mm	Black		
  BA15S	170839	12	10	37.5 mm	10 mm			
  PG13	171748	12	50				American, 885	
 W2.5x16d	171747	12	27				American, 3156	

## Stop and Flasher - Position

	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type	Comment
 BA15d	171088	24	15	43 mm	23 mm			
	170772	12	10	35 mm	18 mm			
 BA15S	170769	12	21	50 mm	25 mm			
	171091	12	21	50 mm	25 mm	Orange		
	170793	24	10	35 mm	18 mm			
	171076	24	10	35 mm	18 mm			
	171086	24	15	43 mm	23 mm			
	170826	24	21	50 mm	25 mm			
	171078	24	21	50 mm	25 mm			
 BAU15s	171089	12	21	50 mm	25 mm	Orange		
	171371	12	21	50 mm	25 mm	Silver/amber		
	171090	24	21	50 mm	25 mm	Orange		
 T13	171390	12	10	30 mm	13 mm			
	171402	12	10	36 mm	15 mm			
 T15	171403	12	21	36 mm	15 mm			
	<b>John</b>	HC-CARGO	Voltage	Watt	Length	OD	Colour	Type
 BA15d	170583	12	15	45 mm	26.5 mm			
	170585	12	20	45 mm	26.5 mm			
	170481	24	20	45 mm	26.5 mm			
 BA15S	171475	6	21	52.5 mm	26.5 mm			
	170584	12	15	35 mm	19 mm			
	170335	12	21	52.5 mm	26.5 mm		P12W	
	170658	12	21	52.5 mm	26.5 mm		Longlife	
	170351	24	10	35 mm	19 mm		R10W	
	170454	24	10	35 mm	15 mm			
	170349	24	21	52.5 mm	26.5 mm		P21W	
	170451	24	21	52.5 mm	26.5 mm			
	170614	24	25	45 mm	26.5 mm			
 BAU15s	170849	24	21	52.5 mm	26.5 mm	Orange		
	170813	12	16	37 mm	15 mm			
 T16	170777	12	21	44 mm	20 mm			
 T20	171398	12	21	44 mm	20 mm	Orange		

## Spare Lamp Kits

### For Cars

**Jahn**



171040



171042



171043

Dimensions: 90 x 90 x 57 mm.

Contains:

HC-CARGO	TYPE	Jahn Ref. No.	Description	H4 171040	H7 171042	H1/H7 171043
170804	H4	1134	12 V. 60/55 W. P43t.	1		
170332	H1	1111	12 V. 55 W. P14.5s.		1	
170720	H7	1117	12 V. 55 W. PX 26d.		1	1
170335	P12W	1321	12 V. 21 W. BAY15s.	1	1	1
170336	P21/5W	1341	12 V. 21/5W. BAY15d.	1	1	1
170648	PY21W	1383	12 V. 21W. BAU15s.		1	1
170347	W5W	1621	12 V. 5 W. W2.1 x 9.5d.		1	1
170340	R5W	1401	12 V. 5 W. BA15s.	1	1	
170341	C5W	1711	12 V. 5 W. SV8.5.		1	1
170346	T4W	1501	12 V. 5 W. SV8.5.	1		
190057	ATO blade fuse		10 Amp. Red.	1	1	1
190058	ATO blade fuse		15 Amp. Blue.	1	1	1
190059	ATO blade fuse		20 Amp. Yellow.	1	1	1

### For Trucks and Buses

**Jahn**

Contains:

HC-CARGO	TYPE	Jahn Ref. No.	Description	H4 171044
170348	H4	1102	24 V. 75/70W P43t.	2
170417	T4W	1502	24 V. 4 W. BA9s.	2
170413	R5W	1402	24 V. 5 W. BA15s.	1
170351	R10W	1412	24 V. 10 W. BA15s.	1
170349	P21W	1322	24 V. 21 W. BA15s.	4
170416	T2W	1512	24 V. 2 W. BA9s.	2
170475	Fest. T10.5	1732	24 V. 10 W. SV8.5.	1
170414	C5W	1712	24 V. 5 W. SV8.5.	1
190057	ATO blade fuse		10 Amp. Red.	1
190058	ATO blade fuse		15 Amp. Blue.	1
190059	ATO blade fuse		20 Amp. Yellow.	1
190060	ATO blade fuse		25 Amp. Natural.	1



171044

Dimensions: 210 x 95 x 60 mm.





# Electrical Components

Edition 2015/2016



## CAMERA & PARKING SENSORS

### CCTV REAR OBSERVATION SYSTEM

#### 160775 Rear Observation Kit

Kit consisting of 1x7" monitor w/ quad: HC-CARGO 160776. 1x colour camera w/ audio: HC-CARGO 160796. 1x20 m extension cable: HC-CARGO 160611.



Voltage: 12/24

Extension cable: 20 m

Height: 140 mm

Depth: 50.8 mm

Display size: 7"

Width: 191 mm

Wide angle: 60°

Monitor: LED

Type: Camera kit

Camera type: Colour

Accessories: DVD

No./cameras: 4+1

Audio: Yes

Extra camera: w/

Infrared: w/

#### 160783 Rear Observation Kit

Kit consisting of 1x7" monitor: HC-CARGO 160784. 1x colour camera: HC-CARGO 160796. 1x20 m extension cable: HC-CARGO 160611.



Voltage: 12/24

Extension cable: 20 m

Height: 140 mm

Depth: 50.8 mm

Display size: 7"

Width: 191 mm

Wide angle: 60°

Monitor: LED

Type: Camera kit

Camera type: Colour

Accessories: DVD

No./cameras: 3+1

Remote control: w/o

Audio: Yes

Extra camera: w/

Infrared: w/

#### 160793 Rear View Mirror Monitor kit

w/o camera and extension cable. Camera: HC-CARGO 160610, 160796. Extension cables use: HC-CARGO 160611, 160612, 160613, 160672.



Voltage: 12/24

Display size: 4.3"

Camera type: Colour

Accessories: DVD

Audio: Yes

#### 160994 Rear Observation Kit

Consists: 1x7" monitor w/ remote control: HC-CARGO 160995. 1x colour camera: HC-CARGO 160887. 1x20 m extension cable: HC-CARGO 160888.



Voltage: 12-24

Extension cable: 20 m

Display size: 7"

Monitor: TFT-LCD

Type: Camera kit

Camera type: Colour

No./cameras: max. 2

Remote control: w/

Audio: Yes

Infrared: w/

Language: Chinese, German, English,

French, Dutch, Italian, Japanese,

Portuguese, Spanish

#### 160996 Rear Observation Kit

Consists: 1x5" monitor w/ remote control: HC-CARGO 160997. 1x colour camera: HC-CARGO 160887. 1x20 m extension cable: HC-CARGO 160888.



Voltage: 12-24

Extension cable: 20 m

Display size: 5"

Monitor: TFT-LCD

Type: Camera kit

Camera type: Colour

No./cameras: max. 2

Remote control: w/

Audio: Yes

Extra camera: w/

Infrared: w/

Language: Chinese, German, English,

French, Dutch, Italian, Japanese,

Portuguese, Spanish

#### 161005 Rear Observation Kit



Voltage: 12

Display size: 3.5"

Wide angle: 170°

Monitor: TFT-LCD

Type: Camera kit

Camera type: Colour - Wireless

No./cameras: 1

Audio: No

Infrared: w/o

Language: Chinese, German, English,

French, Dutch, Italian, Japanese,

Portuguese, Spanish

**161007** Rear Observation Kit, Waterproof

IP 67.



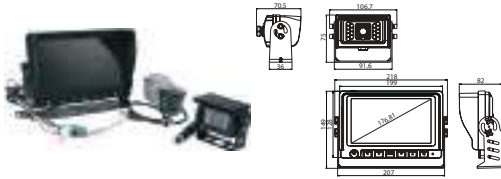
Voltage: 12-24

Display size: 7"

Monitor: TFT-LCD  
 Type: Camera kit  
 Camera type: Colour  
 No./cameras: Max. 2  
 Remote control: w/  
 Audio: Yes  
 Infrared: w/  
 Language: Chinese, German, English, French, Dutch, Italian, Japanese, Portuguese, Spanish

**161027** Rear Observation Kit

Consists: 1x7" monitor: HC-CARGO 161034. 1x colour camera: HC-CARGO 161028. 1x10 m extension cable: HC-CARGO 160889.



Voltage: 12-24

Extension cable: 10 m

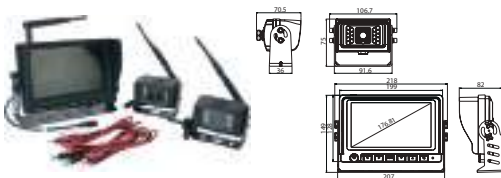
Display size: 7"

Wide angle: 130°

Monitor: TFT-LCD  
 Type: Camera kit  
 Camera type: Colour  
 No./cameras: max. 2  
 Audio: No  
 Infrared: w/  
 Language: Chinese, German, English, French, Dutch, Italian, Portuguese, Spanish, Danish, Russian, Polish

**161031** Rear Observation Kit

Consists: 1x7" monitor: HC-CARGO 161032. 2x colour camera: HC-CARGO 161033.



Voltage: 12-24

Display size: 7"

Wide angle: 130°

Monitor: TFT-LCD  
 Type: Camera kit  
 Camera type: Colour - Wireless  
 No./cameras: 2  
 Audio: No  
 Infrared: w/  
 Language: English

**161039** Rear Observation Kit

Consists: 1x5" monitor: HC-CARGO 161040. 1x colour camera: HC-CARGO 161043. 1x20 m extension cable: HC-CARGO 160888.



Voltage: 12-24

Extension cable: 20 m

Display size: 5"

Wide angle: 130°

Monitor: TFT-LCD  
 Type: Camera kit  
 Camera type: Colour  
 No./cameras: max. 2  
 Remote control: w/  
 Audio: Yes  
 Infrared: w/  
 Language: Chinese, German, English, French, Dutch, Italian, Portuguese, Spanish, Danish, Russian, Polish

**CAMERAS**

**160610** CCTV Camera

Servicing: HC-CARGO 160775, 160783, 160793

w/ original anoised finish and anti-fog glas.



Voltage: 12  
 Light sensitivity: 0.1 lux

OD: 30 mm  
 Length: 70 mm  
 Connection cable: 6 pin mini DIN  
 Weight: 0.200 kg  
 Resolution: >330 TV lines  
 Shutter rate: 1/50-1/100.000 sec.  
 Wide angle: 110°

Signal system: PAL  
 Type: Colour  
 Colour: Black  
 Material: Aluminium  
 Picture sensor: 1/3" CCD  
 Microphone: w/o  
 Mirror function: w/  
 Protection degree: IP 68

**160880** Side Camera

Servicing: HC-CARGO 160775, 160783, 160793



Voltage: 12  
 Light sensitivity: 0 lux/ IR LED on lux

Connection cable: 2 m  
 Height: 60.7 mm  
 Depth: 82.6 mm  
 Width: 61.12 mm  
 Resolution: 380 TV lines  
 Shutter rate: 1/60-1/100.000 sec.  
 Wide angle: 73°

Signal system: PAL  
 Type: Colour  
 Colour: Black  
 Material: Aluminium  
 Picture sensor: 1/4" CCD  
 Microphone: w/o  
 Infrared: w/  
 Mirror function: w/  
 Protection degree: IP 67

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160887</b> Colour Camera	Servicing: HC-CARGO 160994, 160996		
	Voltage: 12/24 Light sensitivity: 0 lux	Connection cable: 0.3 m 4 pin Height: 43 mm Depth: 57 mm Width: 75 mm Resolution: 420 TV lines Wide angle: 120°	Signal system: PAL Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/ Infrared: w/ Mirror function: w/ Protection degree: IP 68
<b>160972</b> Colour Camera	Servicing: HC-CARGO 160994, 160996		
	Voltage: 12/24 Light sensitivity: 0 lux	Connection cable: 0.3 m 4 pin Height: 43 mm Depth: 57 mm Width: 75 mm Resolution: 480 TV lines Wide angle: 95°	Signal system: PAL/NTSC Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/ Infrared: w/ Mirror function: w/ Protection degree: IP 68
<b>161006</b> Colour Camera w/ auto close	Servicing: HC-CARGO 161027, 160994, 161005, 161007, 161039		
	Voltage: 12-24 Light sensitivity: 0 lux	Connection cable: 0.5 m Resolution: 420 TV lines Wide angle: 140°	Signal system: PAL/NTSC Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/o Infrared: w/ Protection degree: IP 68
<b>161028</b> Colour Camera	Servicing: HC-CARGO 161027, 160994, 160996, 161005, 161007		
	Voltage: 12 Light sensitivity: 0 lux	Connection cable: 4 pin Height: 77.2 mm Depth: 66 mm Width: 77.2 mm Resolution: 420 TV lines Wide angle: 130°	Signal system: PAL Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/o Infrared: w/ Mirror function: w/ Protection degree: IP 69K
<b>161029</b> Colour Camera w/ Heat.	HC-CARGO 161027, 160994, 160996, 161005, 161007		
	Voltage: 12-24 Light sensitivity: 0 lux	Connection cable: 4 pin Height: 77.2 mm Depth: 66 mm Width: 77.2 mm Resolution: 420 TV lines Wide angle: 130°	Signal system: PAL Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/ Infrared: w/ Mirror function: w/ Protection degree: IP 69K
<b>161030</b> Side Camera	Servicing: HC-CARGO 161027, 160994, 160996, 161005, 161007		
	Voltage: 12 Light sensitivity: 0 lux	Connection cable: 4 pin Height: 60 mm Depth: 90 mm Width: 75 mm Resolution: 420 TV lines Wide angle: 130°	Signal system: PAL Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/o Infrared: w/ Protection degree: IP 69K
<b>161033</b> Colour Camera	Servicing: HC-CARGO 161031		
	Voltage: 12-24 Light sensitivity: 0 lux	Connection cable: 4 pin Height: 75 mm Depth: 70.5 mm Width: 106.7 mm Resolution: 420 TV lines Wide angle: 120°	Signal system: PAL/NTSC Type: Colour - Wireless Colour: Black Material: Aluminium Picture sensor: 1/4" CMOS Microphone: w/o Infrared: w/ Mirror function: w/ Protection degree: IP 69K

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>161038</b> Colour Camera w/ Audio 	Servicing: HC-CARGO 160775, 160783, 160793 Voltage: 12 Light sensitivity: 0 lux	Connection cable: 1.3 m w/ 6 pin Mini DIN Height: 75 mm Depth: 60 mm Width: 90 mm Resolution: 420 TV lines Shutter rate: 1/50-1/100.000 sec. Wide angle: 122°	Signal system: PAL/NTSC Type: Colour Colour: White Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/ Infrared: w/ Mirror function: w/ Protection degree: IP 68
<b>161041</b> Colour camera for roof mounting 	Servicing: HC-CARGO 161027, 160994, 161005, 161007, 161039 Voltage: 12 Light sensitivity: 0 lux	Connection cable: 0.35 m Height: 80 mm Depth: 215 mm Width: 135 mm Weight: 0.36 kg Resolution: 420 TV lines Wide angle: 120°	Signal system: PAL/NTSC Type: Colour Colour: Black Picture sensor: 1/3" CCD Microphone: w/o Infrared: w/ Protection degree: IP 66
<b>161043</b> Colour Camera 	Servicing: HC-CARGO 161027, 160994, 161005, 161007, 161039 Voltage: 12 Light sensitivity: 0 lux	Connection cable: 4 pin Height: 70 mm Depth: 84 mm Width: 76 mm Weight: 0.4 kg Resolution: 420 TV lines Wide angle: 130°	Signal system: PAL Type: Colour Colour: Black Material: Aluminium Picture sensor: 1/3" CCD Microphone: w/ Infrared: w/ Mirror function: w/ Protection degree: IP 69K
<b>MONITORS</b>			
<b>160776</b> Monitor 	Servicing: HC-CARGO 160775 Voltage: 12/24	Display size: 7" Resolution: 1440x234 pixels	Signal system: PAL/NTSC Type: LED Mount. bracket: w/ Loudspeaker: Yes Mirror function: w/
<b>160784</b> Monitor 	Voltage: 12/24	Display size: 7" Resolution: 1440(W) x 234(H) pixels	Signal system: PAL/NTSC Type: TFT-LCD Mount. bracket: w/ Loudspeaker: Yes Mirror function: w/
<b>160995</b> Monitor 	Servicing: HC-CARGO 160994 Voltage: 12-24	Display size: 7" Resolution: 400x234 pixels	Signal system: PAL/NTSC Type: TFT-LCD Mount. bracket: w/ Remote control: w/ Loudspeaker: Yes Mirror function: w/o Language: Chinese, German, English, French, Dutch, Italian, Japanese, Portuguese, Spanish
<b>160997</b> Monitor 	Servicing: HC-CARGO 160996 Voltage: 12-24	Display size: 5" Resolution: 400x234 pixels	Signal system: PAL/NTSC Type: TFT-LCD Mount. bracket: w/ Remote control: w/ Loudspeaker: Yes Mirror function: w/o Language: Chinese, German, English, French, Dutch, Italian, Japanese, Portuguese, Spanish

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>161032 Monitor</b>  	Servicing: HC-CARGO 161031 Voltage: 12-24	Display size: 7" Resolution: 800x480 pixels	Type: TFT-LCD Camera type: Colour - Wireless Mount. bracket: w/ Mirror function: w/ Language: Chinese, German, English, French, Dutch, Italian, Portuguese, Spanish, Danish, Russian, Polish
<b>161034 Monitor</b>  	Servicing: HC-CARGO 161027 Voltage: 12-24	Display size: 7" Resolution: 800x480 pixels	Type: TFT-LCD Camera type: Colour Mount. bracket: w/ Loudspeaker: Yes Mirror function: w/ Language: Chinese, German, English, French, Dutch, Italian, Portuguese, Spanish, Danish, Russian, Polish
<b>161040 Monitor</b> 	Servicing: HC-CARGO 161039 Voltage: 12-24	Display size: 5" Resolution: 640x480 pixels	Type: TFT-LCD Mount. bracket: w/ Remote control: w/ Loudspeaker: Yes Mirror function: w/ Language: Chinese, German, English, French, Dutch, Italian, Portuguese, Spanish, Danish, Russian, Polish
<b>ACCESSORIES</b>			
<b>160611 CCTV Extension Cable</b> 	Servicing: HC-CARGO 160775, 160783, 160793	Length: 20 m	Plug: Mini DIN 6 pin
<b>160612 CCTV Extension Cable</b> 	Servicing: HC-CARGO 160775, 160783, 160793	Length: 15 m	Plug: Mini DIN 6 pin
<b>160613 CCTV Extension Cable</b> 	Servicing: HC-CARGO 160775, 160783, 160793	Length: 10 m	Plug: Mini DIN 6 pin
<b>160672 CCTV Extension Cable</b> 	Servicing: HC-CARGO 160775, 160783, 160793	Length: 6 m	Plug: Mini DIN 6 pin

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160888</b> CCTV Extension Cable 	Servicing: HC-CARGO 160994, 160996	Length: 20 m	Plug: 4 pin
<b>160889</b> CCTV Extension Cable 	Servicing: HC-CARGO 160994, 160996	Length: 10 m	Plug: 4 pin
<b>160916</b> Trailer Cable Kit 	Servicing: HC-CARGO 160994, 160996	Cable from socket to camera: 2 m Cable from socket to monitor: 5 m Coil length: 3 m	Plug: 4 pin
<b>160961</b> Power Cable 	Servicing: HC-CARGO 160886 Voltage: 12-24		
<b>160965</b> Lens 	Servicing: HC-CARGO 160610		Material: Glass
<b>160993</b> Trailer Cable Kit 	Servicing: HC-CARGO 160775, 160783, 160793	Cable from socket to camera: 20 m Cable from socket to monitor: 5 m Coil length: 2 m	Plug: Mini DIN 6 pin
<b>161036</b> Aerial 	Servicing: HC-CARGO 161031, 161032, 161033		Colour: Black Material: Rubber

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>161037</b> Lens 	Servicing: HC-CARGO 160610		Material: Glass
<b>161044</b> Monitor Mounting, W/suction Cup 			
<b>ACOUSTIC WARNING REVERSING ALARMS</b>			
<b>160346</b> Reversing Alarm <i>w/ "beep-beep" warning sound.</i> 	Voltage: 12 Watt: 10 Decibel: 90		Bulb type: Halogen Socket type: BA15S ADR-approved: No
<b>160410</b> Reversing Alarm <i>w/ "beep-beep" warning sound.</i> 	Voltage: 24 Watt: 20 Decibel: 90		Bulb type: Halogen Socket type: BA15S ADR-approved: No
<b>160481</b> Reversing Alarm 	Voltage: 12/24 Amp: 0.25 Decibel: 96 Hertz: 2500		Overvoltage: Yes Waterproof: Yes ADR-approved: No
<b>160482</b> Reversing Alarm <i>Night attenuation, excluding when fog lights are on. RED LEAD- To reverse lamp, BLACK LEAD- To earth, ORANGE LEAD- To side lamp (night silent mode), GREEN LEAD- To fog lamp (night silent override).</i> 	Voltage: 12/24 Amp: 0.25 Decibel: 100 Hertz: 980		Overvoltage: Yes Waterproof: Yes ADR-approved: Yes
<b>160689</b> Reversing Alarm 	Voltage: 12/80 Milliamp: 30 Decibel: 85 Hertz: 3200	Weight: 0.035 kg	Type: Buzzer Waterproof: Yes ADR-approved: No



**BUZZERS**
**160533** Warning Buzzer


Voltage: 24  
 Milliamp: 21  
 Decibel: 99  
 Hertz: 400±100

**160534** Warning Buzzer


Voltage: 12  
 Milliamp: 25  
 Decibel: 97  
 Hertz: 400±100

**HORNS**
**ELECTRICAL**
**160036** Twin Fanfare Horn

Red w/ chromium grill.



Voltage: 12  
 Decibel: 112  
 Hertz: 410-490

Relay: w/  
 Marine: No  
 E-approval: Yes

**160393** Horn

2 terminals. w/ bracket.



Voltage: 36-48  
 Amp: 1  
 Decibel: 112  
 Hertz: 420

OD: 100 mm

Type: Single tone  
 Material: Steel  
 Marine: No  
 E-approval: Yes

**160414** Horn

Model EM2.



Voltage: 24  
 Amp: 4  
 Decibel: 118  
 Hertz: 370

Length: 400 mm

Type: Single tone  
 Material: Chromed brass  
 Relay: w/o  
 Marine: Yes

**160415** Horn

Model EM2.



Voltage: 12  
 Amp: 5  
 Decibel: 118  
 Hertz: 370

Length: 400 mm

Type: Single tone  
 Material: Chromed brass  
 Relay: w/o  
 Marine: Yes

EL. SPECIFICATIONS		DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160658</b> Horn			
w/ K-Jetronic connection. w/ bracket. Servicing: VW			
		Voltage: 12 Amp: <1 Hertz: 335	OD: 100 mm  Type: Single tone Material: Steel Marine: No E-approval: Yes
<b>160712</b> Horn			
w/ K-Jetronic connection. Servicing: VW			
		Voltage: 12	OD: 82 mm Length: 117 mm  Type: Dual tone Relay: w/o Marine: No E-approval: Yes
<b>160746</b> Horn			
2 terminals. w/ bracket. Servicing: Scooters and motor cycles			
		Voltage: 12 Amp: 1-1.4 Decibel: 109 Hertz: 410-550	OD: 70 mm  Type: Single tone Material: Steel Marine: No E-approval: Yes
<b>160986</b> Horn			
2 terminals. w/ bracket.			
		Voltage: 12 Amp: 3.5 Decibel: 112 Hertz: 420	OD: 90 mm  Type: Single tone Material: Steel Marine: No E-approval: Yes
<b>160987</b> Horn			
2 terminals. w/ bracket.			
		Voltage: 24 Amp: 2.5 Decibel: 112 Hertz: 420	OD: 90 mm  Type: Single tone Material: Steel Marine: No E-approval: Yes
<b>160988</b> Horn			
2 terminals. w/ bracket.			
		Voltage: 12 Amp: 3.5 Decibel: 112 Hertz: 335	OD: 90 mm  Type: Single tone Material: Steel Marine: No E-approval: Yes
<b>160989</b> Horn			
2 terminals. w/ bracket.			
		Voltage: 24 Amp: 2.5 Decibel: 112 Hertz: 335	OD: 90 mm  Type: Single tone Material: Steel Marine: No E-approval: Yes

## AIR HORNS

### 160002 Compressor Horn

w/ parts.



Voltage: 12  
Amp: 16  
Decibel: 117  
Hertz: 630-795

Type: Dual tone  
Material: Shockproof plastic  
Relay: w/  
E-approval: Yes

### 160038 Pneumatic Horn

Operating pressure 500-1200 kPa. For trucks equipped w/ on-board air.



Decibel: 118  
Hertz: 330/370

OD: 80 mm  
Length: 390 mm

Type: Dual tone  
Material: Chromed Metal  
E-approval: Yes

### 160355 Pneumatic Horn

Servicing: Trucks

Operating pressure 30-1200 kPa. Equipped w/ on-board air.



Decibel: 118  
Hertz: 210

OD: 160 mm  
Length: 600 mm

Type: Single tone  
Material: Chromed Metal  
E-approval: Yes

### 160356 Pneumatic Horn

Servicing: Trucks

Operating pressure 30-1200 kPa. Equipped w/ on-board air.



Decibel: 118  
Hertz: 190

OD: 160 mm  
Length: 680 mm

Type: Single tone  
Material: Chromed Metal

### 160508 Compressor Horn



Voltage: 24  
Amp: 8  
Decibel: 118  
Hertz: 692-756

Type: Dual tone  
Material: Shockproof plastic  
Relay: w/  
E-approval: Yes

## SPARE PARTS

### 160039 Electric Valve

For Compressor horn.



Voltage: 24

**160213 Compressor**
*Marine horn: HC-CARGO 160048.*


Voltage: 24

 OD: 90 mm  
 Length: 165 mm  
 Pressure: 2 bar

 Material: Aluminium  
 Relay: w/  
 Marine: Yes

**160333 Compressor**
*Approved for boats until 12 mtr.*


Servicing: HC-CARGO 160038

Voltage: 12

 OD: 70 mm  
 Length: 112 mm  
 Pressure: 1.5 bar

 Type: 1, 2 and 3 tones  
 Material: Aluminium  
 Relay: w/  
 Marine: Yes

**160334 Compressor**

Servicing: HC-CARGO 160038



Voltage: 24

 OD: 70 mm  
 Length: 112 mm  
 Pressure: 1.5 bar

 Type: 1, 2 and 3 tones  
 Material: Aluminium  
 Relay: w/  
 Marine: Yes

**SPARE PARTS**
**160042 Y-Connector**

Servicing: HC-CARGO 160002, 160508


**190097 PA Hose 8 mm**

 ID: 8 mm  
 OD: 11.6 mm  
 Length: 50 m

Hose type: Washer

**POWER MANAGEMENT COMPONENTS**
**VOLTAGE CONVERTERS**
**160899 Adaptor**
*Max. output 220 W. 7-13 pole.*

 Voltage/in: 24  
 Voltage/out: 12  
 Watt/out: 6x70

Type: Switch mode

**160900 Trailer Light Converter Adapter**

Max. output 220 W. 7-7 pole.



Voltage/in: 24  
Voltage/out: 12  
Watt/out: 6x70

Type: Switch mode

**160901 Trailer Light Converter**

Output: 2x42 W + 4x60 W. Level B. To be used when HC-CARGO 160899 and 160900 are not suited.



Voltage/in: 24  
Voltage/out: 12

Type: Switch mode/isolated  
Protection degree: IP 69K  
Approvals: Connection

**NON INSULATED**

**160387 Voltage Converter**

The converter is supplied w/ a unique clip mounting bracket. The converter is intended for use w/ radios, cassette players or other similar equipment. Fitting instruction included.



Voltage/in: 24  
Voltage/out: 13.8  
Amp/5 min: 6  
Amp/cont.: 3  
Amp/ offload: 8  
Watt/out: 40

Dim.: 68x87x50 mm

Type: Switch mode/uninsulated  
Alarm/over heating: Yes  
Alarm/overvoltage: Yes  
Alarm/rev. con.: Yes  
Alarm/transients: Yes  
Over current: Yes  
Approvals: CE

**160388 Voltage Converter**

The converter is supplied w/ a unique clip mounting bracket. The converter is intended for use w/ radios, cassette players or other similar equipment. Fitting instruction included.



Voltage/in: 24  
Voltage/out: 13.8  
Amp/5 min: 10  
Amp/cont.: 6  
Amp/ offload: 8  
Watt/out: 75

Dim.: 90x87x50 mm

Type: Switch mode/uninsulated  
Alarm/over heating: Yes  
Alarm/overvoltage: Yes  
Alarm/rev. con.: Yes  
Alarm/transients: Yes  
Over current: Yes  
Approvals: CE

**160306 Voltage Converter**

The converter is supplied w/ a unique mounting bracket. The converter is intended for use w/ heavy duty communication equipment or other similar equipment. Fitting instruction included.



Voltage/in: 24  
Voltage/out: 13.8  
Amp/5 min: 18  
Amp/cont.: 12  
Amp/ offload: 8  
Watt/out: 160

Dim.: 128x87x50 mm

Type: Switch mode/uninsulated  
Alarm/over heating: Yes  
Alarm/overvoltage: Yes  
Alarm/rev. con.: Yes  
Alarm/transients: Yes  
Over current: Yes  
Approvals: CE

**160389 Voltage Converter**

The converter is supplied w/ a unique clip mounting bracket. The converter is intended for use w/ high power audio installations and high frequency radio transmission or other similar equipment. Fitting instruction included.



Voltage/in: 24  
Voltage/out: 13.8  
Amp/5 min: 30  
Amp/cont.: 24  
Amp/ offload: 8  
Watt/out: 330

Dim.: 168x87x50 mm

Type: Switch mode/uninsulated  
Alarm/over heating: Yes  
Alarm/overvoltage: Yes  
Alarm/rev. con.: Yes  
Alarm/transients: Yes  
Over current: Yes  
Approvals: CE

**INSULATED**
**160960 Power Converter**

Servicing: Used for mounting computers in trollies

*Modified to stabilize the output voltage.*

 Voltage/in: 10-32  
 Voltage/out: 12  
 Amp/cont.: 6  
 Watt/out: 72

Dim.: 167x87x50 mm

 Type: Switch mode/isolated  
 Protection degree: IP 533  
 Approvals: CE

**160642 Converter**

 Voltage/in: 12  
 Voltage/out: 24  
 Amp/5 min: 4  
 Amp/cont.: 3  
 Amp/ offload: <50  
 Watt/out: 72

Dim.: 89x87x50 mm

 Type: Switch mode/isolated  
 Over current: Yes  
 Approvals: CE

**160644 Converter**

 Voltage/in: 12  
 Voltage/out: 24  
 Amp/5 min: 9  
 Amp/cont.: 7  
 Amp/ offload: <50  
 Watt/out: 168

Dim.: 167x87x50 mm

 Type: Switch mode/isolated  
 Over current: Yes  
 Approvals: CE

**160646 Converter**

 Voltage/in: 12  
 Voltage/out: 24  
 Amp/5 min: 13  
 Amp/cont.: 10  
 Amp/ offload: <50  
 Watt/out: 240

Dim.: 217x87x50 mm

 Type: Switch mode/isolated  
 Over current: Yes  
 Approvals: CEV

**160390 Voltage Converter**
*The converter is supplied w/ a unique clip mounting bracket. The converter is intended for use w/ the same equipment as HC-CARGO 160387, but for systems where full isolation is required e.g. marine electrical systems and vehicles for petroche. Instruction included.*

 Voltage/in: 24  
 Voltage/out: 13.8  
 Amp/5 min: 6  
 Amp/cont.: 3  
 Amp/ offload: 8  
 Watt/out: 40

Dim.: 90x87x50 mm

 Type: Switch mode/isolated  
 Alarm/over heating: Yes  
 Alarm/overvoltage: Yes  
 Alarm/rev. con.: Yes  
 Alarm/transients: Yes  
 Over current: Yes  
 Approvals: CE

**160391 Voltage Converter**
*The converter is supplied w/ a unique clip mounting bracket. The converter is intended for use w/ the same equipment as HC-CARGO 160388, but for systems where full isolation is required e.g. marine electrical systems and vehicles for petroche. Instruction included.*

 Voltage/in: 24  
 Voltage/out: 13.8  
 Amp/5 min: 10  
 Amp/cont.: 6  
 Amp/ offload: 8  
 Watt/out: 75

Dim.: 128x87x50 mm

 Type: Switch mode/isolated  
 Alarm/over heating: Yes  
 Alarm/overvoltage: Yes  
 Alarm/rev. con.: Yes  
 Alarm/transients: Yes  
 Over current: Yes  
 Approvals: CE

**160392 Voltage Converter**

The converter is supplied w/ a unique clip mounting bracket. The converter is intended for use w/ the same equipment as HC-CARGO 160306, but for systems where full isolation is required e.g. marine electrical systems and vehicles for petroche. Instruction included.



Voltage/in: 24	Dim.: 168x87x50 mm
Voltage/out: 13.8	
Amp/5 min: 18	
Amp/cont.: 12	
Amp/ offload: 8	
Watt/out: 144	

Type: Switch mode/isolated
Alarm/over heating: Yes
Alarm/overvoltage: Yes
Alarm/rev. con.: Yes
Alarm/transients: Yes
Over current: Yes
Approvals: CE

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**160640 Converter**


Voltage/in: 24	Dim.: 300x100x80 mm
Voltage/out: 12	
Amp/5 min: 60	
Amp/cont.: 50	
Amp/ offload: <50	
Watt/out: 600	

Type: Switch mode/isolated
Over current: Yes
Approvals: CE

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**MULTI POWER**
**160579 Voltage Converter**


Voltage/in: 36-90	Dim.: 134x94x18 mm
Voltage/out: 12	
Amp/cont.: 6	
Watt/out: 75	

Protection degree: IP 68
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**160580 Voltage Converter**


Voltage/in: 36-90	Dim.: 134x94x48 mm
Voltage/out: 12	
Amp/cont.: 15	

Protection degree: IP 68
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**RELAY BOXES**
**160167 Relay Box**

Servicing: For 12 V trailer pulled by a 24 V vehicle

Switches the voltage from 24 V to 12 V by 5 relays. Run at 24 V and leading 12 V from one of the batteries or converter to the lamps of the trailer. For continuous use it has to be connected via a converter. For internal mounting.



Voltage: 12/24	Dim.: 100x100x58 mm
Amp: 10	
Watt: 250	

No./poles: 7
Relay switch: Yes

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**160797 Relay Box**

To reduce voltage drop, if you use vehicles w/ trailer. Fitted w/ 5x12 V relays the 12 V function will not be affected.



Voltage: 12-12	Dim.: 100x100x58 mm
Amp: 5x8	
Watt: 5x250	

No./poles: 7
Relay switch: Yes

--

**VOLTAGE INVERTERS**
**160543 Voltage Inverter**


Voltage/in: 10-15  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/max/cont.: <35  
 Amp/standby: <0.3  
 Watt/cont.: 300  
 Watt/max.: 1000

Dim.: 190x91x58 mm  
 Weight: 1.1 kg  
 Regulation: ±10  
**Efficiency:** Over 90 %

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**160545 Voltage Inverter**


Voltage/in: 10-15  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/standby: <0.3  
 Watt/cont.: 600  
 Watt/max.: 1500

Dim.: 242x91x58 mm  
 Weight: 1.7 kg  
 Regulation: ±10

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**160660 Voltage Inverter**


Voltage/in: 10-15  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/standby: <0.8  
 Watt/cont.: 1000  
 Watt/max.: 2500

Dim.: 310x205x75 mm  
 Weight: 5 kg  
 Regulation: ±10

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**161705 Voltage Inverter**


Voltage/in: 10-15  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/standby: 1  
 Watt/cont.: 1500  
 Watt/max.: 3500

Dim.: 395x240x90 mm  
 Weight: 5.5 kg

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**160541 Voltage Inverter**


Voltage/in: 12  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/max/cont.: <20  
 Amp/standby: <0.3  
 Watt/cont.: 150  
 Watt/max.: 450

Dim.: 165x91x58 mm  
 Weight: 0.850 kg  
 Regulation: ±10  
**Efficiency:** Over 90 %

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**161704 Voltage Inverter**


Voltage/in: 12  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/standby: <1.35  
 Watt/cont.: 600  
 Watt/max.: 1500

Dim.: 242x91x58 mm  
 Weight: 1.7 kg  
 Regulation: ±10

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**161707 Voltage Inverter**


Voltage/in: 12  
 Voltage/out: 230  
 Alarm/Voltage: 10.5±0.5  
 Shut down/Voltage: 10±0.5  
 Amp/standby: <0.3  
 Watt/cont.: 1000  
 Watt/max.: 2500

Dim.: 310x205x75 mm  
 Weight: 5 kg  
 Regulation: ±10

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE



	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160569</b> Voltage Inverter 	Voltage/in: 12 Voltage/out: 230 Alarm/Voltage: 10.5±0.5 Shut down/Voltage: 10±0.5 Amp/standby: <2 Watt/cont.: 1500 Watt/max.: 3500	Dim.: 395x240x90 mm Weight: 5.5 kg	Type: Modified sine Cooling fan: Yes Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE
<b>161706</b> Voltage Inverter 	Voltage/in: 20-30 Voltage/out: 230 Alarm/Voltage: 21±1 Shut down/Voltage: 20±1 Amp/standby: <1 Watt/cont.: 1500 Watt/max.: 3500	Dim.: 395x240x90 mm Weight: 5.5 kg	Type: Modified sine Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE
<b>160542</b> Voltage Inverter 	Voltage/in: 24 Voltage/out: 230 Alarm/Voltage: 21±1 Shut down/Voltage: 20±1 Amp/max/cont.: <10 Amp/standby: <0.3 Watt/cont.: 150 Watt/max.: 450	Dim.: 165x91x58 mm Weight: 0.850 kg Regulation: ±10 Efficiency: Over 90 %	Type: Modified sine Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE
<b>160544</b> Voltage Inverter 	Voltage/in: 24 Voltage/out: 230 Alarm/Voltage: 21±1 Shut down/Voltage: 20±1 Amp/max/cont.: <20 Amp/standby: <0.3 Watt/cont.: 300 Watt/max.: 1000	Dim.: 190x91x58 mm Weight: 1.1 kg Regulation: ±10	Type: Modified sine Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE
<b>160546</b> Voltage Inverter 	Voltage/in: 24 Voltage/out: 230 Alarm/Voltage: 21±1 Shut down/Voltage: 20±1 Amp/standby: <0.3 Watt/cont.: 600 Watt/max.: 1500	Dim.: 242x91x58 mm Weight: 1.7 kg Regulation: ±10	Type: Modified sine Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE
<b>160676</b> Voltage Inverter 	Voltage/in: 24 Voltage/out: 230 Alarm/Voltage: 21±1 Shut down/Voltage: 20±1 Amp/standby: <0.8 Watt/cont.: 1000 Watt/max.: 2500	Dim.: 310x205x75 mm Weight: 5 kg Regulation: ±10	Type: Modified sine Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE
<b>161710</b> Voltage Inverter 	Voltage/in: 24 Voltage/out: 230 Alarm/Voltage: 21±1 Shut down/Voltage: 20±1 Amp/standby: <0.8 Watt/cont.: 1000 Watt/max.: 2500	Dim.: 310x205x75 mm Weight: 5 kg Regulation: ±10	Type: Modified sine Over heating: Yes Overloading: Yes Short circuit: Yes Approvals: CE

**160581 Voltage Inverter**


Voltage/in: 24  
 Voltage/out: 230  
 Alarm/Voltage: 21±1  
 Shut down/Voltage: 20±1  
 Amp/standby: <1  
 Watt/cont.: 1500  
 Watt/max.: 3500

Dim.: 395x240x90 mm  
 Weight: 5.5 kg

Type: Modified sine  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

**160991 Voltage Inverter AC-DC**


Servicing: HC-CARGO 804114

Voltage/in: 230  
 Voltage/out: 12V DC  
 Amp/max/cont.: 25

Dim.: 226.5x115x49.7 mm

Type: AC-DC  
 Over heating: Yes  
 Overloading: Yes  
 Short circuit: Yes  
 Approvals: CE

## VOLTAGE REDUCER

**160627 Voltage Reducer**

Set w/ 2 resistors. Reduces the voltage w/ 0.75 V. Secures the lifetime of the headlight bulbs in cars w/ high voltage. 12/24 V.



## LOAD RESISTORS

**160970 Load Resistor 12 V**

Contains: 2 pcs.



Voltage: 12  
 Amp: 2  
 Watt: 50  
 Ohm: 6

Length: 50 mm  
 Width: 15 mm

**160971 Load Resistor 24 V**

Contains: 2 pcs.



Voltage: 24  
 Amp: 1  
 Watt: 50  
 Ohm: 24

Length: 50 mm  
 Width: 15 mm




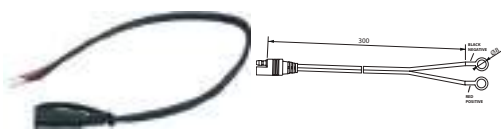

## CHARGERS

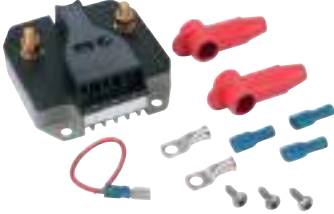

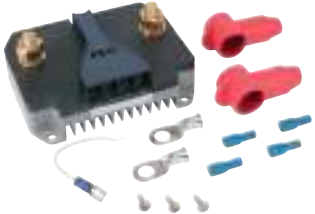
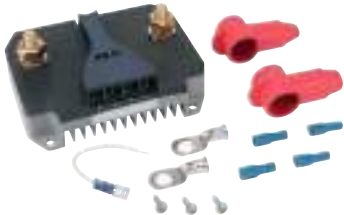
**160874 Charger**


Voltage: 23/24  
 Amp: 12

Weight: 1.660 kg  
 Working temp.:  
 -30°C-+55°C °C

Warning lamp: w/  
 Auto stop: Yes  
 Protection degree: IP 67  
 Approvals: CE

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160875</b> Charger 	Voltage: 230/12 Amp: 17	Weight: 1.660 kg Working temp.: -30°C+55°C °C	Warning lamp: w/ Auto stop: Yes Protection degree: IP 67 Approvals: CE
<b>160968</b> Charger Charger cable: HC-CARGO 160990. 	Voltage: 230/12 Amp: 3 Hertz: 50	Weight: 0.85 kg Working temp.: -20°C+50°C °C	Warning lamp: w/ Protection degree: IP 65 Approvals: CE
<b>161026</b> Charger Charger cable: HC-CARGO 160990. 	Voltage: 230/12 Amp: 5 Hertz: 50	Dim.: 170x73x48 mm Working temp.: -20°C+50°C °C	Warning lamp: w/ Protection degree: IP 65 Approvals: CE
<b>161701*</b> UK Charger Charger cable: HC-CARGO 160990. <div style="border: 1px solid black; border-radius: 50%; padding: 20px; text-align: center; width: fit-content; margin: 0 auto;"> <p>NEW PRODUCT  <a href="http://www.hc-cargo.com">www.hc-cargo.com</a></p> </div>	Voltage: 230/12 Amp: 5 Hertz: 50	Working temp.: -20°C±50°C °C	Warning lamp: w/ Protection degree: IP 65 Approvals: CE
<b>ACCESSORIES</b>			
<b>160990</b> Charger cable 	Servicing: HC-CARGO 161026		
	Voltage: 300	Rolls size: 0.3 m Temp. area: 60 °C	Lead type: Dual Cap colour: Black Cap material: PVC
<b>POWER GUARD</b>			
<b>161014</b> Power Guard 	Voltage/in: 9-32 Alarm/Voltage: Yes Shut down/Voltage: Yes Shut down/12 V: 11.5 V Shut down/24 V: 23 V Amp/max/cont.: 10	Dim.: 155x30x15 mm Weight: 0.045 kg Regulation: Yes	Connection: Connection Over heating: Yes Overloading: Yes Short circuit: Yes

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>161015 Power Guard</b> 	Voltage/in: 9-32 Alarm/Voltage: Yes Shut down/Voltage: Yes Shut down/12 V: 11.5 V Shut down/24 V: 23 V Amp/max/cont.: 20	Dim.: 155x30x15 mm Weight: 0.045 kg Regulation: Yes	Connection: Connection Over heating: Yes Overloading: Yes Short circuit: Yes
<b>161016 Power Guard</b> 	Voltage/in: 9-32 Alarm/Voltage: Yes Shut down/Voltage: Yes Shut down/12 V: 11.5 V Shut down/24 V: 23 V Amp/max/cont.: 40	Dim.: 76x78x33 mm Weight: 0.155 kg Regulation: Yes	Connection: M6 Over heating: Yes Overloading: Yes Short circuit: Yes
<b>161017 Power Guard</b> 	Voltage/in: 9-32 Alarm/Voltage: Yes Shut down/Voltage: Yes Shut down/12 V: 11.5 V Shut down/24 V: 23 V Amp/max/cont.: 60	Dim.: 76x78x33 mm Weight: 0.155 kg Regulation: Yes	Connection: M6 Over heating: Yes Overloading: Yes Short circuit: Yes
<b>161018 Power Guard</b> 	Voltage/in: 9-32 Alarm/Voltage: Yes Shut down/Voltage: Yes Shut down/12 V: 11.5 V Shut down/24 V: 23 V Amp/max/cont.: 100	Dim.: 124x97x51 mm Weight: 0.530 kg Regulation: Yes	Connection: M10 Over heating: Yes Overloading: Yes Short circuit: Yes
<b>161019 Power Guard</b> 	Voltage/in: 9-32 Alarm/Voltage: Yes Shut down/Voltage: Yes Shut down/12 V: 11.5 V Shut down/24 V: 23 V Amp/max/cont.: 200	Dim.: 124x97x51 mm Weight: 0.530 kg Regulation: Yes	Connection: M10 Over heating: Yes Overloading: Yes Short circuit: Yes

## BATTERY ISOLATORS

### 160342 Battery Isolator

Servicing: Boats, autocampers, industrial vehicles

*Eliminates the multi battery drain when 2 or more batteries are in a charging system.*



Voltage: 6-36  
Current/max Amp: 70

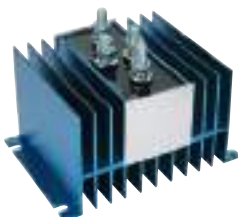
Dim.: 85x115x95 mm

No./batteries: 2  
Comp. diode: No

### 160343 Battery Isolator

Servicing: Boats, autocampers, industrial vehicles

*Eliminates the multi battery drain when 2 or more batteries are in a charging system. w/ compensations diode which allows a higher charging current.*



Voltage: 6-36  
Current/max Amp: 70

Dim.: 85x115x95 mm

No./batteries: 2  
Comp. diode: Yes

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160398</b> Battery Isolator <i>Eliminates the multi battery drain when 2 or more batteries are in a charging system.</i>	Servicing: Boats, autocampers, industrial vehicles Voltage: 6-36 Current/max Amp: 120	Dim.: 170x115x95 mm	No./batteries: 2 Comp. diode: No
			
<b>160399</b> Battery Isolator <i>Eliminates the multi battery drain when 2 or more batteries are in a charging system. w/ compensationsdiode which allows a higher charging current.</i>	Servicing: Boats, autocampers, industrial vehicles Voltage: 6-36 Current/max Amp: 120	Dim.: 170x115x95 mm	No./batteries: 2 Comp. diode: Yes
			
<b>160740</b> Battery Isolator 12V <i>Microprocessor controlled relay. Allows charging on the auxiliary battery at 13.4 V charging voltage.</i>	Servicing: Boats, autocampers, industrial vehicles Voltage: 12 Current/max Amp: 180	Dim.: 120x80x55 mm	No./batteries: 2 Comp. diode: No
			
<b>160742</b> Split Charge Relay <i>Microprocessor controlled relay. Allows charging on the auxiliary battery at 27 V charging voltage.</i>	Servicing: Boats, autocampers, industrial vehicles Voltage: 24 Current/max Amp: 100	Dim.: 120x80x70 mm	No./batteries: 2 Comp. diode: No
			
<b>160876</b> Split Charge Relay 13.4 V-12.6 V.	Voltage: 12 Current/max Amp: 70	Dim.: 60x34x70 mm	No./batteries: 2 Comp. diode: No
			
<b>160877</b> Split Charge Relay	Voltage: 24 Current/max Amp: 50	Dim.: 60x34x70 mm	No./batteries: 2 Comp. diode: No
			

## SWITCHES

### BATTERY SWITCHES

#### 180028 Battery Main Switch

Spare key: HC-CARGO 180143, 180619, 181270. Pole: dia. 10 mm.



Voltage: 24  
Amp/5 sec.: 500  
Amp/cont.: 100

Dist. mount. holes:  
38 mm

Type: Battery  
Material: Plastic  
No./mounting holes: 2  
Key: w/  
Protection degree: IP 65

#### 180087 Battery Main Switch

Spare key: HC-CARGO 180202.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
100 mm

Type: Battery  
Material: Metal  
No./mounting holes: 2  
Key: w/  
Protection degree: IP 66

#### 180203 Battery Main Switch

Spare key: HC-CARGO 180029, 180619.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
100 mm

Type: Battery  
Material: Plastic  
No./mounting holes: 2  
No./poles: 2  
Key: w/  
Protection degree: IP 66

#### 180211 Battery Main Switch

Spare key: HC-CARGO 180288 or 180333. Rubber boot: HC-CARGO 180375.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
100 mm

Type: Battery  
Material: Metal  
No./mounting holes: 2  
Key: w/  
Protection degree: IP 65

#### 180216 Battery Main Switch

Spare key: HC-CARGO 180143, 180619, 181270. Rubber protection cap: HC-CARGO 180374.



Voltage: 24  
Amp/5 sec.: 500  
Amp/cont.: 100

Dist. mount. holes:  
39.5 mm

Type: Battery  
Material: Plastic  
No./mounting holes: 2  
No./poles: M8  
Key: w/  
Protection degree: IP 40

#### 180229 Battery Main Switch

Spare key: HC-CARGO 180029, 180619, 181270. On/Off under load.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
100 mm

Type: Battery  
Material: Plastic  
No./mounting holes: 2  
Key: w/  
Protection degree: IP 66

**180289 Battery Main Switch**
*Rubber boot: HC-CARGO 180375.*

 Voltage: 24  
 Amp/5 sec.: 2500  
 Amp/cont.: 250

 Dist. mount. holes:  
 M30 mm

 Type: Battery  
 Material: Metal  
 No./mounting holes: 2  
 Key: w/  
 Protection degree: IP 65

**180313 Battery Main Switch**
*Spare key: HC-CARGO 180143, 181270. Rubber protection cap: HC-CARGO 180374.*

 Voltage: 24  
 Amp/5 sec.: 500  
 Amp/cont.: 100

 Dist. mount. holes:  
 45 mm

 Type: Battery  
 No./mounting holes: 2  
 Key: w/o  
 Protection degree: IP 40

**180326 Battery Main Switch**
*Rubber boot: HC-CARGO 180375. w/ rotation/press handle.*

 Voltage: 24  
 Amp/5 sec.: 2500  
 Amp/cont.: 250

 Dist. mount. holes:  
 100 mm

 Type: Battery  
 No./mounting holes: 2  
 Protection degree: IP 65

**180596 Battery Main Switch**
*Spare key: HC-CARGO 180029, 180619.*

 Voltage: 24  
 Amp/5 sec.: 500  
 Amp/cont.: 100

 Dist. mount. holes:  
 38 mm

 Type: Battery  
 Material: Plastic  
 No./mounting holes: 2  
 Key: w/  
 Resistor: 3 Ohm, 11 W  
 Sec. circuit: w/  
 Protection degree: IP 43

**180614 Battery Main Switch**
*Spare key: HC-CARGO 181578.*

 Voltage: 24  
 Amp/5 sec.: 1000  
 Amp/cont.: 75

 Dist. mount. holes:  
 38 mm

 Type: Battery  
 Material: Metal  
 No./mounting holes: 2  
 Key: w/  
 Protection degree: IP 41

**181475 Battery Main Switch**
*Spare key: HC-CARGO 180288, w/o chain and rubber cap. Rubber boot: HC-CARGO 180375.*

 Voltage: 24  
 Amp/5 sec.: 2500  
 Amp/cont.: 250

 Dist. mount. holes:  
 100 mm

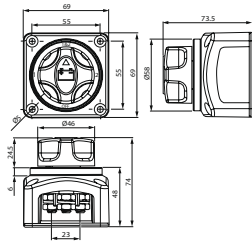
 Material: Metal  
 No./mounting holes: 2  
 Key: w/  
 Protection degree: IP 65

**181613 Battery Main Switch**

 Voltage: 12-50  
 Amp/5 sec.: 1000  
 Amp/cont.: 200

 Dist. mount. holes:  
 104 mm

 Type: Battery  
 Material: PBT  
 No./mounting holes: 3  
 No./poles: 3  
 Key: w/o  
 Protection degree: IP 54  
 Approval: CE

**181614 Battery Main Switch**


Voltage: 12-50  
Amp/5 sec.: 1000  
Amp/cont.: 200

Dist. mount. holes:  
55 mm

Type: Battery  
Material: PBT  
No./mounting holes: 4  
No./poles: 2  
Key: w/  
Protection degree: IP 54  
Approval: CE

**WATERPROOF**
**180271 Battery Main Switch**

Rubber boot: HC-CARGO 180375. Working temp. -30°C/+65°C.



Voltage: 12/24  
Amp/5 sec.: 1000  
Amp/cont.: 300

Dist. mount. holes:  
45 mm

Type: Battery  
Material: Plastic  
Explosion proof 1: Yes  
No./mounting holes: 2  
No./poles: M10  
Key: w/  
Waterproof: Yes  
Protection degree: IP 65  
Approval: SAE J1171

**180272 Battery Main Switch**

Servicing: Marine

Spare key: HC-CARGO 180333. Rubber boot: HC-CARGO 180375.



Voltage: 24  
Amp/5 sec.: 1000  
Amp/cont.: 150

Dist. mount. holes:  
45 mm

Type: Battery  
Material: Metal  
Explosion proof 1: Yes  
No./mounting holes: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 68

**180274 Battery Main Switch**

Rubber boot: HC-CARGO 180375. For alternator w/ separate regulator.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
65 mm

Type: Battery  
Material: Metal  
Explosion proof 1: Yes  
No./mounting holes: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 67

**180275 Battery Main Switch**

Rubber boot: HC-CARGO 180375. For alternator w/ intergral regulator. w/ D+ contact.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
65 mm

Type: Battery  
Material: Metal  
Explosion proof 1: Yes  
No./mounting holes: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 67

**180276 Battery Main Switch**

Rubber boot: HC-CARGO 180375. For alternator w/ intergral regulator. w/ D+ contact.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
110 mm

Type: Battery  
Material: Metal  
Explosion proof 1: Yes  
Explosion proof 2: Yes  
No./mounting holes: 2  
No./poles: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 67  
Approval: ADR



**180277 Battery Main Switch**

Rubber boot: HC-CARGO 180375 . For alternator w/ separate regulator.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
110 mm

Type: Battery  
Material: Metal  
Explosion proof 1: Yes  
Explosion proof 2: Yes  
No./mounting holes: 2  
No./poles: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 67

**180278 Battery Main Switch**

Spare key: HC-CARGO 181477. Rubber boot: HC-CARGO 180375.



Voltage: 24  
Amp/5 sec.: 3000  
Amp/cont.: 300

Dist. mount. holes:  
100 mm

Type: Battery  
Material: Metal  
Explosion proof 1: Yes  
No./mounting holes: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 68

**180338 Battery Main Switch**

For alternator w/ separate regulator. w/ secondary circuit 24 V. Rubber boot: HC-CARGO 180375.



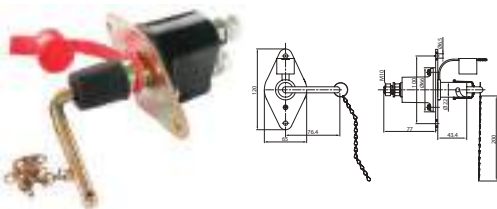
Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 20

Dist. mount. holes:  
65 mm

Type: Battery  
Material: Plastic  
Explosion proof 1: Yes  
No./mounting holes: 2  
Key: w/  
Sec. circuit: w/  
Waterproof: Yes  
Protection degree: IP 67

**181238 Battery Main Switch**

Spare key: HC-CARGO 180333. Rubber boot: HC-CARGO 180375.



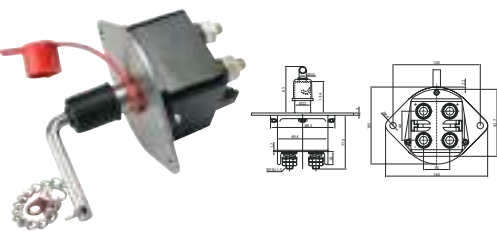
Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
100 mm

Type: Battery  
Material: Metal  
No./mounting holes: 2  
Key: w/  
Waterproof: Yes  
Protection degree: IP 66

**181599 Battery Main Switch**

Rubber boot: HC-CARGO 180375.



Voltage: 12-24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Dist. mount. holes:  
120 mm

Type: Battery  
Material: Metal  
No./mounting holes: 2  
No./poles: 4  
Key: w/  
Waterproof: Yes  
Protection degree: IP 66

**REMOTE CONTROL**

**180280 Pneumatic Remote Control**

Servicing: HC-CARGO 180279, 180291



**RUBBER BOOTS**
**180374** Terminal Boot

Servicing: HC-CARGO 180216, 180313



Material: Rubber

**180375** Terminal Boot set

Servicing: HC-CARGO 180211, 180271, 180272, 180274, 180275, 180276, 180277, 180278, 180289, 180326, 180338, 180238

*Supplied in kit of 2 pcs.*


Material: Rubber

**SPARE KEYS**
**180029** Key

Servicing: HC-CARGO 180028, 180203, 180216, 180229, 180313, 180596



Shaft length: 11 mm

No./pins: 2

**180143** Key

Servicing: HC-CARGO 180028, 180216, 180313



Shaft length: 9 mm

**180202** Key

Servicing: HC-CARGO 180087


**180273** Key

Servicing: HC-CARGO 180272

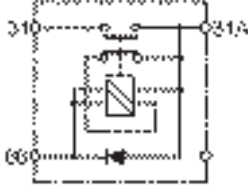

**180288** Key

Servicing: HC-CARGO 180211, 180288



No./pins: 2

EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>180333 Key</b> Servicing: HC-CARGO 180211, 181238		
		No./pins: 1
<b>180619 Key</b> Servicing: HC-CARGO 180028, 180203, 180216, 180229, 180596		
	Shaft length: 11 mm	No./pins: 1
<b>181270 Key</b> Servicing: HC-CARGO 180028, 180216, 180229, 180313		
	Shaft length: 11 mm	No./pins: 1
<b>181477 Key</b> Servicing: HC-CARGO 180278		
		
<b>181578 Key</b> Servicing: HC-CARGO 180614		
<i>For battery main switch.</i>		
		
<b>181603 Key</b> Servicing: HC-CARGO 181599		
<i>For battery main switch.</i>		
		
<b>ELECTROMAGNETIC</b>		
<b>180232 Battery Switch</b> Servicing: Industrial vehicles, buses, tractors, lift trucks and boats		
	Voltage: 12 Amp/5 sec.: 2500 Amp/cont.: 250	Type: Electromagnetic Switch: Negative

**180233 Battery Switch**


Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

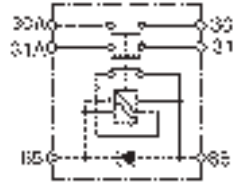
Type: Electromagnetic  
Switch: Negative

**180290 Battery Switch Relay**

*For serial and parallel connction of two 12 V batteries in 12 V systems w/ 24 V starter.*

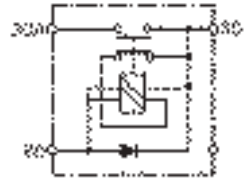


Voltage: 12/24  
Amp/5 sec.: 1500  
(1 sec)  
Amp/cont.: 75

**180556 Battery Switch**


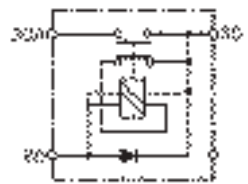
Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Type: Electromagnetic  
Switch: Positive/Negative

**180602 Battery Switch**


Voltage: 12  
Amp/5 sec.: 2500  
Amp/cont.: 250

Type: Electromagnetic  
Switch: Positive

**180603 Battery Switch**


Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 200

Type: Electromagnetic  
Switch: Positive

**180604 Battery Switch**

*w/ seperate power supply.*



Voltage: 12  
Amp/5 sec.: 2500  
Amp/cont.: 250

Type: Electromagnetic  
Switch: Positive/Negative

**180605 Battery Switch**

*w/ seperate power supply.*

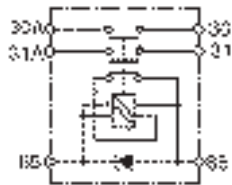


Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 200

Type: Electromagnetic  
Switch: Positive/Negative

**181476 Battery Switch**

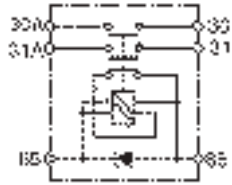
Plug: HC-CARGO 181545.



Voltage: 24  
Amp/5 sec.: 2500  
Amp/cont.: 250

Type: Electromagnetic  
Explosion proof 1: Yes  
Explosion proof 2: Yes  
Switch: Positive/Negative  
No./mounting holes: 4  
No./poles: 4  
Approval: Ex

**181562 Battery Switch**



Voltage: 12  
Amp/5 sec.: 2500  
Amp/cont.: 250

Switch: Positive/Negative  
Comp. diode: Yes

**IGNITION/LIGHT**

**180045 Ignition/Light Switch**

Spare key: HC-CARGO 180341.



Mount. hole size:  
26.5 mm

Switch combination: Parkinglight-off-  
ignition-sidelight-DRL  
No./keys: 2  
Terminals: 6

**180324 Ignition/Light Switch**

Spare key: HC-CARGO 180341.



Mount. hole size:  
26.5 mm

Switch combination: Parkinglight-off-  
ignition-sidelight-DRL  
No./keys: 2  
Terminals: 7

**IGNITION STARTER**

**180027 Ignition Starter Switch**

Spare key: HC-CARGO 180339. Multiplug: HC-CARGO 181597.



Mount. hole size:  
18.5 mm

Switch combination: Off-ignition-start  
No./keys: 2  
Terminals: 5

**180041 Ignition Starter Switch**

Spare key: HC-CARGO 180340.



Mount. hole size:  
26.5 mm

Switch combination: Parking light-off-  
start  
No./keys: 2  
Terminals: 7  
Protection degree: IP 63  
DIN norm: 40050

**180043 Ignition Starter Switch**

Spare key: HC-CARGO 180339.


 Mount. hole size:  
18.5 mm

 Switch combination: Off-aux-ignition-start  
No./keys: 2  
Terminals: 4

**181518 Ignition Starter Switch**

Spare key: HC-CARGO 180339.


 Mount. hole size:  
22.5 mm

 Switch combination: Off-ignition-start  
No./keys: 2  
Terminals: 5  
Positions: 1 (start)

**DIESEL STARTER**
**180044 Ignition Switch**

Servicing: Deutz, IH

Supplied w/ 2 keys. Spare key: HC-CARGO 180340. Multiplug: HC-CARGO 181595, 181596.


 Mount. hole size:  
26.5 mm

 Switch combination: Parking light-off-ignition-glow-start  
Terminals: 10  
Positions: 5  
Protection degree: IP 63  
DIN norm: 40050

**181235 Ignition Switch**

Servicing: Massey Ferguson

Spare key: HC-CARGO 181465.


 Mount. hole size:  
16 mm

 Switch combination: Off-ignition-glow-start  
No./keys: 2  
Terminals: 6  
Positions: 4

**181236 Ignition Switch**

Servicing: Massey Ferguson

Spare key: HC-CARGO 181465.


 Mount. hole size:  
16 mm

 Switch combination: Start-Off-Glow-Start  
No./keys: 2  
Terminals: 4  
Positions: 4

**181237 Ignition Switch**

Servicing: Massey Ferguson

Spare key: HC-CARGO 181465.


 Mount. hole size:  
16 mm

 Switch combination: Off-aux-ignition-glow-start  
No./keys: 2  
Terminals: 7  
Positions: 5

**RUBBER BOOTS**

**181598** Rubber Boot

Servicing: HC-CARGO 180044



**SPARE PARTS**

**180339** Spare Key

Servicing: HC-CARGO 180025, 180027, 180043, 181518



**180340** Spare Key

Servicing: HC-CARGO 180041, 180044



**180341** Spare Key

Servicing: HC-CARGO 180045, 180324



**181465** Spare Key

Servicing: HC-CARGO 181235, 181236, 181237

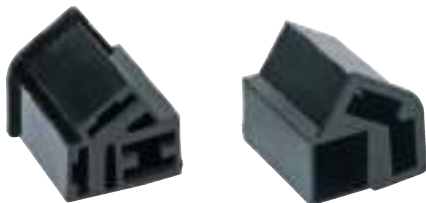


Material: Metal

**181595** Central Plug Connector

Servicing: HC-CARGO 180044

*DIN 46340. Used w/ HC-CARGO 181596.*



Type: Socket  
 Type/terminal: 9.5x1.2  
 Colour: Black  
 No./poles: 4  
 Plug: Female

**181596** Central Plug Connector

Servicing: HC-CARGO 180044

*DIN 46340. Used w/ HC-CARGO 181595.*



Type: Socket  
 Type/terminal: 6.3x0.8  
 Colour: Black  
 No./poles: 6  
 Plug: Female

**181597** Central Plug Connector

Servicing: HC-CARGO 180027


 Type: Socket  
 Colour: Black  
 No./poles: 6  
 Plug: Female

**SOLENOID SHUTDOWN  
 EXTERNALLY SWITCHED**
**090109** Shutdown Solenoid

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 12  
 Amp/hold: 0.7  
 Amp/pull: 30

 Thread size: 6  
 Thread type: mm  
 Pull rating: 40N at  
 25.40 mm  
 Return spring: 9N  
 Hold rating: 89N

 Plunger: External  
 Elect. connection: Plug  
 Function: Pull  
 Mount. type: Flange/bracket  
 Switch: External

**090110** Shutdown Solenoid

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 24  
 Amp/hold: 0.25  
 Amp/pull: 17

 Thread size: 6  
 Thread type: mm  
 Pull rating: 40N at  
 25.40 mm  
 Return spring: 9N  
 Hold rating: 89N

 Plunger: External  
 Elect. connection: Plug  
 Function: Pull  
 Mount. type: Flange/bracket  
 Switch: External

**090111** Shutdown Solenoid

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 12  
 Amp/hold: 0.6  
 Amp/pull: 44

 Thread size: 1/4"  
 Thread type: Inches  
 Pull rating: 75N at  
 25.40 mm  
 Return spring: 35N  
 Hold rating: 178N

 Plunger: External  
 Elect. connection: Plug  
 Function: Pull  
 Mount. type: Flange/bracket  
 Switch: External

**090113** Shutdown Solenoid

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 24  
 Amp/hold: 0.3  
 Amp/pull: 23

 Thread size: 6  
 Thread type: mm  
 Pull rating: 75N at  
 25.40 mm  
 Return spring: 35N  
 Hold rating: 178N

 Plunger: External  
 Elect. connection: Plug  
 Function: Pull  
 Mount. type: Flange/bracket  
 Switch: External

**090199** Shutdown Solenoid

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 12  
 Amp/hold: 1.1  
 Amp/pull: 46

 Thread size: 6  
 Thread type: mm  
 Pull rating: 89N at  
 25.40 mm  
 Return spring: 17N  
 Hold rating: 178N

 Plunger: External  
 Elect. connection: Cable  
 Function: Pull/Push  
 Mount. type: Flat w/ 2 fixing holes  
 Switch: External



**090200 Shutdown Solenoid**

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 24  
Amp/hold: 4  
Amp/pull: 18

Thread size: 6  
Thread type: mm  
Pull rating: 67N at  
25.40 mm  
Return spring: 17N  
Hold rating: 178N

Plunger: External  
Elect. connection: Cable  
Function: Pull/Push  
Switch: External

**090206 Shutdown Solenoid**

Servicing: Yanmar Diesel

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 0.49  
Amp/pull: 36.5

Thread size: 0.158  
Thread type: Inches

Plunger: Internal  
Switch: External

**090216 Shutdown Solenoid**

Servicing: Kubota

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 0.7  
Amp/pull: 30

Pull rating: 44N at  
25.40 mm  
Return spring: 17N  
Hold rating: 85N

Plunger: External  
Elect. connection: Multiplug  
Mount. type: Flange  
Switch: External

**090225 Shutdown Solenoid**

Servicing: Perkins

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 0.49  
Amp/pull: 36.5

Thread size: 0.25  
Thread type: Inches

Plunger: Internal  
Switch: External

**090226 Shutdown Solenoid**

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 24  
Voltage 2: 24  
Amp/hold: 0.5  
Amp/pull: 25

Thread size: 6  
Thread type: mm  
Pull rating: 111N at  
25.40 mm  
Return spring: 7N  
Hold rating: 182N

Plunger: External  
Elect. connection: Multiplug  
Function: Pull  
Switch: External

**090228 Shutdown Solenoid**

Servicing: Yanmar Motors

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 0.49  
Amp/pull: 36.5

Thread size: 0.158  
Thread type: Inches

Plunger: Internal  
Switch: External

**090267 Shutdown Solenoid**

Servicing: Volvo wheel loader

*Syncro start/Woodward.*



Voltage: 24  
Amp/hold: 0.86  
Amp/pull: 39

Pull rating: 129N at  
25.4 mm  
Hold rating: 182N

Plunger: Cable  
Elect. connection: Multiplug  
Function: Pull  
Switch: External

**090348 Shutdown Solenoid**

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 1.1  
Amp/pull: 46

Thread size: 6  
Thread type: mm  
Pull rating: 111N at  
25.40 mm  
Return spring: 4-8N  
Hold rating: 182N

Plunger: External  
Elect. connection: Cable  
Function: Pull  
Mount. type: Flat w/ 2 fixing holes  
Switch: External

**090370 Shutdown Solenoid**

Servicing: Kubota D722, Z482

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 1.1  
Amp/pull: 46

Thread size: 1/4 - 28  
UNF-2A  
Pull rating: 111N  
Hold rating: 182N

Plunger: External  
Elect. connection: Cable  
Mount. type: Flat w/ 2 fixing holes  
Switch: External

**090371 Shutdown Solenoid**

Servicing: Kubota D722, Z482

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 24  
Amp/hold: 0.5  
Amp/pull: 25

Thread size: 1/4 - 28  
UNF-2A  
Pull rating: 111N  
Hold rating: 182N

Plunger: External  
Elect. connection: Cable  
Switch: External

**090373 Shutdown Solenoid**

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 12  
Amp/hold: 0.972  
Amp/pull: 365

Thread size: 0.154  
Thread type: Inches

Plunger: External  
Switch: External

**090431 Shutdown Solenoid**

*This solenoid can't switch off by itself, it will have to be controlled externally.*



Voltage: 24  
Voltage 2: 24  
Amp/hold: 0.57  
Amp/pull: 30

Thread size: 5/16"  
Thread type: Inches  
Pull rating: 165N  
Return spring: 80-115N  
Hold rating: 391N

Plunger: External  
Function: Pull  
Mount. type: Flange/bracket  
Switch: External  
Insulated return: Yes

**090439 Shutdown Solenoid**

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 0.76  
Amp/pull: 41.4







Thread size: 6  
Thread type: mm  
Pull rating: 49N ved  
25.40 mm  
Hold rating: 89N

Plunger: Internal  
Switch: Internal

**SPARE PARTS**
**090218 Plunger**


Thread size: M6  
Thread type: Ordinary

Plunger: External

KITS			
<b>090095 Solenoid Shutdown Kit</b>			
<i>This solenoid can't switch off by itself, it will have to be controlled externally.</i>			
	Voltage: 12 Amp/hold: 1.1 Amp/pull: 46	Pull rating: 89N at 25.40 mm Mount. side: Left Hold rating: 178N	Elect. connection: Cable Function: Pull Mount. type: Flange/bracket Switch: External
<b>090096 Solenoid Shutdown Kit</b>			
<i>This solenoid can't switch off by itself, it will have to be controlled externally.</i>			
	Voltage: 12 Amp/hold: 1.1 Amp/pull: 46	Pull rating: 89N at 25.40 mm Mount. side: Right Hold rating: 178N	Elect. connection: Cable Function: Pull Mount. type: Flange/bracket Switch: External
<b>090099 Solenoid Shutdown Kit</b>			
<i>This solenoid can't switch off by itself, it will have to be controlled externally.</i>			
	Voltage: 24 Amp/hold: 0.5 Amp/pull: 25	Pull rating: 89N at 25.40 mm Mount. side: Left Hold rating: 178N	Elect. connection: Cable Function: Pull Mount. type: Flange/bracket Switch: External
<b>090100 Solenoid Shutdown Kit</b>			
<i>This solenoid can't switch off by itself, it will have to be controlled externally.</i>			
	Voltage: 24 Amp/hold: 0.5 Amp/pull: 25	Pull rating: 89N at 25.40 mm Mount. side: Right Hold rating: 178N	Elect. connection: Cable Function: Pull Mount. type: Flange/bracket Switch: External
<b>090103 Solenoid Shutdown Kit</b>		Servicing: Nippodenso, Zexel	
<i>This solenoid can't switch off by itself, it will have to be controlled externally.</i>			
	Voltage: 12 Amp/hold: 1.1 Amp/pull: 55	Pull rating: 89N at 25.40 mm Mount. side: Left Hold rating: 178N	Elect. connection: Cable Function: Pull Mount. type: Flange/bracket Switch: External
<b>090104 Solenoid Shutdown Kit</b>		Servicing: Nippodenso, Zexel	
<i>This solenoid can't switch off by itself, it will have to be controlled externally.</i>			
	Voltage: 12 Amp/hold: 1.1 Amp/pull: 55	Pull rating: 89N at 25.40 mm Mount. side: Right Hold rating: 178N	Elect. connection: Cable Function: Pull Switch: External

**090105 Solenoid Shutdown Kit**

Servicing: Nippodenso, Zexel

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 24  
 Amp/hold: 0.63  
 Amp/pull: 29

 Pull rating: 89N at  
 25.40 mm  
 Mount. side: Left  
 Hold rating: 178N

 Elect. connection: Cable  
 Function: Pull  
 Switch: External

**090106 Solenoid Shutdown Kit**

Servicing: Nippodenso, Zexel

*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 24  
 Amp/hold: 0.63  
 Amp/pull: 29

 Pull rating: 89N at  
 25.40 mm  
 Mount. side: Right  
 Hold rating: 178N

 Elect. connection: Cable  
 Function: Pull  
 Switch: External

**090107 Solenoid Shutdown Kit**
*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 12  
 Amp/hold: 1.1  
 Amp/pull: 55

 Pull rating: 89N at  
 25.40 mm  
 Mount. side: Left  
 Hold rating: 178N

 Elect. connection: Multiplug  
 Switch: External

**090108 Solenoid Shutdown Kit**
*This solenoid can't switch off by itself, it will have to be controlled externally.*

 Voltage: 24  
 Amp/hold: 0.63  
 Amp/pull: 29

 Pull rating: 89N at  
 25.40 mm  
 Mount. side: Left  
 Hold rating: 178N

 Elect. connection: Multiplug  
 Function: Pull  
 Switch: External

## INTERNALLY SWITCHED

**090160 Shutdown Solenoid**
*This solenoid can switch off the pull coil, and no external 'control' is necessary.*

 Voltage: 12  
 Amp/hold: 0.7  
 Amp/pull: 30

 Thread size: 6  
 Thread type: mm  
 Pull rating: 40N at  
 25.40 mm  
 Return spring: 17N  
 Hold rating: 89N

 Plunger: External  
 Elect. connection: Plug  
 Mount. type: Flange/bracket  
 Switch: Internal

**090161 Shutdown Solenoid**
*This solenoid can switch off the pull coil, and no external 'control' is necessary.*

 Voltage: 24  
 Amp/hold: 0.25  
 Amp/pull: 17

 Thread size: 6  
 Thread type: mm  
 Pull rating: 40N at  
 25.40 mm  
 Return spring: 17N  
 Hold rating: 89N

 Plunger: Internal  
 Elect. connection: Plug  
 Function: Pull  
 Mount. type: Flange/bracket  
 Switch: Internal

**090168** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 0.6  
Amp/pull: 44

Thread size: 6  
Thread type: mm  
Pull rating: 75N at 25.40 mm  
Return spring: 35N  
Hold rating: 178N

Plunger: External  
Elect. connection: Plug  
Mount. type: Flange/bracket  
Switch: Internal

**090169** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 24  
Amp/hold: 0.3  
Amp/pull: 23

Thread size: 6  
Thread type: mm  
Pull rating: 75N at 25.40 mm  
Return spring: 35N  
Hold rating: 178N

Plunger: External  
Elect. connection: Plug  
Function: Pull  
Mount. type: Flange/bracket  
Switch: Internal  
Aux terminal: Yes

**090210** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 1.1  
Amp/pull: 46

Thread size: 1/4"-28 stud.  
Thread type: Inches  
Pull rating: 89N at 25.40 mm  
Return spring: 9N  
Hold rating: 178N

Plunger: Internal  
Elect. connection: Plug  
Function: Pull  
Mount. type: Flange/bracket  
Switch: Internal  
Aux terminal: Yes

**090224** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 0.25  
Amp/pull: 17

Thread size: 6  
Thread type: mm  
Pull rating: 40N at 25.40 mm  
Return spring: 17N  
Hold rating: 89N

Plunger: Internal  
Switch: Internal

**090268** Shutdown Solenoid

Servicing: Kubota 5 series

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 0.49  
Amp/pull: 36.5

Thread size: 0.155  
Thread type: Inches

Plunger: Internal  
Switch: Internal

**090297** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 24  
Amp/hold: 1.1  
Amp/pull: 46

Thread size: 6  
Thread type: mm  
Pull rating: 107N at 25.40 mm  
Return spring: 7-11N  
Hold rating: 169N

Plunger: External  
Switch: Internal  
Aux terminal: No

**090317** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 24  
Amp/hold: 0.3  
Amp/pull: 20

Pull rating: 98N at 32.00 mm  
Return spring: 45N  
Hold rating: 245N

Plunger: Internal  
Switch: Internal  
Coil commander: w/

**090318** Shutdown Solenoid

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 0.65  
Amp/pull: 37

Pull rating: 98N at  
32.00 mm  
Return spring: 45N  
Hold rating: 245N

Plunger: Internal  
Switch: Internal

**090334** Shutdown Solenoid

Servicing: Sisu Diesel 8366 40253

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 1.1  
Amp/pull: 46.5

Pull rating: 89N  
Hold rating: 178N

Plunger: Internal  
Switch: Internal

**090402** Shutdown Solenoid

Servicing: Kubota super 5 series

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 24  
Amp/hold: 0.59  
Amp/pull: 19.6

Thread size: 0.154  
Thread type: Inches

Plunger: Internal  
Switch: Internal

**090430** Shutdown Solenoid

Servicing: Kubota

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 0.49  
Amp/pull: 36.5

Thread size: 0.158  
Thread type: Inches

Plunger: Internal  
Switch: Internal

**KITS**
**090097** Solenoid Shutdown Kit

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 1.1  
Amp/pull: 46

Pull rating: 89N at  
25.40 mm  
Mount. side: Left  
Hold rating: 178N

Elect. connection: Plug  
Function: Pull  
Mount. type: Flange/bracket  
Switch: Internal

**090098** Solenoid Shutdown Kit

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 12  
Amp/hold: 1.1  
Amp/pull: 46

Pull rating: 89N at  
25.40 mm  
Mount. side: Right  
Hold rating: 178N

Elect. connection: Plug  
Function: Pull  
Switch: Internal

**090101** Solenoid Shutdown Kit

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 24  
Amp/hold: 0.5  
Amp/pull: 25

Pull rating: 89N at  
25.40 mm  
Mount. side: Left  
Hold rating: 178N

Elect. connection: Plug  
Function: Pull  
Switch: Internal

**090102 Solenoid Shutdown Kit**

*This solenoid can switch off the pull coil, and no external 'control' is necessary.*



Voltage: 24  
Amp/hold: 0.5  
Amp/pull: 25

Pull rating: 89N at  
25.40 mm  
Mount. side: Right  
Hold rating: 178N

Elect. connection: Plug  
Function: Pull  
Switch: Internal

**PULL COIL TIMER MODULES**
**090115 Pull Coil Timer**


Voltage: 12

No./wires: 3

**090116 Pull Coil Timer**


Voltage: 24

No./wires: 3

**ADVANCE SOLENOIDS**
**080940 Actuator**

Servicing: Fiat, Renault



Voltage: 12

**080941 Actuator**

Servicing: Ford



Voltage: 12

**080942 Actuator**

Servicing: Renault



Voltage: 12

**081117 Actuator**

Voltage: 12

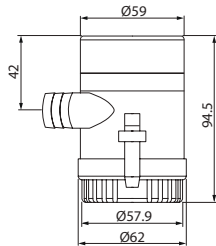


## PUMPS & PUMP PARTS

### ELECTRICAL BILGE PUMPS

#### 070154 Bilge Pump

Model UP500. Completely submersible bilge pump. Compact design w/ ABS material housing, corrosion resistant. Shaft seal made of ceramic and graphite which ensures lubrication and leak resistance. Water inlet strainer slots will screen particles present in the bilge allowing easy running. Pump body can be dismantled by a simple snap-off movement for easy inspection and cleaning.



Voltage: 12  
Amp: 5

Dim.: 94.5x59 mm  
Hose connection:  
19 mm  
Lift height: 4 m  
Weight: 0.4 kg  
Capacity: 32 l/min  
Pressure: 0.45 bar  
Pressure: 6.5 psi

Gasket: Ceramic  
Type: Bilge  
Pump housing: ABS plastic  
Pump shaft: Stainless steel  
ISO norm: 8849/8846

#### 070155 Bilge Pump

Model UP1000. Completely submersible bilge pump. compact design w/ ABS material housing, corrosion resistant. Shaft seal made of ceramic and graphite which ensures lubrication and leak resistance. Water inlet strainer slots will screen particles present in the bilge allowing easy running. Pump body can be dismantled by a simple snap-off movement for easy inspection and cleaning.



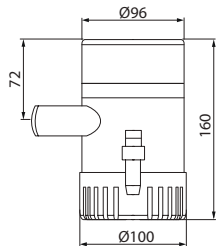
Voltage: 12  
Amp: 10

Dim.: 124.7x78 mm  
Hose connection:  
28.6 mm  
Lift height: 4 m  
Weight: 0.8 kg  
Capacity: 63 l/min  
Pressure: 0.45 bar  
Pressure: 6.5 psi

Gasket: Ceramic  
Type: Bilge  
Pump housing: ABS plastic  
Pump shaft: Stainless steel  
ISO norm: 8849/8846

#### 070156 Bilge Pump

Model UP1500. Completely submersible bilge pump. Compact design w/ ABS material housing, corrosion resistant. Shaft seal made of ceramic and graphite which ensures lubrication and leak resistance. Water inlet strainer slots will screen particles present in the bilge allowing easy running. Pump body can be dismantled by a simple snap-off movement for easy inspection and cleaning.



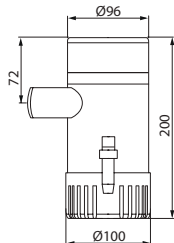
Voltage: 12  
Amp: 20

Dim.: 160x96 mm  
Hose connection:  
26.5 mm  
Lift height: 4 m  
Weight: 1.3 kg  
Capacity: 95 l/min  
Pressure: 0.45 bar  
Pressure: 6.5 psi

Gasket: Ceramic  
Type: Bilge  
Pump housing: ABS plastic  
Pump shaft: Stainless steel  
ISO norm: 8849/8846

#### 070157 Bilge Pump

Model UP2000. Completely submersible bilge pump. compact design w/ ABS material housing, corrosion resistant. Shaft seal made of ceramic and graphite which ensures lubrication and leak resistance. Water inlet strainer slots will screen particles present in the bilge allowing easy running. Pump body can be dismantled by a simple snap-off movement for easy inspection and cleaning.



Voltage: 12  
Amp: 25

Dim.: 200x96 mm  
Hose connection:  
31.8 mm  
Lift height: 4 m  
Weight: 1.8 kg  
Capacity: 126 l/min  
Pressure: 0.45 bar  
Pressure: 6.5 psi

Gasket: Ceramic  
Type: Bilge  
Pump housing: ABS plastic  
Pump shaft: Stainless steel  
ISO norm: 8849/8846

## ACCESSORIES

#### 070160 Automatic Float Switch

Made of corrosion resistant materials.



Voltage: 12/24  
Amp: 10

Dim.: 113x83x62 mm  
Height/closed: 22  
Height/open: 57

Floating switch: w/

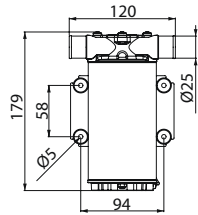


## ELECTRICAL WATER PUMPS

### 070144 Water Pump

Servicing: Renault

Model UP1-N. Self priming (1.5 m) electric water pump w/ self-lubricating flexible impeller for prolonged service life and better performance. Pump body made of brass w/ stainless steel shaft and a rubber lip seal. 1/2" BSP inner thread and ID 25 mm bore hose connections. Main application: as a bilge pump.

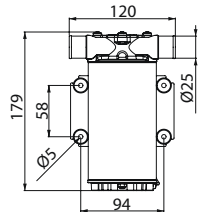

 Voltage: 12  
Amp: 20

 Dim.: 176x120x94 mm  
Hose connection:  
25 mm  
Capacity: 35 l/min  
Pressure: 0.8 bar  
Pressure: 11.6 psi

 Type: Impeller  
Pump housing: Brass  
Pump shaft: Stainless steel  
Impeller: Rubber  
Non return valve: Yes  
ISO norm: 8849/8846

### 070145 Water Pump

Model UP1-N. Self priming (1.5 m) electric water pump w/ self-lubricating flexible impeller for prolonged service life and better performance. Pump body made of brass w/ stainless steel shaft and a rubber lip seal. 1/2" BSP inner thread and ID 25 mm bore hose connections. Main application: as a bilge pump.

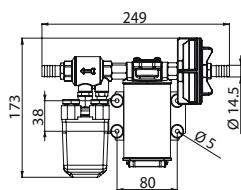

 Voltage: 24  
Amp: 15

 Dim.: 176x120x94 mm  
Hose connection:  
25 mm  
Capacity: 35 l/min  
Pressure: 0.8 bar  
Pressure: 11.6 psi

 Type: Water, Impeller  
Pump housing: Brass  
Pump shaft: Stainless steel  
Impeller: Rubber  
Non return valve: Yes  
ISO norm: 8849/8846

### 070153 Water Pump

Model UP3/A. Self priming electric gear pump equipped w/ pressure switch, non-return valve to be used as automatic pump for water pressure system on boats, mobile homes etc. Bronze gears and rubber lip seal.

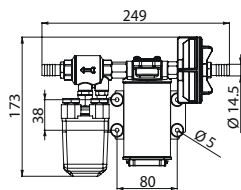

 Voltage: 12  
Amp: 10

 Dim.: 163x249x118 mm  
Hose connection:  
13 mm  
Weight: 2.2 kg  
Capacity: 14 l/min  
Pressure: 2 bar  
Pressure: 29 psi

 Type: Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: PTFE  
Filter: w/  
Non return valve: Yes

### 070172 Water Pump

Model UP4/A. Self priming electric gear pump equipped w/ pressure switch, non-return valve to be used as automatic pump for water pressure system on boats, mobile homes etc. Bronze gears and rubber lip seal.


 Voltage: 24  
Amp: 5

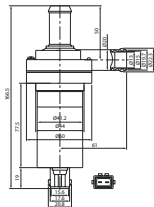
 Dim.: 163x249x118 mm  
Hose connection:  
14 mm  
Weight: 2.2 kg  
Capacity: 14 l/min  
Pressure: 2 bar  
Pressure: 29 psi

 Type: Water, Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: PTFE  
Filter: w/  
Non return valve: Yes

## CIRCULATION TYPE

### 070192 Circulation Pump

Servicing: Ford, Seat, VW



Voltage: 12

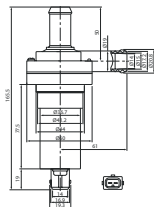
 Hose connection:  
20 mm  
Capacity: 14 l/min

Type: Water, Impeller

### 070203 Circulation Pump

Servicing: Saab, Scania, Ferrari, Maserati, Opel, Vauxhall





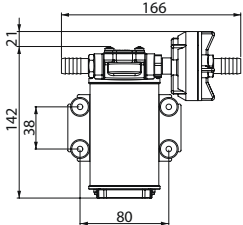

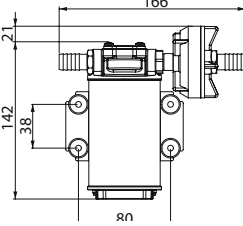

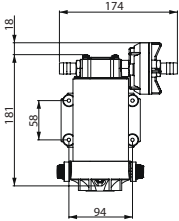
Junior Timer Connector: HC-CARGO 192146. (see Workshop Cons. & Tools)



Voltage: 12

 Hose connection:  
19 mm  
Capacity: 18 l/min

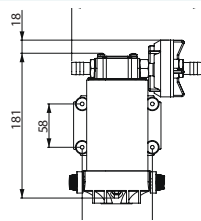
 Type: Water, Impeller  
Filter: w/

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>070206</b> Circulation Pump		Servicing: Mercedes-Benz		
	Voltage: 12	Hose connection: 19 mm Capacity: 18 l/min	Type: Water, Impeller Filter: w/o	
<b>SPARE PARTS</b>				
<b>070146</b> Impeller		Servicing: HC-CARGO 070144, 070145		
			Impeller: Rubber	
<b>ACCESSORIES</b>				
<b>070207</b> In line Filter		Servicing: HC-CARGO 070153		
Diameter: 14 mm.				
				
<b>ELECTRICAL FLUID PUMPS</b>				
<b>070147</b> Fluid Pump		Servicing: Main application: transfer of diesel fuel, water antifreeze etc.		
<i>Model UP/3. self-priming 1.5 m. Electric pump w/ bronze gears for transfer of various liquids, complete w/ inline filter. Pump body made of brass w/ stainless steel shaft and a rubber lip seal. 3/8" BSP w/ brass connection for I.D. 14 mm inner tubing.</i>				
		Voltage: 12 Amp: 10	Dim.: 163x166x95 mm Hose connection: 14 mm Weight: 1.4 kg Capacity: 14 l/min Pressure: 2 bar Pressure: 29 psi	Type: Gear Pump housing: Brass Pump shaft: Stainless steel Pinion: Brass Filter: w/
<b>070148</b> Fluid Pump		Servicing: Main application: transfer of diesel fuel, water antifreeze etc.		
<i>Model UP/3. self-priming 1.5 m. Electric pump w/ bronze gears for transfer of various liquids, complete w/ inline filter. Pump body made of brass w/ stainless steel shaft and a rubber lip seal. 3/8" BSP w/ brass connection for I.D. 14 mm inner tubing.</i>				
		Voltage: 24 Amp: 5	Dim.: 163x166x95 mm Hose connection: 14 mm Weight: 1.4 kg Capacity: 14 l/min Pressure: 2 bar Pressure: 29 psi	Type: Gear Pump housing: Brass Pump shaft: Stainless steel Pinion: Brass Filter: w/
<b>070149</b> Fluid Pump		Servicing: Main application: transfer of diesel fuel, water antifreeze etc.		
<i>Self-priming electric pump w/ helical bronze gears, complete with in-line filter. Nickel plated brass body w/ stainless steel shaft. Ports: 1/2" BSP w/ brass connection for Ø 16 mm inner tubing.</i>				
		Voltage: 12 Amp: 15	Dim.: 199x174x108 mm Hose connection: 16 mm Weight: 3.1 kg Capacity: 26 l/min Pressure: 2 bar Pressure: 29 psi	Type: Fluid, Gear Pump housing: Brass Pump shaft: Stainless steel Pinion: Brass Filter: w/

**070150 Fluid Pump**

Servicing: Main application: transfer of diesel fuel, water antifreeze etc.

Self-priming electric pump w/ helical bronze gears, complete with in-line filter. Nickel plated brass body w/ stainless steel shaft. Ports: 1/2" BSP w/ brass connection for Ø 16 mm inner tubing.

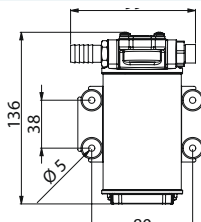

 Voltage: 24  
Amp: 7.5

 Dim.: 199x174x108 mm  
Hose connection: 16 mm  
Weight: 3.1 kg  
Capacity: 26 l/min  
Pressure: 2 bar  
Pressure: 29 psi

 Type: Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: Brass  
Filter: w/

**070151 Fluid Pump**

Model UP3/ oil. Self-priming 1 m. Electrical gear pump particularly suitable for the transfer of lubricating oils or viscous liquids. Complete w/ two brass connections for 14 mm inner tube and one additional quick-fit for 8 mm external tubing. The pump can be used for extracting lubricating oil out of oil sumps of engines. Pump body made of brass w/ bronze gears, stainless steel shaft and a rubber lip seal.

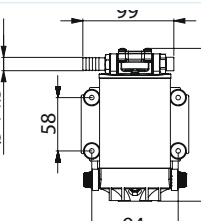

 Voltage: 12  
Amp: 7.5

 Dim.: 139x108x86 mm  
Hose connection: 14 mm  
Weight: 1.4 kg  
Capacity: 5.5 l/min  
Pressure: 29 psi

 Gasket: Rubber  
Type: Fluid, Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: Bronze  
Non return valve: Yes

**070152 Fluid Pump**

Model UP6/ oil. Self-priming 1.5 m. Electrical gear pump particularly suitable for the transfer of lubricating oils or viscous liquids. Professional model complete w/ two brass connections for 14 mm inner tube and one additional quick-fit for 8 mm external tubing. The pump can be used for extracting lubricating oil out of oil sumps of engines. Pump body made of brass w/ bronze gears, stainless steel shaft and a rubber lip seal.

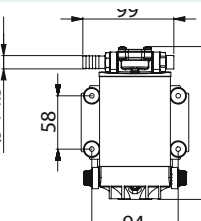

 Voltage: 12  
Amp: 10

 Dim.: 166x117x94 mm  
Hose connection: 14 mm  
Weight: 2.5 kg  
Capacity: 8 l/min  
Pressure: 2 bar  
Pressure: 29 psi

 Type: Fluid, Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: Bronze

**070173 Fluid Pump**

Model UP3/A. Self priming electric gear pump equipped w/ pressure switch, non-return valve to be used as automatic pump for water pressure system on boats, mobile homes etc. Bronze gears and rubber lip seal.

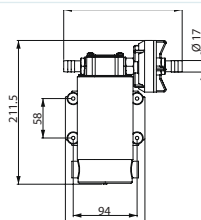

 Voltage: 24  
Amp: 7.5

 Dim.: 166x117x94 mm  
Hose connection: 14 mm  
Weight: 2.5 kg  
Capacity: 8 l/min  
Pressure: 2 bar  
Pressure: 29 psi

 Type: Fluid, Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Impeller: Rubber  
Pinion: Bronze

**070208 Electrical Fluid Pump HD**

Model UP12. Self-priming 4 m.

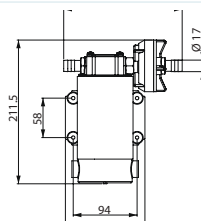

 Voltage: 12  
Amp: 30

 Dim.: 212x174x109 mm  
Hose connection: 16 mm  
Weight: 4.3 kg  
Capacity: 40 l/min  
Pressure: 2.5 bar  
Pressure: 36 psi

 Type: Fluid, Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: Bronze  
Filter: w/  
Non return valve: Yes

**070209 Electrical Fluid Pump HD**

Model UP12. Self-priming 4 m.


 Voltage: 24  
Amp: 15

 Dim.: 212x174x109 mm  
Hose connection: 16 mm  
Weight: 4.3 kg  
Capacity: 40 l/min  
Pressure: 2.5 bar  
Pressure: 36 psi

 Type: Fluid, Gear  
Pump housing: Brass  
Pump shaft: Stainless steel  
Pinion: Bronze  
Filter: w/  
Non return valve: Yes

**SPARE PARTS**
**070182** Brush Set

Servicing: HC-CARGO 070144, -145, -149, -150, -152


 Length: 18.1 mm  
 Height: 8.6 mm  
 Thickness: 5.6 mm

**ELECTRICAL FUEL PUMPS**
**INTERRUPTER PUMPS**
**070003** Fuel Pump

Incl. 2 pcs. 6 mm hose nipples. 8 mm: HC-CARGO 080955. 8 mm angle: HC-CARGO 070181. 10 mm: HC-CARGO 081154.



Voltage: 12

 Capacity: 113.5 l/h  
 Pressure: 4-5 psi

Type: Universal

**070004** Fuel Pump

Incl. 2 pcs. 6 mm hose nipples. 8 mm: HC-CARGO 080955. 8 mm angle: HC-CARGO 070181.



Voltage: 24

 Capacity: 113.5 l/h  
 Pressure: 4-5 psi

Type: Universal

**070058** Fuel Pump

Servicing: Thermo King, Carrier

Incl. 2 pcs. 6 mm hose nipples. 8 mm: HC-CARGO 080955. 8 mm angle: HC-CARGO 070181. 10 mm: HC-CARGO 081154.



Voltage: 12

 Capacity: 87 l/h  
 Pressure: 7-9.5 psi

Type: Universal

**070076** Fuel Pump

w/ integral filter.



Voltage: 12

 Capacity: 113 l/h  
 Pressure: 9-11.5 psi

 Fuel: Gasoline, diesel, ethanol,  
 methanol  
 Type: Universal

**070134** Fuel Pump

Servicing: New-Holland, Same



Voltage: 12

 Thread: In 1/4-18"  
 Capacity: 136 l/h  
 Pressure: 4-5 psi

Type: Universal

**ACCESSORIES**
**070177** Filter

Servicing: HC-CARGO 070003, 070004, 070058, 070134


**PRESSURE PUMPS**
**070032** Fuel Pump

*Hose nipple 8 mm. Suction 1 mtr. Connectors can be rotated. Fitting instruction included.*


Voltage: 12

 Capacity: 120 l/h  
 Pressure: 0.2 bar

 Fuel: Gasoline, diesel, ethanol,  
 methanol  
 Type: Universal

**070078** Fuel Pump

*Hose nipple 8 mm. Suction 1.5 mtr. Connectors can be rotated. Fitting instruction included.*


Voltage: 12

 Capacity: 125 l/h  
 Pressure: 0.35 bar

Type: Universal

**070107** Fuel Pump

*Hose nipple 8 mm. Suction 1.5 mtr. Connectors can be rotated. Fitting instruction included.*


Voltage: 24

 Capacity: 130 l/h  
 Pressure: 0.35 bar

 Fuel: Gasoline, diesel, ethanol,  
 methanol  
 Type: Universal

**070143** Fuel Pump

Servicing: Thermo King/carrier, tested according to SAE J1537

*Suction 1.2 mtr. Fitting instruction included.*


Voltage: 12

 Thread: In 1/8" NPSF  
 Capacity: 155 l/h  
 Pressure: 0.1 bar

 Fuel: Gasoline, diesel, ethanol,  
 methanol  
 Type: Universal

**070161** Fuel Pump

*Hose nipple 8 mm.*


Voltage: 12

 Capacity: 80-150 l/h  
 Pressure: 0.1-0.4 kg  
 Pressure: 1.4-5.7 psi

Type: Universal

**ACCESSORIES**
**070183** Filter Kit

Servicing: Thermo King/Carrier pump 6103 W

For HC-CARGO 070143.



Filter type: Insert

**HIGH PERFORMANCE FUEL PUMPS**
**070187** Fuel Pump

Supplied w/ 2 pcs. 6 mm hose connection.



Voltage: 12

 Thread: In 1/8"-27 NPTF  
 Capacity: 95 l/h  
 Pressure: 0.1-0.28 bar  
 Pressure: 0.1-0.3 kg  
 Pressure: 1.5-4 psi

 Fuel: Gasoline, diesel, ethanol, methanol  
 Type: Universal

**070188** Fuel Pump

Replaceable hose nipple. Supplied w/ 2 pcs. 6 mm hose connection.



Voltage: 12

 Thread: In 1/8"-27 NPTF  
 Capacity: 132 l/h  
 Pressure: 0.3-0.5 kg  
 Pressure: 4-7 psi

 Fuel: Gasoline, diesel, ethanol, methanol  
 Type: Universal

**070191** Fuel Pump

Standard 6 mm hose nipples.



Voltage: 12

 Thread: In M8  
 Capacity: 130 l/h  
 Pressure: 0.5-0.7 kg  
 Pressure: 7-10 psi

 Fuel: Gasoline, diesel, ethanol, methanol  
 Type: Universal

**SOLID STATE PUMPS**
**070056** Fuel Pump

Servicing: Caterpillar, IH/Case



Voltage: 24

 Capacity: 121 l/h  
 Pressure: 0.3-0.45 kg  
 Pressure: 4.5-6 psi

Type: Universal

**070057** Fuel Pump

Servicing: Thermo King etc



Voltage: 12

 Capacity: 121 l/h  
 Pressure: 0.7 kg  
 Pressure: 10 psi

 Fuel: Gasoline, diesel, ethanol, methanol  
 Type: Universal

**SUCTION PUMPS**
**070019** Fuel Pump Servicing: Bobcat

*Suction 0.2 bar = 2.7 mtr. Fitting instruction included.*


Voltage: 12

 Thread: Out R-1/4"  
 Capacity: 120 l/h  
 Pressure: 0.2 bar

 Fuel: Gasoline  
 Type: Universal

**070021** Fuel Pump Servicing: VW

*Hose nipple 8 mm. Suction 1 mtr. Connectors can be rotated. Fitting instruction included.*


Voltage: 12

 Capacity: 120 l/h  
 Pressure: 0.15 bar

 Fuel: Gasoline/diesel  
 Type: Universal

**070184** Fuel Pump Servicing: VW marine

*Hose nipple 8 mm. Waterproof. Suction 1 mtr. Connectors can be rotated.*


Voltage: 12

 Capacity: 120 l/h  
 Pressure: 0.15 bar

 Fuel: Gasoline, diesel, ethanol,  
 methanol  
 Type: Universal

**UNIVERSAL**
**HOSE NIPPLES**
**070067** Hose Nipple Servicing: A005T16384, A5T16384

 Hose ID: 10 mm  
 Thread: R1/4

**070070** Hose Nipple

 Hose ID: 10 mm  
 Thread: M16-1.5

**070077** Hose Nipple

 Hose ID: 6 mm  
 Thread: 1/8-27 NPTF

## DIESEL PUMP KITS

### 070162 Diesel Transfer/Filter Kit

Includes: 2.5 m suction hose. 2.5 m pressure hose w/ gun. Wired connection w/ alligator clips. Switch on the pump. Bypass valve on the pump ensures that it is not overloaded by closed gun. Not to gasoline.



Voltage: 12  
Amp: 15

Dim.: 210x161x120 mm  
Hose connection:  
25 mm  
Capacity: 45 l/min  
Pressure: 1.2 bar  
Pressure: 17.4 psi

Type: Fluid  
Gear  
Impeller: Steel  
Filter: w/

### 070175 Diesel Transfer/Filter Kit

2.5 m suction hose w/ filter. 2.5 m pressure hose w/ gun. 2 m cable w/ alligator clips. Switch on the pump. Bypass valve on the pump ensure against overloading. Not for gasoline.



Voltage: 24  
Amp: 7.5

Dim.: 210x161x120 mm  
Hose connection:  
25 mm  
Capacity: 45.1 l/min  
Pressure: 1.2 bar  
Pressure: 17.4 psi

Type: Fluid  
Filter: w/

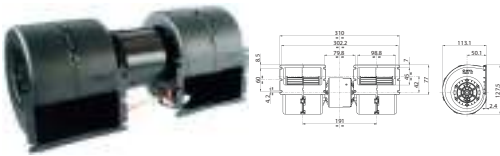
## FANS & BLOWERS

### BLOWERS

#### CENTRIFUGAL TYPE

### 160483 Centrifugal Blower

Servicing: HC-CARGO 060216



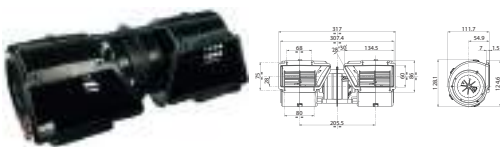
Voltage: 12  
Amp: 15

Dim.: 113.1x127.5 mm  
Shaft dia.: 50.1 mm  
Length: 310 mm  
Capacity: 750 m<sup>3</sup>  
Pressure: 0 psi  
Speed: 3-speed

No./shafts: 2  
Fan mounted: Yes

### 160510 Centrifugal Blower

Servicing: New Holland tractors



Voltage: 12  
Amp: 14

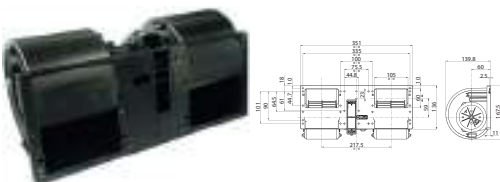
Dim.: 111.7x124.6 mm  
Shaft dia.: 54.9 mm  
Length: 317 mm  
Capacity: 650 m<sup>3</sup>  
Pressure: 0 psi  
Speed: 3-speed

No./shafts: 2  
Fan mounted: Yes

### 160511 Centrifugal Blower

Servicing: Deutz, New Holland

This model have to be used w/ a static pressure that is higher than 0.1 psi. (pressure cabins).



Voltage: 12  
Amp: 34

Dim.: 139.8x167.5 mm  
Shaft dia.: 60 mm  
Length: 351 mm  
Capacity: 840 m<sup>3</sup>  
Pressure: 0 psi  
Speed: 1-speed

No./shafts: 2  
Fan mounted: Yes

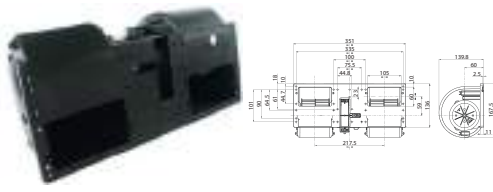
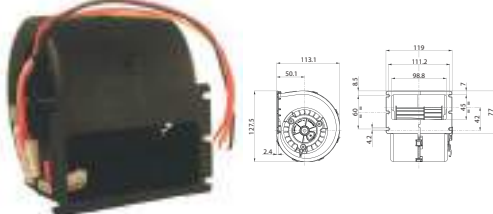

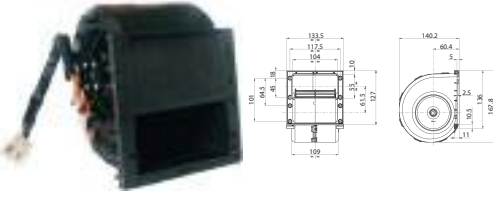
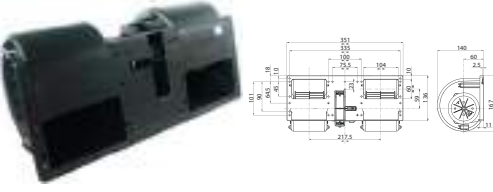
### 160512 Centrifugal Blower

Voltage: 24  
Amp: 15.9

Dim.: 139.8x167.5 mm  
Shaft dia.: 60 mm  
Length: 351 mm  
Capacity: 1160 m<sup>3</sup>  
Pressure: 0 psi  
Speed: 3-speed

No./shafts: 2  
Fan mounted: Yes



	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160557</b> Centrifugal Blower	 <p>Voltage: 24 Amp: 12</p>	<p>Dim.: 139.8x167.5 mm Shaft dia.: 60 mm Length: 351 mm Capacity: 1050 m<sup>3</sup> Pressure: 0 psi Speed: 3-speed</p>	<p>No./shafts: 2 Fan mounted: Yes</p>
<b>160592</b> Centrifugal Blower	 <p>Voltage: 12 Amp: 19.6</p>	<p>Dim.: 146x163.9 mm Shaft dia.: 65 mm Length: 139 mm Capacity: 540 m<sup>3</sup> Pressure: 0 psi Speed: 3-speed</p>	<p>No./shafts: 1 Fan mounted: Yes</p>
<b>160593</b> Centrifugal Blower	 <p>Voltage: 12 Amp: 5</p>	<p>Dim.: 113.5x127.5 mm Shaft dia.: 50.1 mm Length: 119 mm Capacity: 260 m<sup>3</sup> Pressure: 0 psi Speed: 3-speed</p>	<p>No./shafts: 1 Fan mounted: Yes</p>
<b>160594</b> Centrifugal Blower	 <p>Voltage: 24 Amp: 11</p>	<p>Dim.: 146x163.9 mm Shaft dia.: 65 mm Length: 335 mm Capacity: 1050 m<sup>3</sup> Pressure: 0 psi Speed: 3-speed</p>	<p>No./shafts: 2 Fan mounted: Yes</p>
<b>160596</b> Centrifugal Blower	 <p>Voltage: 24 Amp: 11.1</p>	<p>Dim.: 140.2x167.8 mm Shaft dia.: 60.4 mm Length: 133.5 mm Capacity: 530 m<sup>3</sup> Pressure: 0 psi Speed: 3-speed</p>	<p>No./shafts: 2 Fan mounted: Yes</p>
<b>160639</b> Centrifugal Blower	 <p>Voltage: 12 Amp: 19.9</p>	<p>Dim.: 140.2x167.8 mm Shaft dia.: 60.4 mm Length: 133.5 mm Capacity: 510 m<sup>3</sup> Pressure: 0 psi Speed: 3-speed</p>	<p>No./shafts: 1 Fan mounted: Yes</p>
<b>160647</b> Centrifugal Blower	 <p>Voltage: 12 Amp: 17.2</p>	<p>Dim.: 140x167 mm Shaft dia.: 60 mm Length: 351 mm Capacity: 910 m<sup>3</sup> Speed: 3-speed</p>	<p>No./shafts: 2 Fan mounted: Yes</p>

**160649** Centrifugal Blower

Servicing: HC-CARGO 060220



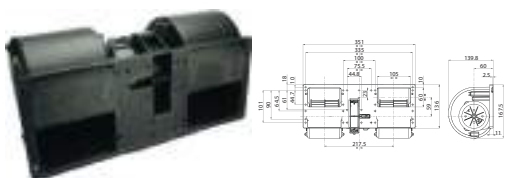
Voltage: 24  
Amp: 8.2

Dim.: 113.1x127.5 mm  
Shaft dia.: 50.1 mm  
Length: 310 mm  
Capacity: 750 m<sup>3</sup>  
Pressure: 0 psi  
Speed: 3-speed

No./shafts: 2  
Fan mounted: Yes

**160878** Centrifugal Blower

Servicing: Volvo



Voltage: 24  
Amp: 12

Dim.: 139.8x167.5 mm  
Shaft dia.: 60 mm  
Length: 351 mm  
Capacity: 1050 m<sup>3</sup>  
Pressure: 0 psi  
Speed: 4-speed

No./shafts: 2  
Fan mounted: Yes

**FAN/HEATER MOTORS**

**UNIVERSAL**

**SINGLE SHAFTS**

**160005** Universal Motor

Universal.



Voltage: 12  
Watt: 40

Dia.: 60 mm  
Shaft dia.: 8x22 mm  
Length: 121 mm  
Revolutions/min.: 2000  
Speed: 1-speed

No./shafts: 1  
Fan mounted: No

**160006** Universal Motor

Universal.



Voltage: 24  
Watt: 40

Dia.: 60 mm  
Shaft dia.: 8x22 mm  
Length: 121 mm  
Revolutions/min.: 2000  
Speed: 1-speed

No./shafts: 1  
Fan mounted: No

**160674** Universal Motor

Universal.



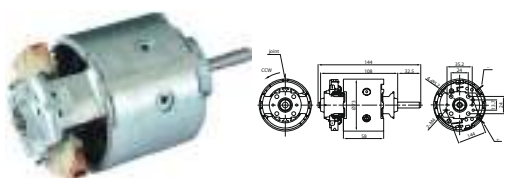
Voltage: 12

Dim.: 58x107 mm  
Dia.: 51 mm  
Shaft dia.: 6 mm  
Length: 107 mm

No./shafts: 1  
Fan mounted: No

**160734** Universal motor

Servicing: Volvo

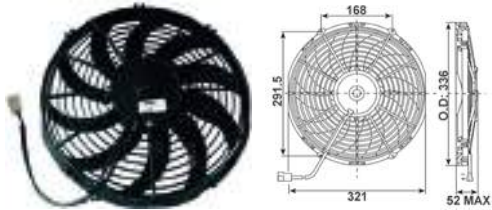


Voltage: 12

Dia.: 73 mm  
Shaft dia.: 8 mm  
Length: 144 mm

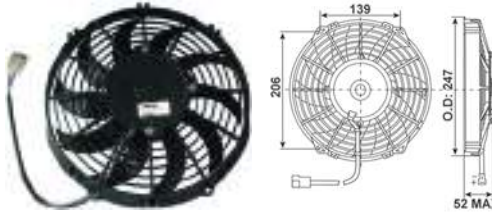
No./shafts: 1  
Fan mounted: No

DOUBLE SHAFTS			
<b>160250 Universal Motor</b>			
<i>Universal.</i>			
	Voltage: 12	Dia.: 90 mm Shaft dia.: 10x110 mm Length: 105 mm Revolutions/min.: 3200 Speed: 3-speed	No./shafts: 2 Fan mounted: No
<b>160251 Universal Motor</b>			
<i>Universal.</i>			
	Voltage: 24	Dia.: 90 mm Shaft dia.: 7.95x79 mm Length: 107 mm Revolutions/min.: 2600 Speed: 3-speed	No./shafts: 2 Fan mounted: No
<b>160252 Universal Motor</b>			
<i>Universal.</i>			
	Voltage: 24	Dia.: 82 mm Shaft dia.: 7.2x58 mm Length: 248 mm Revolutions/min.: 2500 Speed: 1-speed	No./shafts: 2 Fan mounted: No
<b>160253 Universal Motor</b>			
<i>Universal.</i>			
	Voltage: 12	Dia.: 77.5 mm Shaft dia.: 7x68.5 mm Length: 254 mm Revolutions/min.: 3300 Speed: 3-speed	No./shafts: 2 Fan mounted: No
<b>160622 DC Motor</b>			
Servicing: Massey Ferguson 3070			
<i>Universal.</i>			
	Voltage: 12	Dia.: 73 mm Shaft dia.: 8x51 mm Length: 223 mm Revolutions/min.: 3100	Type: Blower No./shafts: 2 Fan mounted: No
<b>160626 DC Motor</b>			
Servicing: Fiat tractors			
<i>Universal.</i>			
	Voltage: 12	Dia.: 59.5 mm Shaft dia.: 8 mm Length: 198 mm Revolutions/min.: 4000	No./shafts: 2 Fan mounted: No

**AXIAL FANS**
**12 V**
**160536 Axial Fan**

 Voltage: 12  
Amp: 6.2

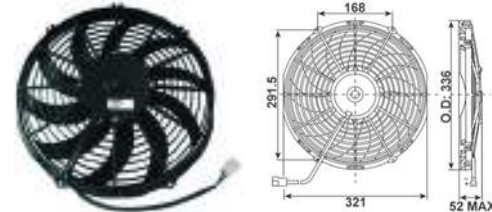
 OD: 336 mm  
Capacity: 1590 m<sup>3</sup>

 Type: Blower  
Tightness norm: IP 68

**160537 Axial Fan**

 Voltage: 12  
Amp: 6.7

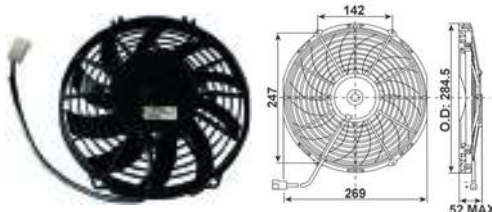
 OD: 247 mm  
Capacity: 1060 m<sup>3</sup>

 Type: Suction  
Tightness norm: IP 68

**160538 Axial Fan**

 Voltage: 12  
Amp: 6.7

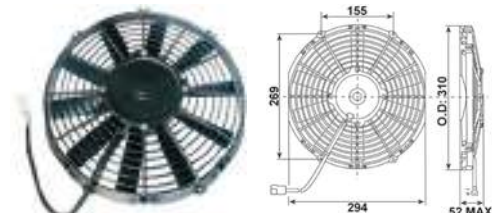
 OD: 336 mm  
Capacity: 1540 m<sup>3</sup>

 Type: Suction  
Tightness norm: IP 68

**160539 Axial Fan**

 Voltage: 12  
Amp: 8.7

 OD: 284.5 mm  
Capacity: 1360 m<sup>3</sup>

 Type: Suction  
Tightness norm: IP 68

**160598 Axial Fan**

 Voltage: 12  
Amp: 7.8

 OD: 310 mm  
Capacity: 1390 m<sup>3</sup>

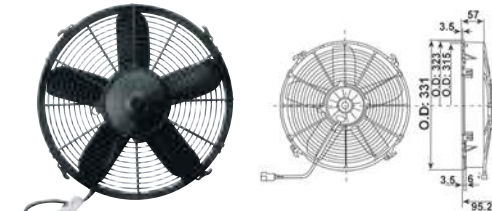
 Type: Suction  
Tightness norm: IP 68

**160601 Axial Fan**

 Voltage: 12  
Amp: 7.7


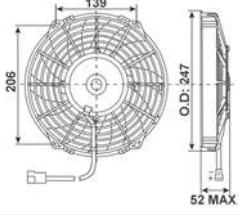

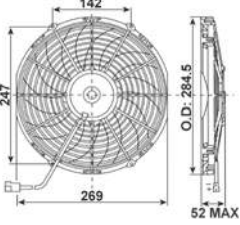

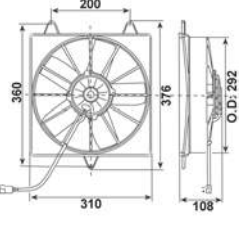

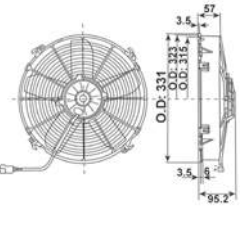

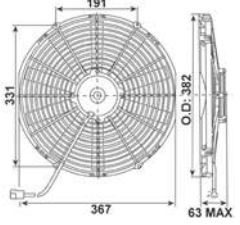

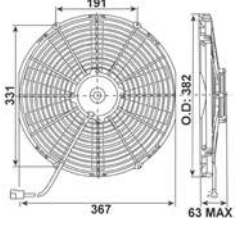

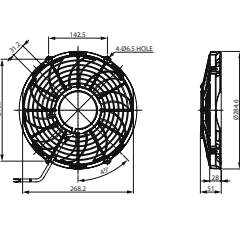
 OD: 310 mm  
Capacity: 1400 m<sup>3</sup>


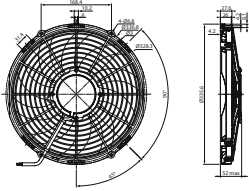

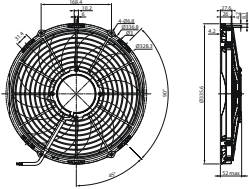

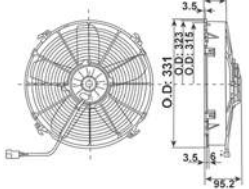

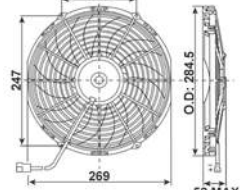

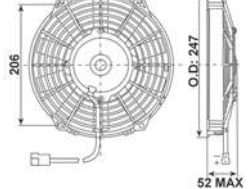

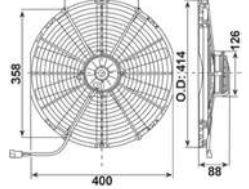

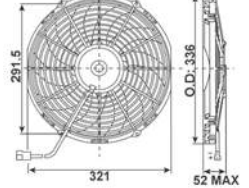
 Type: Blower  
Tightness norm: IP 68

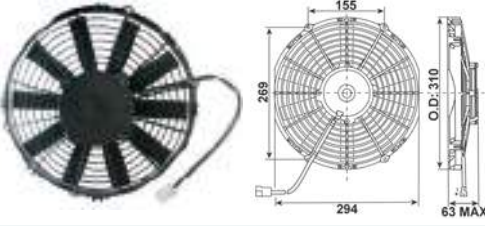

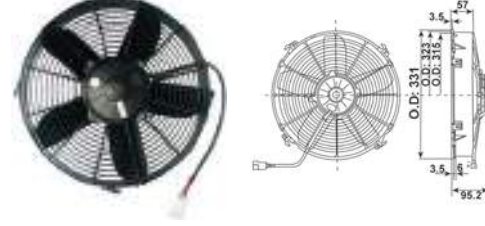
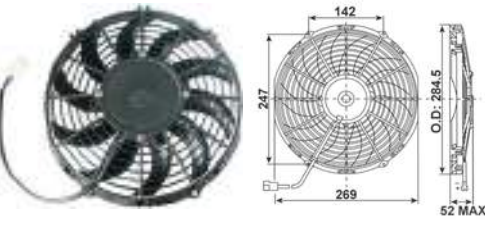
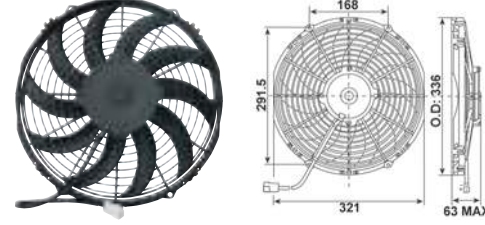
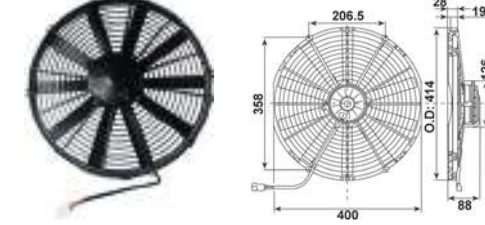
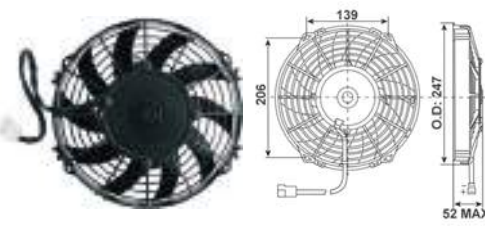
**160739 Axial Fan**

 Voltage: 12  
Amp: 15.6


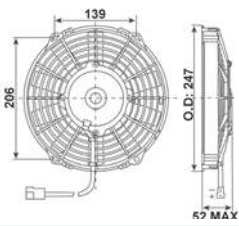

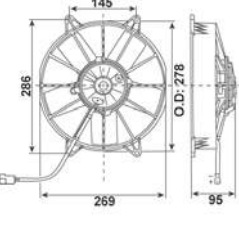

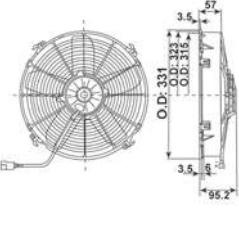

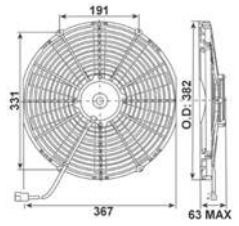

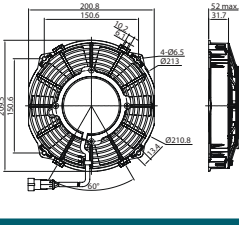

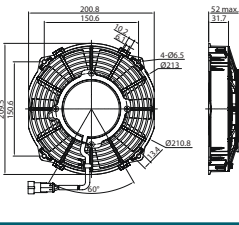

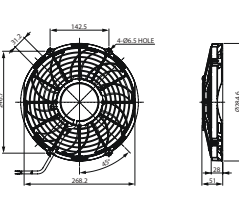
 OD: 331 mm  
Capacity: 2430 m<sup>3</sup>

 Type: Suction  
Tightness norm: IP 68

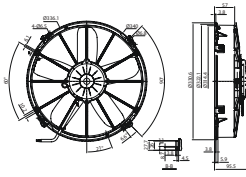
EL. SPECIFICATIONS		DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160910 Axial Fan</b>			
		Voltage: 12 Amp: 7.2	OD: 247 mm Capacity: 1080 m <sup>3</sup>
<b>160911 Axial Fan</b>			
		Voltage: 12 Amp: 7.6	OD: 284.5 mm Capacity: 1430 m <sup>3</sup>
<b>160912 Axial Fan</b>			
		Voltage: 12 Amp: 11.4	Dim.: 376x310x108 mm OD: 292 mm Capacity: 2280 m <sup>3</sup>
<b>160913 Axial Fan</b>			
		Voltage: 12 Amp: 15.3	OD: 331 mm Capacity: 2340 m <sup>3</sup>
<b>160914 Axial Fan</b>			
		Voltage: 12 Amp: 9.5	OD: 382 mm Capacity: 2220 m <sup>3</sup>
<b>160915 Axial Fan</b>			
		Voltage: 12 Amp: 8.7	OD: 382 mm Capacity: 2140 m <sup>3</sup>
<b>161000 HC-CARGO Axial Fan</b>			
		Voltage: 12 Amp: 9	OD: 284.6 mm Capacity: 1506 m <sup>3</sup>

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>161002 HC-CARGO Axial Fan</b>				
		Voltage: 12 Amp: 7.5	OD: 335.6 mm Capacity: 1733 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>161003 HC-CARGO Axial Fan</b>				
		Voltage: 12 Amp: 7.5	OD: 335.6 mm Capacity: 1733 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>24 V</b>				
<b>160584 Axial Fan</b>				
		Voltage: 24 Amp: 7.4	OD: 331 mm Capacity: 2900 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160587 Axial Fan</b>				
		Voltage: 24 Amp: 3.9	OD: 384.5 mm Capacity: 1300 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160588 Axial Fan</b>				
		Voltage: 24 Amp: 4.1	OD: 247 mm Capacity: 1080 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160595 Axial Fan</b>				
		Voltage: 24 Amp: 8.7	OD: 414 mm Capacity: 3540 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160597 Axial Fan</b>				
		Voltage: 24 Amp: 3.9	OD: 336 mm Capacity: 1180 m <sup>3</sup>	Type: Blower Tightness norm: IP 68

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160599</b> Axial Fan		Voltage: 24 Amp: 4.4 OD: 310 mm Capacity: 1690 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160600</b> Axial Fan		Voltage: 24 Amp: 4.1 OD: 310 mm Capacity: 1570 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160619</b> Axial Fan		Voltage: 24 Amp: 7.8 OD: 310 mm Capacity: 2440 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160714</b> Axial Fan		Voltage: 24 Amp: 3.7 OD: 284.5 mm Capacity: 1400 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160737</b> Axial Fan		Voltage: 24 Amp: 6 OD: 336 mm Capacity: 2240 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160777</b> Axial Fan		Voltage: 24 Amp: 8.4 OD: 414 mm Capacity: 3315 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160799</b> Axial Fan		Voltage: 24 Amp: 4 OD: 347 mm Capacity: 1170 m <sup>3</sup>	Type: Suction Tightness norm: IP 68

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160906 Axial Fan</b>				
		Voltage: 24 Amp: 3.7	OD: 247 mm Capacity: 1070 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160907 Axial Fan</b>				
		Voltage: 24 Amp: 5.7	OD: 278 mm Capacity: 1990 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160908 Axial Fan</b>				
		Voltage: 24 Amp: 7.1	OD: 331 mm Capacity: 2760 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>160909 Axial Fan</b>				
		Voltage: 24 Amp: 4.9	OD: 382 mm Capacity: 2170 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160998 HC-CARGO Axial Fan</b>				
		Voltage: 24 Amp: 2.5	OD: 210.8 mm Capacity: 645 m <sup>3</sup>	Type: Suction Tightness norm: IP 68
<b>160999 HC-CARGO Axial Fan</b>				
		Voltage: 24 Amp: 2.5	OD: 210.8 mm Capacity: 645 m <sup>3</sup>	Type: Blower Tightness norm: IP 68
<b>161001 HC-CARGO Axial Fan</b>				
		Voltage: 24 Amp: 4	OD: 284.6 mm Capacity: 1437 m <sup>3</sup>	Type: Suction Tightness norm: IP 68



**161004 HC-CARGO Axial Fan**

 Voltage: 24  
Amp: 9

 OD: 330.6 mm  
Capacity: 2976 m<sup>3</sup>

 Type: Suction  
Tightness norm: IP 68

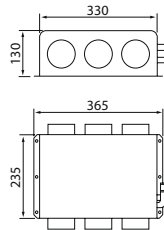
**ACCESSORIES**
**160966 Mounting kit**


Total length: 180 mm

Washer: w/

**CABIN HEATERS**
**060216 Cabin Heater**

The heater has three 75 mm tube connections on the air inlet side. There are also three 75 mm tube connections on the outlet side. The water connections can be placed on either side of the heater and also be turned towards either the inlet or the outlet side.

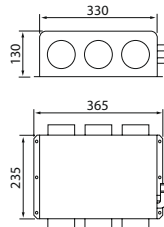

 Voltage: 12  
Watt/speed 1: 60  
Watt/speed 2: 77  
Watt/speed 3: 114

 Dim.: 330x230x130 mm  
Water connection OD: 16 mm  
Weight: 6.3 kg  
Capacity kW/speed 1: 7.2  
Airflow speed 1: 264 m<sup>3</sup>/h  
Capacity kW/speed 2: 9.3  
Airflow speed 2: 357 m<sup>3</sup>/h  
Capacity kW/speed 3: 12.2  
Airflow speed 3: 504 m<sup>3</sup>/h  
Regulation: Yes

 Type: Complete kit  
Cabinet: Stainless steel

**060220 Cabin Heater**

The heater has three 75 mm tube connections on the air inlet side. There are also three 75 mm tube connections on the outlet side. The water connections can be placed on either side of the heater and also be turned towards either the inlet or the outlet side. Blower: HC-CARGO 160649.

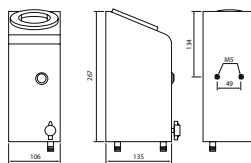

 Voltage: 24  
Watt/speed 1: 60  
Watt/speed 2: 77  
Watt/speed 3: 114

 Dim.: 330x230x130 mm  
Water connection OD: 16 mm  
Weight: 6.3 kg  
Capacity kW/speed 1: 7.2  
Airflow speed 1: 264 m<sup>3</sup>/h  
Capacity kW/speed 2: 9.2  
Airflow speed 2: 357 m<sup>3</sup>/h  
Capacity kW/speed 3: 12.2  
Airflow speed 3: 504 m<sup>3</sup>/h  
Regulation: Yes

 Type: Complete kit  
Cabinet: Stainless steel

**060222 Cabin Heater**

This Cabin heater is easily installed in small off road vehicles or as auxiliary heater in buses and delivery vans. The heating cycle is controlled by means of the built-in 1/4-turn water valve and the built-in switch. Heat-On 1331-12.

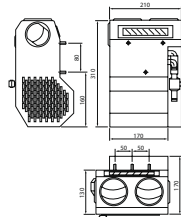

 Voltage: 12  
Watt/speed 1: 24

 Dim.: 267x106x135 mm  
Water connection OD: 12 mm  
Weight: 3 kg  
Capacity kW/speed 1: 1.9  
Airflow speed 1: 76 m<sup>3</sup>/h  
Regulation: No

 Type: Complete kit  
Cabinet: Metal

**060223 Cabin Heater**

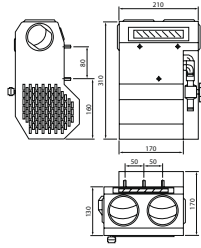
This very powerful cabin heater is used for airrecirculation and has all connections behind a cover allowing hoses and cables to be led in any direction. It has a powerful fan (230 W), controlled by means of a built-in 1/4-turn water valve. Efficient distribution of the air through the adjustable air vents provides for demisting of the cabin screens w/o the use of extra tubes and nozzles.


 Voltage: 12  
Watt/speed 3: 230

 Dim.: 310x210x130 mm  
Water connection OD: 16 mm  
Weight: 5.8 kg  
Capacity kW/speed 1: 4.3  
Airflow speed 1: 180 m<sup>3</sup>/h  
Capacity kW/speed 2: 6.3  
Airflow speed 2: 288 m<sup>3</sup>/h  
Capacity kW/speed 3: 9.2  
Airflow speed 3: 468 m<sup>3</sup>/h  
Regulation: Yes

 Type: Complete kit  
Cabinet: Galvanized steel w/  
black polyester

**060233** Cabin Heater



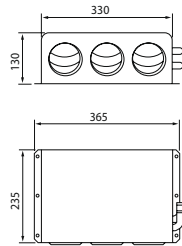
Voltage: 24  
Watt/speed 3: 230

Dim.: 310x210x130 mm  
Water connection OD: 16 mm  
Weight: 5.8 kg  
Capacity kW/speed 1: 4.3  
Airflow speed 1: 180 m<sup>3</sup>/h  
Capacity kW/speed 2: 6.3  
Airflow speed 2: 288 m<sup>3</sup>/h  
Capacity kW/speed 3: 9.2  
Airflow speed 3: 468 m<sup>3</sup>/h  
Regulation: Yes

Type: Complete kit  
Cabinet: Galvanized steel w/ black polyester

**060235** Cabin Heater

*Especially suitable for heating the passenger room in for instance buses.*



Voltage: 24  
Watt/speed 1: 60  
Watt/speed 2: 77  
Watt/speed 3: 114

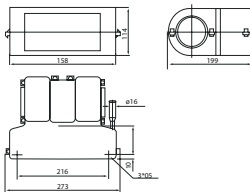
Dim.: 365x235x130 mm  
Water connection OD: 16 mm  
Weight: 6.3 kg  
Capacity kW/speed 1: 7.2  
Airflow speed 1: 264 m<sup>3</sup>/h  
Capacity kW/speed 2: 9.3  
Airflow speed 2: 357 m<sup>3</sup>/h  
Capacity kW/speed 3: 12.2  
Airflow speed 3: 504 m<sup>3</sup>/h  
Regulation: Yes

Type: Complete kit  
Cabinet: Metal

**060241** Cabin Heater

Servicing: Delivery vans, excavators, park tractors

*Radiator: copper/aluminium.*



Voltage: 12  
Watt/speed 2: 75

Dim.: 273x114x199 mm  
Water connection OD: 16 mm  
Weight: 1.7 kg  
Capacity kW/speed 2: 4.3  
Airflow speed 2: 230 m<sup>3</sup>/h  
Regulation: Yes

Type: Complete kit  
Cabinet: Shockproof plastic

**HEATER MOTORS**

**060059** Cabin Heater Motor

*Heat-on 1531M-2412.*



Voltage: 12  
Watt: 24

Dim.: 72 mm  
Dia.: 70 mm  
Shaft dia.: 6.35x16 mm  
Length: 63 mm  
Speed: 1-speed

Mount.: 3 holes  
No./shafts: 1

**060213** Cabin Heater Motor

Servicing: HC-CARGO 060210

*Heat-on 1531M-5012.*



Voltage: 12  
Watt: 50

Dia.: 70 mm  
Shaft dia.: 6.35x16 mm  
Length: 63 mm  
Speed: 2-speed

Mount.: 3 holes  
No./shafts: 1  
Fan mounted: Yes

**060214** Cabin Heater Motor

Servicing: HC-CARGO 060211

*Heat-on 1531M-5024.*



Voltage: 24  
Watt: 50

Dia.: 70 mm  
Shaft dia.: 6.35x16 mm  
Length: 63 mm  
Speed: 1-speed

Mount.: 3 holes  
No./shafts: 1  
Fan mounted: Yes

## CONNECTORS

### 060229 Round Air Vent

Heat-on 66231.



ID: 70/76 mm  
OD: 101 mm

## ACCESSORIES

### 060058 Defroster Set

Servicing: HC-CARGO 060210, 060211

Heat-on 1518.



ID/demister tube connection: 45 mm  
ID/demister tube: 40 mm  
Demister tube length: 160 cm

Rubber elbows: 2  
Demist nozzles: 2

### 060219 Air Distribution Kit

Servicing: HC-CARGO 060216, 060220

Heat-on 3050-30.



ID/demister tube: 75 mm  
Demister tube length: 620 cm

Demist nozzles: 3

### 060227 Water Valve

Heat-on 2100.



ID/demister tube connection: 16 mm  
Demister tube length: 11.2 cm

### 060237 Demister Tube



ID/demister tube: 50 mm

## WIPER SYSTEMS








### WIPER ARMS

#### 160022 Wiper Arm



Dim./wiper arm: 8x2 mm  
Length: 390 mm  
Mount./wiper shaft: 6 mm

Type: Single

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160023 Wiper Arm</b> 	Servicing: Opel	Dim./wiper arm: 8x2 mm Length: 420 mm Mount./wiper shaft: 6 mm	Type: Single
<b>160024 Wiper Arm</b> 	Servicing: Opel	Dim./wiper arm: 8x2.5 mm Length: 450 mm Mount./wiper shaft: 6 mm	Type: Single
<b>160256 Wiper Arm</b> <i>Wiper motor: HC-CARGO 160258, 160290, 160291, 160357, 160408.</i>			
		Length: 450 mm Dist./wiper arms: 57 mm Mount./wiper shaft: M6 cone + M8 shaft mm	Type: Parallel Length/adjustable: No
<b>160257 Wiper Arm</b> <i>Usable w/ HC-CARGO 160258, 160290, 160291, 160357, 160408.</i>			
		Length: 400 mm Dist./wiper arms: 57 mm Mount./wiper shaft: M6 cone + M8 shaft mm	Type: Parallel Length/adjustable: No
<b>160338 Wiper Arm</b> Servicing: HC-CARGO 160727 <i>Usable w/ wiper motor: HC-CARGO 160340, 160345.</i>			
		Length: 700 mm Dist./wiper arms: 55 mm Mount./wiper shaft: 2x8 cone mm	Type: Parallel Length/adjustable: No
<b>160339 Wiper Arm</b> <i>Wiper motor: HC-CARGO 160292, 106293.</i>			
		Length: 400 mm Dist./wiper arms: 57 mm Mount./wiper shaft: 6+M8 shaft mm	Type: Parallel Length/adjustable: No
<b>160358 Wiper Arm</b> <i>Wiper motor: HC-CARGO 160258, 160290, 160291, 160357, 160408.</i>			
		Length: 500 mm Dist./wiper arms: 57 mm Mount./wiper shaft: M6 cone + M8 shaft mm	Type: Parallel Length/adjustable: No

**160359 Wiper Arm**

Wiper motor: HC-CARGO 160258, 160290, 160291, 160357, 160408.



Length: 550 mm  
Dist./wiper arms: 57 mm  
Mount./wiper shaft: M6 cone + M8 shaft mm

Type: Parallel  
Length/adjustable: No

**160484 Wiper Arm**

Usable w/ HC-CARGO 160258, 160480.



Length: 340-420 mm  
Dist./wiper arms: 57 mm  
Mount./wiper blade: 9x2.5 mm hook  
Mount./wiper shaft: M8 cone + M8 shaft mm

Type: Parallel  
Length/adjustable: Yes

**160485 Wiper Arm**



Length: 430-500 mm  
Dist./wiper arms: 57 mm  
Mount./wiper blade: 9x2.5 mm hook  
Mount./wiper shaft: M8 cone + M8 shaft mm

Type: Parallel  
Length/adjustable: Yes

**160486 Wiper Arm**



Length: 340-420 mm  
Mount./wiper blade: 9x3 mm hook  
Mount./wiper shaft: M8 cone mm

Type: Single  
Length/adjustable: Yes

**160487 Wiper Arm**



Length: 430-500 mm  
Mount./wiper blade: 9x3 mm hook  
Mount./wiper shaft: M8 cone mm

Type: Single  
Length/adjustable: Yes

**160571 Wiper Arm**



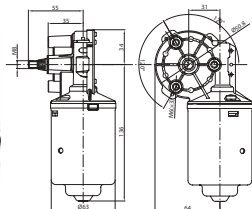
Length: 680 mm  
Dist./wiper arms: 60 mm  
Mount./wiper shaft: 2x8 cone mm

Type: Parallel  
Length/adjustable: No

**WIPER MOTORS**

**160150 Wiper Motor**

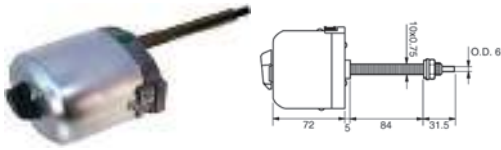
Servicing: Fiat 127, Lada 2101



Voltage: 12

Type: OE

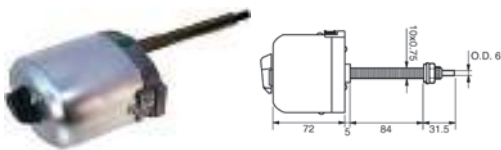
	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160376 Wiper Motor</b> 	Servicing: Fiat Uno Voltage: 12	Shaft length: 10 mm Wiper angle: 138°	Type: OE Position: Front windscreen Wiper shaft: w/ 1 Shaft Built in switch: Yes Auto stop: Yes
<b>160395 Wiper Motor</b> 	Servicing: Nissan Patrol 86-93 Voltage: 12		Type: OE Position: Rear windscreen Wiper shaft: w/ 1 M8 Shaft Auto stop: No
<b>160396 Wiper Motor</b> 	Servicing: Nissan Patrol 86-93 Voltage: 24		Type: OE Position: Rear windscreen Wiper shaft: w/ 1 M8 Shaft Auto stop: No
<b>160671 Wiper Motor</b> 	Servicing: Citroen, Fiat, Peugeot Voltage: 12		Type: OE Position: Front windscreen
<b>160881 Wiper Motor</b> 	Servicing: TEREX/SCHAEFF 5388665196 Voltage: 12	Shaft length: 38 mm	Type: OE Wiper shaft: w/ 1 Shaft Built in switch: No Auto stop: Yes Auto stop/placement: Left side
<b>UNIVERSAL</b>			
<b>160031 Wiper Motor</b> <i>Fitted w/ an interchangeable bearing allowing the shaft to be cut in any size.</i> 	Voltage: 12	Wiper angle: 85°	Type: Universal Built in switch: Yes Auto stop: No
<b>160032 Wiper Motor</b> <i>Fitted w/ an interchangeable bearing allowing the shaft to be cut in any size.</i> 	Voltage: 24	Wiper angle: 85°	Type: Universal Built in switch: Yes Auto stop: No

**160033 Wiper Motor**
*Fitted w/ an interchangeable bearing allowing the shaft to be cut in any size.*


Voltage: 12

Wiper angle: 110°

 Type: Universal  
 Built in switch: Yes  
 Auto stop: No

**160034 Wiper Motor**
*Fitted w/ an interchangeable bearing allowing the shaft to be cut in any size.*


Voltage: 24

Wiper angle: 110°

 Type: Universal  
 Built in switch: Yes  
 Auto stop: Yes

**160258 Wiper Motor**
*w/ reciprocating shaft.*


Voltage: 12

 Dist./shafts: 57 mm  
 Wiper angle: 95°

 Type: Universal  
 Wiper shaft: w/ 2 shafts for parallelogram  
 Built in switch: No  
 Auto stop: Yes

**160290 Wiper Motor**
*w/ reciprocating shaft.*


Voltage: 12

 Dist./shafts: 57 mm  
 Wiper angle: 95°

 Type: Universal  
 Wiper shaft: w/ 2 shafts for parallelogram  
 Built in switch: No  
 Auto stop: Yes  
 Auto stop/placement: Left side

**160291 Wiper Motor**
*w/ reciprocating shaft.*


Voltage: 24

 Dist./shafts: 57 mm  
 Wiper angle: 95°

 Type: Universal  
 Wiper shaft: w/ 2 shafts for parallelogram  
 Auto stop: Yes  
 Auto stop/placement: Left side

**160292 Wiper Motor**
*w/ reciprocating shaft.*


Voltage: 12

 Dist./shafts: 57 mm  
 Wiper angle: 110°

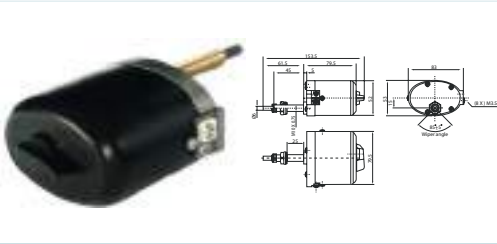
 Type: Universal  
 Wiper shaft: w/ 2 shafts for parallelogram  
 Built in switch: Yes  
 Auto stop: No





**160558 Wiper Motor**

*Black motor.*



Voltage: 12

Wiper angle: 85°

Type: Universal  
Position: Rear windscreen  
Wiper shaft: w/ 1 Shaft  
Built in switch: Yes

**160659 Wiper Motor**

*1 speed.*



Voltage: 12

Dist./shafts: 57 mm  
Wiper angle: 85°

Type: Universal  
Wiper shaft: w/ 1 M6 Shaft  
Built in switch: No  
Auto stop: Yes

**160725 Wiper Motor**



Voltage: 12

Dist./shafts: 57 mm  
Wiper angle: 90°

Type: Universal  
Wiper shaft: w/ 2 M8 shafts for parallelogram  
Built in switch: Yes  
Auto stop: Yes  
Auto stop/placement: Right side

**WINDSCREEN WASHERS**

**KITS**

**160186 Washer Kit**

*Pump: HC-CARGO 160386.*



Voltage: 12

Dim.: 190x130x100 mm  
Can capacity: 1.2 l  
Capacity: 140 ml/min

Type: Complete kit  
Can: w/

**160273 Washer Kit**

*Pump: HC-CARGO 160630.*



Voltage: 24

Dim.: 190x130x100 mm  
Can capacity: 1.2 l

Type: Complete kit  
Can: w/

**TANKS**

**12 V**

**160187 Washer Tank**

*Washer pump: HC-CARGO 160360.*



Voltage: 12

Dim.: 207x200x100 mm  
Can capacity: 3 l

Type: Can  
Motor: w/

**160973 Washer Tank 12 V**

Washer pump: HC-CARGO 160386.



Voltage: 12

 Dim.: 190x130x100 mm  
Can capacity: 1.2 l

Type: Can

**24 V**
**160188 Washer Tank**

Washer pump: HC-CARGO 160360.



Voltage: 24

Can capacity: 3 l

 Type: Can  
Motor: w/

**160967 Washer Tank**

Doga ref. 232.2001.30.00.



Voltage: 24

Can capacity: 2.1 l

 Type: Can  
Can: w/ pump

**PUMPS**
**160197 Washer Pump**

Servicing: Porsche, Volvo, Volkswagen, Alfa Romeo, Audi, BMW, Fiat, Ford, Lancia, Mercedes-Benz, Opel, Porsche, Saab, Seat



Voltage: 12

Capacity: 2400 ml/min

 Type: Standard  
Pump type: Single

**160198 Washer Pump**

Servicing: Scania, Mercedes-Benz



Voltage: 24

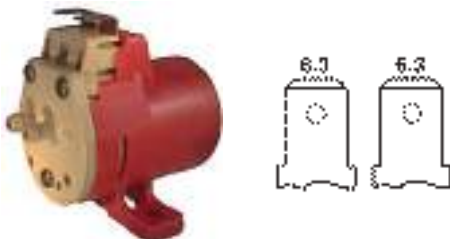
Capacity: 2400 ml/min

 Type: Universal  
Pump type: Single

**160223 Washer Pump**

Servicing: Peugeot 104, 504






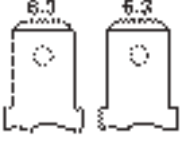

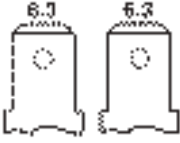

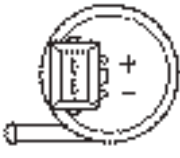



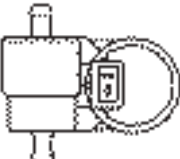
For independent mounting in engine compartment.










Voltage: 12

Capacity: 1500 ml/min

 Type: Universal  
Pump type: Single

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160289</b> Washer Pump		Servicing: Peugeot, Citroen, Renault		
		Voltage: 24	Capacity: 1500 ml/min	Pump type: Single
<b>160332</b> Washer Pump		Servicing: Peugeot, Citroen, Renault		
		Voltage: 12	Capacity: 1500 ml/min	Pump type: Single
<b>160360</b> Washer Pump		Servicing: Rover Group, Honda		
		Voltage: 12	Capacity: 1400 ml/min	Type: Universal Pump type: Single
<b>160361</b> Washer Pump		Servicing: Skoda Favorit		
<i>Replacing original pump 115930290 on Skoda Favorit.</i>				
		Voltage: 12	Capacity: 1200 ml/min	Type: Standard Pump type: Single
<b>160378</b> Washer Pump		Servicing: Ford, Opel, Seat, VW		
		Voltage: 12	Capacity: 2200 ml/min	Pump type: Single
<b>160379</b> Washer Pump		Servicing: Mercedes-Benz		
		Voltage: 12	Capacity: 2200 ml/min	Type: Standard Pump type: Single
<b>160380</b> Washer Pump		Servicing: VW, Opel, Seat, Ford		
		Voltage: 12	Capacity: 2400 ml/min	Type: Universal Pump type: Dual

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160381</b> Washer Pump		Servicing: Fiat, Vauxhall, Audi, Ford, Opel, VW, Wartburg		
		Voltage: 12	Capacity: 2000 ml/min	Type: Universal Pump type: Dual
<b>160382</b> Washer Pump		Servicing: Opel, Seat, VW		
		Voltage: 12	Capacity: 2400 ml/min	Type: Universal Pump type: Dual
<b>160383</b> Washer Pump		Servicing: VW, Smart, Seat, Audi, BMW		
		Voltage: 12	Capacity: 2200 ml/min	Type: Universal Pump type: Dual
<b>160386</b> Washer Pump		Servicing: Honda Accort, Peugeot (UK), Ford		
		Voltage: 12	Capacity: 1800 ml/min	Type: Universal Pump type: Single
<b>160507</b> Washer Pump		Servicing: Daihatsu, Ford, Mazda		
		Voltage: 24	Capacity: 1500 ml/min	Type: Universal Pump type: Single
<b>160535</b> Washer Pump		Servicing: Daihatsu, Ford, Mazda		
		Voltage: 12	Capacity: 1800 ml/min	Type: Standard Pump type: Dual
<b>160629</b> Washer Pump		Servicing: Citroen, Fiat, Peugeot		
		Voltage: 12	Capacity: 1700 ml/min	Type: Standard Pump type: Dual

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160630 Washer Pump</b> HC-CARGO 160273. 	Voltage: 24	Capacity: 1800 ml/min	Type: Universal Pump type: Single
<b>160677 Washer Pump</b> 	Voltage: 12	Capacity: 2000 ml/min	Servicing: Daewoo, Hyundai, Kia, Mazda, Mitsubishi, Toyota Type: Standard Pump type: Single
<b>160679 Washer Pump</b> 	Voltage: 12	Capacity: 2100 ml/min	Servicing: Mercedes-Benz Type: Standard Pump type: Single
<b>160680 Washer Pump</b> 	Voltage: 12	Capacity: 2300 ml/min	Servicing: BMW Type: Standard Pump type: Single
<b>160681 Washer Pump</b> 	Voltage: 12	Capacity: 2400 ml/min	Servicing: Audi Type: Standard Pump type: Single
<b>160682 Washer Pump</b> 	Voltage: 12	Capacity: 2400 ml/min	Servicing: Audi Type: Standard Pump type: Dual
<b>160683 Washer Pump</b> 	Voltage: 12	Capacity: 2200 ml/min	Servicing: Audi, BMW, Mercedes-Benz, Seat, Skoda, VW Type: Standard Pump type: Dual

**CONNECTIONS**
**160195 T-Connection**


OD: 4 mm

Valve: w/o

**160413 Pipe Connector**
*For hose I.D. 4 mm.*

 OD: 8 mm  
 Length: 32 mm

Valve: w/

**RADIO ACCESSORIES**
**CAPACITORS**
**FOR CAR RADIOS**
**150100 Capacitor**
*For car radios.*

 El. capacitance:  
 2.2  $\mu$ F

Length: 100 mm

 Type: Universal  
 Mount. bracket: Straight  
 Plug: Straight  
 Cable: w/

**150101 Capacitor**
*For car radios.*

 El. capacitance:  
 2.2  $\mu$ F

Length: 80 mm

 Type: Universal  
 Mount. bracket: Angled  
 Plug: Angled  
 Cable: w/

**150407 Capacitor**
*For car radios.*

 El. capacitance:  
 2.2  $\mu$ F

Length: 40 mm

 Type: Universal  
 Mount. bracket: Angled  
 Plug: Angled  
 Cable: w/

**150408 Capacitor**
*For car radios.*

 El. capacitance:  
 2.2  $\mu$ F

Length: 100 mm

 Type: Universal  
 Mount. bracket: Angled  
 Plug: Ring  
 Cable: w/

## LOUDSPEAKER IN CABINET

### 040197 Speakers



Watt: 20/40  
Ohm: 4

Length: 97 mm  
Depth: 95 mm  
Width: 95 mm

Cabinet: Yes  
Mount. bracket: w/  
Unit: Set

## LOUDSPEAKER BUILT-IN

### 040193 Speakers

70-23000 Hz.



Watt: 150  
Ohm: 4

ID/hole: 95 mm  
Depth: 50 mm  
Dist./mount. holes 1:  
80 mm  
Dist./mount. holes 2:  
115 mm  
Width: 100 mm

Type: Built-in  
System: 2 way  
Grill: w/  
Unit: Set

## RADIO MOUNTING KITS

### 040149 Radio Box



Colour: Black  
Material: Acrylic  
Mount. bracket: Pendant  
Integral front: Yes

### 040170 Radio Mounting Kit

Galvanized. w/ gasket.



Integral front: Yes

## DASHBOARD GAUGES

### AMMETER

#### 160697 Ammeter

White figures.



Voltage: 12-24

OD: 52 mm

Mount. type: Hook fastening  
Colour: Black  
Measuring range: 30-0-30  
Measuring unit: A

#### 160698 Ammeter

White figures.



Voltage: 12-24

OD: 52 mm

Mount. type: Hook fastening  
Colour: Black  
Measuring range: 60-0-60  
Measuring unit: A

## VOLTMETER

### 160695 Voltmeter

White figures.



Voltage: 8-16

OD: 52 mm

Mount. type: Hook fastening  
Colour: Black  
Measuring range: 8-16  
Measuring unit: v

### 160696 Voltmeter

White figures.



Voltage: 16-32

OD: 52 mm

Mount. type: Hook fastening  
Colour: Black  
Measuring range: 16-32  
Measuring unit: v

## HOUR METER

### 160702 Hour Meter

w/o illumination. IP65.



Voltage: 12-28

OD: 52 mm

Type: Mechanical  
Mount. type: Hook fastening  
Colour: Black  
Measuring unit: Timer

### 160747 Hour Meter

w/o illumination.



Voltage: 10-28

OD: 36.5x25 mm

Type: Electrical operated  
Colour: Black  
Measuring unit: Timer

### 160897 Hour Meter

Digital.



Voltage: 10-28

OD: 52 mm

Type: Electrical operated  
Mount. type: Hook fastening  
Colour: Black  
Measuring unit: Timer  
Digital: Yes

## FUEL GAUGES

### 160701 Fuel Gauge

10-180 Ohm.



Voltage: 12

OD: 52 mm

Mount. type: Hook fastening  
Colour: Black  
Measuring unit: l  
Sender: w/



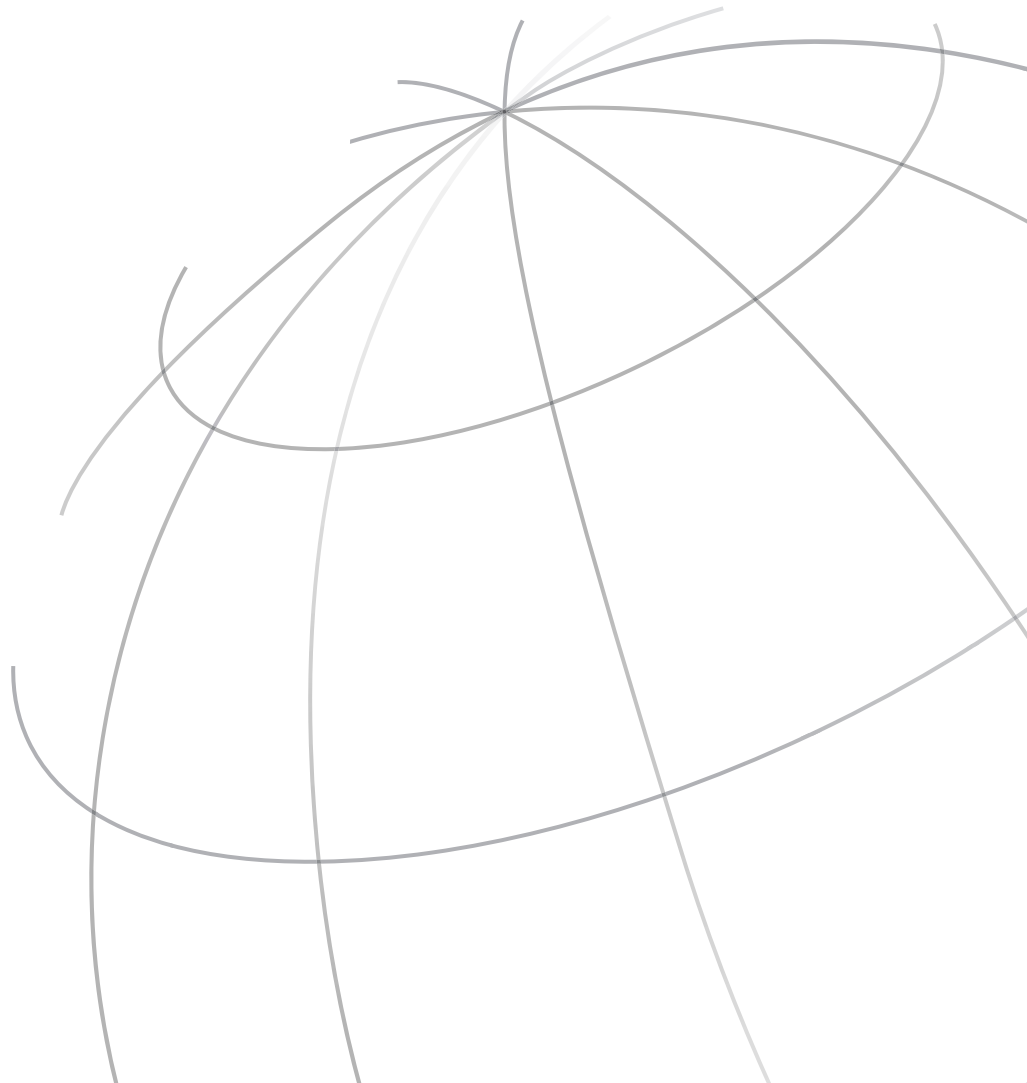
	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160872 Fuel Gauge</b>			
	Voltage: 24	OD: 52 mm	Mount. type: Hook fastening Colour: Black Measuring unit: l Sender: w/
<b>160873 Fuel Gauge</b>			
	Servicing: HC-CARGO 160701, 160872 Voltage: 12/24		
<b>WATER TEMP. GAUGES</b>			
<b>160699 Water Temp. Gauge</b>			
<i>Transmitter 1/8" NPTF: HC-CARGO 160786.</i>			
	Voltage: 12	OD: 52 mm	Type: Electrical operated Mount. type: Hook fastening Colour: Black Measuring range: 40-120 Measuring unit: C° Sender: w/
<b>160778 Water Temp. Gauge</b>			
<i>Transmitter 1/8" NPTF: HC-CARGO 160786.</i>			
	Voltage: 24	OD: 52 mm	Type: Electrical operated Mount. type: Hook fastening Colour: Black Measuring range: 40-120 Measuring unit: v Sender: w/
<b>OIL PRESSURE GAUGES</b>			
<b>160700 Electrical Oil Pressure Gauge</b>			
<i>Transmitter 1/8" NPTF: HC-CARGO 160787.</i>			
	Voltage: 12	OD: 52 mm	Type: Electrical operated Mount. type: Hook fastening Colour: Black Measuring range: 0-10 Measuring unit: Bar Sender: w/
<b>160779 Oil Pressure Gauge</b>			
<i>Transmitter 1/8" NPTF: HC-CARGO 160787.</i>			
	Voltage: 24	OD: 52 mm	Type: Electrical operated Mount. type: Hook fastening Colour: Black Measuring range: 0-10 Sender: w/





# Workshop Consumables

Edition 2015/2016



**BATTERY TERMINALS**
**BRASS CASTING**

 25-35 mm<sup>2</sup>
**192368 Battery Terminal**


Length: 46 mm

Material: Moulded brass

**192369 Battery Terminal**


Length: 46 mm

Material: Moulded brass

**W/ 10 mm BOLT**
**192400 Battery Terminal**


Length: 54 mm

Material: Moulded brass

**192401 Battery Terminal**


Length: 54 mm

Material: Moulded brass

**TIN PLATED**
**190213 Battery Terminal**


ID: 18.5 mm

Material: Moulded brass

**190214 Battery Terminal**


ID: 15.9 mm

Material: Moulded brass

W/ M6 BOLT AND WING NUT			
TIN PLATED			
<b>191134</b> Battery Terminal			
<i>w/ wing nut.</i>			
		ID: 15.9 mm	Material: Moulded brass
W/ M10 BOLT AND WING NUT			
<b>192402</b> Battery Terminal			
<i>w/ wing nut.</i>			
		Length: 54 mm	Material: Moulded brass
<b>192403</b> Battery Terminal			
<i>w/ wing nut.</i>			
		Length: 54 mm	Material: Moulded brass
TIN PLATED			
<b>191133</b> Battery Terminal			
<i>w/ wing nut.</i>			
		ID: 18.5 mm	Material: Moulded brass
25 mm <sup>2</sup>			
<b>192163</b> Battery Terminal			
		ID: 19 mm	Material: Moulded brass
<b>192164</b> Battery Terminal			
		ID: 17 mm	Material: Moulded brass

**W/ SWITCH**
**192493** Battery Terminal

 Material: Moulded brass  
 Switch: w/

**16-35 mm<sup>2</sup>**
**TIN PLATED**
**190012** Battery Terminal


ID: 18.5 mm

Material: Moulded brass

**190013** Battery Terminal


ID: 15.9 mm

Material: Moulded brass

**190211** Battery Terminal

Servicing: Fiat, Mazda, Suzuki, Nissan



ID: 13 mm

Material: Moulded brass

**190212** Battery Terminal

Servicing: Fiat, Mazda, Suzuki, Nissan








ID: 11.2 mm

Material: Moulded brass

**35-70 mm<sup>2</sup>**
**TIN PLATED**
**191166** Battery Terminal


ID: 18.5 mm

Material: Moulded brass

EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>191167</b> Battery Terminal		
	ID: 15.9 mm	Material: Moulded brass
<b>35-95 mm<sup>2</sup></b>		
<b>TIN PLATED</b>		
<b>193000</b> Battery Terminal		
<i>Heavy duty.</i>		
	ID: 18.5 mm	Material: Moulded brass
<b>193001</b> Battery Terminal		
<i>Heavy duty.</i>		
	ID: 15.9 mm	Material: Moulded brass
<b>TIN PLATED W/DOUBLE SCREW</b>		
<b>190866</b> Battery Terminal		
<i>w/ double screws and screw for AUX.</i>		
	ID: 18.5 mm	Material: Moulded brass
<b>190867</b> Battery Terminal		
<i>w/ double screws and screw for AUX.</i>		
	ID: 15.9 mm	Material: Moulded brass
<b>35 mm<sup>2</sup></b>		
<b>TIN PLATED</b>		
<b>191244</b> Battery Terminal		
	ID: 18.5 mm	Material: Moulded brass

**191245 Battery Terminal**


ID: 15.9 mm

Material: Moulded brass

**50 mm<sup>2</sup>**
**TIN PLATED**
**190202 Battery Terminal**


ID: 18.5 mm

Material: Moulded brass

**190203 Battery Terminal**


ID: 15.9 mm

Material: Moulded brass

**70 mm<sup>2</sup>**
**TIN PLATED**
**191989 Battery Terminal**


ID: 18.5 mm

Material: Moulded brass

**191990 Battery Terminal**


ID: 15.9 mm

Material: Moulded brass

**193166 Battery Terminal**


Length: 50 mm








Material: Moulded brass

**193167 Battery Terminal**


Length: 50 mm

Material: Moulded brass



ACCESSORIES			
<b>190215</b> Nut & Bolt			
		Thread size: M8	Material: Moulded brass
<b>192681</b> Terminal Cover			
		Length: 52 mm Width: 35 mm	Colour: Red Material: PVC
<b>192682</b> Terminal Cover			
		Length: 52 mm Width: 35 mm	Colour: Black Material: PVC
<b>192888</b> Terminal Cover Right +			
		Length: 52 mm Height: 22 mm Width: 35 mm	Colour: Red Material: PVC
<b>192889</b> Terminal Cover Left -			
		Length: 52 mm Height: 22 mm Width: 35 mm	Colour: Black Material: PVC
<b>192890</b> Terminal Cover Left -			
		Length: 52 mm Height: 22 mm Width: 35 mm	Colour: Red Material: PVC
<b>192891</b> Terminal Cover Right -			
		Length: 52 mm Height: 22 mm Width: 35 mm	Colour: Black Material: PVC

**FORMPRESSED**

 25-40 mm<sup>2</sup>

17 MM

**192075 Battery Terminal**


ID: 17 mm

Material: Compressed

**192076 Battery Terminal**
*For M8 stud connection.*


ID: 17 mm

Material: Compressed

19 mm

**191820 Battery Terminal**
*Terminal: HC-CARGO 191822, -827.*


ID: 19 mm

Material: Compressed

**3 TERMINAL OUTLETS**
**191821 Battery Terminal**
*Terminal: HC-CARGO 191822, -829.*


ID: 19 mm

Material: Compressed

**192234 Battery Terminal**
*Terminal: HC-CARGO 191822, -829.*


ID: 17 mm

Material: Compressed

 10-20 mm<sup>2</sup>

17 mm

**192074 Battery Terminal**


ID: 17 mm

Material: Compressed

**FOR FRENCH APPLICATIONS**
**190253** Battery Terminal

Servicing: French applications



ID: 19 mm

 Colour: Red  
Material: Compressed

**190254** Battery Terminal

Servicing: French applications



ID: 17 mm

 Colour: Green  
Material: Compressed

**LEADS AND EARTH STRAPS**
**190218** Battery Connection Cable


Length: 300 mm

No./wires: 1008/0.2

**190220** Earth Strap


Amp: 110

Length: 200 mm

No./wires: 432/0.26

**190221** Earth Strap


Amp: 110

Length: 250 mm

No./wires: 432/0.26

**190222** Earth Strap


Amp: 110

Length: 300 mm

No./wires: 432/0.26

**190223** Earth Strap


Amp: 110

Length: 350 mm


No./wires: 432/0.26

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>190224 Earth Strap</b> 	Amp: 110	Length: 400 mm	No./wires: 432/0.26
<b>190225 Earth Strap</b> 	Amp: 110	Length: 400 mm	No./wires: 432/0.26
<b>190226 Earth Strap</b> 	Amp: 110	Length: 500 mm	No./wires: 432/0.26
<b>190228 Earth Strap</b> 	Amp: 82	Length: 200 mm	No./wires: 228/0.25
<b>190229 Earth Strap</b> 	Amp: 82	Length: 250 mm	No./wires: 228/0.25
<b>190230 Earth Strap</b> 	Amp: 82	Length: 350 mm	No./wires: 228/0.25
<b>190231 Earth Strap</b> 	Amp: 82	Length: 400 mm	No./wires: 228/0.25

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>190232</b> Earth Strap 	Amp: 82	Length: 450 mm	No./wires: 228/0.25
<b>190235</b> Starter Cable 		Length: 300 mm	No./wires: 742/0.2
<b>190237</b> Starter Cable 		Length: 500 mm	No./wires: 742/0.2
<b>190239</b> Starter Cable 		Length: 700 mm	No./wires: 742/0.2
<b>190242</b> Starter Cable 		Length: 1000 mm	No./wires: 742/0.2
<b>191679</b> Battery Connection Cable 		Length: 300 mm	No./wires: 378/0.41

## INDUSTRIAL BATTERY CONNECTORS

### 50 AMPERE

CB50	HC-CARGO	Max V	Amp	Temp. class °C	Colour	Cable size	Terminals	Handle	Dust cap
	180530	600	50	-40 - +125	Grey	6 mm <sup>2</sup>	180535	180548	180516
	180531	600	50	-40 - +125	Red	6 mm <sup>2</sup>	180535	180548	180516
	180532	600	50	-40 - +125	Black	6 mm <sup>2</sup>	180535	180548	180516
	180381	600	50	-40 - +125	Grey	16 mm <sup>2</sup>	180390	180548	180516
	180382	600	50	-40 - +125	Red	16 mm <sup>2</sup>	180390	180548	180516
	180383	600	50	-40 - +125	Black	16 mm <sup>2</sup>	180390	180548	180516

### SPARE PARTS

#### 180390 Terminals

Servicing: HC-CARGO 180381, -382, -383



Voltage: 600  
Amp: 50  
Cable dim.: 16 mm<sup>2</sup>

#### 180535 Terminals

Servicing: HC-CARGO 180530, -531, -532



Voltage: 600  
Amp: 50  
Cable dim.: 6 mm<sup>2</sup>

### ACCESSORIES

#### 180548 Handle

Servicing: HC-CARGO 180381, -382, -383, -530, -531, -532




Colour: Red

#### 181516 Dust Cap

Servicing: CB50



### 80 AMPERE

NF80	HC-CARGO	Max V	Amp	Temp. class	Colour	Heding type	Cable size
	180542	150	80	-20°C - +90°C	Black	Female	25 mm <sup>2</sup>
	180543	150	80	-20°C - +90°C	Black	Male	25 mm <sup>2</sup>
	180562	150	80	-20°C - +90°C	Black	Female	16 mm <sup>2</sup>
	180563	150	80	-20°C - +90°C	Black	Male	16 mm <sup>2</sup>

## 100 AMPERE

CB100	HC-CARGO	Max V	Amp	Temp. class	Colour	Heding type	Cable size	Handle
	181501	150	100	-20°C - +90°C	Black	Female	16 mm <sup>2</sup>	181505 (R)
	181502	150	100	-20°C - +90°C	Black	Male	16 mm <sup>2</sup>	181505 (R)
	181503	150	100	-20°C - +90°C	Black	Female	25 mm <sup>2</sup>	181505 (R)
	181504	150	100	-20°C - +90°C	Black	Male	25 mm <sup>2</sup>	181505 (R)

## ACCESSORIES

181505 Handle

Servicing: HC-CARGO 181501, 181502, 181503, 181504

	Colour: Red
--	-------------

## 160 AMPERE

CB160	HC-CARGO	Max V	Amp	Temp. class °C	Colour	Heading type	Cable size	Reducing bush	Handle
	181519	150	160	-20 - +90	Black	Female	50 mm <sup>2</sup>	181521	180380 (B)
	181520	150	160	-20 - +90	Black	Male	50 mm <sup>2</sup>	181521	Already present

## ACCESSORIES

180380 Handle

Servicing: HC-CARGO 180395, 180396, 181519, 181520

	Colour: Black
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181521 Reducer Kit

Servicing: HC-CARGO 181519, 181520

	Voltage: 150 Amp: 160	Cable dim.: 50/35 mm <sup>2</sup>
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## 175 AMPERE

CB175	HC-CARGO	Max V	Amp	Temp. class °C	Colour	Cable size	Terminals	Handle	Dust cap
	180533	600	175	-40 - +125	Grey	35 mm <sup>2</sup>	180536	180549 (G) 180391 (R)	180517
	180534	600	175	-40 - +125	Red	35 mm <sup>2</sup>	180536	180549 (G) 180391 (R)	180517
	180384	600	175	-40 - +125	Grey	50 mm <sup>2</sup>	180392	180549 (G) 180391 (R)	180517
	180385	600	175	-40 - +125	Red	50 mm <sup>2</sup>	180392	180549 (G) 180391 (R)	180517
	180537	600	175	-40 - +125	Grey	50 mm <sup>2</sup>	180554	180549 (G) 180391 (R)	
	180538	600	175	-40 - +125	Red	50 mm <sup>2</sup>	180554	180549 (G) 180391 (R)	

## SPARE PARTS

180392 Terminals

Servicing: HC-CARGO 180384, -385



Voltage: 600  
Amp: 175  
Cable dim.: 50 mm<sup>2</sup>

180536 Terminals

Servicing: HC-CARGO 180533, 180534



Voltage: 600  
Amp: 175  
Cable dim.: 35 mm<sup>2</sup>

180554 Terminals

Servicing: HC-CARGO 180537, -538



Voltage: 600  
Amp: 175  
Cable dim.: 50 mm<sup>2</sup>

## ACCESSORIES

180391 Handle

Servicing: HC-CARGO 180533, -534, -537, -538, -384, -385



Colour: Red

180549 Handle

Servicing: HC-CARGO 180533, -534, -537, -538, -384, -385



Colour: Grey

181517 Dust Cap

Servicing: CB175




## 250 AMPERE

Y250	HC-CARGO	Max V	Amp	Colour	Heading type	Cable size	Terminals	Handle	Self close lid
	180580	150	250	Yellow	Male	50 mm <sup>2</sup>	180582	180328	181329
	180581	250	250	Black	Female	50 mm <sup>2</sup>	180583	180328	181329




SPARE PARTS		
<b>181605</b> Terminals <span style="float: right;">Servicing: HC-CARGO 180581</span>		
	Amp: 250	Gender: Female
<b>181606</b> Terminals <span style="float: right;">Servicing: HC-CARGO 180580</span>		
	Amp: 250	Gender: Male
ACCESSORIES		
<b>180582</b> Terminals <span style="float: right;">Servicing: HC-CARGO 180580</span>		
<i>Single delivered.</i>		
	Amp: 250	Gender: Male
<b>180583</b> Terminals <span style="float: right;">Servicing: HC-CARGO 180581</span>		
<i>Single delivered.</i>		
	Amp: 250	Gender: Female
<b>181328</b> Rubber Boot <span style="float: right;">Servicing: HC-CARGO 180580</span>		
		Protection degree: IP 66
<b>181329</b> Lid <span style="float: right;">Servicing: HC-CARGO 180581</span>		
<i>Self-closed.</i>		
		
<b>181594</b> Joint interfacial <span style="float: right;">Servicing: HC-CARGO 180580</span>		
		

### 300 AMPERE

E300	HC-CARGO	Max V	Amp	Colour	Cable size	
	180575	250	300	Yellow	70 mm <sup>2</sup>	w/ brazed solid silver tip
	180577	250	300	Yellow	70 mm <sup>2</sup>	w/ brazed solid silver tip


### 320 AMPERE

	HC-CARGO	Max V	Amp	Temp. class	Colour	Heading type	Cable size	Aux terminals
	180395	150	320	-20 °C - +90 °C	Black	Female	90/70 mm <sup>2</sup>	180550
	180396	150	320	-20 °C - +90 °C	Black	Female	90/70 mm <sup>2</sup>	

### ACCESSORIES


#### 180616 Terminals


Servicing: HC-CARGO 180395

	Voltage: 150					Type: Female
	Amp: 160					

### INDUSTRIAL BATTERY CONNECTORS

### 350 AMPERE


	HC-CARGO	Max V	Amp	Temp. class	Colour	Heading type	Cable size	Handle
	180386	600	350	-40 °C - +125 °C	Grey	Female	70 mm <sup>2</sup>	180550 (G)
	180387	600	350	-40 °C - +125 °C	Red	Female	70 mm <sup>2</sup>	180550 (G)

	HC-CARGO	Max V	Amp	Temp. class	Colour	Heading type	Cable size	Handle
	180551	600	350	-40 °C - +125 °C	Grey	Female	70 mm <sup>2</sup>	180550 (G)
	180552	600	350	-40 °C - +125 °C	Red	Female	70 mm <sup>2</sup>	180550 (G)

### ACCESSORIES

#### 180550 Handle

Servicing: HC-CARGO 180386, -387, 180551, -552

						Colour: Grey

## PLUGS & SOCKETS

### DIN AND CIGARETTE LIGHTER

**160294** Cigarette Lighter

Servicing: Alfa Romeo, Audi, Opel, VW

*Universal.*


Voltage: 12

Light: w/o

**160300** Cigarette Lighter

*Universal.*


Voltage: 12

Light: w/

## SOCKETS

**160409** Lighter Socket

*Universal.*

 Voltage: 12-24  
Amp: 20

 Light: w/o  
Cap: w/  
Resistor: w/o

**180038** DIN Socket

*Standard DIN.*

 ID/mount. hole:  
18.5 mm

 Material: Nickel plated brass  
No./mounting holes: 1  
Cap: w/  
Male/female: Female  
DIN norm: 72591  
ISO norm: 4165

**180115** DIN Socket

*Universal.*

 Dist. mount. holes:  
46 mm

 Material: Cast aluminum  
No./mounting holes: 2  
No./poles: 2  
Male/female: Female  
DIN norm: 72591  
ISO norm: 4165

**180315** DIN Socket

*Universal. Fits HC-CARGO 180629.*

 Dist. mount. holes:  
46 mm

 Material: Plastic  
No./mounting holes: 2  
No./poles: 2  
Male/female: Female

**180354** Coupling Socket

*DIN - coupling socket extension connector, universal. Standard*



No./poles: 1  
Male/female: Female

**180376** DIN Socket

Servicing: HC-CARGO 170292, 170387, 170405, 170788, 170406, 170562, 170789, 170537, 171576, 170419, 170460

*Also used in sockets for beacons.*



ID/mount. hole:  
18.5 mm

Material: Brass  
No./poles: 1  
Male/female: Female  
DIN norm: 72591

**180377** DIN Socket

*Also used in sockets for beacons.*



ID/mount. hole:  
18.5 mm

Material: Brass  
No./poles: 2  
Male/female: Female  
DIN norm: 72591

**181275** DIN Socket


ID/mount. hole:  
18.5 mm

No./poles: 2  
Cap: w/  
Male/female: Female  
DIN norm: 72591  
ISO norm: 4165

**181548** Twin Socket Cigar Adapter

*w/ 60 cm cable.*



Voltage: 12  
Amp: 15

**181549** Twin Socket Cigar Adapter


Voltage: 12  
Amp: 15

**181550** Twin Socket Cigar Adapter

*w/ 2 USB plugs. Cable length: 650 mm.*



Voltage: 12-24  
Amp: 10

**181575 Socket**

Universal. w/ 30 cm cable 0.8 mm<sup>2</sup>.


**181601 USB Adapter**

2 horizontally built-in ports, charging two USB devices simultaneously.



Voltage: 12-24  
Amp: 3

Material: PVC

**181616 DIN Socket**

300 mm cable.



Voltage: 6-24  
Amp: 16

Cable dim.: 2x2.5 mm<sup>2</sup>  
Mount. hole dia.:  
18.4 mm  
Temp.: -40 - +105 °C  
Connection: Cable

Mount.: Screw  
Colour: Black  
Material: Shockproof plastic  
No./poles: 2  
Male/female: Female  
ISO norm: 4165  
Protection degree: IP 67

**181631 USB Adapter**

2 horizontally built-in ports, charging two USB devices simultaneously.



Voltage: 12-24  
Amp: 2.1

Colour: White/black  
Material: Polycarbonate

## PLUGS

**180113 DIN Plug**

Universal. Fits HC-CARGO 180115.



Material: Plastic  
No./poles: 2  
Male/female: Male  
DIN norm: 72591  
ISO norm: 4165

**180230 DIN Plug**

Universal plug suitable for all cigarette lighter sockets. Also suitable for standard DIN socket.



Voltage: 12/24  
Amp: <8

Material: Plastic  
No./poles: 2  
Male/female: Male  
ISO norm: 4165

**180287 DIN Plug**

Universal plug suitable for all cigarette lighter sockets. Also suitable for standard DIN socket. w/ built-in 8 A fuse.



Voltage: 12/24

Material: Plastic  
No./poles: 2  
Male/female: Male  
ISO norm: 4165

**180399 DIN Plug**
*Universal. Fits HC-CARGO 180315.*


Voltage: 12/24

 Material: Plastic  
 No./poles: 2  
 Male/female: Male

**181629 DIN Plug**
*Universal. Fits HC-CARGO 180315.*


Voltage: 12-24

 Material: Plastic  
 No./poles: 2  
 Male/female: Male

**ACCESSORIES**
**171518 Coiled Cable**

Servicing: HC-CARGO 170292, 170387, 170405, 170788, 170406, 170562, 170789, 170537, 171576, 170419, 170460



Working length: 2 m

 Plug type: Cigar plug  
 Plug: 2  
 ISO norm: 4165

**171562 Coiled Cable**

Servicing: HC-CARGO 171763, 171764, 171494, 171495, 171496



Working length: 3 m

Plug type: Cigar plug

**181579 Plug and Socket**

Servicing: HC-CARGO 181629, 180315



Voltage: 12-24

 Material: Plastic  
 No./mounting holes: 2  
 No./poles: 2

**181602 USB Charging Kit**

Servicing: HC-CARGO 181601, 181550, 181631

*Plug 1: Nokia N70/628/6300/N95. Plug 2: Sony PSP. Plug 3: I-Phone. Plug 4: Nokia 8600/6500C. Plug 5: Nintendo DS Lite. Plug 6: Motorola, Android. Plug 7: Samsung Trace/E900.*


Material: PVC

**ADAPTERS - 12/24 V**
**7-7 PIN**
**180201 Trailer Adapter**


Voltage: 12-24

 Plug type: 24N, 12N  
 Plug 1: 7  
 Plug 2: 7  
 ISO norm 1: 1724  
 ISO norm 2: 1185

**ADAPTERS 12 V**
**2-2 PIN**
**181622** Splitter Cable

Servicing: HC-CARGO 181617



Voltage: 12

 Cable dim.: 2x1 mm<sup>2</sup>  
 Length: 0.25 m

 Plug 1: 2  
 Plug 2: 2

**7-8 PIN**
**181618** Trailer Adapter

Servicing: HC-CARGO 181617



Voltage: 12

 Cable dim.: 6x1 mm<sup>2</sup>  
 Length: 8.5 m

 Plug type: 12N, Bayonet  
 Colour: Black  
 Material: ABS plastic  
 Plug 1: 7  
 Plug 2: 8  
 ISO norm: 1724

**181619** Trailer Adapter

Servicing: HC-CARGO 181617



Voltage: 12

 Cable dim.: 6x1 mm<sup>2</sup>  
 Length: 11 m

 Plug type: 12N, Bayonet  
 Colour: Black  
 Material: ABS plastic  
 Plug 1: 7  
 Plug 2: 8  
 ISO norm: 1724

**181620** Trailer Adapter

Servicing: HC-CARGO 181617



Voltage: 12

 Cable dim.: 6x1 mm<sup>2</sup>  
 Length: 14 m

 Plug type: 12N, Bayonet  
 Colour: Black  
 Material: ABS plastic  
 Plug 1: 7  
 Plug 2: 8  
 ISO norm: 1724

**181621** Socket with cable

Servicing: HC-CARGO 181617



Voltage: 12

 Cable dim.: 4x1 mm<sup>2</sup>  
 Length: 2 m

 Plug type: 12N, 4 pin Power Seal  
 Colour: Black  
 Material: ABS plastic  
 Plug 1: 7  
 Plug 2: 4  
 ISO norm: 1724

**7-13 PIN**
**180221** Trailer Adapter

Voltage: 12

Cable length: 1 m

 Plug 1: 7  
 Plug 2: 13  
 Cable: w/  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**181461** Trailer Adapter

Servicing: Hobby and Hymer caravans

Connect pos. 2/54 on 7-pin to pos. 9 and 10 on 13-pin. (continuous power supply) and connect 3/31 on 7-pin to pos. 3.11 and 13 on 13-pin.



Voltage: 12

 Plug 1: 7  
 Plug 2: 13  
 ISO norm 1: 1724  
 ISO norm 2: 11446

**13-7 PIN**
**180157** DIN Socket

 ID/mount. hole:  
18.5 mm

 Material: Nickel plated brass  
 No./poles: 2  
 Cap: w/  
 Male/female: Female  
 DIN norm: 72591  
 ISO norm: 4165

**180213** Trailer Adapter


Voltage: 12

Cable length: 0.8 mm

 Plug 1: 13  
 Plug 2: 7  
 Cable: w/  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**180298** Trailer Adapter


Voltage: 12

 Plug 1: 13  
 Plug 2: 7  
 Cable: w/  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**180305** Trailer Adapter


Voltage: 12

 Plug 1: 13  
 Plug 2: 7  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**180332** Trailer Adapter


Voltage: 12

 Plug type: Multicon  
 Plug 1: 13  
 Plug 2: 7-13  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**180373** Trailer Adapter


Voltage: 12

Cable length: 0.1 mm

 Plug 1: 7  
 Plug 2: 13  
 Cable: w/  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**180574** Trailer Adapter


Voltage: 12

Cable length: 0.3 mm

 Plug type: 12N/12S  
 Plug 1: 13  
 Plug 2: 7  
 Cable: w/  
 ISO norm 1: 11446  
 ISO norm 2: 1724



**180606 Trailer Adapter**
*Extremely compact.*


Voltage: 12

 Plug 1: 13  
 Plug 2: 7  
 ISO norm 1: 11446  
 ISO norm 2: 1724

**181669 UK short adapter**

Servicing: UK



Voltage: 12

 Plug 1: 13  
 Plug 2: 2x7  
 Cable: w/o  
 ISO norm 1: 11446  
 ISO norm 2: 1724  
 ISO norm 3: 3732

**DISTRIBUTOR BOX**
**181617 Distribution Box**

 Dim.: 160x60x120 mm  
 Input: 8 pin  
 Outlet: 6x4 pin + 2x3 pin

Protection degree: IP 54

**TRAILER SOCKETS - 12 V**
**3 PIN**
**180306 Socket**

 Voltage: 12  
 Amp: 5/25/25

Connection: Terminal

 Colour: Black  
 Material: Plastic  
 No./poles: 3  
 Male/female: Female

**180307 Socket**

 Voltage: 12  
 Amp: 5/25/25

Connection: Terminal

 Colour: Black  
 Material: Plastic  
 No./poles: 3  
 Male/female: Female  
 DIN norm: 9680

**7 PIN**
**180110 Trailer Socket**

Servicing: HC-CARGO 180107, 180108, 180147, 181547



Voltage: 12

Connection: Screw

 Plug type: 12N  
 Colour: Black  
 Material: Shock thermo plastic  
 No./poles: 7  
 Male/female: Female  
 DIN norm: 72577  
 ISO norm: 1724

**180150 Coupling Socket**

Servicing: HC-CARGO 180110, 180218, 180293, 181485



Voltage: 12

Connection: Screw

 Plug type: 12N  
 Colour: Black  
 Material: Shock thermo plastic  
 No./poles: 7  
 Male/female: Female  
 DIN norm: 72579  
 ISO norm: 1724

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>180218 Trailer Socket</b> Servicing: HC-CARGO 180107, 180108, 180147, 181547			
	Voltage: 12	Connection: Screw	Plug type: 12N Colour: Black Material: Cast aluminum No./poles: 7 Male/female: Female DIN norm: 72577 ISO norm: 1724
<b>180239 Trailer Socket</b> Servicing: HC-CARGO 180238			
<i>w/ changed central contact 7/58L. w/ grey cap.</i>			
	Voltage: 12	Connection: Screw	Plug type: 12S Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female ISO norm: 3732
<b>180293 Trailer Socket</b> Servicing: HC-CARGO 180107, 180108, 180147, 181547			
	Voltage: 12	Connection: Terminal	Plug type: 12N Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female DIN norm: 72577 ISO norm: 1724
<b>180620 Coupling Socket</b> Servicing: HC-CARGO 180239			
<i>w/ changed 7/58L contact.</i>			
	Voltage: 12	Connection: Cable	Plug type: 12S Colour: Grey Material: Shock thermo plastic No./poles: 7 Male/female: Female
<b>181485 Trailer Socket</b> Servicing: HC-CARGO 180107, 180108, 180147, 181547			
<i>w/ rear fog light cut-off.</i>			
	Voltage: 12	Connection: Screw	Plug type: 12N Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female DIN norm: 72577 ISO norm: 1724
<b>181604 Trailer Socket</b> Servicing: HC-CARGO 180107, 180108, 180147, 181547			
<i>Micro and mechanical switch.</i>			
	Voltage: 12 Amp: 6	Connection: Screw	Plug type: 12N Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female DIN norm: 72577 ISO norm: 1724
<b>13 PIN</b>			
<b>180214 Trailer Socket 13-Pol</b> Servicing: HC-CARGO 180212			
<i>Trailer socket kit: HC-CARGO 180405.</i>			
	Voltage: 12	Connection: Screw	Colour: Black Locking device: Bayonet Material: Nickel plated brass No./poles: 13 Male/female: Female DIN norm: 72570 ISO norm: 11446 Protection degree: Splash proof

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>181274 Trailer Socket</b> Servicing: HC-CARGO 180212			
<i>w/ micro switch, that switch over the rear fog lamps from car to trailer. Trailer socket kit: HC-CARGO 180405 .</i>			
	Voltage: 12	Connection: Screw	Colour: Black Locking device: Bayonet Material: Nickel plated brass No./poles: 13 Male/female: Female DIN norm: 72570 ISO norm: 11446 Protection degree: Splash proof
<b>181576 Coupling Socket</b>			
	Voltage: 12	Connection: Screw	Colour: Black Material: Shockproof plastic No./poles: 13 Male/female: Female ISO norm: 11446
<b>13-7 PIN</b>			
<b>180329 Trailer Socket</b> Servicing: HC-CARGO 180330			
<i>w/ micro switch, that switch over the rear fog lamps from car to trailer.</i>			
	Voltage: 12	Connection: Screw	Plug type: Multicon, Colour: Black Material: Shock thermo plastic No./poles: 7/13 Male/female: Female ISO norm: 1724
<b>TRAILER SOCKETS - 24 V</b>			
<b>3 PIN</b>			
<b>180402 Trailer Socket</b>			
	Voltage: 6/24	Connection: Screw	Colour: Black Material: Shock thermo plastic No./poles: 3 Male/female: Female
<b>7 PIN</b>			
<b>180112 Trailer Socket</b> Servicing: HC-CARGO 180296, 180351, 180111, 180154			
	Voltage: 24	Connection: Terminal	Plug type: 24N, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female DIN norm: 72579 ISO norm: 1185
<b>180153 Trailer Socket</b> Servicing: HC-CARGO 180296, 180351, 180111, 180154			
	Voltage: 24	Connection: Screw	Plug type: 24N, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female DIN norm: 72579 ISO norm: 1185

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>180219 Trailer Socket</b> Servicing: HC-CARGO 180296, 180351, 180111, 180154			
	Voltage: 24	Connection: Screw	Plug type: 24N, Europe Material: Cast aluminum No./poles: 7 Male/female: Female DIN norm: 72579 ISO norm: 1185
<b>180240 Trailer Socket</b> Servicing: HC-CARGO 180568, 180610, 180624			
<i>w/ changed 1/31 contact. w/ grey cap.</i>			
	Voltage: 24	Connection: Screw	Plug type: 24S, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female ISO norm: 3731
<b>180296 Trailer Socket</b> Servicing: HC-CARGO 180112, 180153, 180219, 180607, 180297			
	Voltage: 24	Connection: Terminal	Plug type: 24N, Europe Material: Cast aluminum No./poles: 7 Male/female: Female DIN norm: 72579 ISO norm: 1185
<b>180351 Trailer Socket</b> Servicing: HC-CARGO 180112, 180153, 180219, 180607, 180297			
<i>16x flat tongue.</i>			
	Voltage: 24	Connection: Terminal	Plug type: 24N, Europe Material: Cast aluminum No./poles: 7 Male/female: Female DIN norm: 72579 ISO norm: 1185
<b>180568 Trailer Socket</b> Servicing: HC-CARGO 180240, 180569, 180608, 180241			
<i>w/ changed 1/31 contact. w/ grey cap.</i>			
	Voltage: 24	Connection: Terminal	Plug type: 24S, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female ISO norm: 3731
<b>180569 Trailer Socket</b> Servicing: HC-CARGO 180568, 180610, 180624			
<i>w/ changed 1/31 contact. w/ grey cap.</i>			
	Voltage: 24	Connection: Terminal	Plug type: 24S, Europe Material: Cast aluminum No./poles: 7 Male/female: Female ISO norm: 3731
<b>180571 EBS Socket</b>			
<i>w/ ejector device for correct plug/socket connection. Incl. pins 3x1.5+2x4 mm<sup>2</sup>.</i>			
	Voltage: 24	Connection: Terminal	Plug type: EBS No./poles: 7 Male/female: Female DIN norm: 74001 ISO norm: 7638

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>180607 Trailer Socket</b>			
Servicing: HC-CARGO 180296, 180351, 180111, 180154			
	Voltage: 24	Connection: Terminal	Plug type: 24N, Europe No./poles: 7 Male/female: Female DIN norm: 72579 ISO norm: 1185 Protection degree: IP 54 ADR-approved: Yes
<b>180608 Trailer Socket</b>			
Servicing: HC-CARGO 180568, 180610, 180624			
<i>w/ changed 1/31 contact. w/ grey cap.</i>			
	Voltage: 24	Connection: Terminal	Plug type: 24S, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Female ISO norm: 3731 Protection degree: IP 54 ADR-approved: Yes
<b>181470 EBS Socket</b>			
<i>Screw connection w/ wirecolour indication.</i>			
	Voltage: 24		Plug type: EBS Locking device: Metal bracket No./poles: 7 Male/female: Female ISO norm: 7638
<b>181471 EBS Socket</b>			
<i>Screw connection w/wire colour indication. Angled.</i>			
	Voltage: 24		Plug type: EBS Locking device: Bayonet No./poles: 7 ISO norm: 7638
<b>13 PIN</b>			
<b>180253 EBS Socket</b>			
<i>Incl. pins 12x1+1x2.5 mm<sup>2</sup>. Weather proof.</i>			
	Voltage: 24		Plug type: EBS No./poles: 13 Male/female: Female DIN norm: 74001 ISO norm: 12098 ADR-approved: Yes GGVS approval: Yes
<b>ACCESSORIES</b>			
<b>180611 Terminal Coupling</b>			
Servicing: HC-CARGO 180112, 180569, 180607, 180608, 180241, 180297			
<i>For trailer sockets.</i>			
	Voltage: 24		Plug type: Europe Colour: White No./poles: 7 Male/female: Multiplug

**TRAILER SOCKETS - 6/24 V**
**4 PIN**
**180404** Trailer Socket


Voltage: 6-24

Connection: Screw

 Colour: Black  
 Material: Shock thermo plastic  
 No./poles: 4  
 Male/female: Female  
 DIN norm: 72575

**TRAILER PLUGS - 12 V**
**3 PIN**
**180308** Plug

 Voltage: 12  
 Amp: 5/25/25

Connection: Terminal

 Colour: Black  
 Material: Plastic  
 No./poles: 3  
 Male/female: Male  
 DIN norm: 9680

**7 PIN**
**180107** Trailer Plug

Servicing: HC-CARGO 180110, 180218, 180293, 181485



Voltage: 12

Connection: Screw

 Plug type: 12N  
 Material: Cast aluminum  
 No./poles: 7  
 Male/female: Male  
 DIN norm: 72577  
 ISO norm: 1724

**180108** Trailer Plug

Servicing: HC-CARGO 180110, 180218, 180293, 181485



Voltage: 12

Connection: Screw

 Plug type: 12N  
 Colour: Black  
 Material: Shock thermo plastic  
 No./poles: 7  
 Male/female: Male  
 DIN norm: 72577  
 ISO norm: 1724

**180147** Trailer Plug

Servicing: HC-CARGO 180110, 180218, 180293, 181485



Voltage: 12

Connection: Screw

 Plug type: 12N  
 Mount.: Snap-on  
 Colour: Black  
 Material: Shock thermo plastic w/  
 snap-on session  
 No./poles: 7  
 Male/female: Male  
 DIN norm: 72577  
 ISO norm: 1724

**180238** Trailer Plug

Servicing: HC-CARGO 180239

w/ changed 7/58L contact.






Voltage: 12

Connection: Screw

 Plug type: 12S  
 Colour: Grey  
 Material: Shock thermo plastic  
 No./poles: 7  
 Male/female: Male  
 ISO norm: 3732

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>181547 Trailer Plug</b> Servicing: HC-CARGO 180110, 180218, 180293, 181485			
<i>w/ rubber grommet for 1 cable. Grommet for 2 cables: HC-CARGO 181581.</i>			
	Voltage: 12	Connection: Terminal	Plug type: 12N Colour: Black Material: Plastic No./poles: 7 Male/female: Male DIN norm: 72577 ISO norm: 1724
<b>13 PIN</b>			
<b>180212 Trailer Plug</b> Servicing: HC-CARGO 180214, 181274			
<i>Nickel plated brass pins.</i>			
	Voltage: 12	Connection: Screw	Colour: Black Locking device: Bayonet Material: Shock thermo plastic No./poles: 13 Male/female: Male DIN norm: 72570 ISO norm: 11446 Protection degree: Splash proof
<b>13-7 PIN</b>			
<b>180330 Trailer Plug</b> Servicing: HC-CARGO 180329			
<i>+ 6 contacts.</i>			
	Voltage: 12	Connection: Screw	Plug type: Multicon Colour: Black Material: Shock thermo plastic No./poles: 7-13 Male/female: Male ISO norm: 1724
<b>TRAILER PLUGS - 24 V</b>			
<b>7 PIN</b>			
<b>180111 Trailer Plug</b> Servicing: HC-CARGO 180112, 180153, 180219, 180607, 180297			
	Voltage: 24	Connection: Terminal	Plug type: 24N, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Male DIN norm: 72579 ISO norm: 1185
<b>180154 Trailer Plug</b> Servicing: HC-CARGO 180112, 180153, 180219, 180607, 180297			
	Voltage: 24	Connection: Screw	Plug type: 24N, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Male DIN norm: 72579 ISO norm: 1185
<b>180220 Trailer Plug</b>			
	Voltage: 24	Connection: Screw	Plug type: 24N, Europe Material: Cast aluminum No./poles: 7 Male/female: Male DIN norm: 72579 ISO norm: 1185

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>180241 Trailer Plug</b> Servicing: HC-CARGO 180568, 180610, 180624			
<i>w/ changed 1/31 contact. w/ grey plastic interior.</i>			
	Voltage: 24	Connection: Screw	Plug type: 24S, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Male ISO norm: 3731
<b>180297 Trailer Plug</b> Servicing: HC-CARGO 180296, 180351, 180111, 180154			
	Voltage: 24	Connection: Terminal	Plug type: 24N, Europe Material: Cast aluminum No./poles: 7 Male/female: Male DIN norm: 72579 ISO norm: 1185
<b>180570 EBS Plug</b>			
<i>Incl. pins 5x1.5+2x4 mm<sup>2</sup>. w/ locking device.</i>			
	Voltage: 24	Connection: Terminal	Plug type: EBS Locking device: Metal bracket No./poles: 7 Male/female: Male DIN norm: 40050 ISO norm: 7638 Protection degree: Waterproof
<b>180610 Trailer Plug</b> Servicing: HC-CARGO 180240, 180569, 180608, 180241			
<i>w/ changed 1/31 contact. w/ grey plastic interior.</i>			
	Voltage: 24	Connection: Screw	Plug type: 24S, Europe Colour: Black Material: Shock thermo plastic No./poles: 7 Male/female: Male ISO norm: 3731 Protection degree: IP 54 ADR-approved: Yes
<b>180624 Trailer Plug</b> Servicing: HC-CARGO 180240, 180569, 180608, 180241			
<i>w/ changed 1/31 contact. w/ grey plastic interior.</i>			
	Voltage: 24	Connection: Screw	Plug type: 24S, Europe Material: Cast aluminum No./poles: 7 Male/female: Male ISO norm: 3731
<b>181469 EBS Plug</b>			
<i>Screw connection w/ wirecolour indication.</i>			
	Voltage: 24	Connection: Terminal	Plug type: EBS Locking device: Metal bracket No./poles: 7 Male/female: Male ISO norm: 7638 Protection degree: Waterproof
<b>13 PIN</b>			
<b>180252 EBS Plug</b>			
<i>Incl. pins 12x1+1x2.5 mm<sup>2</sup>. Weather proof.</i>			
	Voltage: 24	Connection: Terminal	Plug type: EBS No./poles: 13 Male/female: Male DIN norm: 40050 ISO norm: 7638 ADR-approved: Yes GGVS approval: Yes



**ACCESSORIES**
**180612 Terminal Coupling**

Servicing: HC-CARGO 180296, 180351, 180568, 180111, 180609



Voltage: 24

 Plug type: Europe  
 Colour: Red  
 No./poles: 7

**TRAILER PLUGS - 6/24 V**
**3 PIN**
**180401 Plug**


Voltage: 6-24

Connection: Screw

 Colour: Black  
 Material: Shock thermo plastic  
 No./poles: 3  
 Male/female: Male  
 DIN norm: 9680

**4 PIN**
**180403 Plug**


Voltage: 6-24

Connection: Screw

 Colour: Black  
 Material: Shock thermo plastic  
 No./poles: 4  
 Male/female: Male  
 DIN norm: 72575

**VOLTAGE CONVERTERS**
**160899 Adaptor**

Max. output 220 W. 7-13 pole.


 Voltage/in: 24  
 Voltage/out: 12  
 Watt/out: 6x70

Type: Switch mode

**160900 Trailer Light Converter Adapter**

Max. output 220 W. 7-7 pole.


 Voltage/in: 24  
 Voltage/out: 12  
 Watt/out: 6x70

Type: Switch mode

**CABLE KITS 12 V**
**7 PIN**
**180001 Trailer Cable Kit**


Voltage: 12

Length: 1.4 m

 Cable type: Single core w/ flex  
 Socket type: 12N  
 Fixing materials: Yes  
 No./poles: 7  
 Gasket: Yes  
 DIN norm: 72577  
 ISO norm: 1724

**180144 Trailer Cable Kit**


Voltage: 12

Length: 1.4 m

 Cable type: Multi core  
 Socket type: 12N  
 Fixing materials: Yes  
 No./poles: 7  
 Gasket: Yes  
 Male/female: Male  
 DIN norm: 72577  
 ISO norm: 1724

**180248 Trailer Cable Kit**


Voltage: 12

Length: 2 m

 Cable type: Multi core  
 Socket type: 12N  
 Fixing materials: Yes  
 No./poles: 7  
 Gasket: Yes  
 Male/female: Male  
 DIN norm: 72577  
 ISO norm: 1724

**13 PIN**
**180405 Trailer Cable Kit**

Servicing: HC-CARGO 180214

*w/ rubber gasket.*


Voltage: 12

Length: 1.8 m

 Cable type: Multi core  
 Fixing materials: Yes  
 No./poles: 13  
 Gasket: Yes  
 DIN norm: 72570  
 ISO norm: 4091

**TRAILER COILS 24 V**
**2 PIN**
**181489 Trailer Coil**


Voltage: 24

 Cable dim.: 2x35 mm<sup>2</sup>  
 Working length: 4 m

 Plug type: Nato plug, Nato plug  
 Colour: Red/black  
 Material: Polyurethan  
 Windings: 35  
 Plug 1: 2  
 Plug 2: 2

**TRAILER COILS 12 V**
**13 PIN**
**181600 Trailer coil w/ 2x13 pin plugs**
*Max extension length: 4.5 m.*


Voltage: 12

Working length: 3 m

 Windings: 17  
 Plug 1: 13  
 Plug 2: 13  
 ISO norm: 11446

**7 PIN**
**180225 Trailer Coil**


Voltage: 12

 Cable dim.: 6x1+1x1.5 mm<sup>2</sup>  
 Working length: 3.5 m

 Plug type: 12N, 24N, Europe  
 Colour: Black  
 Material: Polyurethan  
 Windings: 42  
 Plug 1: 7  
 Plug 2: 7  
 ISO norm: 1724

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>180372</b> Trailer Coil 	Voltage: 12	Cable dim.: 6x1+1x1.5 mm <sup>2</sup> Working length: 3.5 m	Plug type: 12N, 12N Colour: Black Material: Polyurethan Windings: 42 Plug 1: 7 Plug 2: 7 ISO norm: 1724
<b>180613</b> Trailer Coil 	Voltage: 12	Cable dim.: 6x1+1x1.5 mm <sup>2</sup> Working length: 1.5 m	Plug type: 12N, 12N Colour: Black Material: Polyurethan Windings: 15 Plug 1: 7 Plug 2: 7 ISO norm: 1724
<b>181544</b> Extension Cable Coil 	Voltage: 12	Cable dim.: 6x1.5+1x2 mm <sup>2</sup> Working length: 3.5 m	Plug type: 12N, Europe, 12N, Europe Mount.: Screw Colour: Black Material: Shock thermo plastic Windings: 42 Plug 1: 7 Plug 2: 7 DIN norm: 72577 ISO norm: 1724
<b>ACCESSORIES</b>			
<b>180245</b> ABS Sealing Kit 			Socket type: ABS No./poles: 7
<b>181581</b> Rubber Bushing <i>w/ 2 outlets.</i> 	Servicing: HC-CARGO 181547	OD: 6.5 mm	
<b>181583</b> Mounting Bracket <i>For trailer socket.</i> 	Servicing: HC-CARGO 180110, 180218, 180239, 180293, 181485	ID: 40 mm OD: 80 mm Dist. mount. holes: 20 mm Mount hole: 12 mm	No./mounting holes: 2 (0)
<b>181612</b> Rubber Gasket 	Servicing: HC-CARGO 180110, 180218, 180239, 180293, 181485		Colour: Black Material: EPDM rubber

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>181623</b> Cable w/ connector 2P 2m 	Servicing: HC-CARGO 181617 Voltage: 12	Cable dim.: 2x1 mm <sup>2</sup> Length: 2 m	Plug type: 2 pin Power Seal Plug: 2
<b>181624</b> Cable w/ connector 2P 3.56m 	Servicing: HC-CARGO 181617 Voltage: 12	Cable dim.: 2x1 mm <sup>2</sup> Length: 3.56 m	Plug type: 2 pin Power Seal Plug: 2
<b>181625</b> Cable w/ connector 4P 2.3 m 	Servicing: HC-CARGO 181617 Voltage: 12	Cable dim.: 4x1 mm <sup>2</sup> Length: 2.3 m	Plug type: 4 pin Power Seal Plug: 4
<b>181626</b> Cable w/ connector 4P 4.06 m 	Servicing: HC-CARGO 181617 Voltage: 12	Cable dim.: 4x1 mm <sup>2</sup> Length: 4.06 m	Plug type: 4 pin Power Seal Plug: 4
<b>181627</b> Bayonet connector 	Servicing: HC-CARGO 181617 Voltage: 12	Cable dim.: 8x1.5-2.5 mm <sup>2</sup>	Mount.: Terminal Locking device: Bayonet No./poles: 8 DIN norm: 72580
<b>181628</b> Rubber Gasket 	Servicing: HC-CARGO 180110, 180218, 180239, 180293, 181485		Colour: Black Material: EPDM rubber
<b>TRAILER COILS 24 V</b>			
<b>7 PIN</b>			
<b>180194</b> Trailer Coil 	Voltage: 24	Cable dim.: 6x1+1x1.5 mm <sup>2</sup> Working length: 3.5 m	Plug type: 12N, 24N, Europe Colour: Black Material: Nylon Windings: 20 Plug 1: 7 Plug 2: 7 ISO norm: 1185 ISO norm 2: 1724

**180195 Trailer Coil**
*Aluminium plug.*


Voltage: 24

 Cable dim.:  
6x1+1x1.5 mm<sup>2</sup>  
Working length: 3.5 m

 Plug type: 24N, Europe, 24N, Europe  
 Colour: Black  
 Material: Nylon  
 Windings: 20  
 Plug 1: 7  
 Plug 2: 7  
 DIN norm: 72579  
 ISO norm: 1185

**180196 Trailer Coil**


Voltage: 24

 Cable dim.:  
6x1+1x1.5 mm<sup>2</sup>  
Working length: 3.5 m

 Plug type: 24N, Europe, 24N, Europe  
 Colour: Black  
 Material: Nylon  
 Windings: 20  
 Plug 1: 7  
 Plug 2: 7  
 DIN norm: 72579  
 ISO norm: 1185

**180226 Trailer Coil**


Voltage: 24

 Cable dim.:  
6x1+1x1.5 mm<sup>2</sup>  
Working length: 3.5 m

 Plug type: 24N, Europe, 24N, Europe  
 Colour: Black  
 Material: Polyurethan  
 Windings: 42  
 Plug 1: 7  
 Plug 2: 7  
 ISO norm: 1185

**180227 Trailer Coil**
*Aluminium plug.*


Voltage: 24

 Cable dim.:  
6x1+1x1.5 mm<sup>2</sup>  
Working length: 3.5 m

 Plug type: 24N, Europe, 24N, Europe  
 Colour: Black  
 Material: Polyurethan  
 Windings: 42  
 Plug 1: 7  
 Plug 2: 7  
 ISO norm: 1185

**180228 Trailer Coil**


Voltage: 24

 Cable dim.:  
6x1+1x1.5 mm<sup>2</sup>  
Working length: 3.5 m

 Plug type: 24N, Europe, 24N, Europe  
 Mount.: Moulded  
 Colour: Black  
 Material: Polyurethan  
 Windings: 42  
 Plug 1: 7  
 Plug 2: 7  
 ISO norm: 1185

**180316 Trailer Coil**


Voltage: 24

 Cable dim.:  
6x1+1x1.5 mm<sup>2</sup>  
Working length: 3.5 m

 Plug type: 24S, Europe, 24S, Europe  
 Colour: Black  
 Material: Polyurethan  
 Windings: 42  
 Plug 1: 7  
 Plug 2: 7  
 ISO norm: 3731

**180572 Trailer Coil**


Voltage: 24

 Cable dim.:  
2x4+5x1.5 mm<sup>2</sup>  
Working length: 4 m

 Plug type: EBS, EBS  
 Material: Polyurethan  
 Plug 1: 7  
 Plug 2: 7  
 DIN norm: 74001  
 ISO norm: 7638

## NATO CABLE CONNECTORS

### 180197 Nato Socket

Terminal: HC-CARGO 180560.



Voltage: 24  
Amp: 200

Dim.: 35-50 mm<sup>2</sup>  
Dist. mount. holes:  
82.5/47.6 mm  
Connection: Solder/  
crimp

No./mounting holes: 4  
No./poles: 2  
Male/female: Female  
Approvals: VG 96917

### 180198 Nato Plug

Servicing: HC-CARGO 193002



Voltage: 24  
Amp: 200

Dim.: 50 mm<sup>2</sup>  
Connection: Solder/  
crimp

No./poles: 2  
Male/female: Male  
Approvals: VG 96917

### 180325 Nato Plug

w/ screw device.



Voltage: 24  
Amp: 200

Dim.: 50 mm<sup>2</sup>  
Connection: Solder/  
crimp

Material: Metal/Rubber  
No./poles: 2  
Male/female: Male

### 180349 Nato Socket

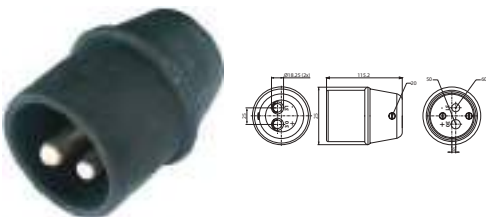


Voltage: 24  
Amp: 250

Dim.: 70 mm<sup>2</sup>  
Dist. mount. holes:  
85/60 mm  
Connection: 10 mm  
ring terminals

No./mounting holes: 4  
No./poles: 2  
Male/female: Female

### 180350 Nato Plug



Voltage: 24  
Amp: 250

Dim.: 70 mm<sup>2</sup>  
Connection: Soldering

No./poles: 2  
Male/female: Male

### 181563 Nato Plug

Servicing: HC-CARGO 180197



Voltage: 24  
Amp: 200

Dim.: 50 mm<sup>2</sup>  
Connection: Solder/  
crimp

No./poles: 2  
Male/female: Male

### 181611 Nato Plug

Servicing: HC-CARGO 180197

Terminal: HC-CARGO 180561.



Voltage: 24  
Amp: Max 300

Dim.: 35 mm<sup>2</sup>  
Connection: Solder/  
crimp

Material: Aluminium  
No./poles: 2  
Male/female: Male  
Approvals: VG 96917

**181630** Nato Socket

Terminal: HC-CARGO 180560.



Voltage: 24

Dim.: 35-50 mm<sup>2</sup>

Colour: Yellow/black  
No./mounting holes: 4  
No./poles: 2  
Male/female: Female  
Approvals: VG 96917

**193002** Nato Socket 2-pin

Terminal: HC-CARGO 180561.



Voltage: 24

Dim.: 35 mm<sup>2</sup>  
ID/mount. hole: 6 mm  
Dist. mount. holes:  
82x49 mm  
Connection: Soldering

Colour: Black  
Material: Plastic  
No./mounting holes: 4  
No./poles: 2  
Cap: w/  
Male/female: Female  
Approvals: VG 96917

Servicing: HC-CARGO 180198

**SPARE PARTS**

**180560** Terminal

Long.



Servicing: HC-CARGO 180197, 181630

Plug length: 67.2 mm  
Cable size: 35-50 mm<sup>2</sup>

Gender: Female

**180561** Terminal



Servicing: HC-CARGO 181611

Plug length: 42 mm  
Cable size: 35 mm<sup>2</sup>

Gender: Male

**181670** Terminal



Servicing: HC-CARGO 180198, 180325, 181563

Plug length: 42 mm  
Cable size: 50 mm<sup>2</sup>

Gender: Male

**ACCESSORIES**

**180199** Nato Coupling



Voltage: 24  
Amp: 200

Dim.: 35-50 mm<sup>2</sup>

No./poles: 2  
Approvals: VG 96917

**181671** Rubber Gasket




Servicing: HC-CARGO 180197, 181630, 193002

Colour: Black  
Material: EPDM rubber

## CIRCUIT BREAKERS


### ATO BLADE FUSE TYPE

	HC-CARGO	Ampere	Voltage	Type	
	192936	5	0-28	ATO	Manual reset.
	192937	7.5	0-28	ATO	Manual reset.
	192938	10	0-28	ATO	Manual reset.
	192939	15	0-28	ATO	Manual reset.
	192940	20	0-28	ATO	Manual reset.
	192941	25	0-28	ATO	Manual reset.

### PANEL MOUNT TYPE


**192959** Circuit Breaker Servicing: Motors, transformers, battery chargers, machinery, extra low voltage systems

Circuit breaker w/ thread neck for panel mounting. Mounting hole 9.6 mm.

	Voltage: Multi Amp: 5	Length: 79.4 mm	Type: Thermo contact Plug type: Flat
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**192960** Circuit Breaker Servicing: Motors, transformers, battery chargers, machinery, extra low voltage systems

Circuit breaker w/ thread neck for panel mounting. Mounting hole 9.6 mm.

	Voltage: Multi Amp: 7	Length: 79.4 mm	Type: Thermo contact Plug type: Flat
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**192961** Circuit Breaker Servicing: Motors, transformers, battery chargers, machinery, extra low voltage systems

Circuit breaker w/ thread neck for panel mounting. Mounting hole 9.6 mm.

	Voltage: Multi Amp: 10	Length: 79.4 mm	Type: Thermo contact Plug type: Flat
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**192962** Circuit Breaker Servicing: Motors, transformers, battery chargers, machinery, extra low voltage systems

Circuit breaker w/ thread neck for panel mounting. Mounting hole 9.6 mm.

	Voltage: Multi Amp: 15	Length: 79.4 mm	Type: Thermo contact Plug type: Flat
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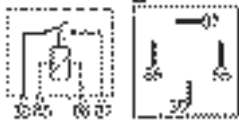
**192963** Circuit Breaker Servicing: Motors, transformers, battery chargers, machinery, extra low voltage systems

Circuit breaker w/ thread neck for panel mounting. Mounting hole 9.6 mm.

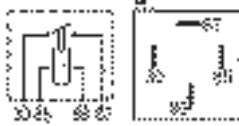
	Voltage: Multi Amp: 20	Length: 79.4 mm	Type: Thermo contact Plug type: Flat
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EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>192964</b> Circuit Breaker Servicing: Motors, transformers, battery chargers, machinery, extra low voltage systems		
<i>Circuit breaker w/ thread neck for panel mounting. Mounting hole 9.6 mm.</i>		
	Voltage: Multi Amp: 25	Length: 79.4 mm  Type: Thermo contact Plug type: Flat
<b>ACCESSORIES</b>		
<b>192965</b> Splash Proof Cover Servicing: HC-CARGO 192959, 192964		
		Colour: Black
<b>192972</b> Blue Cover Servicing: HC-CARGO 192966, 192971		
<i>For circiut breaker.</i>		
		Colour: Blue
<b>192973</b> Black Cover Servicing: HC-CARGO 192966, 192971		
<i>For circiut breaker.</i>		
		Colour: Black
<b>192974</b> Green Cover Servicing: HC-CARGO 192966, 192971		
<i>For circiut breaker.</i>		
		Colour: Green
<b>RELAYS</b>		
<b>WORK RELAYS</b>		
<b>MINI - 6 V</b>		
<b>160652</b> Mini Relay		
	Voltage: 6 Amp: 20	Terminals: 4 Bracket: w/

**MINI - 12 V**
**160080 Mini Relay**

 Voltage: 12  
Amp: 30

 Terminals: 4  
Bracket: w/

**160083 Mini Relay**


Servicing: BMW

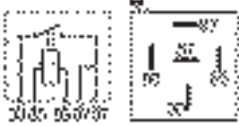
 Voltage: 12  
Amp: 30

 Terminals: 4  
Bracket: w/

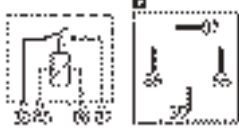
**160155 Mini Relay**

 Voltage: 12  
Amp: 15

 Type/fuse: ATO  
Terminals: 4  
Bracket: w/  
Yes

**160265 Mini Relay**

 Voltage: 12  
Amp: 30

 Terminals: 5  
Bracket: w/

**160282 Mini Relay**


Servicing: 1403010, S115HD24-2, ZGS002, ZGS003, Kia

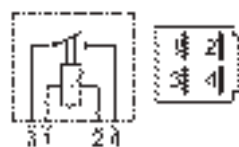
 Voltage: 12  
Amp: 40

 Terminals: 4  
Bracket: w/o

**160311 Mini Relay**

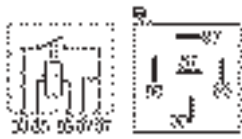
 Voltage: 12  
Amp: 40

 Terminals: 4  
Bracket: w/

**160480 Mini Relay**

 Voltage: 12  
Amp: 30

 Terminals: 4  
Bracket: w/

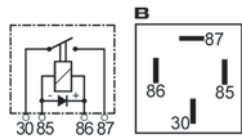
**160903** Mini Relay



Voltage: 12  
Amp: 40

Terminals: 5  
Bracket: w/

**160929** Mini Relay



Voltage: 12  
Amp: 40

Terminals: 4  
Bracket: w/  
Diode: w/

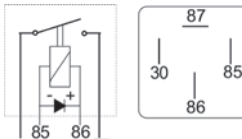
**160945** Mini Relay



Voltage: 12  
Amp: 20

Terminals: 4  
Bracket: w/

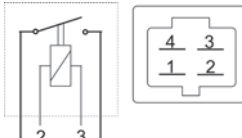
**160982** Mini Relay



Voltage: 12  
Amp: 40

Terminals: 4  
Bracket: w/  
Diode: w/

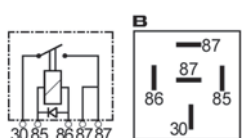
**160983** Mini Relay



Voltage: 12  
Amp: 30

Type: Japanese  
Terminals: 4  
Bracket: w/

**161009** Mini Relay



Voltage: 12  
Amp: 40

Terminals: 5  
Bracket: w/  
Diode: w/

**MINI - 12 V HIGH PERFORMANCE**

**160239** Mini Relay

w/ two 6.3 mm and two 9.5 mm terminals. (terminals 30 and 87).

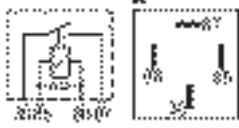


Voltage: 12  
Amp: 70

Type: High performance  
Terminals: 4  
Bracket: w/

**160468 Mini Relay**

w/ two 6.3 mm and two 9.5 mm terminals. (terminals 30 and 87).

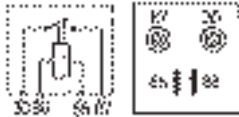


Voltage: 12  
Amp: 70

Type: High performance  
Terminals: 4  
Bracket: w/o  
Resistor: w/

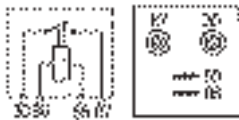
**160477 Mini Relay**

180 A for 15 sec. w/ 2x6.3 mm screws and 2xM6 flat plugs.



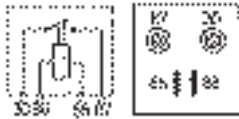
Voltage: 12  
Amp: 100

Type: High performance  
Terminals: 4  
Bracket: w/

**160720 Mini Relay**


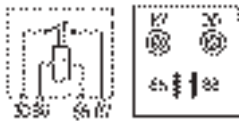
Voltage: 12  
Amp: 120

Type: High performance  
Terminals: 4  
Bracket: w/

**160922 Mini Relay**


Voltage: 12  
Amp: 140

Type: High performance  
Terminals: 4  
Bracket: w/

**160923 Mini Relay**


Voltage: 12  
Amp: 200

Type: High performance  
Terminals: 4  
Bracket: w/

**160931 Mini Relay**

Terminal 85+86=6.3 mm. Terminal 87+30=8 mm.



Voltage: 12  
Amp: 50

Type: High performance  
Terminals: 4  
Bracket: w/

**160940 Mini Relay**

w/ double output.



Voltage: 12  
Amp: 40

Type: High performance  
Terminals: 5  
Bracket: w/

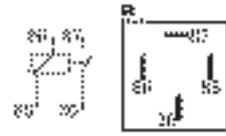
**160941** Mini Relay



Voltage: 12  
Amp: 70

Type: High performance  
Terminals: 4  
Bracket: w/  
Diode: w/

**160946** Mini Relay

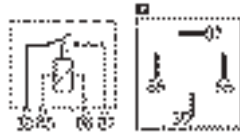


Voltage: 12  
Amp: 100

Type: High performance  
Terminals: 4  
Bracket: w/o

**MINI - 24 V**

**160082** Mini Relay



Voltage: 24  
Amp: 20

Terminals: 4  
Bracket: w/o

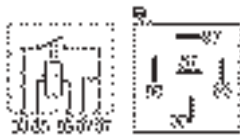
**160215** Mini Relay



Voltage: 24  
Amp: 20

Terminals: 4  
Bracket: w/

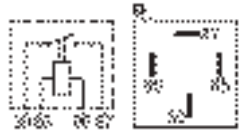
**160266** Mini Relay



Voltage: 24  
Amp: 20

Terminals: 5  
Bracket: w/

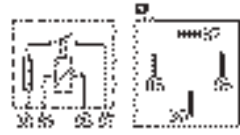
**160307** Mini Relay



Voltage: 24  
Amp: 20

Terminals: 4  
Bracket: w/o

**160473** Mini Relay



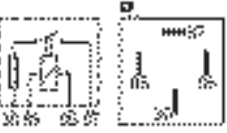
Voltage: 24  
Amp: 30

Type/fuse: ATO  
Terminals: 4  
Bracket: w/  
Yes

**160890 Mini Relay**

 Voltage: 24  
Amp: 20

 Terminals: 4  
Bracket: w/  
Diode: w/

**160926 Mini Relay**

 Voltage: 24  
Amp: 15

 Type/fuse: ATO  
Terminals: 4  
Bracket: w/  
Yes

**160935 Mini Relay**

 Voltage: 24  
Amp: 22

 Terminals: 4  
Bracket: w/  
Resistor: w/

**160936 Mini Relay**
*w/ double output.*

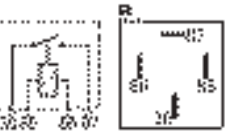
 Voltage: 24  
Amp: 22

 Terminals: 5  
Bracket: w/

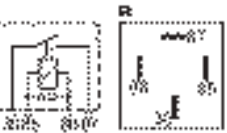
**160947 Mini Relay**

 Voltage: 24  
Amp: 30

 Terminals: 4  
Bracket: w/  
Diode: w/

**MINI - 24 V HIGH PERFORMANCE**
**160240 Mini Relay**
*w/ two 6.3 mm and two 9.5 mm terminals. (terminals 30 and 87).*

 Voltage: 24  
Amp: 40

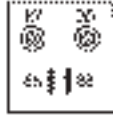
 Type: High performance  
Terminals: 4  
Bracket: w/o

**160272 Mini Relay**
*w/ two 6.3 mm and two 9.5 mm terminals. (terminals 30 and 87).*

 Voltage: 24  
Amp: 70

 Type: High performance  
Terminals: 4  
Bracket: w/o  
Resistor: w/

**160478** Mini Relay

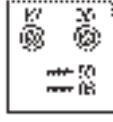
180 A for 15 sec. w/ 2x6.3 mm screws and 2xM6 flat plugs.



Voltage: 24  
Amp: 60

Type: High performance  
Terminals: 4  
Bracket: w/

**160721** Mini Relay



Voltage: 24  
Amp: 100

Type: High performance  
Terminals: 4  
Bracket: w/

**160769** Mini Relay

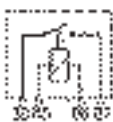
w/ two 6.3 mm and two 9.5 mm terminals. (terminals 30 and 87).



Voltage: 24  
Amp: 70

Type: High performance  
Terminals: 4  
Bracket: w/o

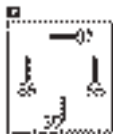
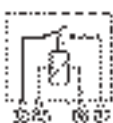
**160937** Mini Relay



Voltage: 24  
Amp: 40

Type: High performance  
Terminals: 4  
Bracket: w/

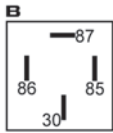
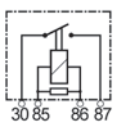
**160975** Mini Relay



Voltage: 24  
Amp: 70

Type: High performance  
Terminals: 4  
Bracket: w/

**160977** Mini Relay



Voltage: 24  
Amp: 50

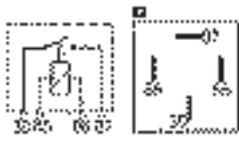
Type: High performance  
Terminals: 4  
Bracket: w/  
Resistor: w/

**160978** Mini Relay

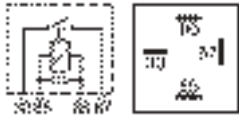


Voltage: 24  
Amp: 40

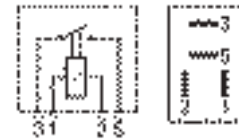
Type: High performance  
Terminals: 4  
Bracket: w/o

**160979 Mini Relay**

 Voltage: 24  
 Amp: 30

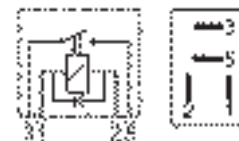
 Type: High performance  
 Terminals: 4  
 Bracket: w/

**161035 Mini Relay**

 Servicing: Scania  
 Voltage: 24  
 Amp: 70

 Type: High performance  
 Terminals: 4  
 Bracket: w/  
 Resistor: w/

**MICRO**
**160363 Micro Relay**

 Voltage: 12  
 Amp: 30

 Terminals: 4  
 Bracket: w/o

**160364 Micro Relay**

 Voltage: 12  
 Amp: 25

 Terminals: 4  
 Bracket: w/o  
 Diode: w/

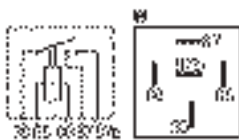
**160918 Micro Relay**

 Voltage: 12  
 Amp: 25

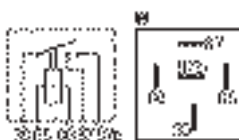
 Terminals: 4  
 Bracket: w/o  
 Resistor: w/

**DOUBLE CONTACT**
**160168 Relay**

Servicing: Mercedes-Benz


 Voltage: 12  
 Amp: 2x20

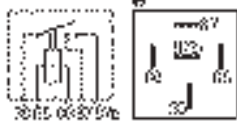
 Terminals: 5  
 Bracket: w/

**160169 Relay**

 Voltage: 24  
 Amp: 2x10

 Terminals: 5  
 Bracket: w/



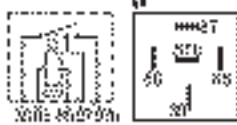
**160902 Relay**



Voltage: 12  
Amp: 2x15

Terminals: 5  
Bracket: w/

**160933 Mini Relay**



Voltage: 12  
Amp: 2x20

Terminals: 5  
Bracket: w/  
Resistor: w/

**160934 Mini Relay**



Voltage: 12  
Amp: 2x20

Terminals: 5  
Bracket: w/  
Diode: w/

**160938 Relay**

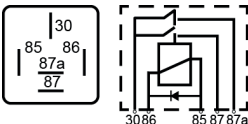
w/ double contact.



Voltage: 24  
Amp: 2x10

Terminals: 5  
Bracket: w/  
Resistor: w/

**160939 Relay**



Voltage: 24  
Amp: 2x10

Terminals: 5  
Bracket: w/  
Diode: w/

**TWIN**

**160267 Twin Relay**

Servicing: VW

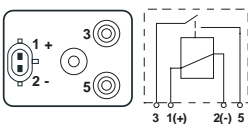


Voltage: 12  
Amp: 2x40

Terminals: 2x4  
Bracket: w/

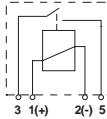
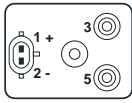
**HIGH PERFORMANCE 12 V**

**160984 Relay**



Voltage: 12  
Amp: 300

Type: High performance  
Terminals: 3  
Bracket: w/

**HIGH PERFORMANCE 24 V**
**160985 Relay**

 Voltage: 24  
Amp: 200

 Type: High performance  
Terminals: 3  
Bracket: w/

**CHANGE OVER - 12 V**
**MICRO**
**160365 Micro Relay**

 Voltage: 12  
Amp: 20/10

 Type: Change Over  
Terminals: 5  
Bracket: w/o

**160366 Micro Relay**

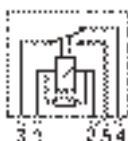
 Voltage: 12  
Amp: 15/25

 Type: Change Over  
Terminals: 5  
Bracket: w/o  
Diode: w/

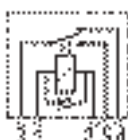
**160367 Micro Relay**

 Voltage: 12  
Amp: 15/25

 Type: Change Over  
Terminals: 5  
Bracket: w/o  
Resistor: w/

**160919 Micro Relay**

 Voltage: 12  
Amp: 20/10

 Terminals: 5  
Bracket: w/o  
Resistor: w/

**160920 Micro Relay**

 Voltage: 12  
Amp: 20/10

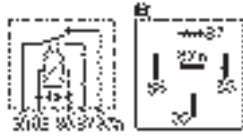
 Terminals: 5  
Bracket: w/o  
Diode: w/

**160081 Relay**

 Voltage: 12  
Amp: 20/30

 Type: Change Over  
Terminals: 5  
Bracket: w/

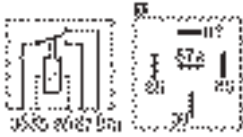
160270 Relay



Voltage: 12  
Amp: 20/30

Type: Change Over  
Terminals: 5  
Bracket: w/  
Diode: w/

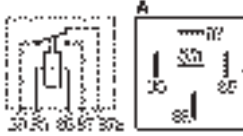
160308 Relay



Voltage: 12  
Amp: 40/15

Type: Change Over  
Terminals: 5  
Bracket: w/o

160316 Relay



Voltage: 12  
Amp: 40/15

Type: Change Over  
Terminals: 5  
Bracket: w/

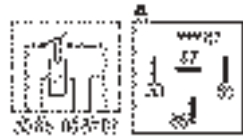
160403 Relay



Voltage: 12  
Amp: 40/15

Type: Change Over  
Terminals: 5  
Bracket: w/  
Resistor: w/

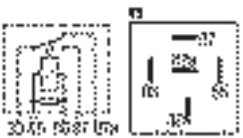
160921 Relay



Voltage: 12  
Amp: 40/15

Plug type: Flat  
Terminals: 5  
Bracket: w/

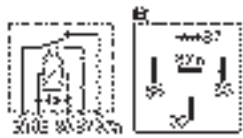
160932 Relay



Voltage: 12  
Amp: 40/15

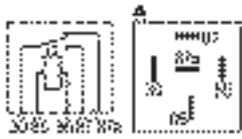
Type: Change Over  
Terminals: 5  
Bracket: w/  
Resistor: w/

160942 Relay

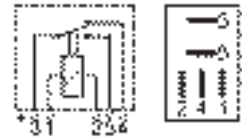


Voltage: 12  
Amp: 40/15

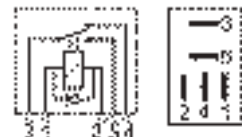
Type: Change Over  
Terminals: 5  
Bracket: w/  
Diode: w/

**160974 Relay**

 Voltage: 12  
 Amp: 40/70

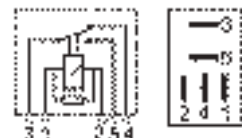
 Type: Change Over  
 Terminals: 2x6.3 mm, 3x9.5 mm  
 Bracket: w/

**CHANGE OVER - 24 V**
**MICRO**
**160368 Micro Relay**

 Voltage: 24  
 Amp: 5/10

 Type: Change Over  
 Terminals: 5  
 Bracket: w/o

**160521 Micro Relay**

 Voltage: 24  
 Amp: 5/10

 Type: Change Over  
 Terminals: 5  
 Bracket: w/o  
 Diode: w/

**161010 Micro Relay**

 Voltage: 24  
 Amp: 5/10

 Type: Change Over  
 Terminals: 5  
 Bracket: w/o  
 Resistor: w/

**161020 Micro Relay**

 Voltage: 24  
 Amp: 10/15

 Type: Change Over  
 Terminals: 5  
 Bracket: w/o  
 Diode: w/

**160216 Relay**


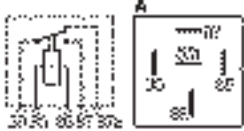












 Voltage: 24  
 Amp: 20/10

 Type: Change Over  
 Terminals: 5  
 Bracket: w/

**160271 Relay**

 Voltage: 24  
 Amp: 20/10

 Type: Change Over  
 Terminals: 5  
 Bracket: w/  
 Diode: w/

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160317 Relay</b>		 	Voltage: 24 Amp: 20/10	Type: Change Over Terminals: 5 Bracket: w/
<b>160337 Relay</b>		 	Voltage: 24 Amp: 10/22	Type: Change Over Terminals: 5 Bracket: w/o
<b>160394 Relay</b>		 	Servicing: Mercedes, Iveco, Audi Voltage: 24 Amp: 40/60	Type: Change Over Terminals: 5 Bracket: w/o Resistor: w/
<b>160944 Relay</b>		 	Voltage: 24 Amp: 10/20	Type: Change Over Terminals: 5 Bracket: w/o Resistor: w/
<b>160976 Relay</b>		 	Voltage: 24 Amp: 30/50	Type: Change Over Terminals: 2x6.3 mm, 3x9.5 mm Bracket: w/o
<b>160980 Relay</b>		 	Voltage: 24 Amp: 30/40	Type: Change Over Terminals: 5 Bracket: w/
<b>160981 Relay</b>		 	Voltage: 24 Amp: 10/20	Type: Change Over Terminals: 5 Bracket: w/

## TIME DELAY - 12 V

### 160297 Time Delay Relay

Servicing: Alfa Romeo, Opel, Audi, VW, Renault, Citroen, Peugeot, Volvo, Seat, Saab, Porsche, Skoda, Ford, Vauxhall, Alfa Romeo

For windshield wiper and washer. Also for universal use.



Voltage: 12  
Amp: 15

Delay time: 3.5 sec.

Terminals: 6  
Bracket: w/o

### 160570 Relay Time Delay

Servicing: Universal



Voltage: 12  
Amp: 20

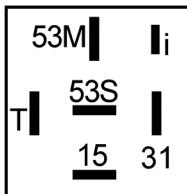
Delay time: 10 min.

Terminals: 5  
Bracket: w/o

### 160749 Relay

Servicing: Audi, VW

Washing/wiper unit w/ changeable intervals.

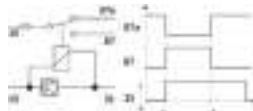


Voltage: 12  
Amp: 30

Delay time: 0.5 sec

Terminals: 6  
Bracket: w/o

### 160992 Time Delay Relay



Voltage: 12  
Amp: 20

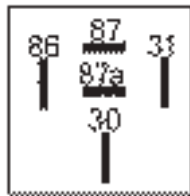
Delay time: 3.5 sec

Type: Delay off  
Terminals: 5  
Bracket: w/

## TIME DELAY - 24 V

### 160466 Time Delay Relay

For A/C compressor, bus doors and time delayed motors.



Voltage: 24  
Amp: 5

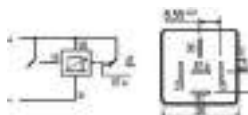
Delay time: 4 sec

Terminals: 5  
Bracket: w/o

## MULTITIMER

### 160927 Multitimer Relay

0.5 sec. -6 hours.

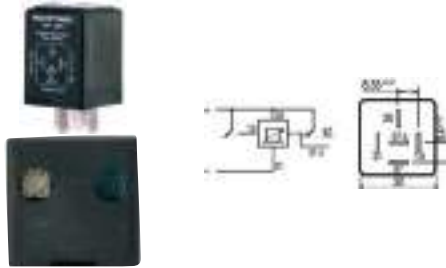


Voltage: 12  
Amp: 10

Terminals: 5  
Bracket: w/o

**160928** Multimer Relay

0.5 sec. -6 hours.



Voltage: 24  
Amp: 10

Terminals: 5  
Bracket: w/o

**161008** Multimer Relay

0.5 sec. -10 hours.



Voltage: 12  
Amp: 10

Terminals: 5  
Bracket: w/o

**MULTI PLUGS**

**190766** Relay Multiplug

Sockets can be built together. 5x6.3 mm flat plug terminals. 4x2.8 mm flat plug terminals.



Type: Socket  
No./poles: 9  
Plug: Female

**190767** Relay Multiplug

6.3 mm.



Type: Socket  
Type/terminal: Flat  
No./poles: 5

**191026** Relay Multiplug

Sockets can be built together. 2x9.5 mm flat plug terminals. 3x6.3 mm flat plug terminals. 4x2.8 mm flat plug terminals.



Type: Socket  
No./poles: 9

**191752** Relay Multiplug

Sockets can be built together. 2x6.3 mm flat plug terminals. 3x4.7 mm flat plug terminals.



Type: Socket  
No./poles: 5

**KITS**
**192158** Relay Multiplug Kit

Contents: 1x HC-CARGO 190766, 5x HC-CARGO 190252, 4x HC-CARGO 191083.


**192159** Relay Multiplug Kit

Content: 1x HC-CARGO 190767, 5x HC-CARGO 190252.


**192160** Relay Multiplug Kit

Contents: 1x HC-CARGO 191026, 2x HC-CARGO 191025, 3x HC-CARGO 190252, 4x HC-CARGO 191083.


**192161** Relay Multiplug Kit

Content: 1x HC-CARGO 191752, 2x HC-CARGO 190252, 3x HC-CARGO 191089.


**TRAILER SWITCH BOXES**
**160167** Relay Box

Servicing: For 12 V trailer pulled by a 24 V vehicle

Switches the voltage from 24 V to 12 V by 5 relays. Run at 24 V and leading 12 V from one of the batteries or converter to the lamps of the trailer. For continuous use it has to be connected via a converter. For internal mounting.



Voltage: 12/24  
Amp: 10  
Watt: 250

Dim.: 100x100x58 mm

No./poles: 7  
Relay switch: Yes

**160797** Relay Box

To reduce voltage drop, if you use vehicles w/ trailer. Fitted w/ 5x12 V relays the 12 V function will not be affected.



Voltage: 12/12  
Amp: 5x8  
Watt: 5x250

Dim.: 100x100x58 mm

No./poles: 7  
Relay switch: Yes



**BOXES**
**191410** Relay Box

*Can be assembled in rows (terminals: HC-CARGO 190252 or 191029).*

 Capacity: 4  
 Assembling: Yes

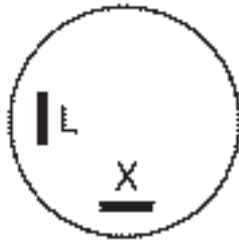
 Regulator type: Standard  
 Colour: Transparent  
 Terminals: w/  
 Lock: w/

**191818** Relay Box

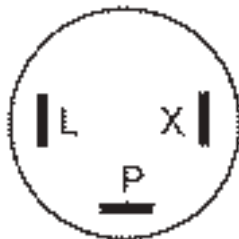
*Can be assembled in rows (terminals: HC-CARGO 190252 or 191029).*

 Capacity: 7  
 Assembling: Yes

 Regulator type: Micro  
 Colour: Transparent  
 Terminals: w/  
 Lock: w/

**FLASHER UNITS - 12 V**
**160115** Flasher Unit

 Voltage: 12  
 Watt: 138

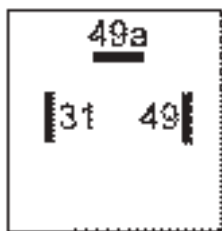
 Terminals: 2  
 Bracket: w/o

**160116** Flasher Unit

 Voltage: 12  
 Watt: 138

 Terminals: 3  
 Bracket: w/o

**160242** Flasher Unit

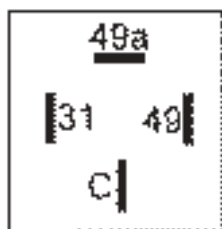
Servicing: Alfa Romeo, Audi, Bedford, Ford, Nissan, Opel, Toyota


 Voltage: 12  
 Watt: 2/4x21

 Terminals: 3  
 Bracket: w/

**160243** Flasher Unit

Servicing: Alfa Romeo, Audi, Austin, BMW, Citroen, Fiat, Ford, Honda, Iveco, Lada, Lancia, Mercedes-Benz, Opel, Peugeot, Porsche


 Voltage: 12  
 Watt: 2/4x21

 Terminals: 4  
 Bracket: w/

**160244** Flasher Unit

Servicing: Audi, Austin, BMW, Citroen, Daihatsu, Fiat, Ford, Honda, Lada, Lancia, Lexus, Mazda, Mercedes-Benz, Mitsubishi, Nissan

For vehicles w/ towbars.



Voltage: 12  
Watt: 2+1/6x21

Terminals: 4  
Bracket: w/

**160263** Flasher Unit



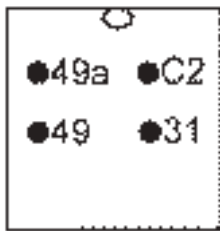
Voltage: 12  
Watt: 2+1+1/8x21

Terminals: 6  
Bracket: w/

**160305** Flasher Unit

Servicing: Mercedes-Benz

For vehicles w/ towbars.

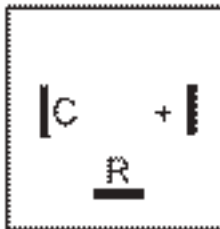


Voltage: 12  
Watt: 2+1/6x21

Terminals: 4  
Bracket: w/o

**160312** Flasher Unit

Interchangeable w/ all 4 terminal device (+, -, C, R). for SAE standard vehicles (France, Italy, USA, Spain).



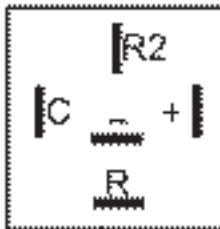
Voltage: 12  
Watt: 2/4x21

Terminals: 3  
Bracket: w/

**160314** Flasher Unit

Servicing: Alfa Romero, Renault, Fiat, Lancia, Lada, Alfa Romeo, BMW, Fiat, Lada, Lancia, Renault

For vehicles w/ towbars. For SAE standard vehicles (France, Italy, USA, Spain).

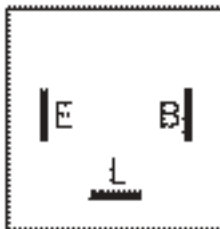


Voltage: 12  
Watt: 2+1/6x21

Terminals: 5  
Bracket: w/


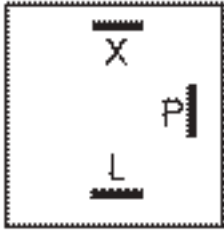

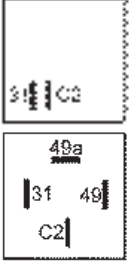

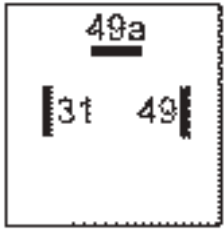



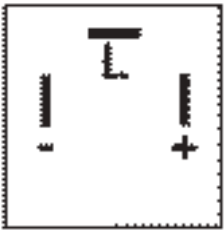

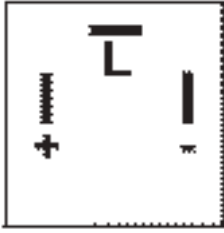
**160315** Flasher Unit

Servicing: Japanese vehicles



Voltage: 12  
Watt: 2/4x21

Terminals: 3  
Bracket: w/o

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160341</b> Flasher Unit		Servicing: Alfa Romeo, Audi, Austin, BMW, Citroen, Fiat, Ford, Honda, Lada, Mercedes-Benz, Opel, Peugeot, Porsche		
		Voltage: 12 Amp: 16 Watt: 180		Terminals: 3 Bracket: w/
<b>160402</b> Flasher Unit <i>For vehicles w/ towbars.</i>				
		Voltage: 12 Watt: 2+1/6x21		Terminals: 4+2/top Bracket: w/o
<b>160474</b> Flasher Unit				
		Voltage: 12 Watt: 2/4x21		Terminals: 3 Bracket: w/o
<b>160475</b> Flasher Unit <i>For vehicles w/ towbars.</i>				
		Voltage: 12 Watt: 2+1/6x21		Terminals: 3+2/top Bracket: w/o
<b>W/ LED</b>				
<b>160948</b> Flasher Unit				
		Voltage: 12 Watt: 0.1-150	Height: 30 mm	Plug type: Flat Terminals: 3 Bracket: w/o
<b>160949</b> Flasher Unit				
		Voltage: 12 Watt: 0.1-150	Height: 30 mm	Plug type: Flat Terminals: 3 Bracket: w/o

**160950 Flasher Unit**

 Voltage: 12  
 Watt: 0.1-150

Height: 30 mm

 Plug type: Flat  
 Terminals: 2  
 Bracket: w/o

**160951 Flasher Unit**

 Voltage: 12  
 Watt: 0.1-150

Height: 30 mm

 Plug type: Flat  
 Terminals: 2  
 Bracket: w/o

**160954 i-LS sensor**
*In combination w/ an I-LS flasher unit, the I-LS sensor secures the legal requirements of "lamp failure warning".*

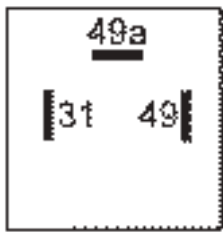

Voltage: 12

Height: 26 mm

 Terminals: 3  
 Bracket: w/o

**160956 Flasher Unit i-LS**

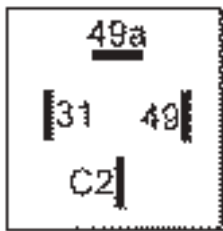
Servicing: Vehicles w/ 2 LED lamps on front or rear

*In combination w/ an I-LS sensor, the I-LS flasher relay secures the legal requirements of "lamp failure warning" by installed LED lamps.*

 Voltage: 12  
 Watt: 90

 Terminals: 3  
 Bracket: w/

**160957 Flasher Unit i-LS**

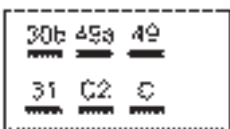
Servicing: Vehicles w/ trailer, w/ 2 LED lamps

*In combination w/ an I-LS sensor, the I-LS flasher relay secures the legal requirements of "lamp failure warning" by installed LED lamps.*

 Voltage: 12  
 Watt: 170


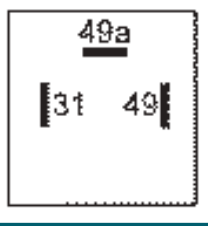



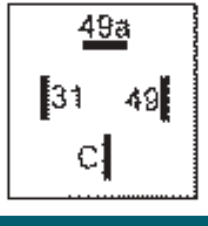



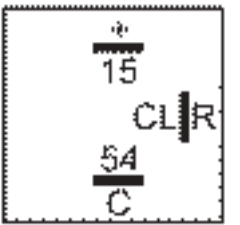

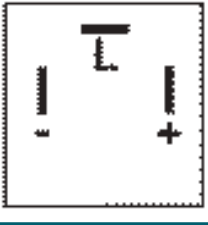

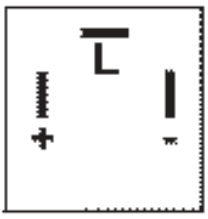
 Terminals: 4  
 Bracket: w/

**FLASHER UNITS - 24 V**
**160199 Flasher Unit**

Servicing: Mazda, Volvo


 Voltage: 24  
 Watt: 3+1/8x21

 Terminals: 6  
 Bracket: w/

		EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>160261</b> Flasher Unit				
Servicing: Mercedes-Benz				
		Voltage: 24 Watt: 2/4x21		Terminals: 3 Bracket: w/
<b>160262</b> Flasher Unit				
		Voltage: 24 Watt: 2+1/6x21		Terminals: 6 Bracket: w/
<b>160296</b> Flasher Unit				
		Voltage: 24 Watt: 2/4x21		Terminals: 4 Bracket: w/
<b>160313</b> Flasher Unit				
Interchangeable w/ all 4 terminal device (+, -, C, R). for SAE standard vehicles (France, Italy, USA, Spain).				
		Voltage: 24 Watt: 2/4x21		Terminals: 3 Bracket: w/
<b>160716</b> Flasher Unit				
		Voltage: 24 Watt: 500		Plug type: Flat Terminals: 3 Bracket: w/
<b>W/ LED</b>				
<b>160952</b> Flasher Unit				
		Voltage: 24 Watt: 0.1-150	Height: 30 mm	Plug type: Flat Terminals: 3 Bracket: w/o
<b>160953</b> Flasher Unit				
		Voltage: 24 Watt: 0.1-150	Height: 30 mm	Plug type: Flat Terminals: 3 Bracket: w/o

**160955** i-LS Sensor

In combination w/ an I-LS flasher unit, the I-LS sensor secures the legal requirements of "lamp failure warning".



Voltage: 24

Terminals: 3  
Bracket: w/o

**160958** Flasher Unit i-LS

Servicing: Vehicles w/ 2 LED lamps on front or rear

In combination w/ an I-LS sensor, the I-LS flasher relay secures the legal requirements of "lamp failure warning" by installed LED lamps.



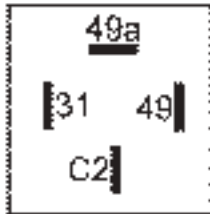
Voltage: 24  
Watt: 90

Terminals: 3  
Bracket: w/

**160959** Flasher Unit i-LS

Servicing: Vehicles w/ trailer, w/ 2 LED lamps

In combination w/ an I-LS sensor, the I-LS flasher relay secures the legal requirements of "lamp failure warning" by installed LED lamps.



Voltage: 24  
Watt: 170

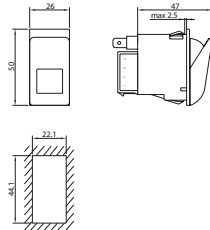
Terminals: 4  
Bracket: w/

**SWITCHES**

**ROCKER**

**181638** Rocker Switch

w/o symbol plate. Illuminated w/ location and function light. Bulb: HC-CARGO 181615, 181667 (LED).



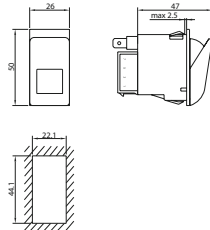
Voltage: 12  
Watt: 1.2

Mount. hole size:  
22.1x44.1 mm

Socket type: T5  
Switch: On/Off  
No./terminals w/screw: 4  
Bulb incl.: Yes  
Automatic return: Yes

**181639** Rocker Switch

w/o symbol plate. Illuminated w/ location and function light. Bulb: HC-CARGO 181632, 181668 (LED).



Voltage: 24  
Watt: 1.2

Mount. hole size:  
22.1x44.1 mm

Socket type: T5  
Switch: On/Off  
No./terminals w/screw: 4  
Bulb incl.: Yes  
Automatic return: Yes

**181640** Rocker Switch


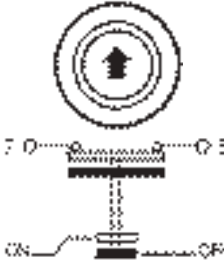



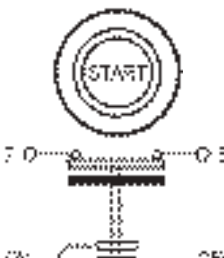

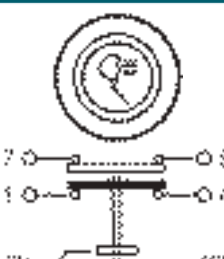




w/o symbol plate. Illuminated w/ location and function light. Bulb: HC-CARGO 181615, 181667 (LED), 181632, 181668 (LED).

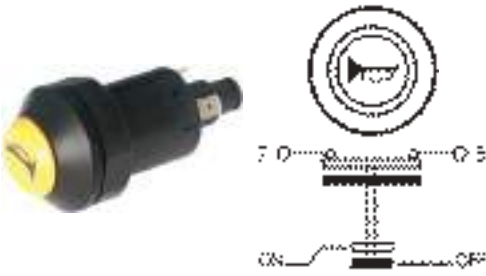


Voltage: dec-24

Mount. hole size:  
22.1x44.1 mm

Type/terminal: Flat  
Switch: (On)/Off/(On)  
Terminals: 6  
Bulb incl.: No  
Automatic return: Yes

MULTI PURPOSE				
<b>181249 Push Switch</b>				
		Voltage: 12 Voltage 2: 24 Amp 2: 25	Mount. hole size: 30.5 mm	Button symbol: Lift & lower Switch: Off/(On) No./terminals w/screw: 2 DIN norm: 40053 Protection degree: IP 67
<b>181251 Push Switch</b>				
		Voltage: 12 Voltage 2: 24 Amp 2: 25	Mount. hole size: 30.5 mm	Button symbol: Rotating beacon Switch: On/Off No./terminals w/screw: 6 Illuminated: Yes DIN norm: 40053 Protection degree: IP 67
<b>181252 Push Switch</b>				
		Voltage: 12 Voltage 2: 24 Amp 2: 25	Mount. hole size: 30.5 mm	Button symbol: Start Switch: Off/(On) No./terminals w/screw: 2 DIN norm: 40053 Protection degree: IP 67
<b>181253 Push Switch</b>				
		Voltage: 12 Voltage 2: 24 Amp 2: 25	Mount. hole size: 30.5 mm	Button symbol: Adjustable light Switch: On/Off No./terminals w/screw: 4 Illuminated: Yes DIN norm: 40053 Protection degree: IP 67
<b>181256 Push Switch</b>				
		Voltage: 12 Voltage 2: 24 Amp 2: 25	Mount. hole size: 30.5 mm	Button symbol: Hazard Warning Lamp Switch: On/Off No./terminals w/screw: 7 Illuminated: Yes Automatic return: Yes DIN norm: 40053 Protection degree: IP 67
<b>181257 Push Switch</b>				
		Voltage: 12 Voltage 2: 24 Amp 2: 25	Mount. hole size: 30.5 mm	Button symbol: Sidemarker Switch: On/Off No./terminals w/screw: 4 Illuminated: Yes DIN norm: 40053 Protection degree: IP 67

**181258 Push Switch**

 Voltage: 12  
 Voltage 2: 24  
 Amp 2: 25

 Mount. hole size:  
 30.5 mm

 Button symbol: Horn  
 Switch: Off/(On)  
 No./terminals w/screw: 2  
 DIN norm: 40053  
 Protection degree: IP 67

**181263 Push Switch**

 Voltage: 12  
 Voltage 2: 24  
 Amp 2: 25

 Mount. hole size:  
 30.5 mm

 Switch: On/Off  
 No./terminals w/screw: 6  
 Illuminated: Yes  
 Automatic return: Yes  
 DIN norm: 40053  
 Protection degree: IP 67

**181264 Multi Socket**

For multi purpose switches.


 Type/terminal: Flat  
 No./poles: 7

**IGNITION/LIGHT**
**180045 Ignition/Light Switch**

Spare key: HC-CARGO 180341.


 Mount. hole size:  
 26.5 mm

 Switch combination: Parkinglight-off-  
 ignition-sidelight-DRL  
 No./keys: 2  
 Terminals: 6

**180324 Ignition/Light Switch**

Spare key: HC-CARGO 180341.


 Mount. hole size:  
 26.5 mm

 Switch combination: Parkinglight-off-  
 ignition-sidelight-DRL  
 No./keys: 2  
 Terminals: 7

**IGNITION STARTER**
**180027 Ignition Starter Switch**

Spare key: HC-CARGO 180339. Multiplug: HC-CARGO 181597.


 Mount. hole size:  
 18.5 mm

 Switch combination: Off-ignition-start  
 No./keys: 2  
 Terminals: 5



**180041 Ignition Starter Switch**

Spare key: HC-CARGO 180340.



Mount. hole size:  
26.5 mm

Switch combination: Parking light-off-start  
No./keys: 2  
Terminals: 7  
DIN norm: 40050  
Protection degree: IP 63

**180043 Ignition Starter Switch**

Spare key: HC-CARGO 180339.



Mount. hole size:  
18.5 mm

Switch combination: Off-aux-ignition-start  
No./keys: 2  
Terminals: 4

**181518 Ignition Starter Switch**

Spare key: HC-CARGO 180339.



Mount. hole size:  
22.5 mm  
Positions: 1 (start)

Switch combination: Off-ignition-start  
No./keys: 2  
Terminals: 5

**SPARE KEYS**

**180339 Spare Key**

Servicing: HC-CARGO 180025, 180027, 180043, 181518



**180340 Spare Key**

Servicing: HC-CARGO 180041, 180044



**180341 Spare Key**

Servicing: HC-CARGO 180045, 180324



**181465 Spare Key**

Servicing: HC-CARGO 181235, 181236, 181237



Material: Metal

## DIESEL STARTER

**180044** Ignition Switch

Servicing: Deutz, IH

*Supplied w/ 2 keys. Spare key: HC-CARGO 180340. Multiplug: HC-CARGO 181595, 181596.*

 Mount. hole size:  
26.5 mm  
Positions: 5

 Switch combination: Parking light-off-ignition-glow-start  
Terminals: 10  
DIN norm: 40050  
Protection degree: IP 63

**181235** Ignition Switch

Servicing: Massey Ferguson

*Spare key: HC-CARGO 181465.*

 Mount. hole size:  
16 mm  
Positions: 4

 Switch combination: Off-ignition-glow-start  
No./keys: 2  
Terminals: 6

**181236** Ignition Switch

Servicing: Massey Ferguson

*Spare key: HC-CARGO 181465.*

 Mount. hole size:  
16 mm  
Positions: 4

 Switch combination: Start-Off-Glow-Start  
No./keys: 2  
Terminals: 4

**181237** Ignition Switch

Servicing: Massey Ferguson

*Spare key: HC-CARGO 181465.*

 Mount. hole size:  
16 mm  
Positions: 5

 Switch combination: Off-aux-ignition-glow-start  
No./keys: 2  
Terminals: 7

**181598** Rubber Boot

Servicing: HC-CARGO 180044



## CABLE & WIRING

### CHARGING CLIPS

**192196** Charging Clips


Amp: 275

 Cable dim.: 16 mm<sup>2</sup>

 Colour: Red  
Material: Moulded brass

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>192197</b> Charging Clips 	Amp: 275	Cable dim.: 16 mm <sup>2</sup>	Colour: Black Material: Moulded brass
<b>192293</b> Charging Clips Length: 210 mm. 	Amp: 420	Cable dim.: 35-50 mm <sup>2</sup>	Colour: Red Material: PP/PVC
<b>192294</b> Charging Clips Length: 210 mm. 	Amp: 420	Cable dim.: 35-50 mm <sup>2</sup>	Colour: Black Material: PP/PVC
<b>192386</b> Charging Clips 	Amp: 275	Cable dim.: 16 mm <sup>2</sup>	Colour: Red Material: Moulded brass
<b>192387</b> Charging Clips 	Amp: 275	Cable dim.: 16 mm <sup>2</sup>	Colour: Black Material: Moulded brass
<b>192388</b> Charging Clips 	Amp: 320	Cable dim.: 25 mm <sup>2</sup>	Colour: Red Material: Moulded brass
<b>192389</b> Charging Clips 	Amp: 320	Cable dim.: 25 mm <sup>2</sup>	Colour: Black Material: Moulded brass

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>192390</b> Charging Clips 	Amp: 420	Cable dim.: 50 mm <sup>2</sup>	Colour: Red Material: Moulded brass
<b>192391</b> Charging Clips 	Amp: 420	Cable dim.: 50 mm <sup>2</sup>	Colour: Black Material: Moulded brass
<b>192903</b> Charging clips, red 	Amp: 1200	Cable dim.: 25-50 mm <sup>2</sup>	Colour: Red Material: Brass
<b>192904</b> Charging clips, red 	Amp: 1200	Cable dim.: 25-50 mm <sup>2</sup>	Colour: Black Material: Brass
<b>FULLY INSULATED</b>			
<b>192204</b> Charging clips 600A, red 	Amp: 600	Cable dim.: 25-50 mm <sup>2</sup>	Colour: Red Material: Compressed steel Fully insulated: Yes Braided link: w/
<b>192205</b> Charging clips 600A, BL 	Amp: 600	Cable dim.: 25-50 mm <sup>2</sup>	Colour: Black Material: Compressed steel Fully insulated: Yes Braided link: w/
<b>192398</b> Charging Clips 	Amp: 600	Cable dim.: 50 mm <sup>2</sup>	Colour: Red Material: Copper/Brass Fully insulated: Yes Braided link: w/

	EL. SPECIFICATIONS	DIMENSIONS	ADDITIONAL SPECIFICATIONS
<b>192399</b> Charging Clips 	Amp: 600	Cable dim.: 50 mm <sup>2</sup>	Colour: Black Material: Copper/Brass Fully insulated: Yes Braided link: w/
<b>192559</b> Charging Clips 500 A <i>Ergonomic.</i> 	Amp: 500	Cable dim.: 25-50 mm <sup>2</sup>	Colour: Red Material: Moulded brass Fully insulated: Yes
<b>192560</b> Charging Clips 500 A <i>Ergonomic.</i> 	Amp: 500	Cable dim.: 25-50 mm <sup>2</sup>	Colour: Black Material: Moulded brass Fully insulated: Yes
<b>CABLES</b>			
<b>BOOSTER</b>			
<b>STEEL CLIPS</b>			
<b>192206</b> Booster cable set 10 mm <sup>2</sup> 	Amp: 80	Conductor dim. 1: 10 mm <sup>2</sup> Conductor dim. 2: 79/0.4 mm Length: 2.5 m	Colour: Red/black Material: Galvanised steel No./wires: 2
<b>192207</b> Booster cable set 16 mm <sup>2</sup> 	Amp: 100	Conductor dim. 1: 16 mm <sup>2</sup> Conductor dim. 2: 126/0.4 mm Length: 2.5 m	Colour: Red/black Material: Galvanised steel No./wires: 2
<b>192208</b> Booster cable set 25 mm <sup>2</sup> 	Amp: 120	Conductor dim. 1: 25 mm <sup>2</sup> Conductor dim. 2: 188/0.4 mm Length: 2.5 m	Colour: Red/black Material: Galvanised steel No./wires: 2

**BRASS CHARGING CLIPS**
**192209** Booster cables


Amp: 230

 Conductor dim. 1:  
25 mm<sup>2</sup>  
Conductor dim. 2:  
770/0.2 mm  
Length: 3.5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2  
BS-approved: BS638

**192210** Booster cable set 35 mm<sup>2</sup>


Amp: 290

 Conductor dim. 1:  
35 mm<sup>2</sup>  
Conductor dim. 2:  
1083/0.2 mm  
Length: 3.5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2  
BS-approved: BS638

**192211** Booster cable set 50 mm<sup>2</sup>


Amp: 370

 Conductor dim. 1:  
50 mm<sup>2</sup>  
Conductor dim. 2:  
1558/0.2 mm  
Length: 3.5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2  
BS-approved: BS638

**192212** Booster cable set 50 mm<sup>2</sup>


Amp: 370

 Conductor dim. 1:  
50 mm<sup>2</sup>  
Conductor dim. 2:  
1558/0.2 mm  
Length: 5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2  
BS-approved: BS638

**192295** Booster cables set


Amp: 135

 Conductor dim. 1:  
35 mm<sup>2</sup>  
Conductor dim. 2:  
265/0.41 mm  
Length: 3.5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2

**192296** Booster cables set


Amp: 160

 Conductor dim. 1:  
50 mm<sup>2</sup>  
Conductor dim. 2:  
378/0.41 mm  
Length: 5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2

**192844** Booster Cable 5m 35mm<sup>2</sup>


Amp: 290

 Conductor dim. 1:  
35 mm<sup>2</sup>  
Conductor dim. 2:  
1008/0.2 mm  
Length: 5 m

 Colour: Red/black  
Material: Moulded brass  
No./wires: 2  
BS-approved: BS638

**FULLY INSULATED CLIPS**
**192213** Booster cable set 35 mm<sup>2</sup>


Amp: 290

 Conductor dim. 1:  
35 mm<sup>2</sup>  
Conductor dim. 2:  
1083/0.2 mm  
Length: 3.5 m

 Colour: Red/black  
No./wires: 2  
Insulator: Yes  
Braided link: w/  
BS-approved: BS638

**192214** Booster cable set 50 mm<sup>2</sup>


Amp: 370

 Conductor dim. 1:  
50 mm<sup>2</sup>  
Conductor dim. 2:  
1558/0.2 mm  
Length: 3.5 m

 Colour: Red/black  
Material: Compressed steel  
No./wires: 2  
Insulator: Yes  
Braided link: w/  
BS-approved: BS638

**192215** Booster cable set 50 mm<sup>2</sup>


Amp: 370

 Conductor dim. 1:  
50 mm<sup>2</sup>  
Conductor dim. 2:  
1558/0.2 mm  
Length: 5 m

 Colour: Red/black  
Material: Compressed steel  
No./wires: 2  
Insulator: Yes  
Braided link: w/  
BS-approved: BS638

**192384** Booster cable


Amp: 290

 Conductor dim. 1:  
35 mm<sup>2</sup>  
Conductor dim. 2:  
1083/0.2 mm  
Length: 3.5 m

 Colour: Red/black  
Material: Copper/Brass  
No./wires: 2  
Insulator: Yes  
Braided link: w/  
DIN no.: 72553

**192385** Booster cable


Amp: 370

 Conductor dim. 1:  
50 mm<sup>2</sup>  
Conductor dim. 2:  
1558/0.2 mm  
Length: 5 m


 Colour: Red/black  
Material: Copper/Brass  
No./wires: 2  
Insulator: Yes  
Braided link: w/  
DIN no.: 72553

**HOSES**
**PLASTIC**


	HC-CARGO	ID min	ID max	Width	Spanner size	Ref. no.	Coating	Material
	190097							

## CLAMPS

### HOSE

	HC-CARGO	ID min	ID max	Width	Spanner size	Ref. no.	Coating	Material
	190157	8 mm	14 mm	9 mm	7 mm	15	El. galvanized, Alu/zinc, Lacquered	Steel
	193027	8 mm	14 mm	10 mm	7 mm	15	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190158	11 mm	17 mm	9 mm	7 mm	17	El. galvanized, Alu/zinc, Lacquered	Steel
	193028	11 mm	17 mm	10 mm	7 mm	17	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190159	13 mm	20 mm	9 mm	7 mm	22	El. galvanized, Alu/zinc, Lacquered	Steel
	193029	13 mm	20 mm	10 mm	7 mm	22	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190160	15 mm	24 mm	12 mm	7 mm	25	El. galvanized, Alu/zinc, Lacquered	Steel
	193030	15 mm	24 mm	12 mm	7 mm	25	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190161	19 mm	28 mm	12 mm	7 mm	28	El. galvanized, Alu/zinc, Lacquered	Steel
	193031	19 mm	28 mm	12 mm	7 mm	28	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190162	22 mm	32 mm	12 mm	7 mm	32	El. galvanized, Alu/zinc, Lacquered	Steel
	193032	22 mm	32 mm	12 mm	7 mm	32	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190163	26 mm	38 mm	12 mm	7 mm	40	El. galvanized, Alu/zinc, Lacquered	Steel
	193033	26 mm	38 mm	12 mm	7 mm	40	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190164	32 mm	44 mm	12 mm	7 mm	45	El. galvanized, Alu/zinc, Lacquered	Steel
	193034	32 mm	44 mm	12 mm	7 mm	45	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190165	38 mm	50 mm	12 mm	7 mm	51	El. galvanized, Alu/zinc, Lacquered	Steel
	193035	38 mm	50 mm	12 mm	7 mm	51	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190166	44 mm	56 mm	12 mm	7 mm	56	El. galvanized, Alu/zinc, Lacquered	Steel
	193036	44 mm	56 mm	12 mm	7 mm	56	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190167	50 mm	65 mm	12 mm	7 mm	65	El. galvanized, Alu/zinc, Lacquered	Steel
	193037	50 mm	65 mm	12 mm	7 mm	65	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190168	58 mm	75 mm	12 mm	7 mm	75	El. galvanized, Alu/zinc, Lacquered	Steel
	193038	58 mm	75 mm	12 mm	7 mm	75	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190169	68 mm	85 mm	12 mm	7 mm	85	El. galvanized, Alu/zinc, Lacquered	Steel
	193039	68 mm	85 mm	12 mm	7 mm	85	El. galvanized, Alu/zinc, Lacquered	Carbon steel
	190170	77 mm	95 mm	12 mm	7 mm	96	El. galvanized, Alu/zinc, Lacquered	Steel
	193040	77 mm	95 mm	12 mm	7 mm	96	El. galvanized, Alu/zinc, Lacquered	Carbon steel
190171	87 mm	112 mm	12 mm	7 mm	113	El. galvanized, Alu/zinc, Lacquered	Steel	
193041	87 mm	112 mm	12 mm	7 mm	113	El. galvanized, Alu/zinc, Lacquered	Carbon steel	
190172	104 mm	138 mm	12 mm	7 mm	139	El. galvanized, Alu/zinc, Lacquered	Steel	
191239	130 mm	165 mm	12 mm	7 mm	166	El. galvanized, Alu/zinc, Lacquered	Steel	

### MINI

	HC-CARGO	ID min	ID max	Width	Spanner size	Ref. no.	Coating	Material
	190005	6 mm	8.3 mm	9 mm	7 mm	8	El. galvanized, Alu/zinc, Lacquered	Steel
	190006	7 mm	9.3 mm	9 mm	7 mm	9	El. galvanized, Alu/zinc, Lacquered	Steel
	190007	8 mm	10.3 mm	9 mm	7 mm	10	El. galvanized, Alu/zinc, Lacquered	Steel
	190008	9 mm	11.3 mm	9 mm	7 mm	10	El. galvanized, Alu/zinc, Lacquered	Steel
	190009	9 mm	12.3 mm	9 mm	7 mm	12	El. galvanized, Alu/zinc, Lacquered	Steel
	190010	10 mm	13.3 mm	9 mm	7 mm	13	El. galvanized, Alu/zinc, Lacquered	Steel
	190937	11 mm	14.3 mm	9 mm	7 mm	14	El. galvanized, Alu/zinc, Lacquered	Steel
	190938	12 mm	15.3 mm	9 mm	7 mm	15	El. galvanized, Alu/zinc, Lacquered	Steel
	191056	13 mm	16.3 mm	9 mm	7 mm	16	El. galvanized, Alu/zinc, Lacquered	Steel
	192054	14 mm	17.3 mm	9 mm	7 mm	17	El. galvanized, Alu/zinc, Lacquered	Steel

## TOOLS

### HOSE CLAMP SCREWDRIVERS

210249 Hose Clamp Screwdriver

*Flexible.*

