

# Z SPARS

**Z SPARS INTERNATIONAL LTD**



*Everything above deck*

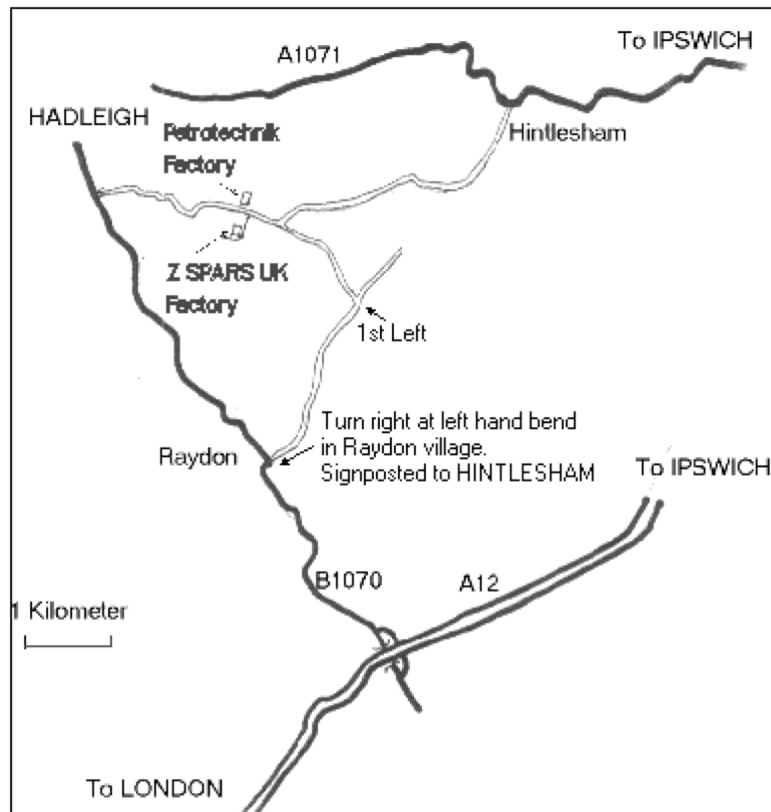
**2012**

## Z SPARS UK

Z Spars UK makes alloy masts, booms, spars, rigging and fittings for boats from dinghies to 60 foot yachts. In addition to supplying the leading production boatyards, we specialise in custom made spars for professional and home boatbuilders in single lengths up to 18.4 metres.

We can supply spars, rigging and accessories to anywhere in the world.

We have a large modern factory on the outskirts of Hadleigh, near Ipswich, Suffolk. Our staff are available to discuss your requirements, but please call us first to confirm that the relevant member of staff will be present when you arrive.



At Z Spars we do our utmost to satisfy our customers' requirements. Here are some recent customer comments:

'It's been an absolute pleasure dealing with you.'

'I just wanted to say, brilliant service, and the parts were perfect.'

'Many thanks to all at Z Spars who have helped to get my boat back on the water.'

'A note just to say how much we have appreciated your prompt and efficient supply of spars and equipment during the past year.'


'Thank you very much for the extremely rapid service you gave us over our replacement shrouds. .... we are singing your praises to everyone we talk to.'

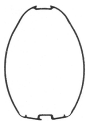
'So please pass on my thanks to all... I now have my first silverware thanks to the new mast!'


# MAST AND BOOM SECTIONS





SCHEMATIC VIEW	SECTION REFERENCE	DIMENSIONS mm	INERTIAE (see note 1) cm <sup>4</sup>	WALL THICKNESS (see note 2) mm	WEIGHT PER METER kg	APPROX. YACHT SIZE ft
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<b>DELTA MASTS</b> 	Z145	81 68	45 29	2.1	1.45	15-19
	Z170	98 68	65 33	1.9	1.64	18-20
	Z190	108 78	94 50	2	1.92	20-22
	Z230	122 82	143 69	2.3	2.29	23-26
	Z265	143 96	238 118	2.2	2.72	24-26
	Z351	160 105	391 173	2.2	3.44	26-29

<b>01 SERIES MASTS</b> 	Z401	179 119	601 260	2.8	4.1	27-30
	Z402	180 118	601 260	2.8	4.1	27-30
	Z501	189 125	760 326	3.3	4.6	30-34
	Z531	200 123	998 380	3.3	5.33	30-35
	Z601	223 138	1280 502	3.5	5.9	34-36
	Z602	223 138	1411 518		6.21	34-36
	Z701	232 145	1702 686	4	7.28	36-38
	Z702	240 146	1951 726		7.61	36-38
	Z901	255 160	2460 1100	4.4	8.7	38-43
	Z902	257 160	2641 1022		8.96	38-43
	Z1001	290 175	3677 1452	4.5	9.77	43-50
	Z1250	310 182	4994 1838		11.76	50-53

<b>FURLING MASTS</b> 	Z300E	160 105	400 162	2.2	3.5	24-28
	Z400E	183 117	585 280	2.6	4.9	27-30
	Z500E	200 124	785 370	2.8	5.77	30-34
	Z600E	220 131	1250 490	3	6.75	33-36
	Z602E	223 137	1286 544			
	Z700E	231 137	1505 621	3.4	7.5	35-38
	Z702E	240 146	1624 731			
	Z800E	243 148	1730 760	3.5	8.3	37-43
	Z900E	255 160	2430 1000	3.7	9.72	41-45
	Z1100E	290 175	3550 1550	3.9	11.48	45-50
	Z1400E	340 200	5550 2500	4.7	14.77	50-60

<b>BOOMS</b> 	Z120	71 61	45 24	1.5	1.2
	Z160	94 68	60 32	1.5	1.56
	Z204	118 86	125 68	2	2.28
	Z360	145 105	380 150	2.5	3.29
	Z480	180 125	750 300	3	4.82
	Z690	232 145	1660 462	2.9	6.24

<b>DINGHY MASTS</b> 	Z57	72 57	19 14	2.1	1.1
	Z90	62 56	16 12	2	0.9
	Z105	72 57	21 14	1.6	0.9
	Z106	72 57	22 16	1.7	1.1
	Z125	76 62	33 21	1.9	1.25
	Z145	81 68	45 29	2.1	1.45

Note 1: Moments of Inertia: these numbers give an indication of the relative stiffness of each section about the athwartships and fore-and-aft axes respectively.

Note 2: Wall thickness is variable around the section

The yacht size for a particular section is a guide only. Please consult .

Sailmakers are advised to check suitability of sail slides. See over for detail

We reserve the right to change specification without notice

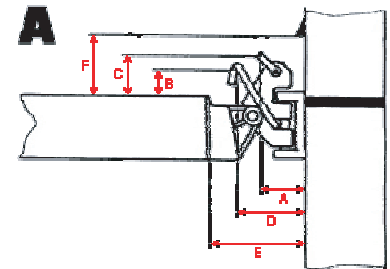
Z Spars UK, Unit 2, Pond Hall Rd, Hadleigh Business Park, Hadleigh, Suffolk IP7 5PW. Tel 01473 822130 Fax 827354

E-mail: sales@zsparsuk.com

# SAILMAKERS INFORMATION

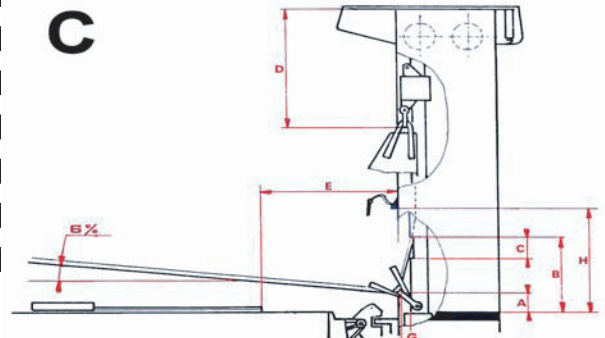
	Z145	Z170	Z190	Z230	Z265	Z301	Z351	Z380	Z401	Z501*	Z531	Z601	Z701	Z901	Z1001	Z1400
sail slide	AO13	AO13	AO13	AO13	AO13	HA89	AO13	AO13	AO14	HA89	AO14	AO15	AO15	HA91	HA91	HA91
alternative	AO16	AO16	AO16	AO16	AO14	AO14	AO14			AO14		AO14	AO14			
* Z501 sections: check with your specific mast for appropriate slide																
Luff Rope	8	8	8	8	8			8	8	10	10	10	10	10		

BOOMS	A	B	C	D	E	F	G	H	foot rope	slide
(See drawing A)										
Z120 dinghy	55	5	15	15	80	250			8	
Z120 cruiser	40	40	20	60	130	250			8	
Z160	70	20	40	70	140	280			8	A032
Z204	70	30	45	80	170	280			8	A032
Z360	70	20	40	80	200	280			10	B012
Z480	60	0	20	90	200	280			10	B012
Z690	Call Z Spars UK									



FURLING MASTS	A	B	C	D	E	H	luff rope	trysail slide
(See drawing C)								
Z230E	60	150	100	350	800		6	
Z300E	60	500	100	400	800	100	6	HA89
Z400E	60	500	100	400	800	100	6	HA89
Z500E	60	500	100	400	800	100	6	HA89
Z600E	60	500	100	400	1000	100	6	HA91
Z700E	60	500	100	450	1000	100	6	HA91
Z800E	60	500	100	450	1000	100	6	HA91
Z900E	60	500	100	450	1200	100	6	HA91
Z1100E	60	500	100	450	1500	100	6	HA91
Z1400E	60	500	100	450	1500	100	6	HA91

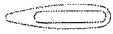


All sections:  
G = 20mm



Furling mainsails cannot use battens  
Use 6% slope on foot  
Luff rope size is sailmakers finished size

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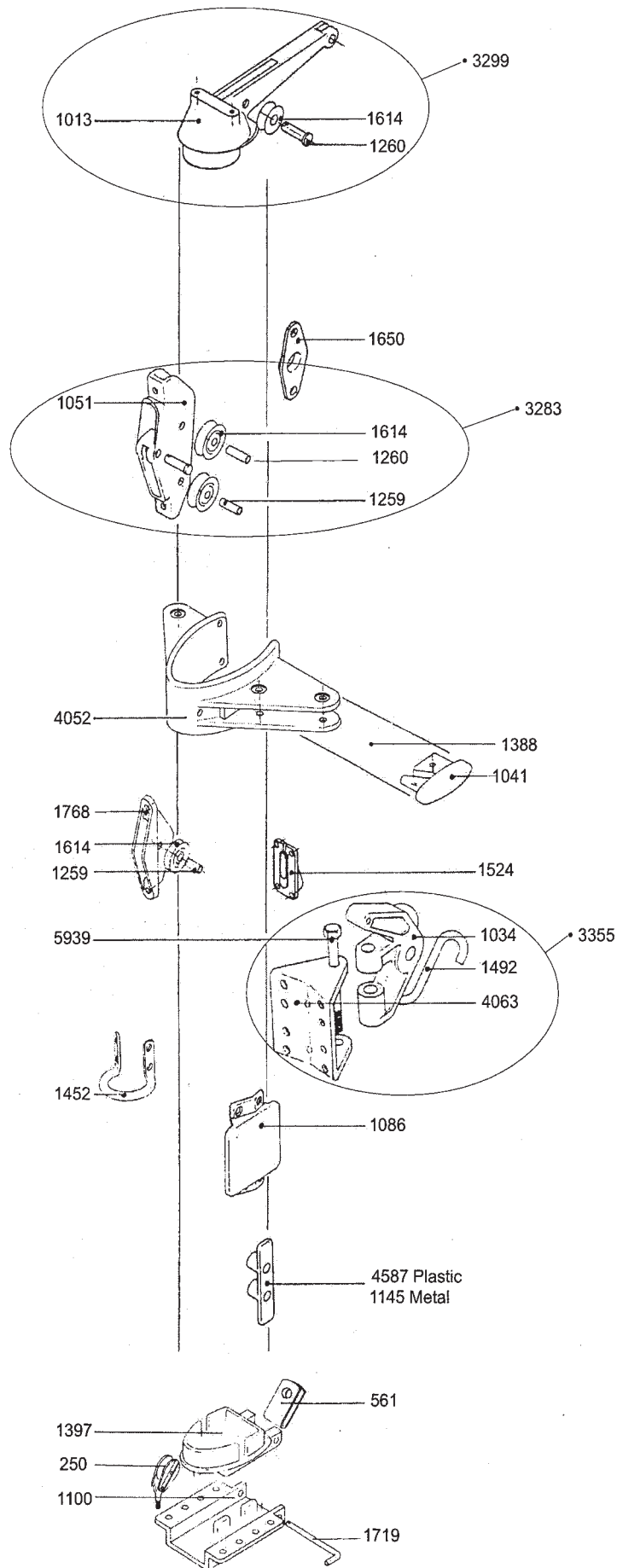
## SPREADERS

Profiles		Dimensions mm	Weight Kg
	Z Der	44 x 9	0.4
	Z 65	56 x 21	0.5
	Z 80	56 x 25	0.8
	Z 60	55 x 20	0.5
	Z 95	80 x 25	1.25
	Z 240	130 x 40	2.4
	Z 341	155 x 49	3.6
	Z 541	180 x 60	5.4

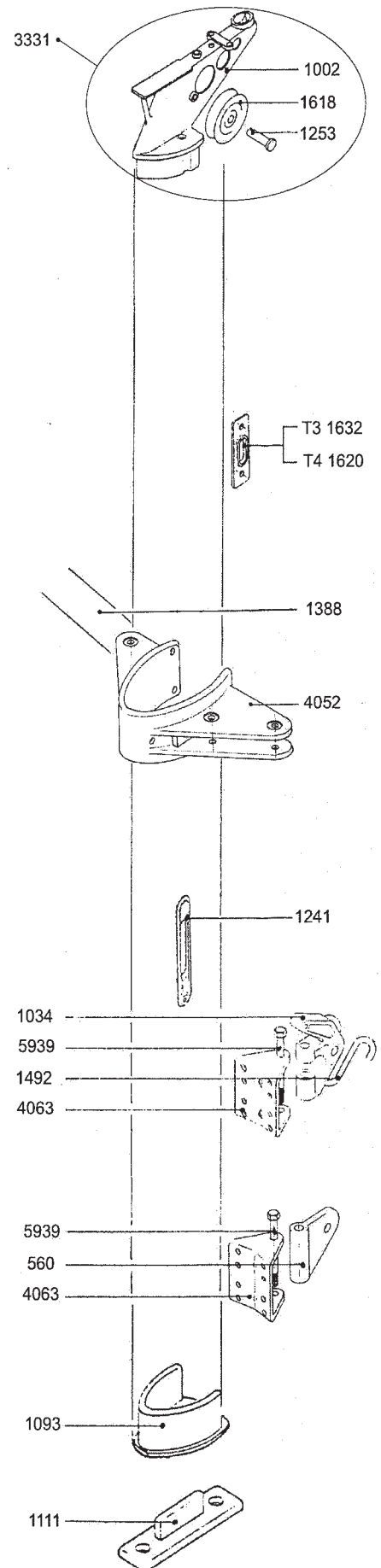
		Spreader Tip				
		Spreader Tip		Discontinuous Spreader Tip		
Spreader		Reference	Material	Type	V1 Pin Diameter	D2 Pin Diameter
Z Der	Taper	3112	Aluminium		No	
Z 60	Taper	3113	Delrin	3527	8 mm	6 mm
Z 65	No taper	1667	Delrin	1054	8 mm	6 mm
Z 80	No taper	1667	Delrin	3500	10 mm	8 mm
	No taper	1040	Delrin	1040	12 mm	8 mm
Z 95	Taper	3114	Delrin	3500	10 mm	8 mm
	Taper	3114	Delrin	3110	12 mm	8 mm
	No taper	3802	Delrin	3804	10 mm	8 mm
	No Taper	3802	Delrin	3805	12 mm	8 mm
Z 240	Taper	3115	Delrin	3378	16 mm	12 mm
	Taper	3115	Delrin	3147	19 mm	12 mm
	Taper	3109	Aluminium		16 mm	12 mm
	Taper	3109	Aluminium	3147	19 mm	12 mm
	No Taper	3803	Delrin	3806	16 mm	12 mm
	No Taper	3803	Delrin	3807	19 mm	12 mm
	No taper	3822	Aluminium	3806	16 mm	12 mm
	No taper	3822	Aluminium	3807	19 mm	12 mm
Z 341	Taper		Aluminium			

# MASTS

## Z 145



## Z 145 TAPER

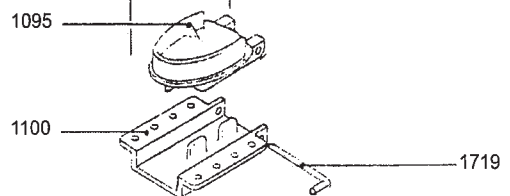
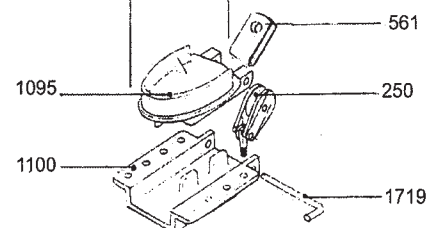
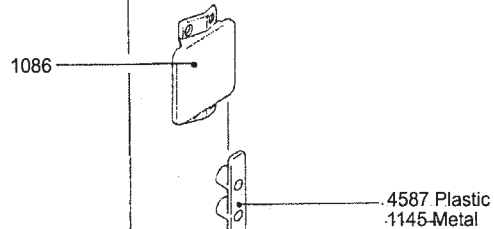
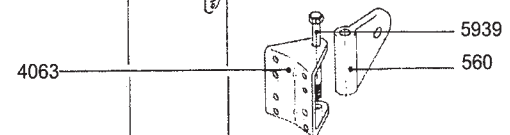
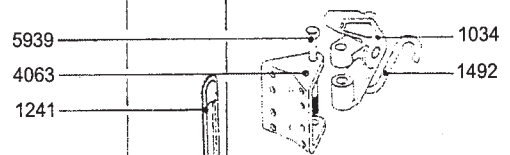
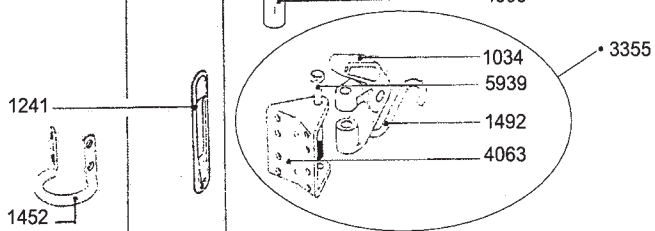
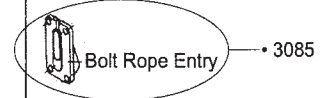
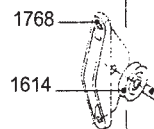
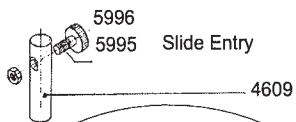
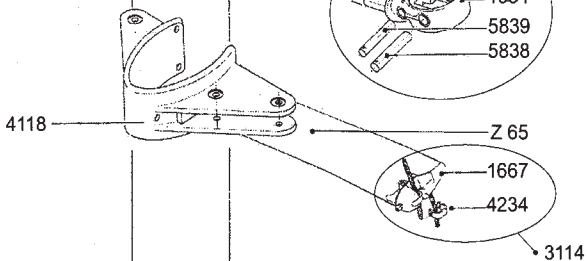
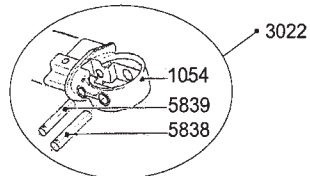
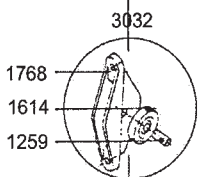
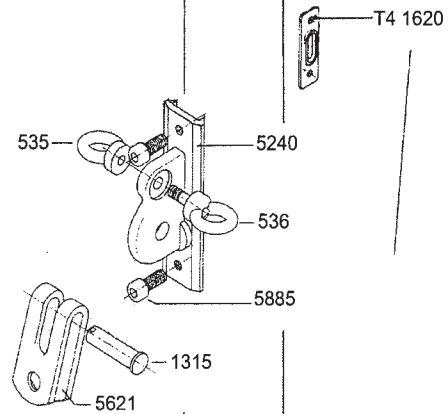
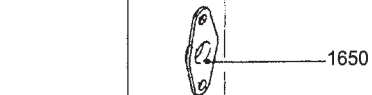
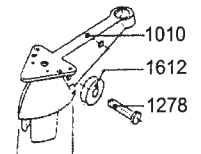
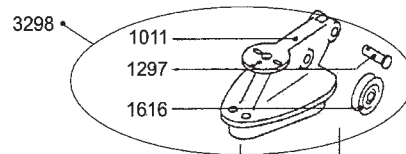
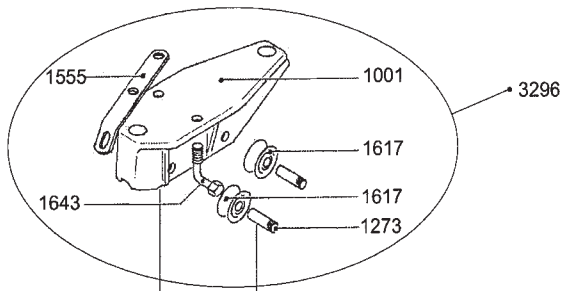


# MASTS

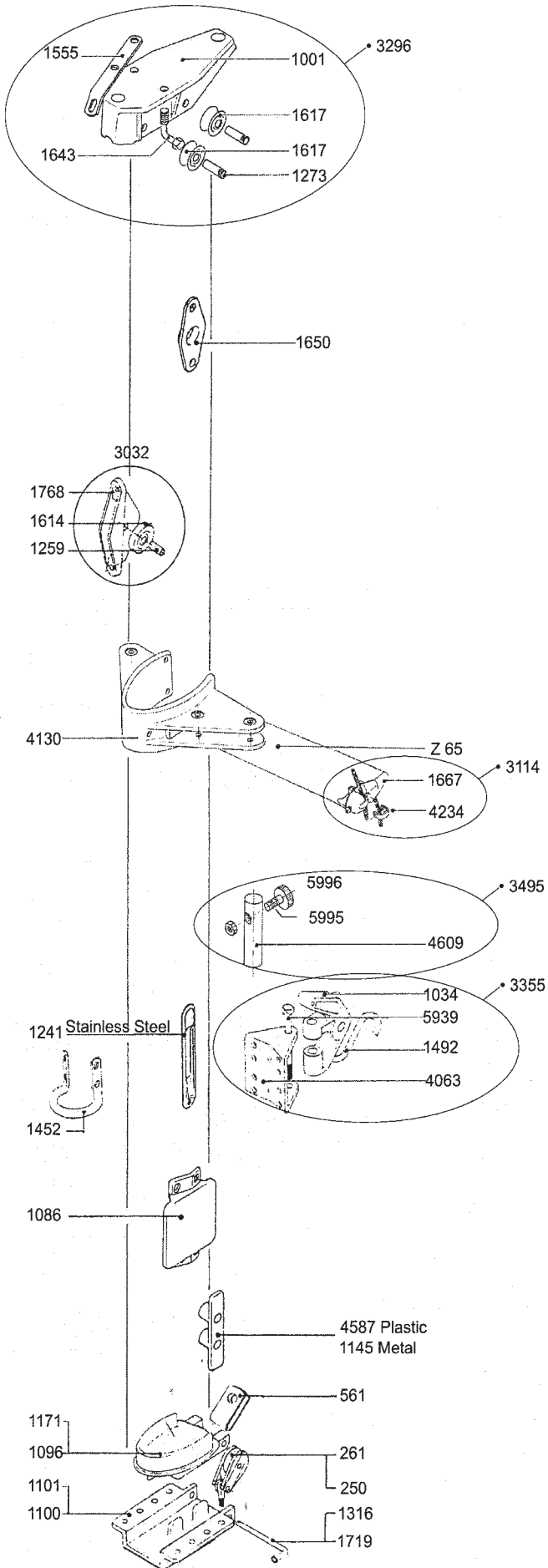
Z 170

Z 170 7/8

Z 170 Taper



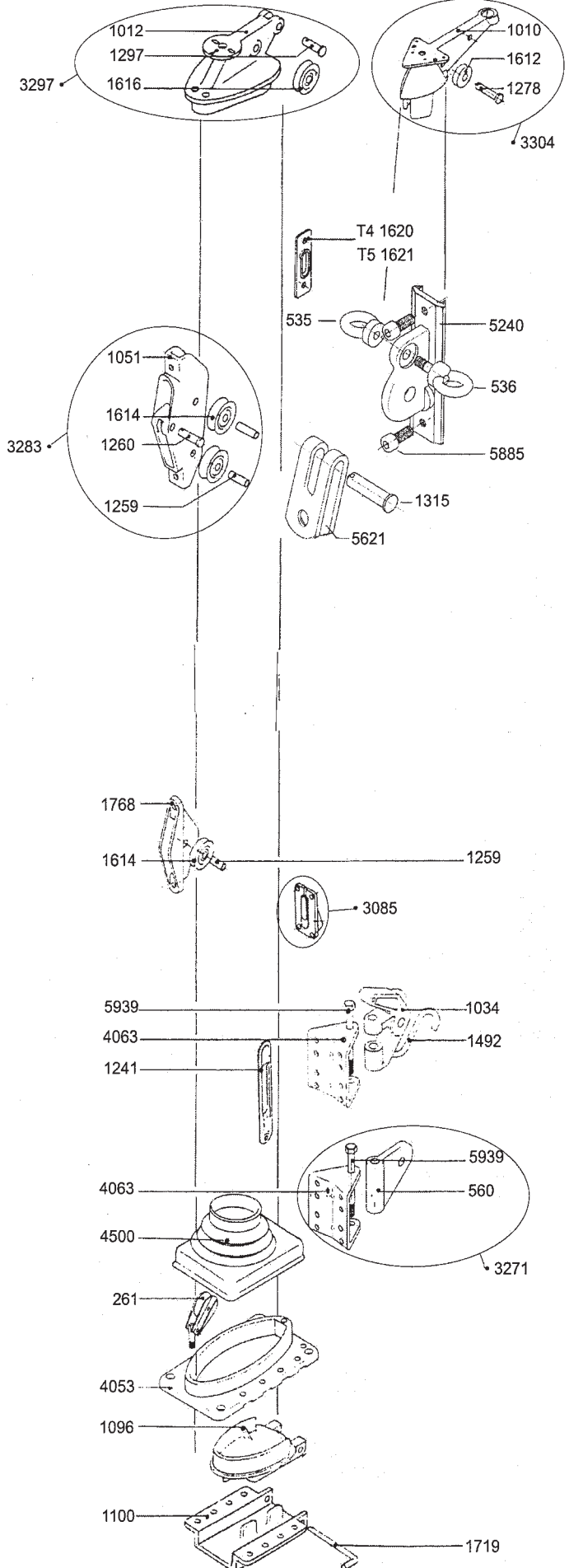
### Z 190



### MASTS

#### Z 190 7/8

#### Z 190 Taper



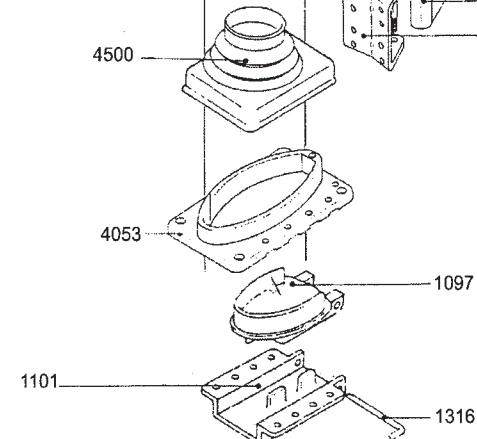
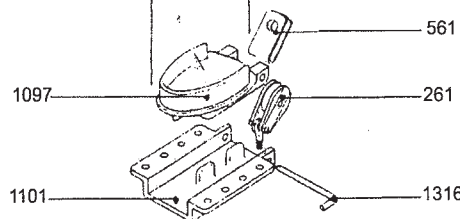
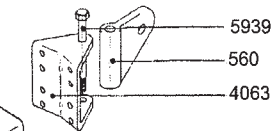
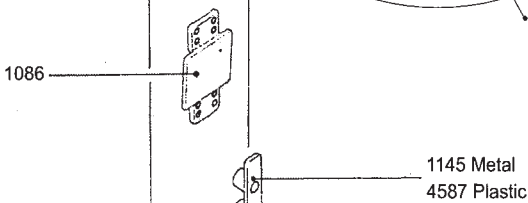
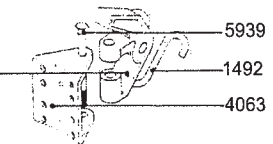
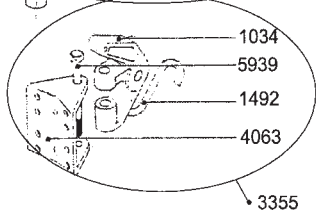
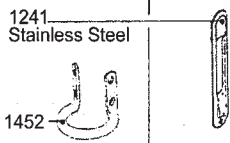
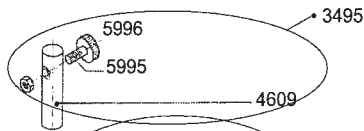
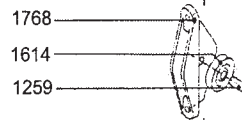
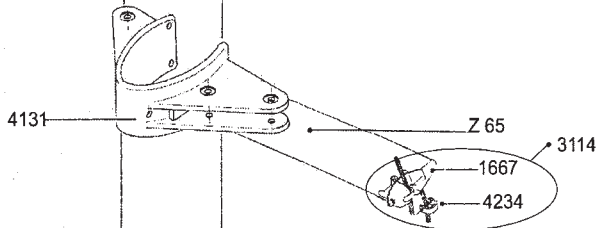
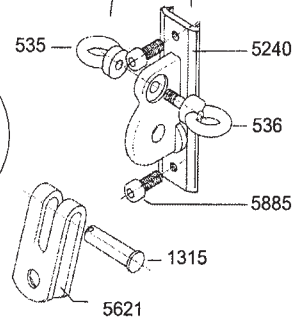
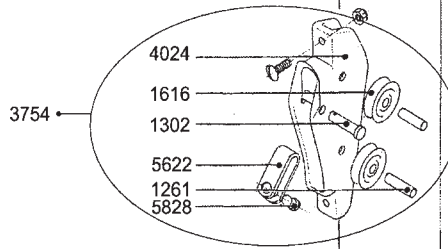
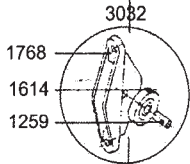
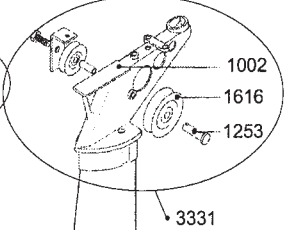
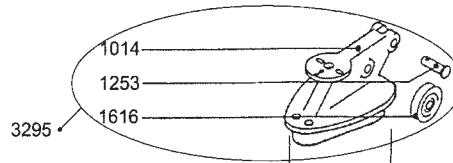
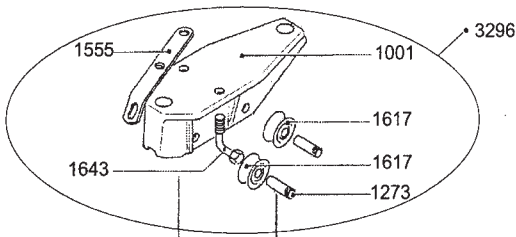


# MASTS

Z 230

Z 230 7/8

Z 230 Taper

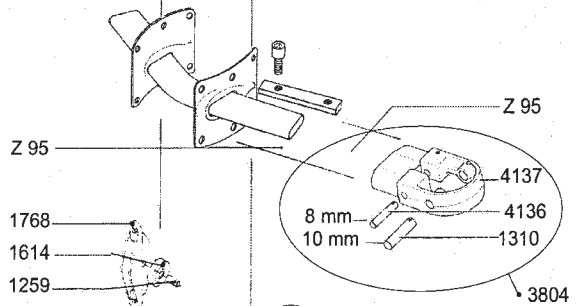
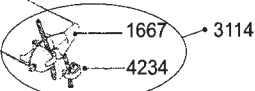
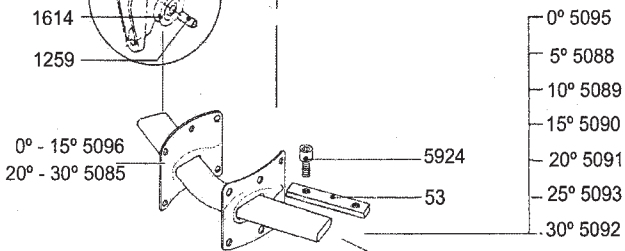
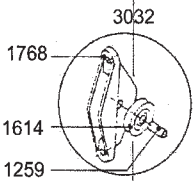
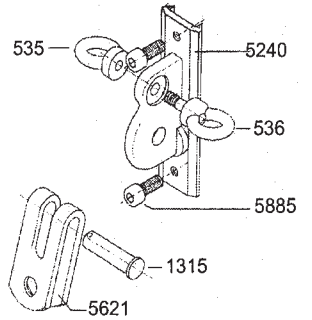
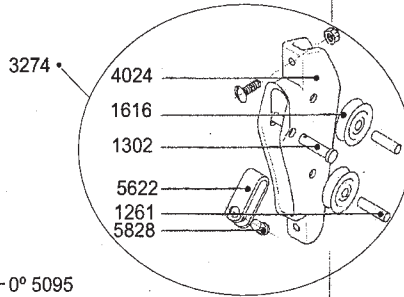
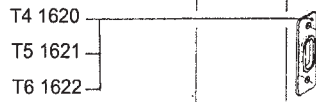
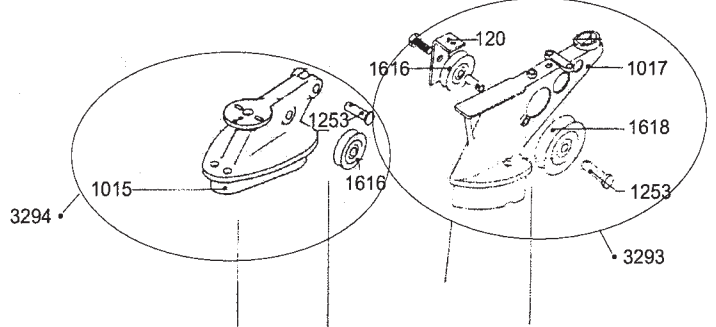
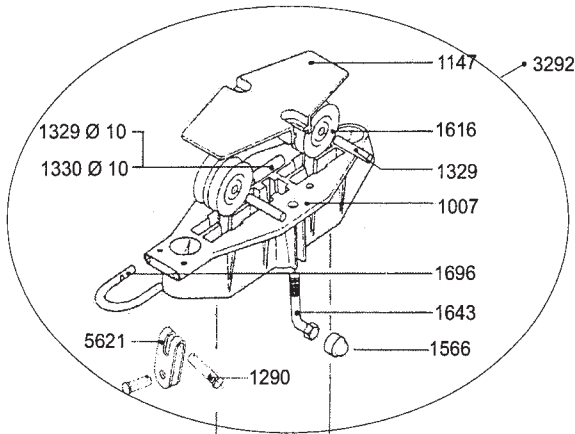


Z 265

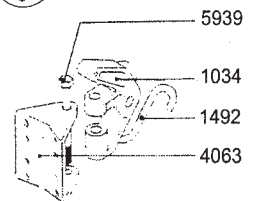
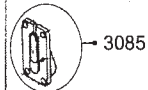
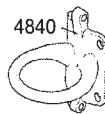
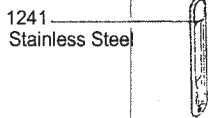
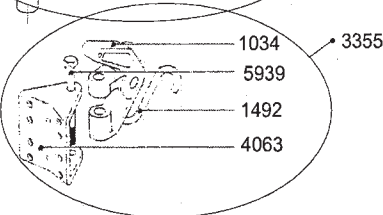
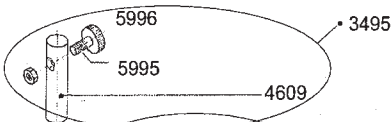
MASTS

Z 265 7/8

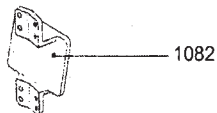
Z 265 Taper



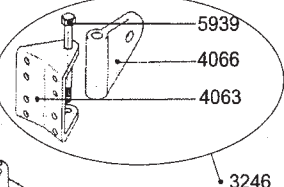
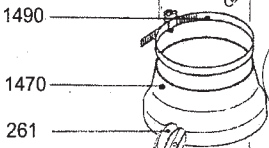
Z 80



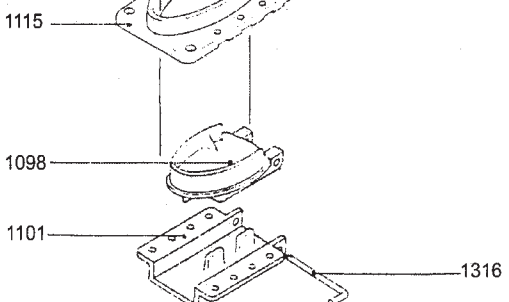
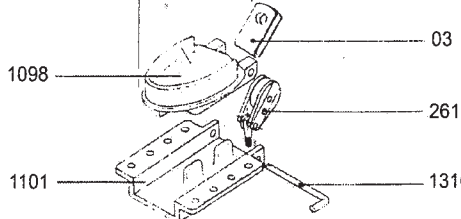
1077



1241  
Stainless Steel

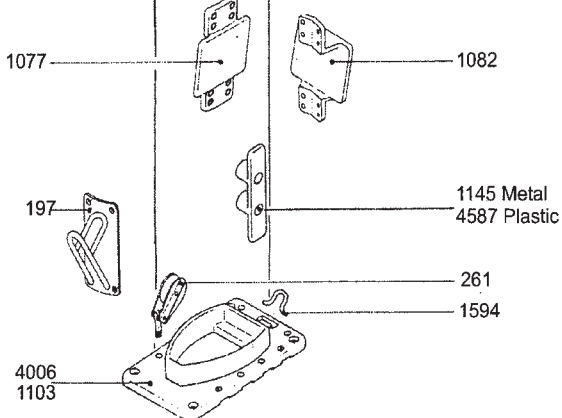
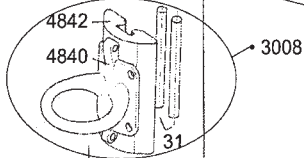
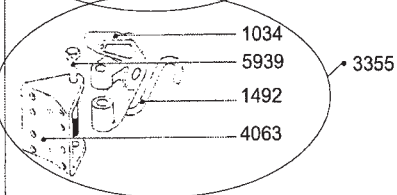
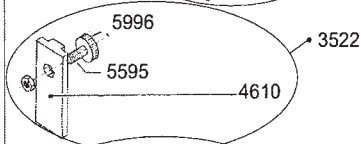
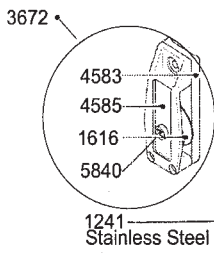
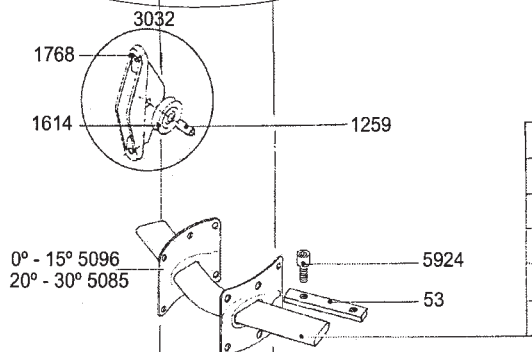
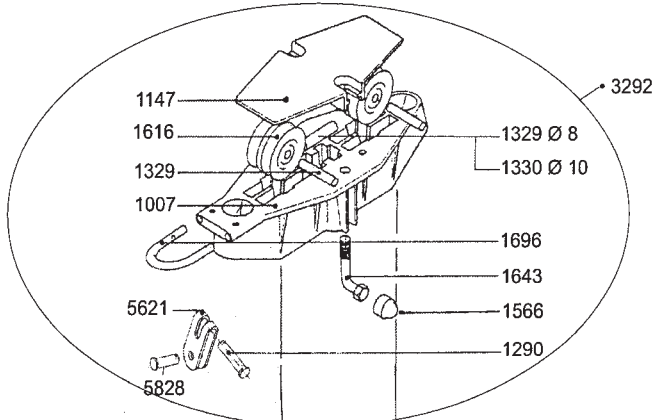


1145 Metal  
4587 Plastic

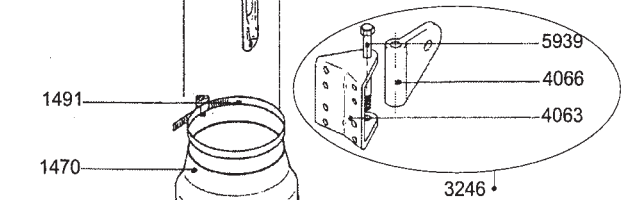
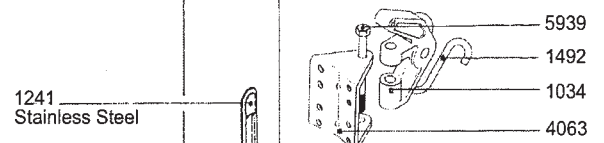
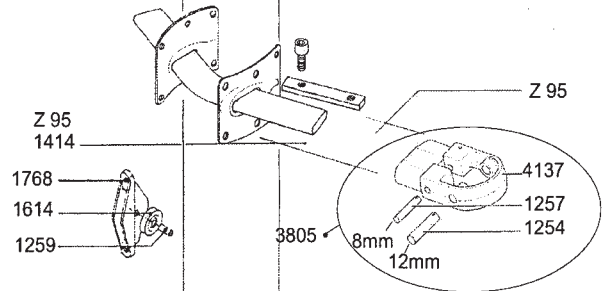
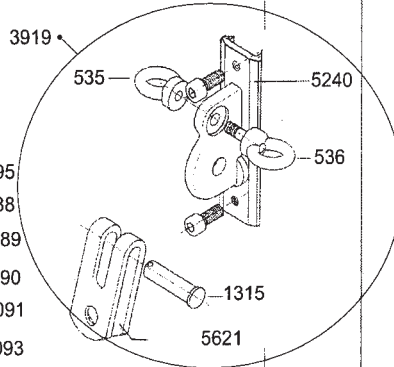
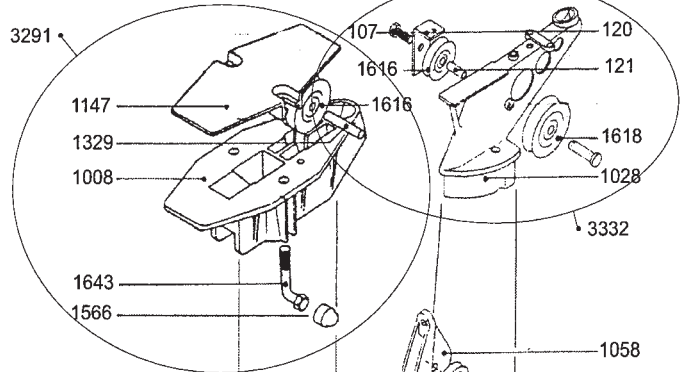


# MASTS

## Z 351



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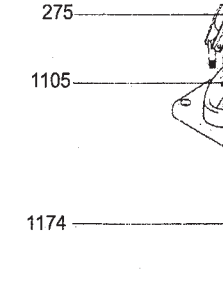
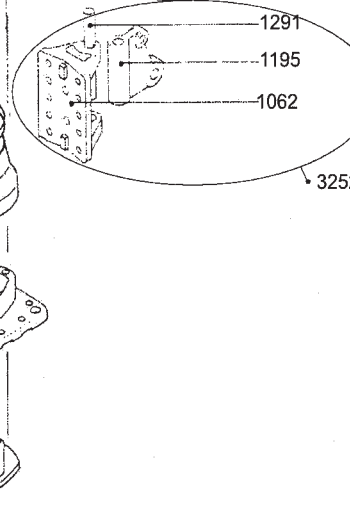
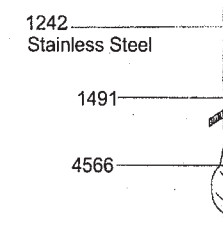
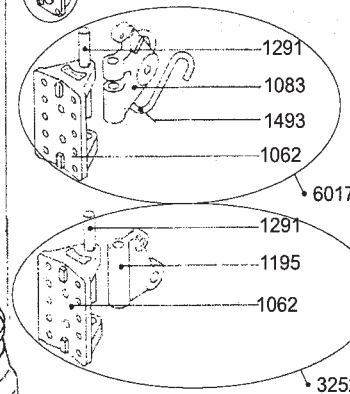
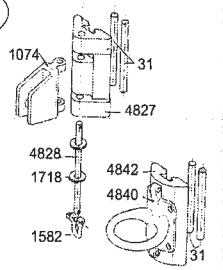
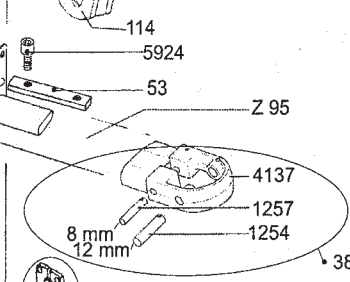
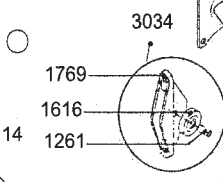
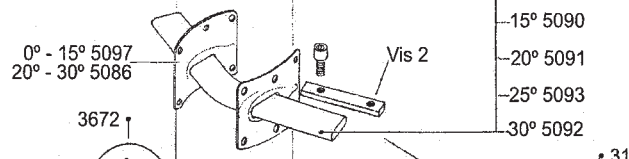
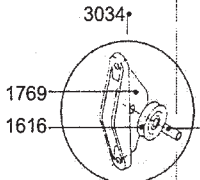
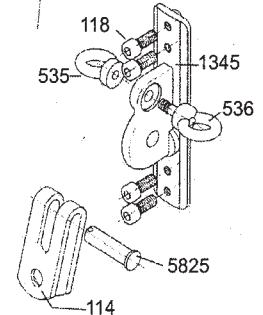
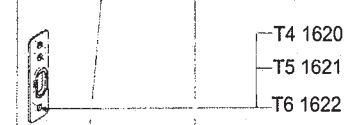
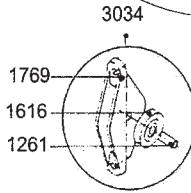
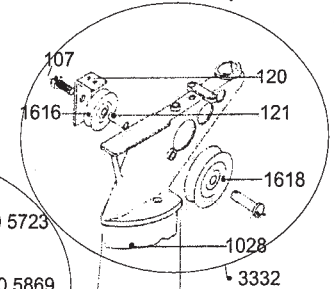
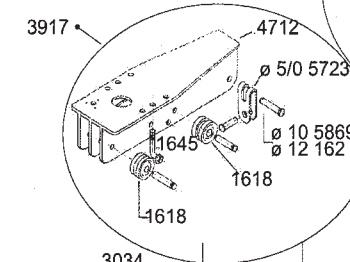
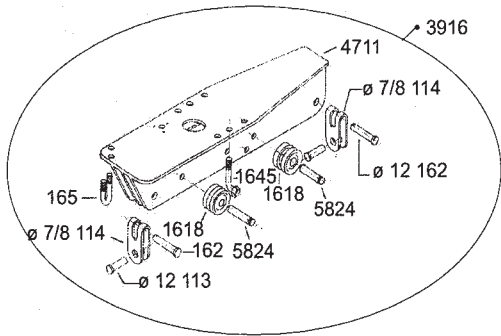


Z 401

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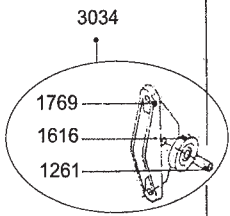
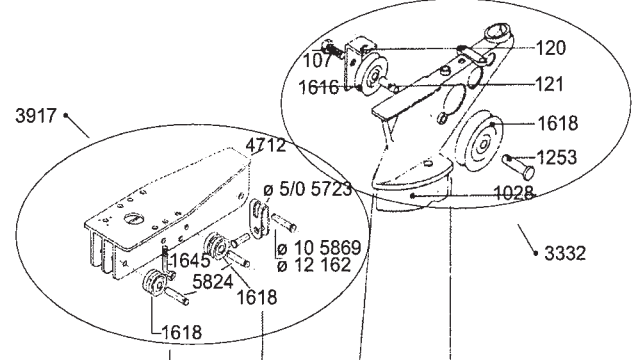
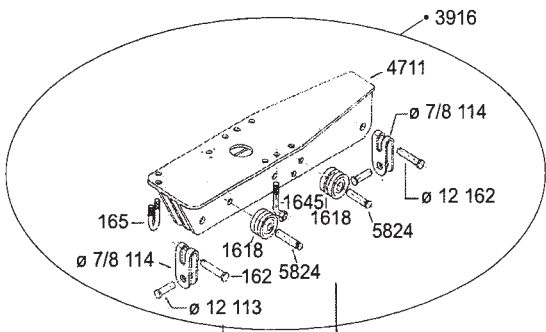


# MASTS

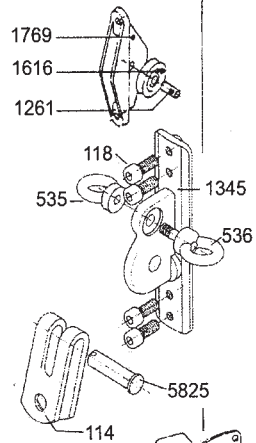
Z 501

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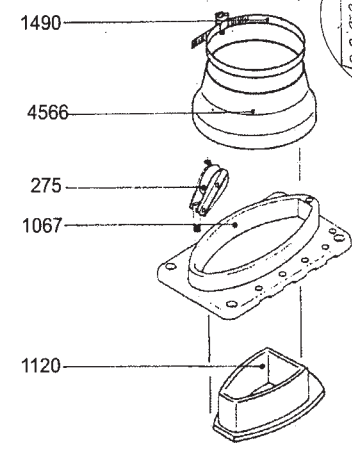
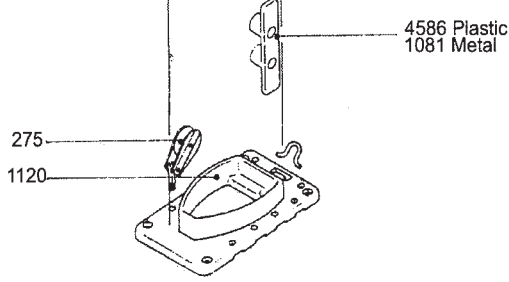
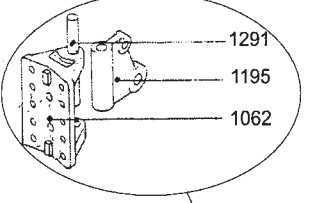
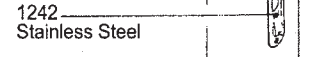
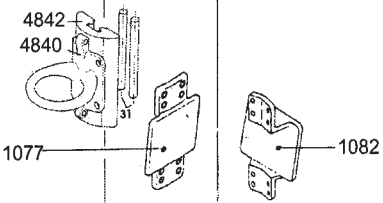
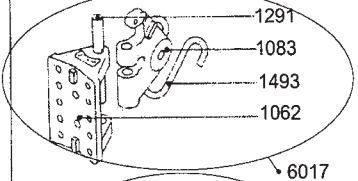
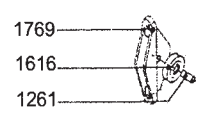
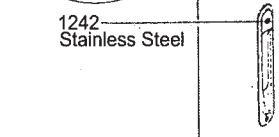
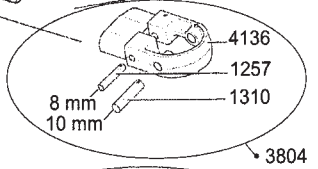
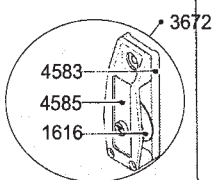
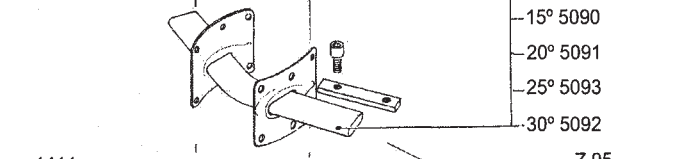
Z 501 7/8 Taper



- 0° 5095
- 5° 5088
- 10° 5089
- 15° 5090
- 20° 5091
- 25° 5093
- 30° 5092



- T4 1620
- T5 1621
- T6 1622

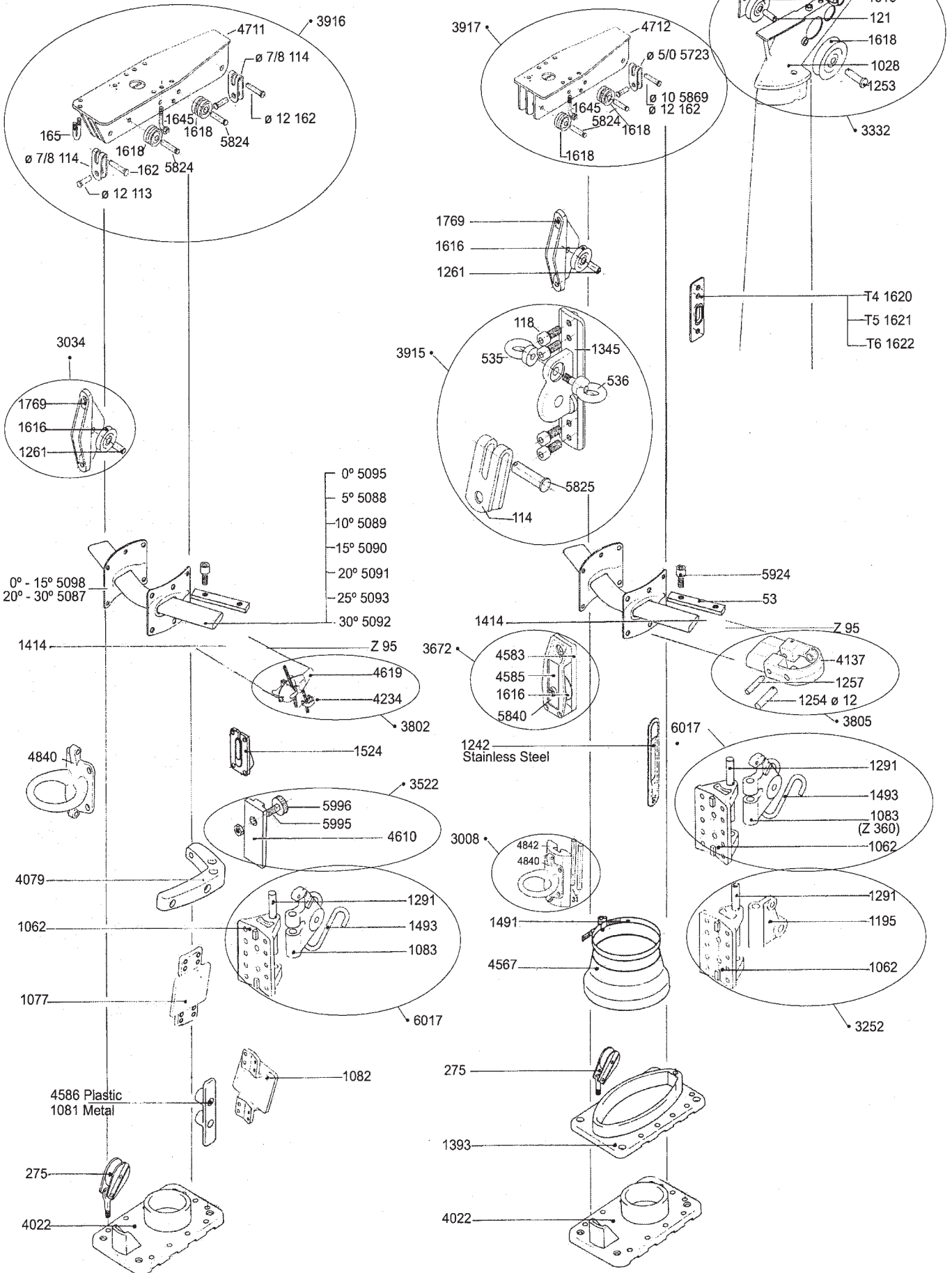


# MASTS

Z 531

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Z 531 7/8 Taper

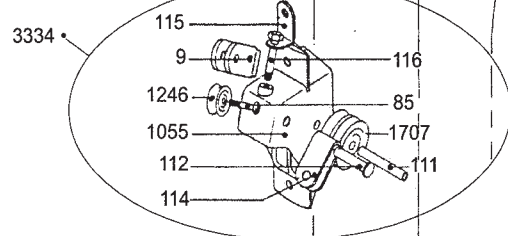
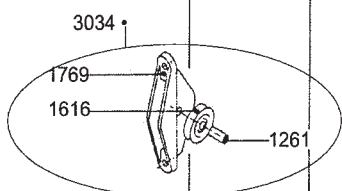
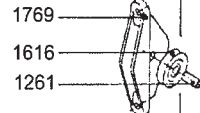
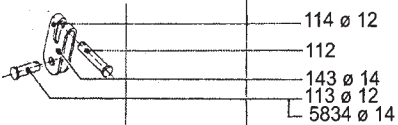
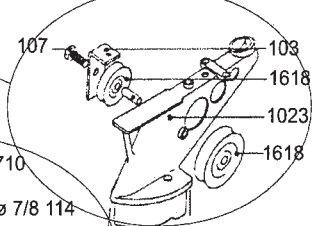
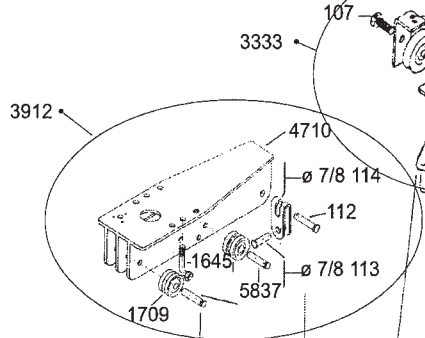
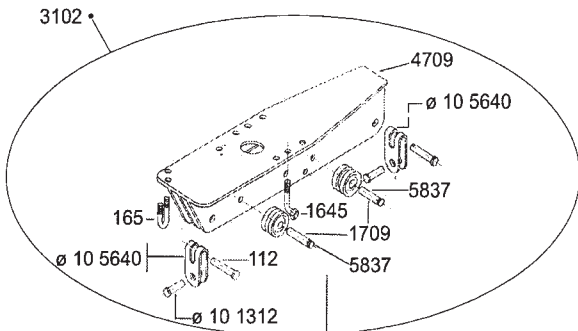


# MASTS

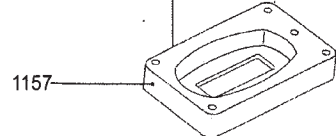
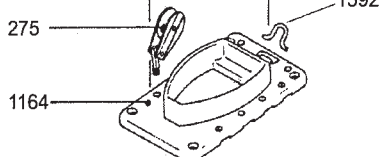
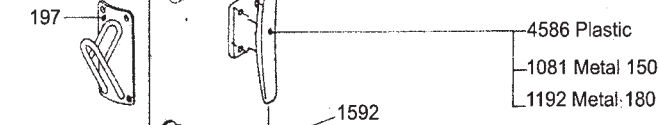
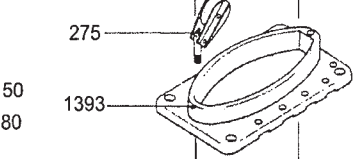
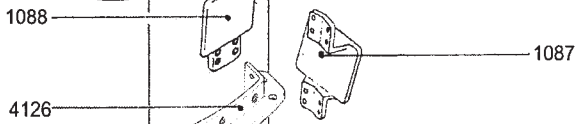
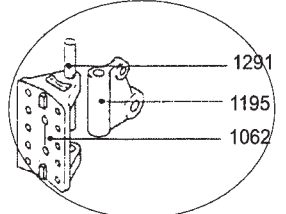
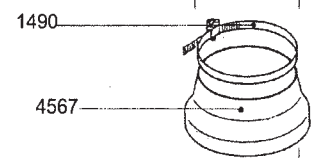
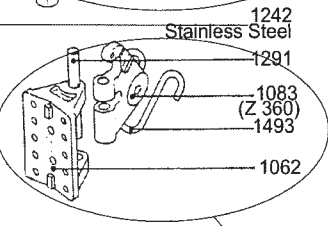
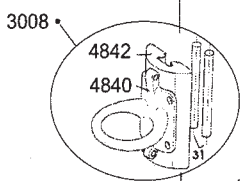
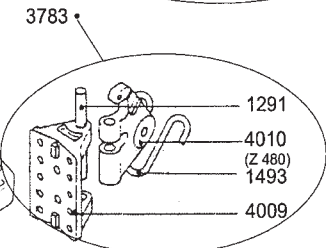
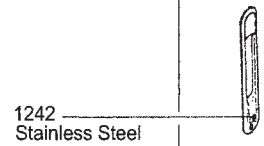
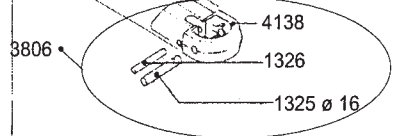
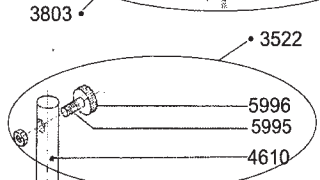
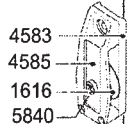
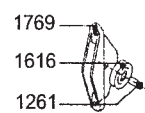
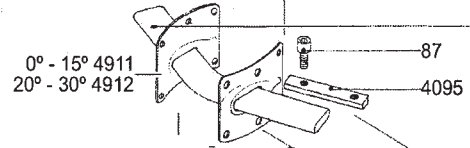
Z 601

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Z 601 7/8 Taper



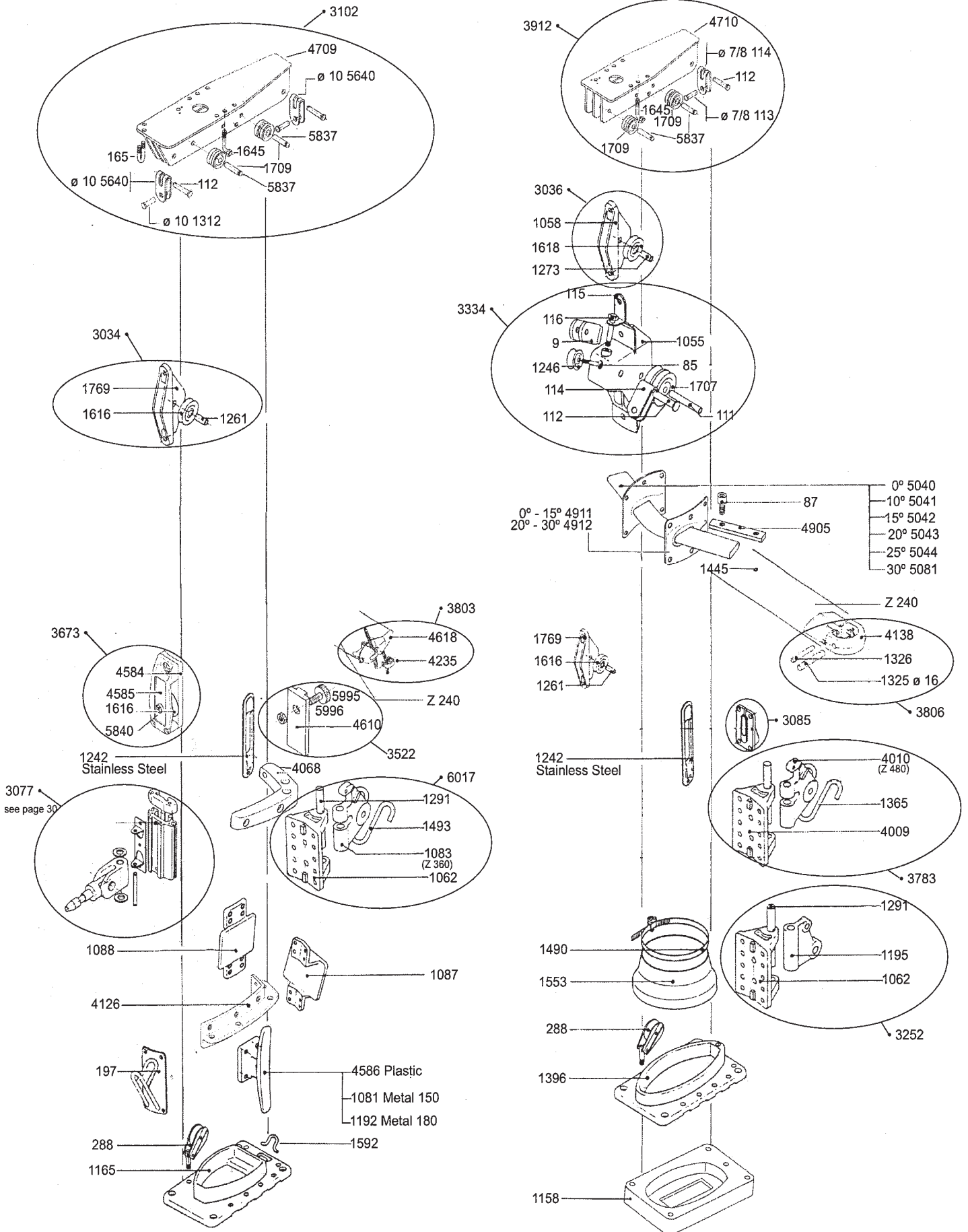
- 0° 5040
- 10° 5041
- 15° 5042
- 20° 5043
- 25° 5044



# MASTS

## Z 701

## Z 701 7/8

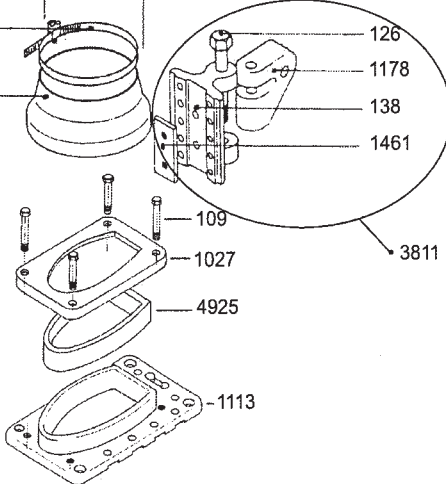
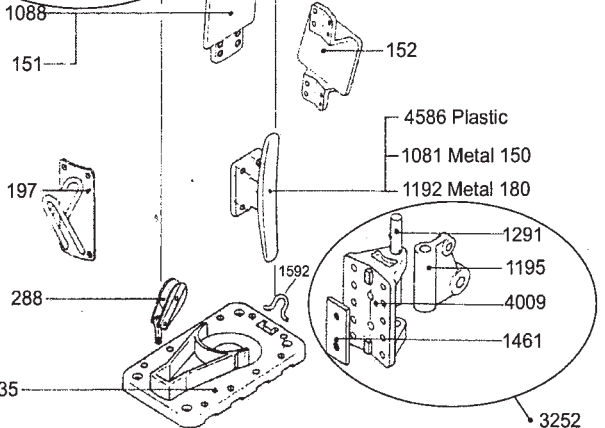
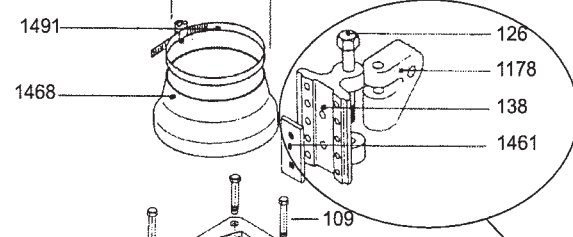
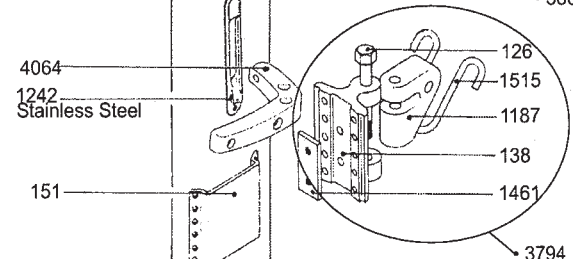
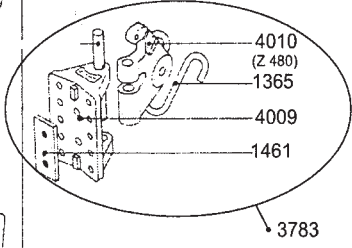
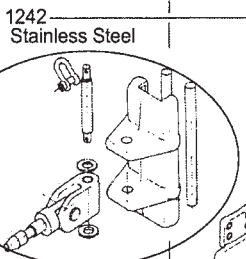
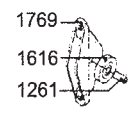
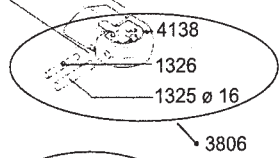
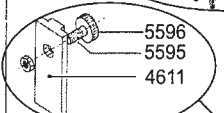
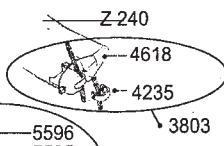
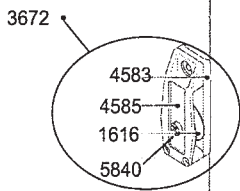
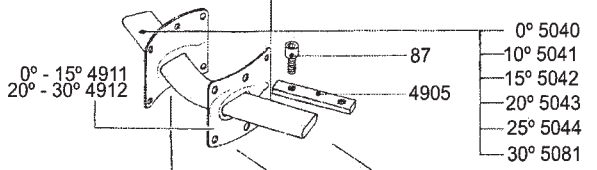
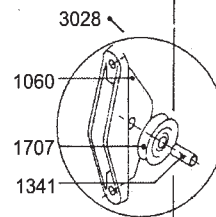
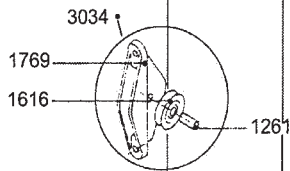
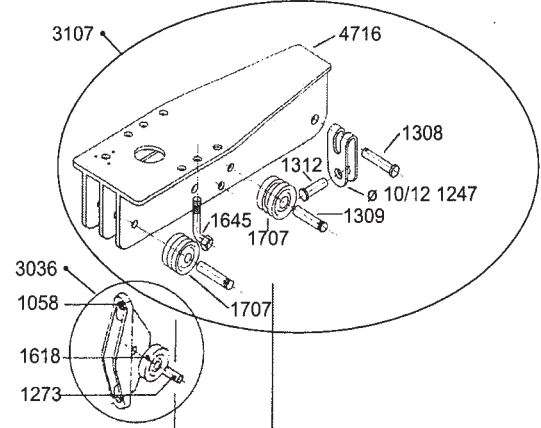
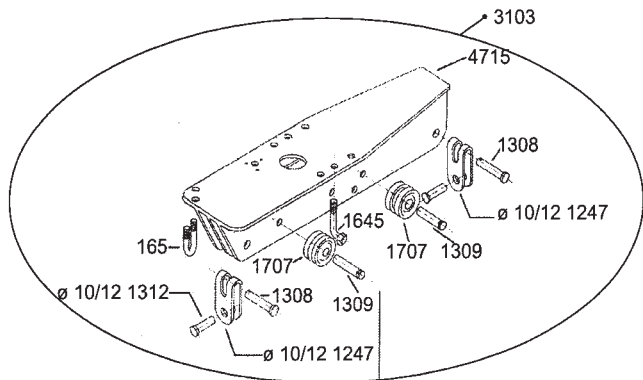




# MASTS

Z 901

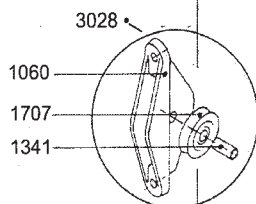
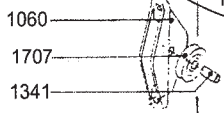
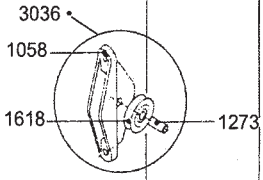
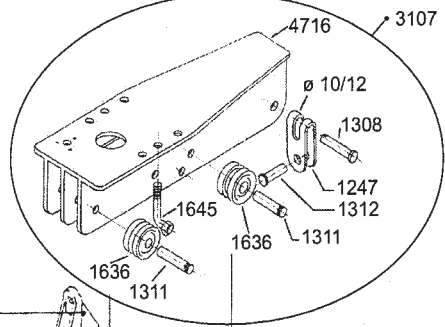
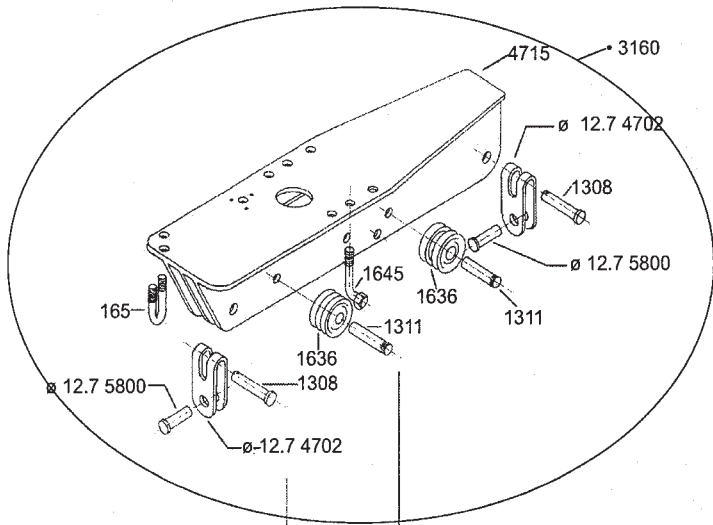
Z 901 7/8



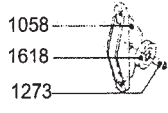
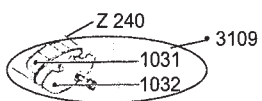
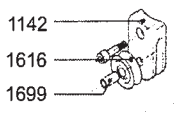
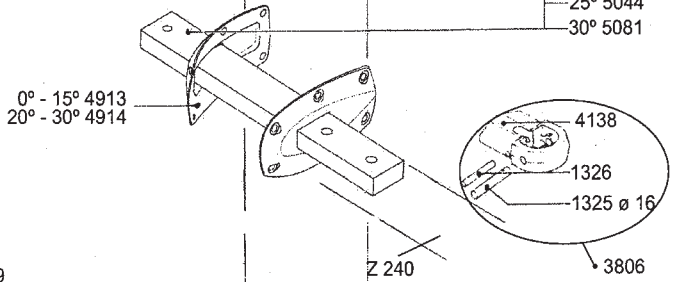
# MASTS

Z 1001

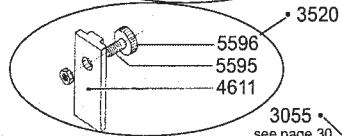
Z 1001 7/8



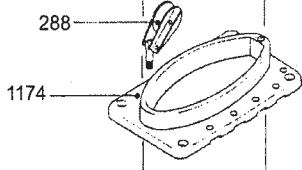
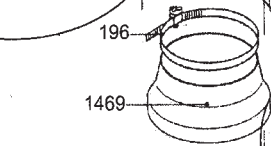
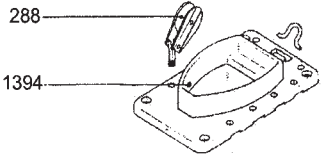
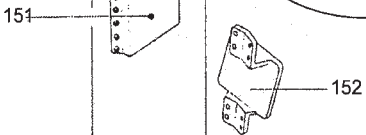
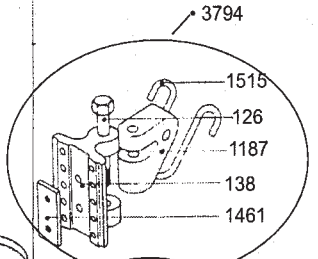
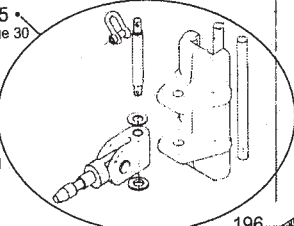
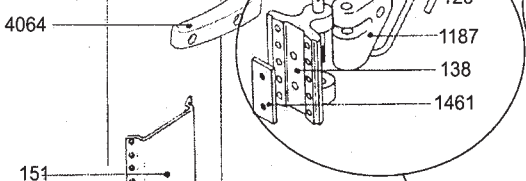
- 0° 5040
- 10° 5041
- 15° 5042
- 20° 5043
- 25° 5044
- 30° 5081



1242  
Stainless Steel



1242  
Stainless Steel

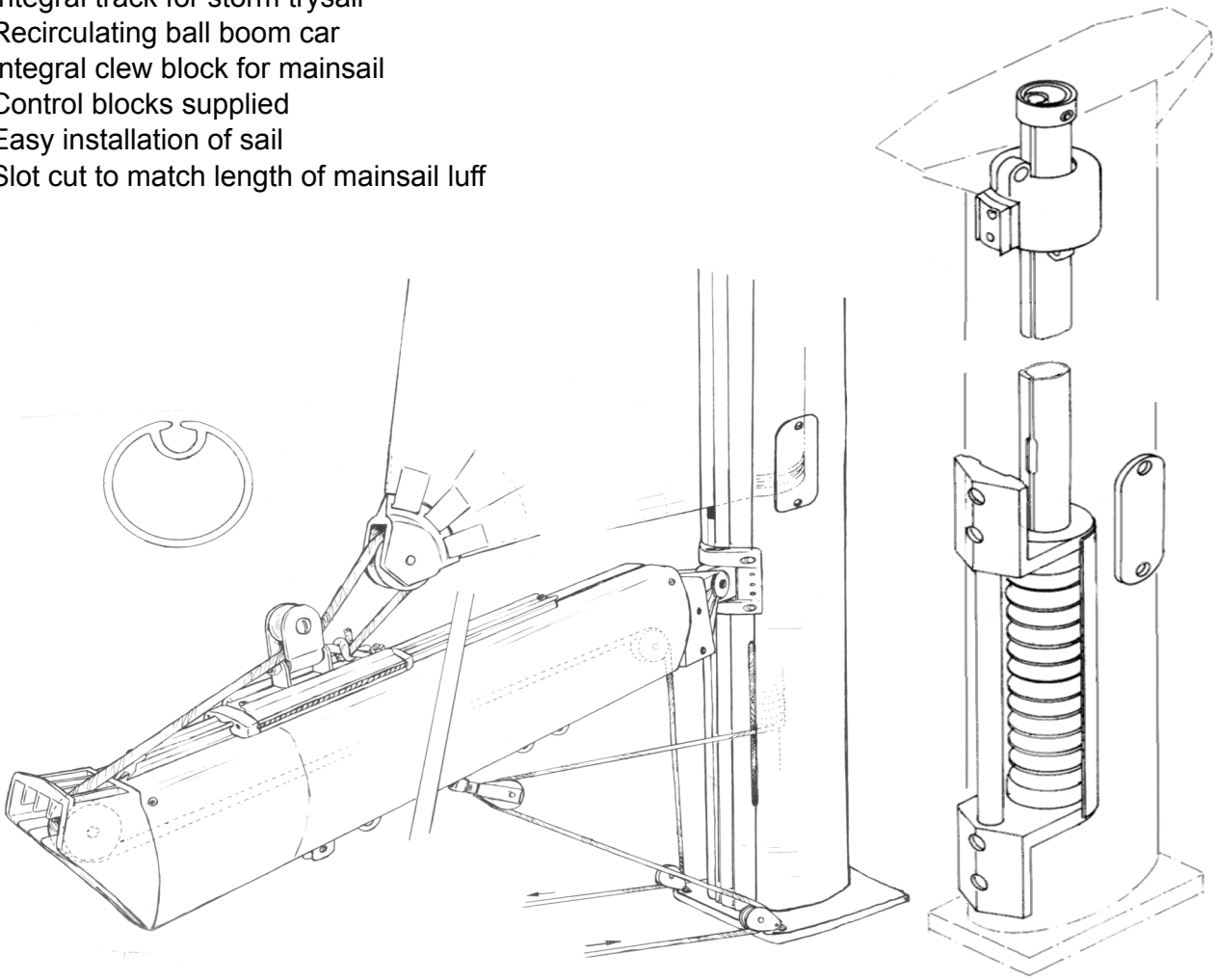


# FURLING SPARS

## FOR EASY CONTROL OF THE MAINSAIL

### FEATURES

- Removable helical drum furling mechanism
- Easy access to halyard swivel
- Minimum maintenance required
- Computer-aided-design mast sections
- Integral track for storm trysail
- Recirculating ball boom car
- Integral clew block for mainsail
- Control blocks supplied
- Easy installation of sail
- Slot cut to match length of mainsail luff



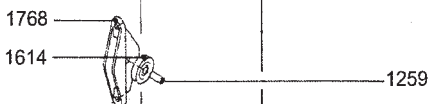
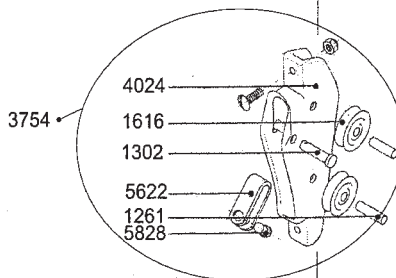
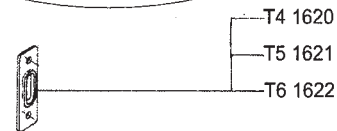
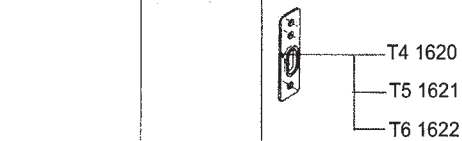
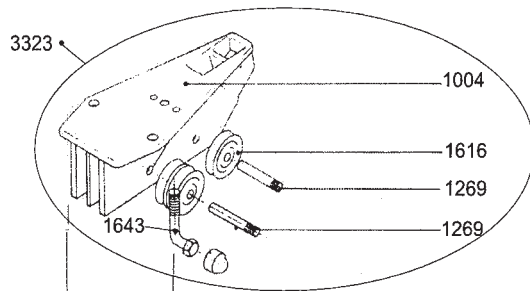
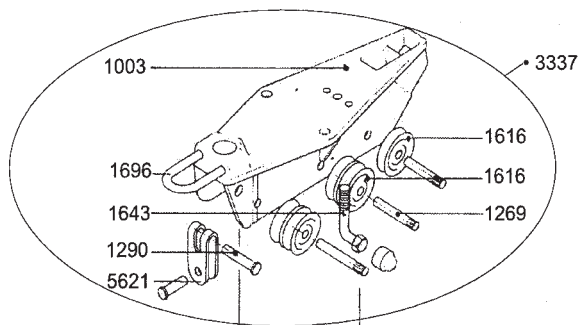
Note: mainsail battens cannot be used  
We reserve the right to change specification without notice

Z Spars UK, Unit 2, Pond Hall Industrial Estate, Hadleigh, IPSWICH, Suffolk, IP7 5PW, UK.  
Tel: +44(0)1473 822130. Fax: +44(0)1473 827354. E-mail: [sales@zsparsuk.com](mailto:sales@zsparsuk.com) Visit our website: [www.zsparsuk.com](http://www.zsparsuk.com).

# MASTS

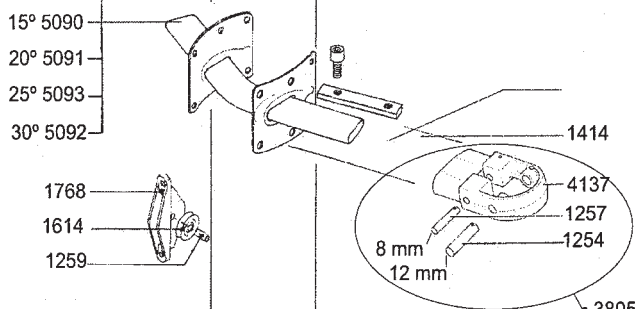
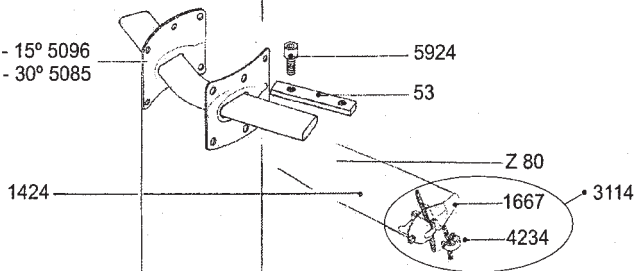
## Z 300 E

## Z 300 E 7/8



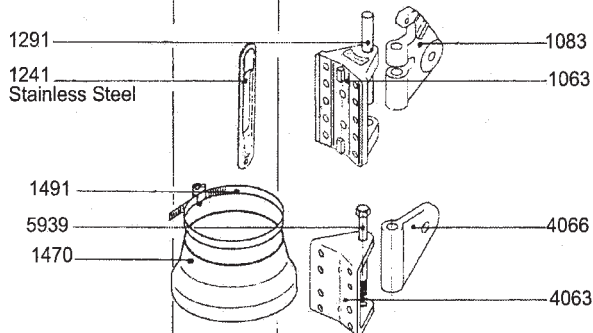
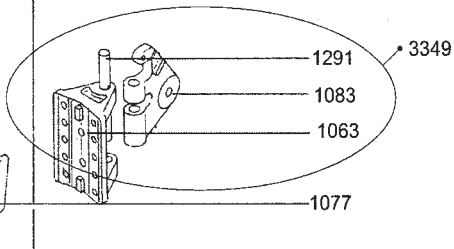
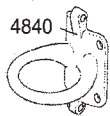
- 0° 5095
- 5° 5088
- 10° 5089
- 15° 5090
- 20° 5091
- 25° 5093
- 30° 5092

- 0° - 15° 5096
- 20° - 30° 5085

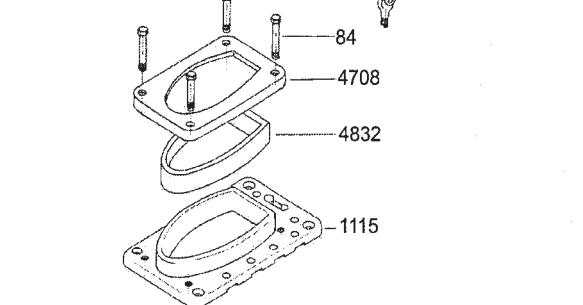
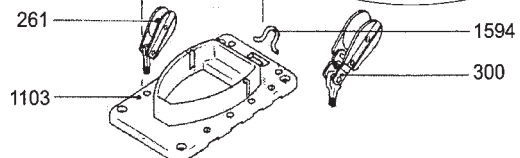
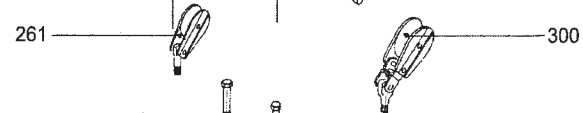
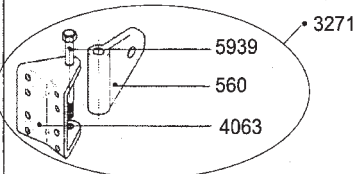


1241  
Stainless Steel

1291  
1241  
Stainless Steel



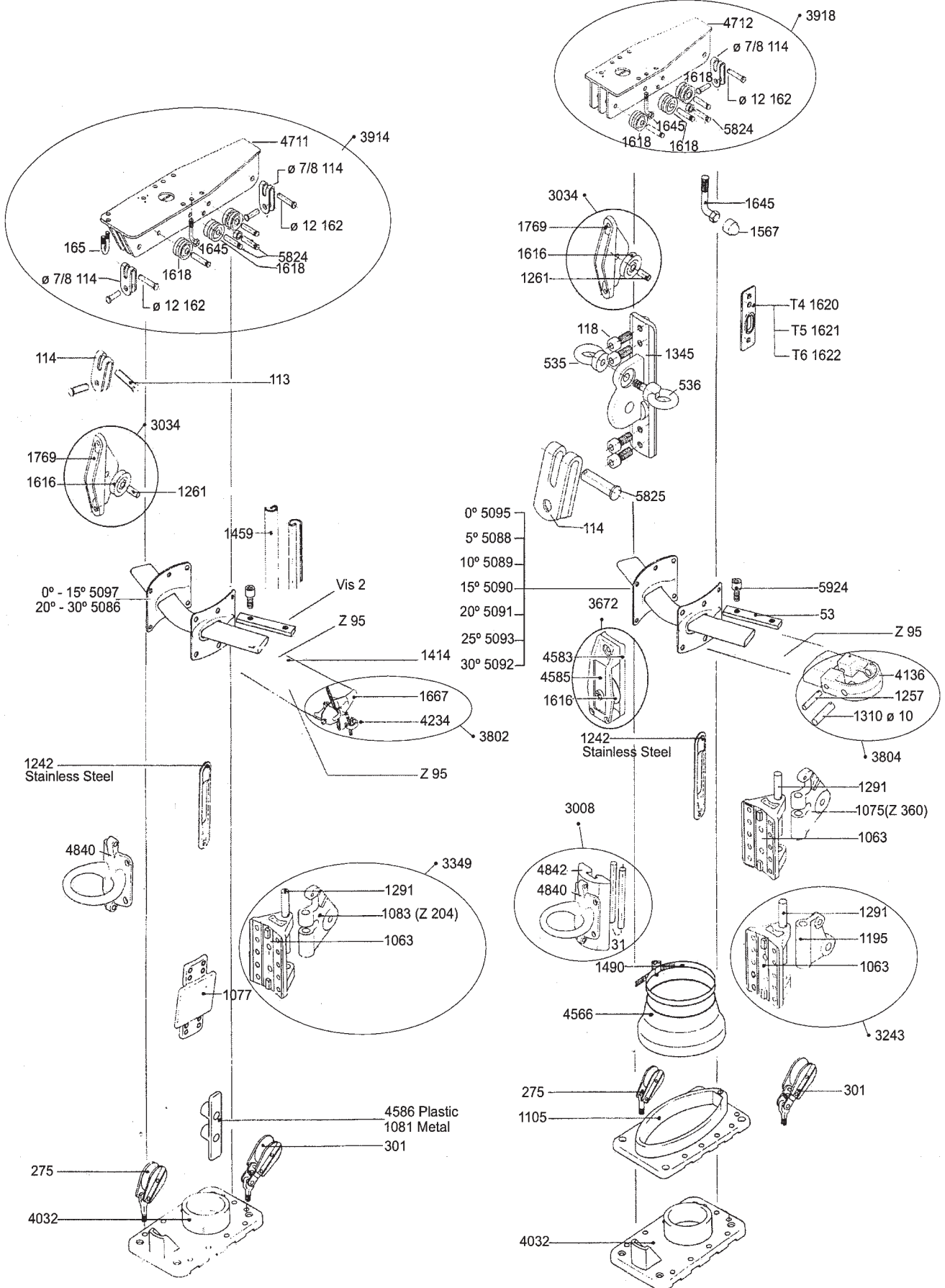
1081 Metal  
4586 Plastic



# FURLING MASTS

Z 400 E

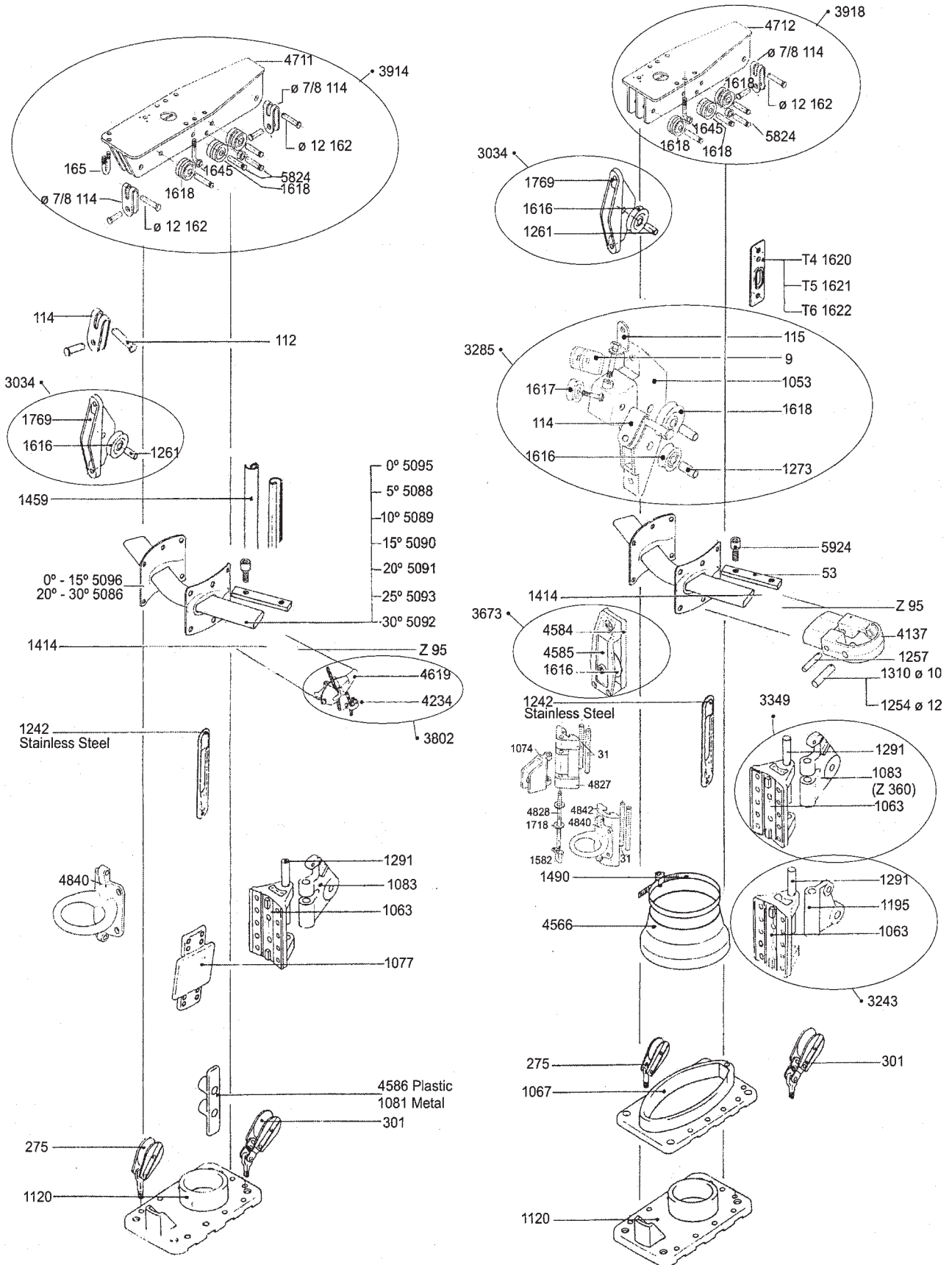
Z 400 E 7/8



# FURLING MASTS

Z 500 E

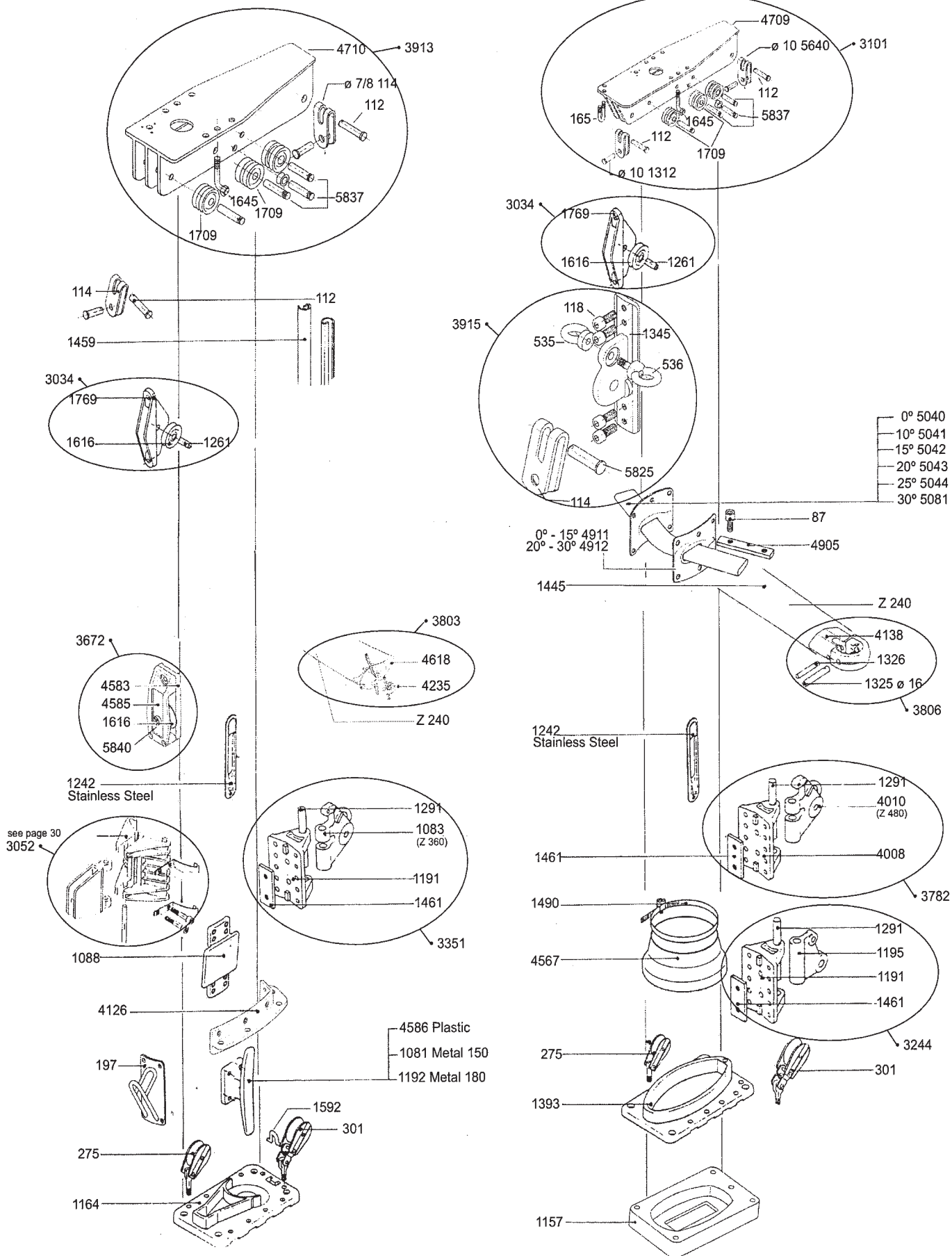
Z 500 E 7/8



# FURLING MASTS

Z 600 E 7/8

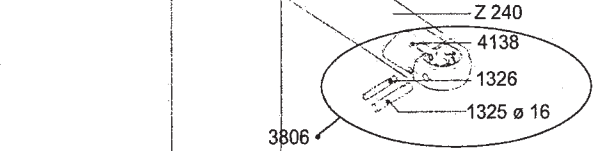
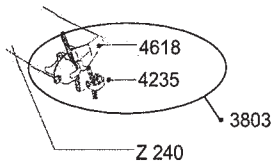
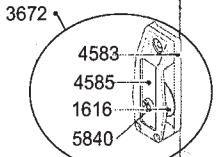
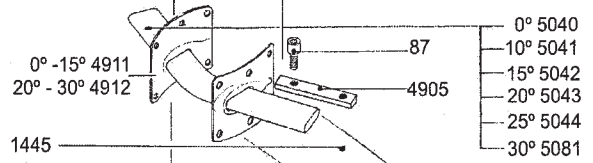
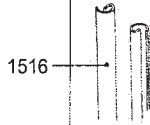
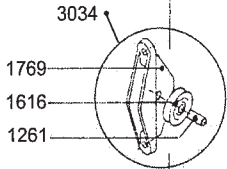
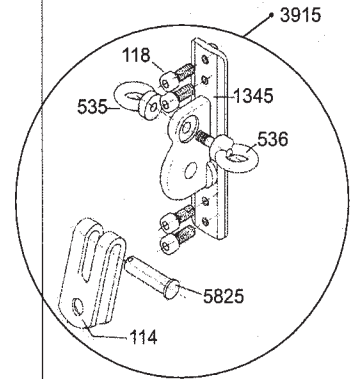
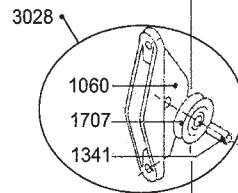
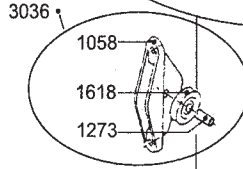
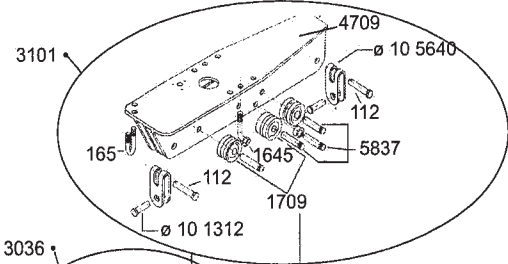
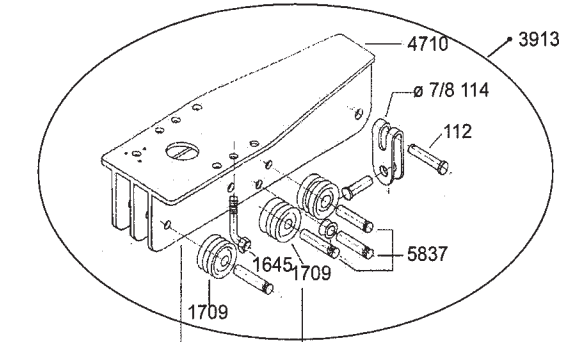
Z 600 E



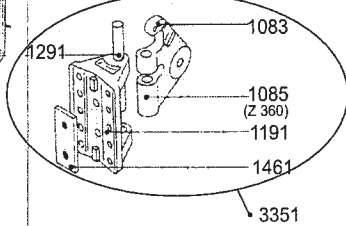
# FURLING MAST

Z 700 E

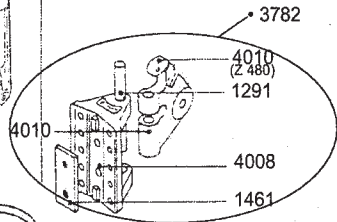
Z 700 E 7/8



1242  
Stainless Steel



1242  
Stainless Steel



1088

4126

197

288

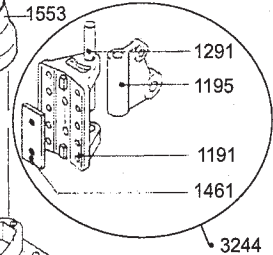
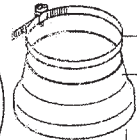
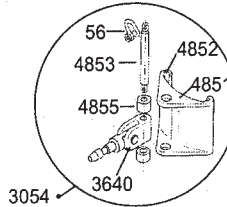
1165

4586 Plastic

1081 Metal 150

1192 Metal 180

302



288

1396

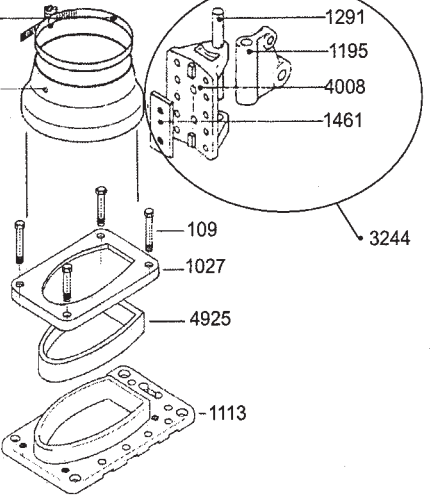
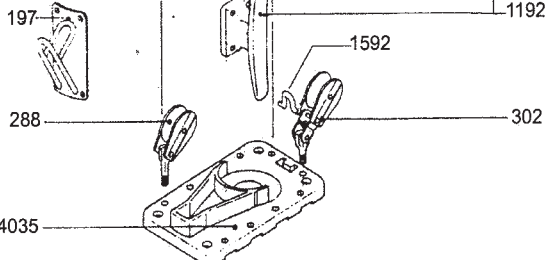
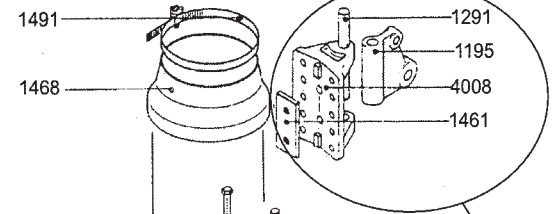
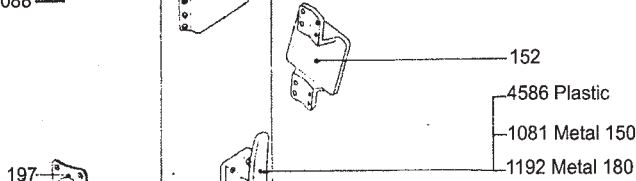
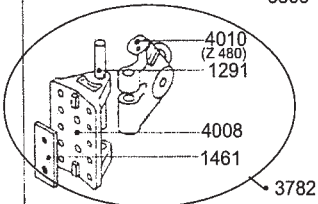
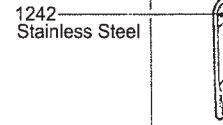
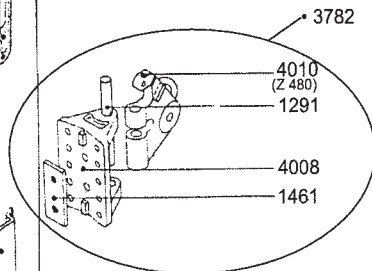
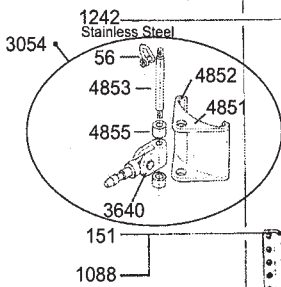
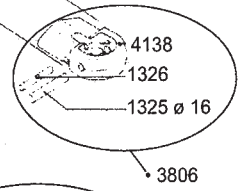
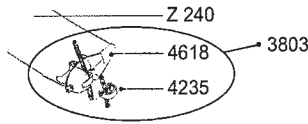
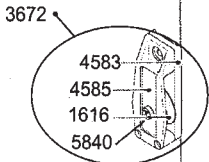
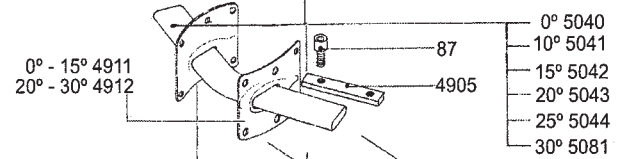
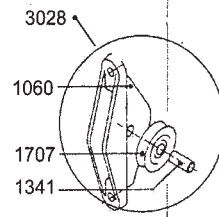
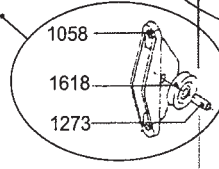
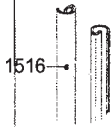
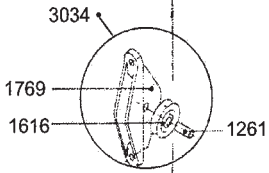
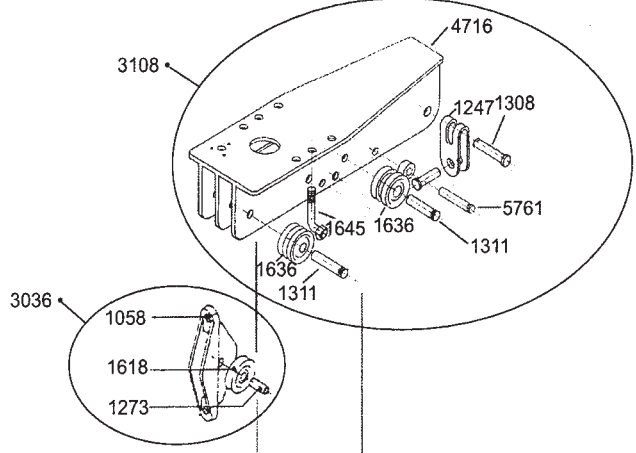
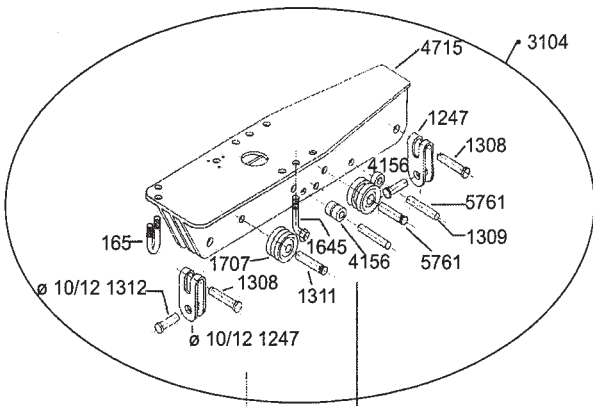
1158



# FURLING MASTS

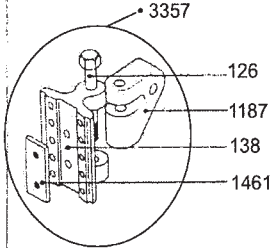
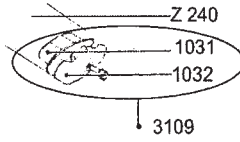
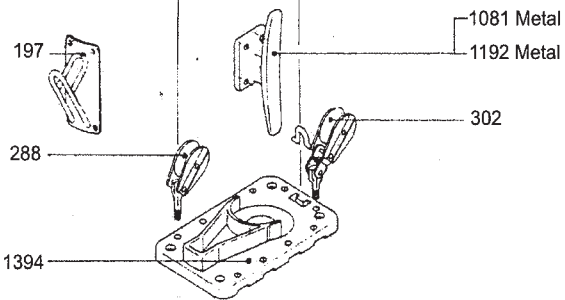
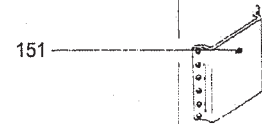
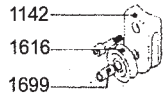
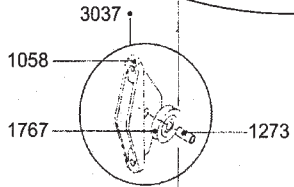
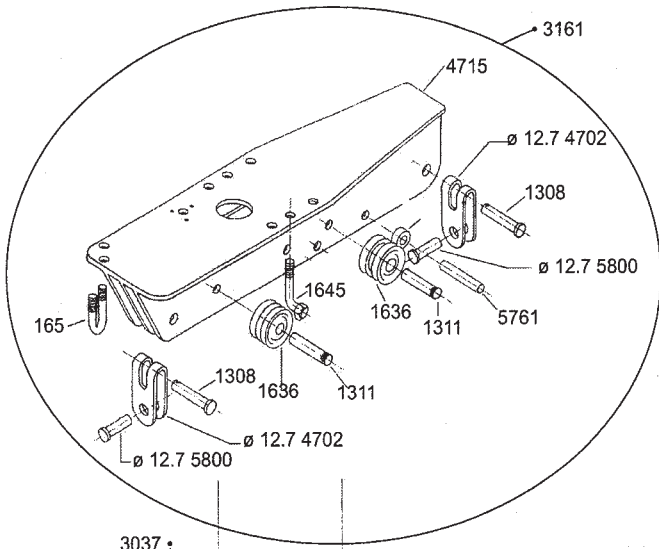
Z 900 E

Z 900 7/8

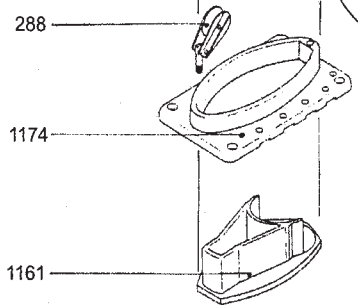
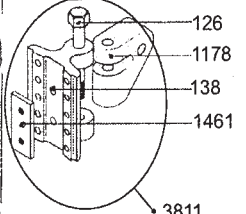
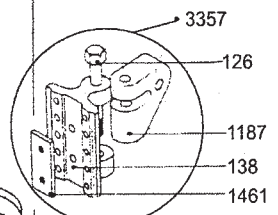
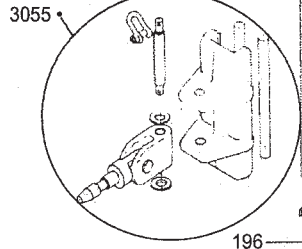
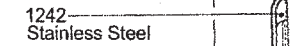
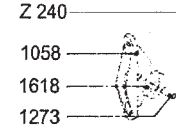
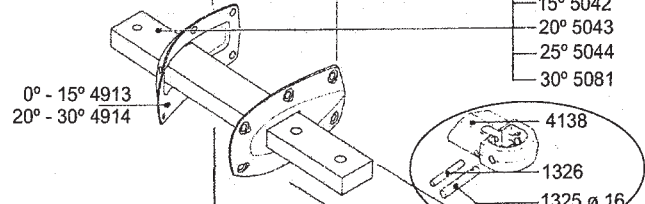
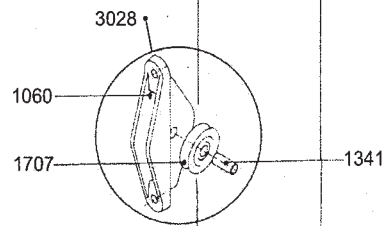
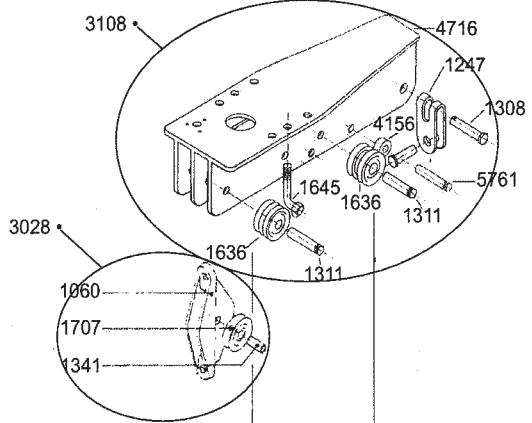


# FURLING MASTS

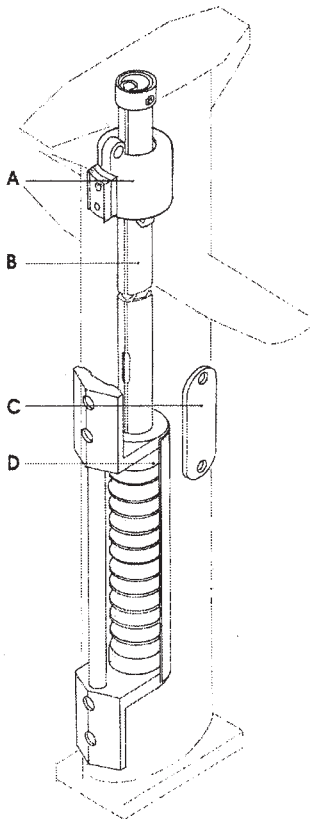
## Z 1100 E



## Z 1100 E 7/8



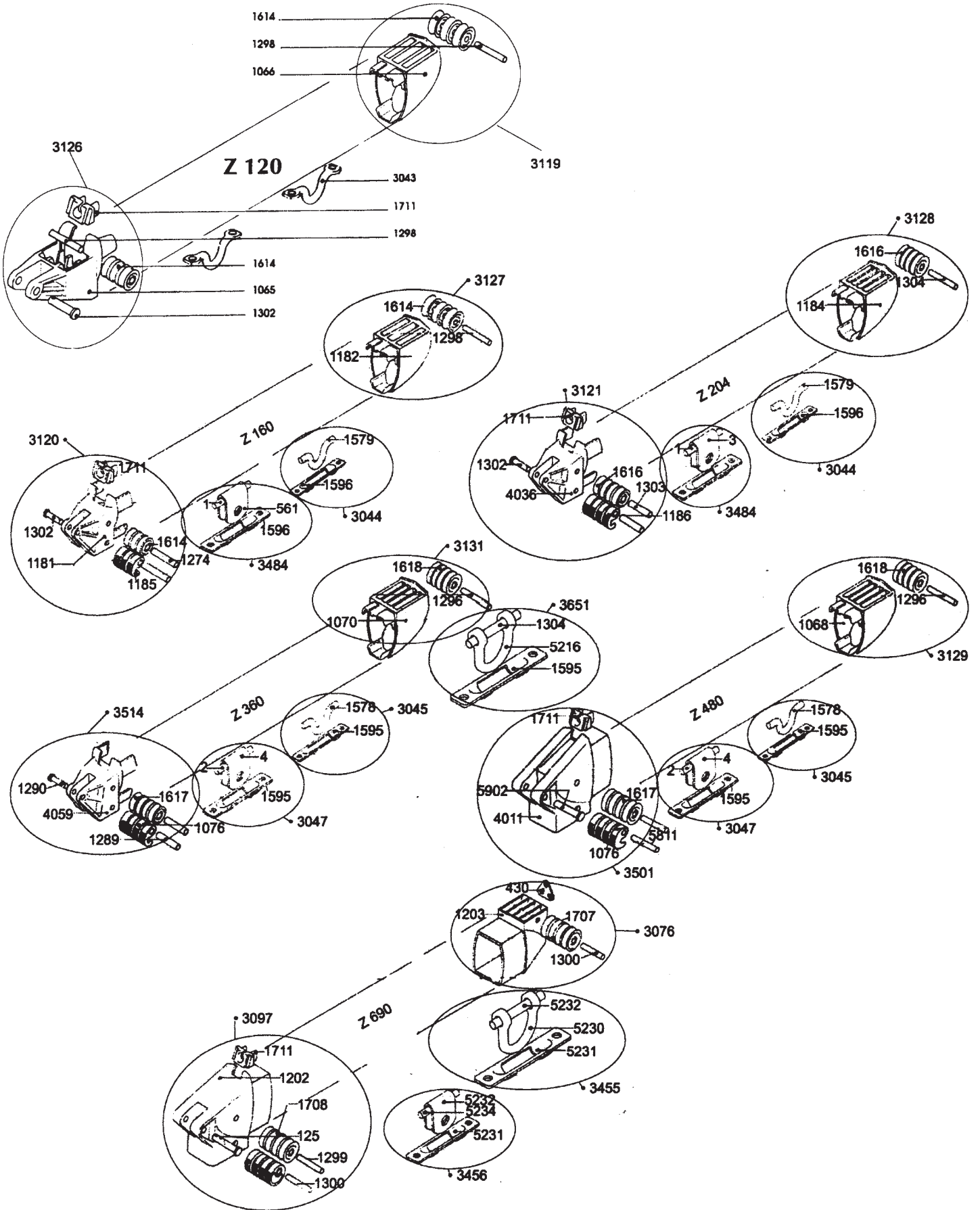
## MAST FURLING MECHANISM



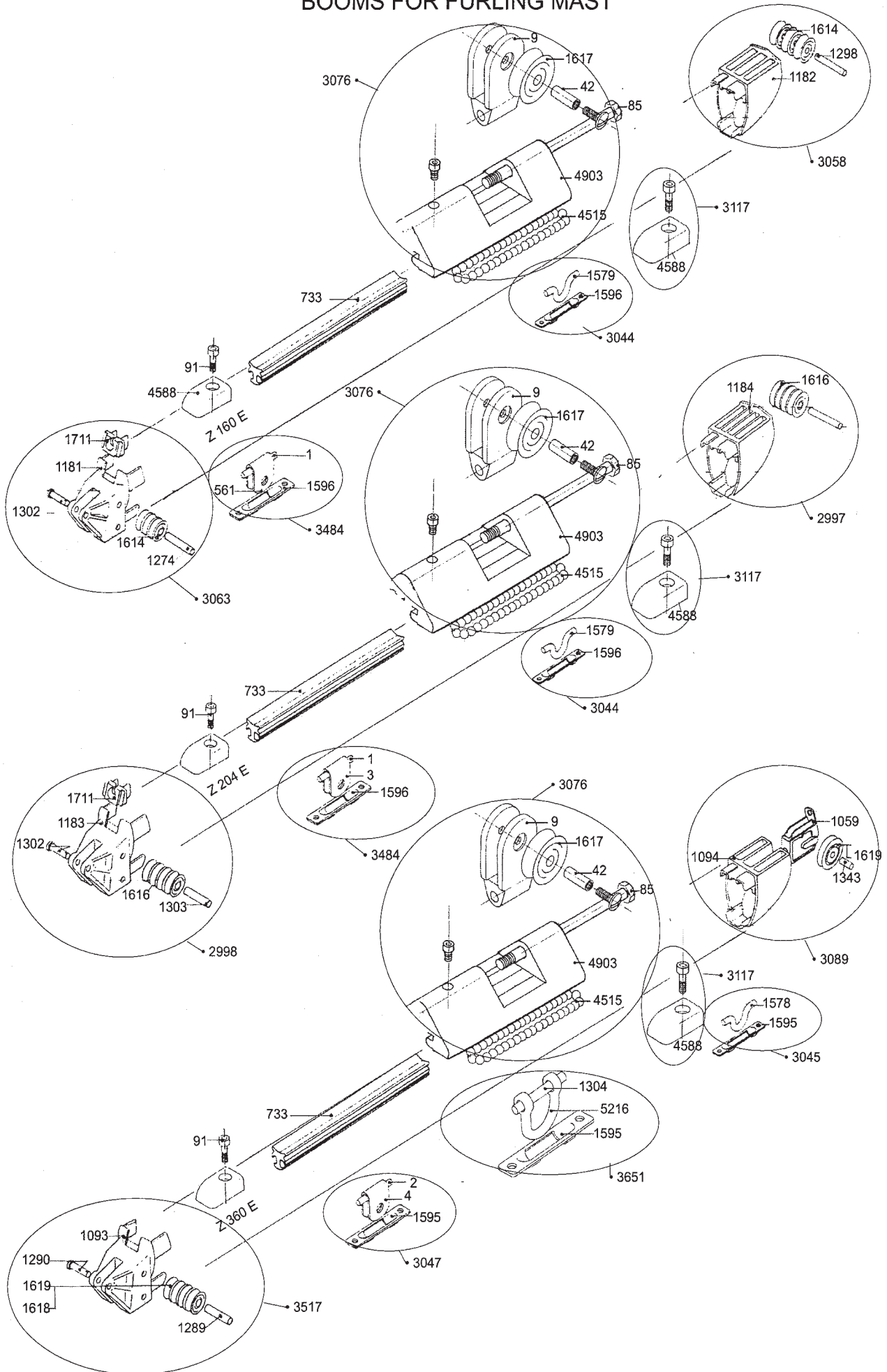
Section	Z 230 E	Z 300 E	Z 400 E	Z 500 E	Z 600 E	Z 700 E	Z 900 E	Z 1100 E	Z 1400 E
B Furling extrusion	Z 55	Z 55	Z 55	Z 55	Z 55	Z 55	Z 55	Z 55	Z 55
A Halyard swivel	3503	3504	3164	3164	3165	3165	3166	3159	3505
D Furling mechanism	3623								
D Furling mechanism with screw		3626	3626	3626	3625	3625	3622	3627	3627
C Maintenance cap	3247	3247	3247	3247	3247	3247	3247	3245	3245
Clew shackle	3208	3208	3208	3208	3208	3208	3208	3208	3208
Halyard swivel shackle	3168	3168	3168	3168	3168	3168	3168	1562	1562

See our website [www.zsparsuk.com](http://www.zsparsuk.com) for  
more information on the furling system.

# STANDARD BOOMS

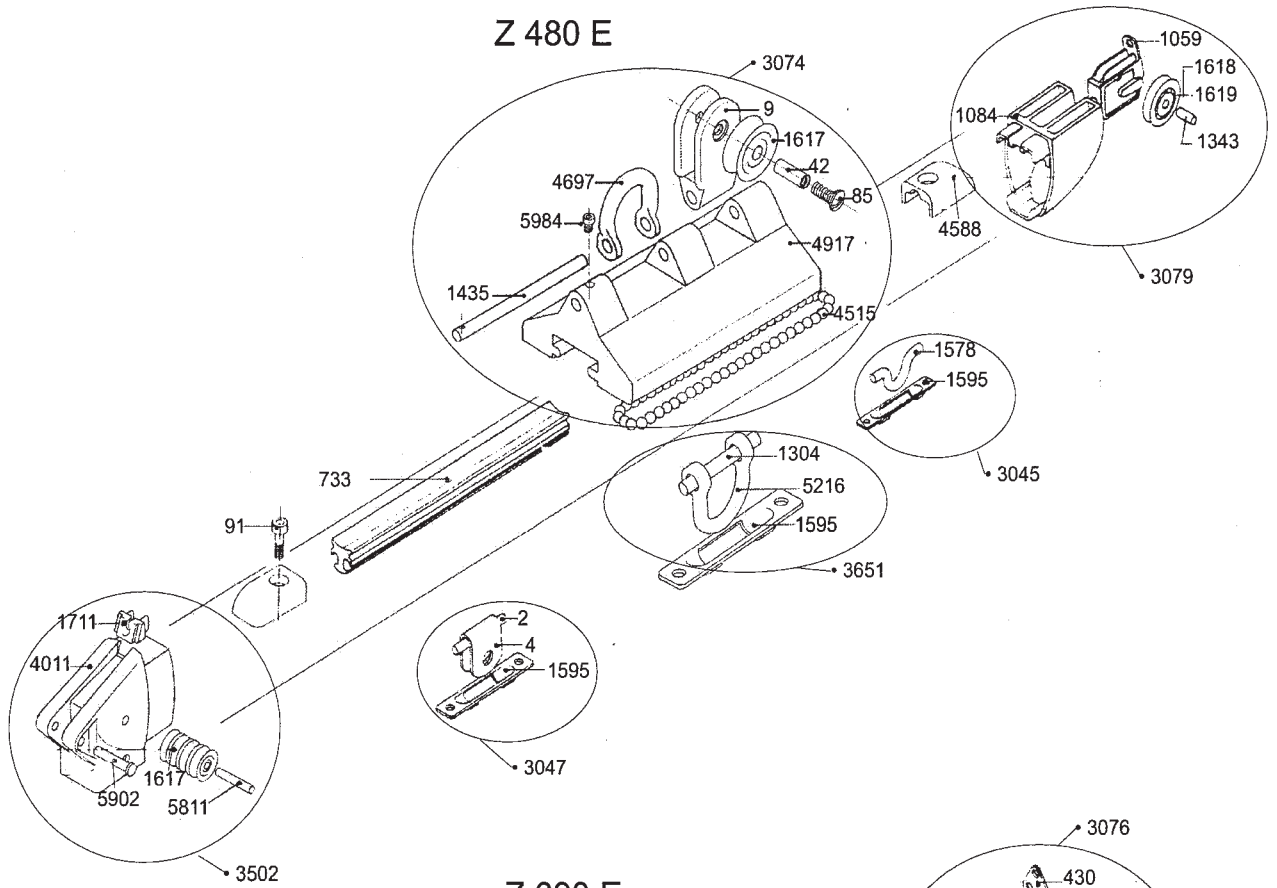


# BOOMS FOR FURLING MAST

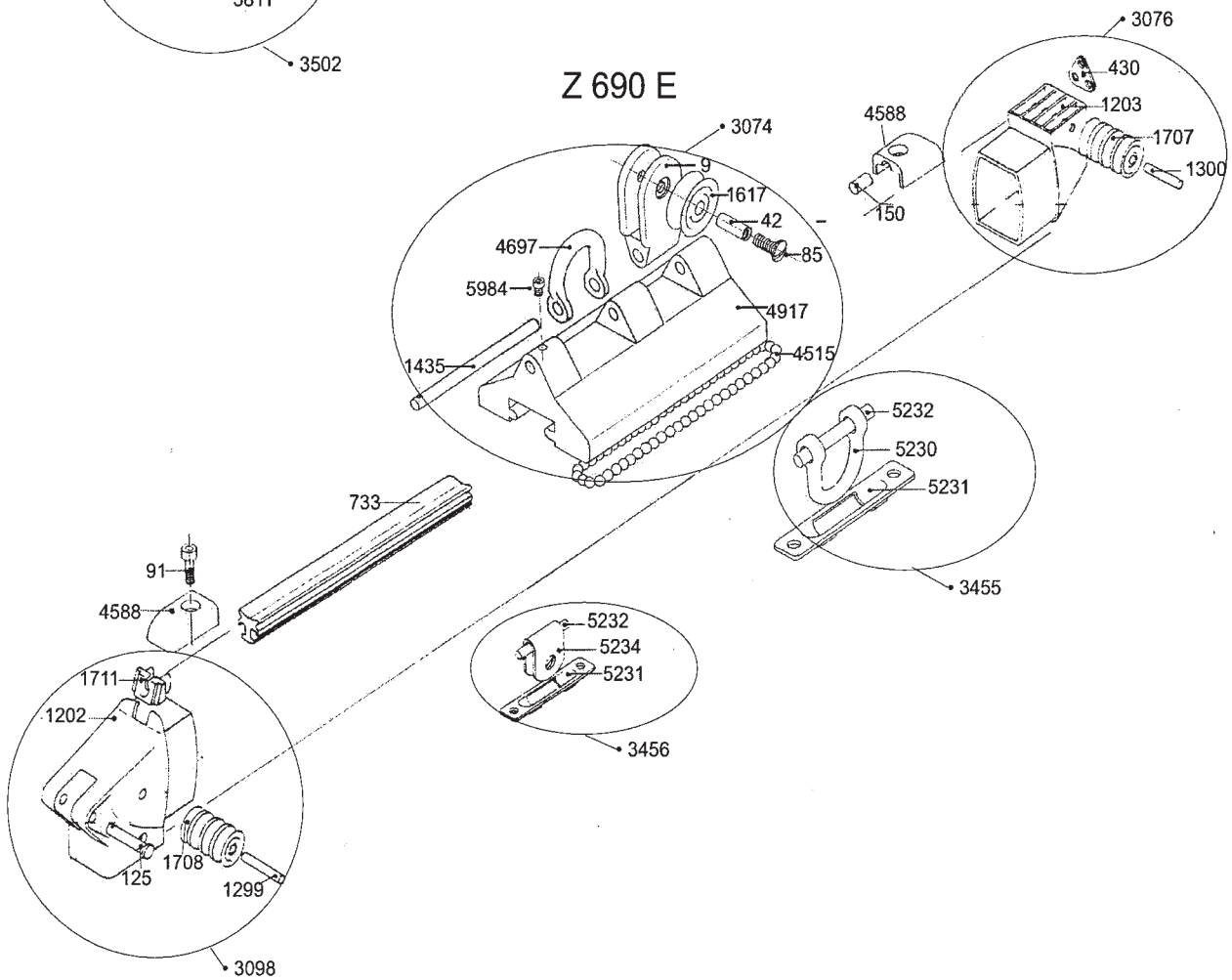


# BOOMS FOR FURLING MAST

## Z 480 E

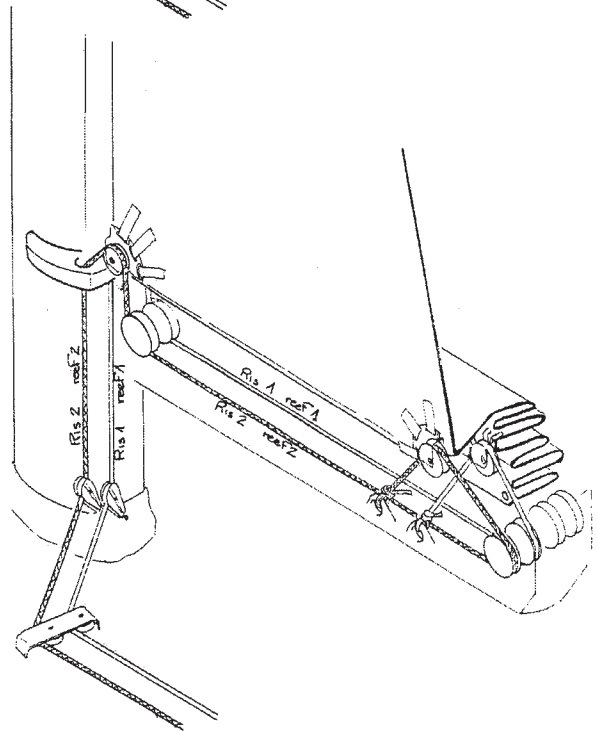
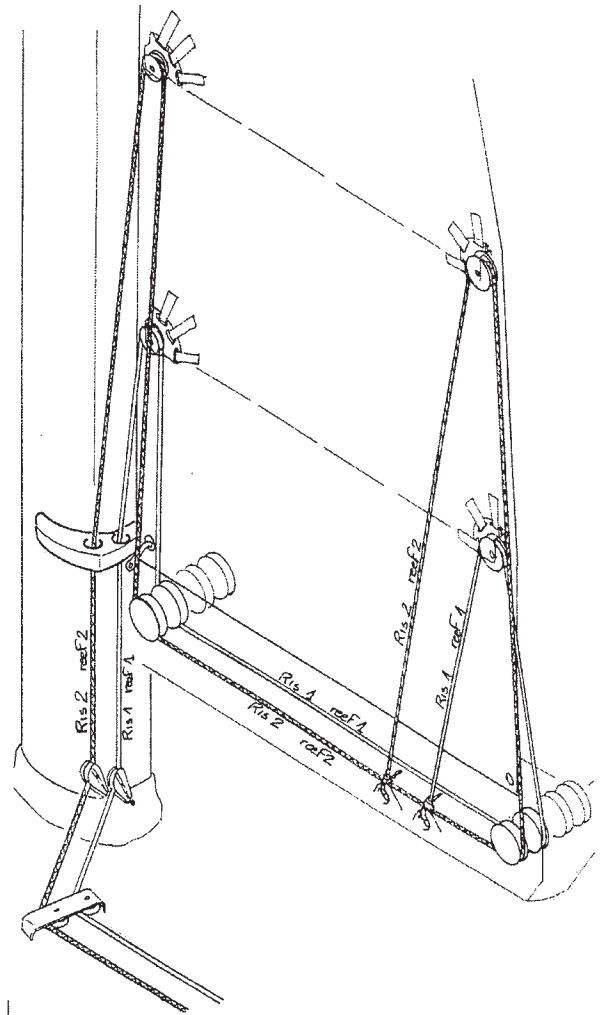
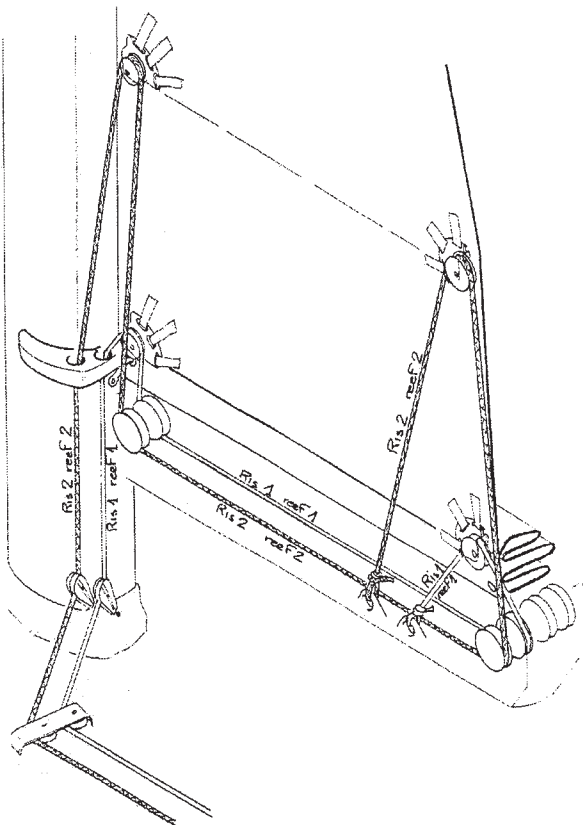


## Z 690 E

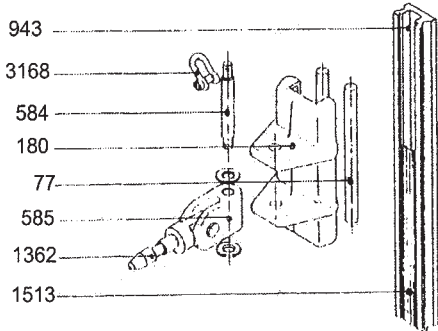


# CONTINUOUS LINE REEFING SYSTEM

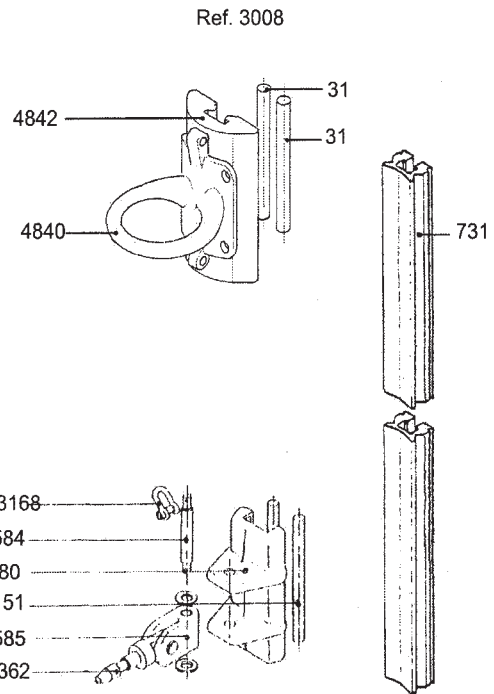
Z Spars continuous line reefing system is available on all our booms.  
Please ask for details.



# SPINNAKER POLE, TRACK AND CAR SYSTEMS

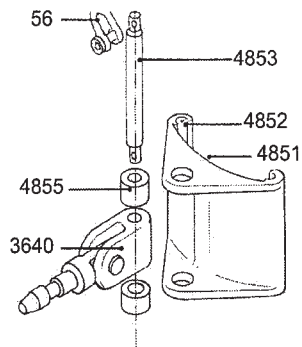


Ref. 3055

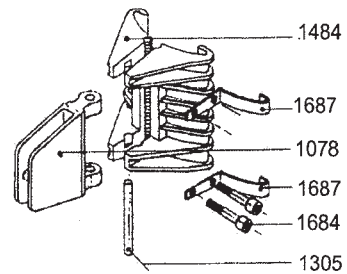


Ref. 3077

U.S. Spars pole cars are designed for our own make of poles.



Ref. 3054

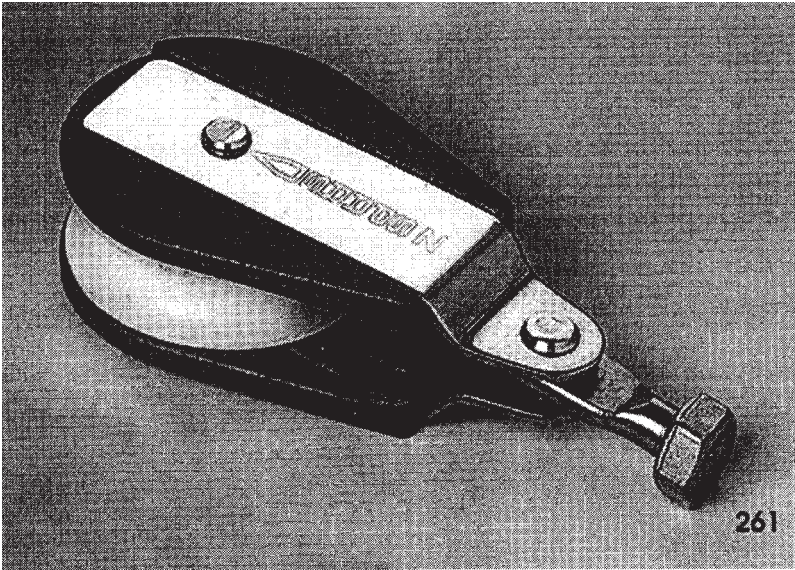


Ref. 3052



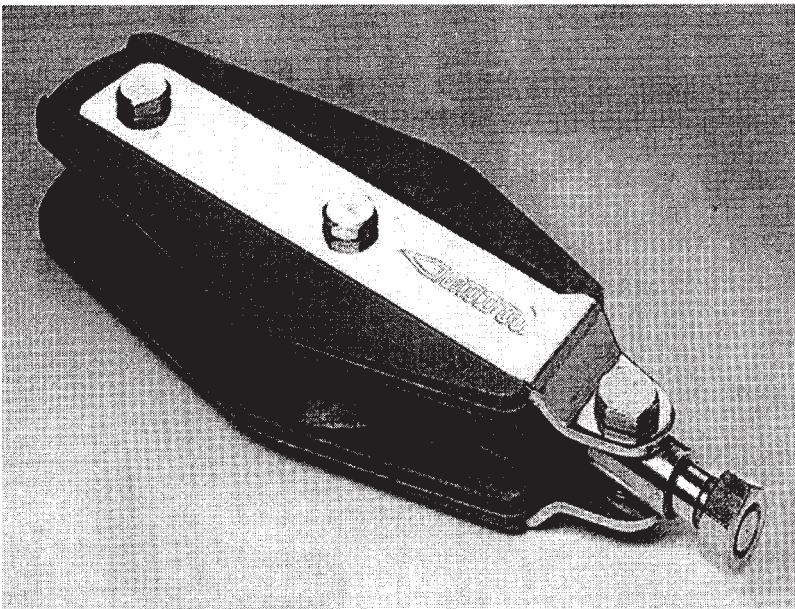


## Z SPARS UK Halyard Blocks



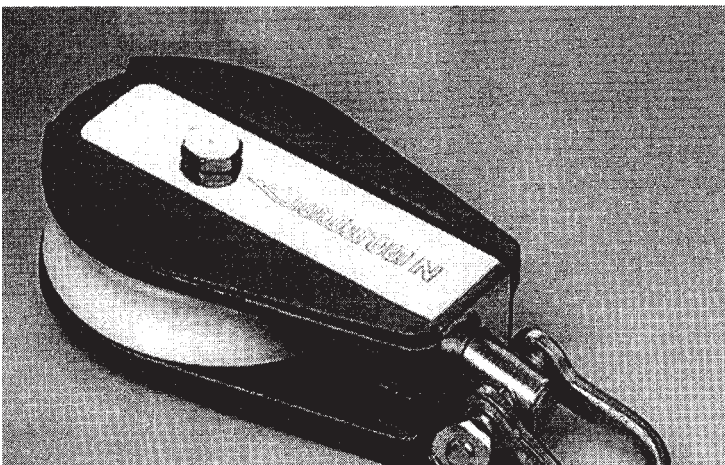
Our standard base block, for leading halyards from base of mast to cockpit. The stud fits in the mast base on the deck.

Sheave Diameter	Max Rope Diameter	Max Working Load	Ref No.
45mm	12mm	550kg	261
60mm	14mm	900kg	275
80mm	16mm	1300kg	288
* Break load is 2 times working load			



Fiddle block, for leading 2 halyards from base of mast to cockpit. The stud fits in the mast base on the deck.

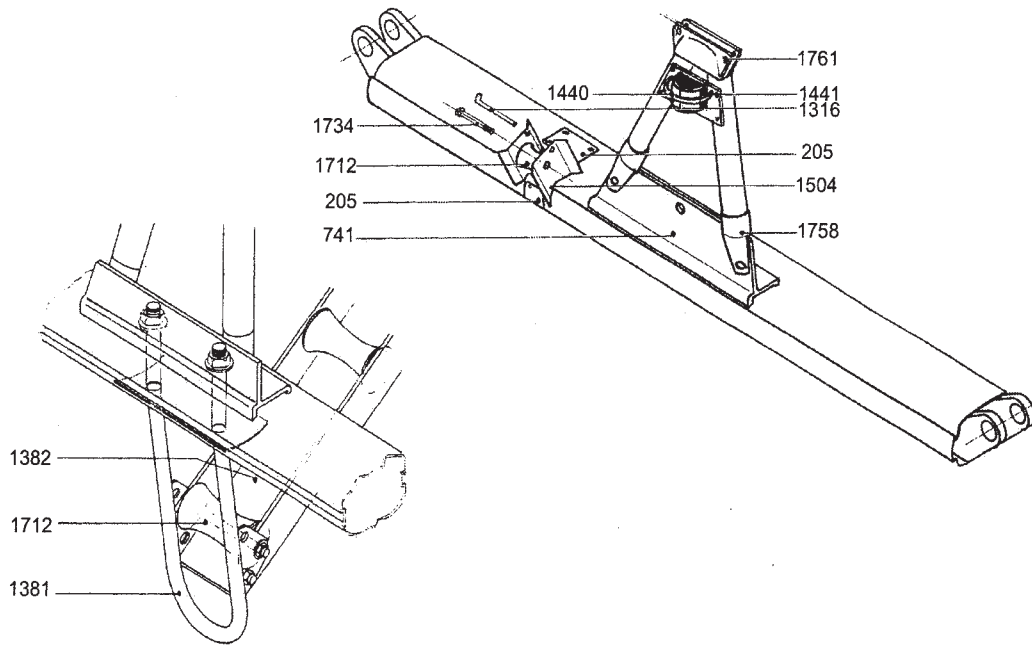
Sheave Diameter	Max Rope Diameter	Max Working Load	Ref No.
45mm	12mm	550kg	262
60mm	14mm	900kg	278
80mm	16mm	1300kg	293
* Break load is 2 times working load			



Swivel Block

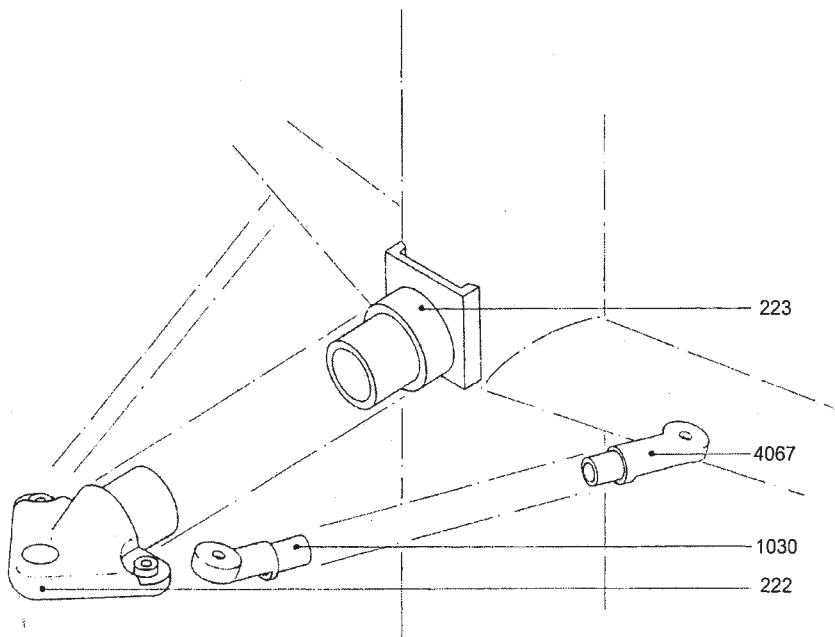
Sheave Diameter	Max Rope Diameter	Max Working Load	Ref No.
45mm	12mm	550kg	266
60mm	14mm	900kg	279
80mm	16mm	1300kg	292
* Break load is 2 times working load			

## CATAMARAN BEAMS



Section	Beam Ends Starboard	Beam Ends Port
Z 400		40
Z 600		41
Z 501		40
Z 701		41

## TRIANGULATION STRUT TO SPREADER

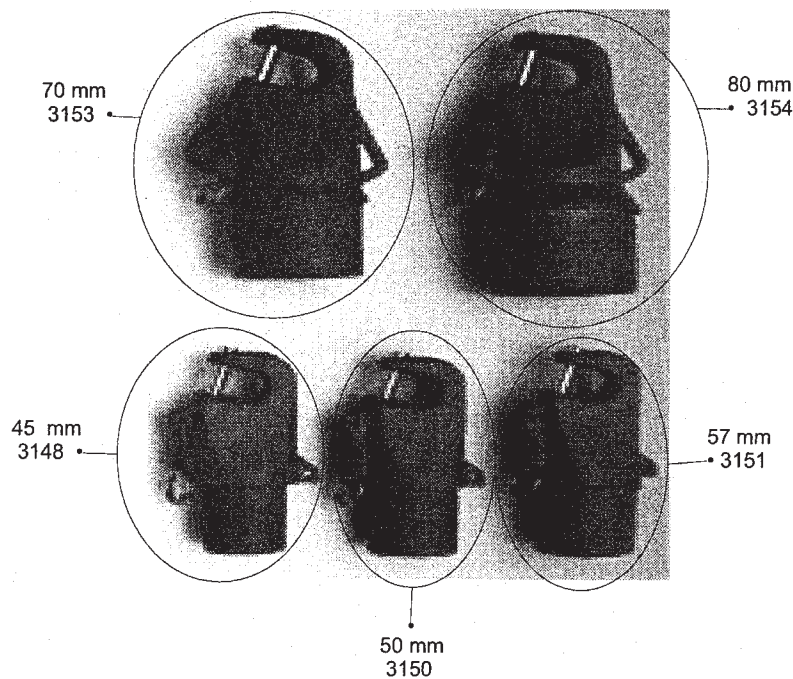


## Z SPARS UK POLES

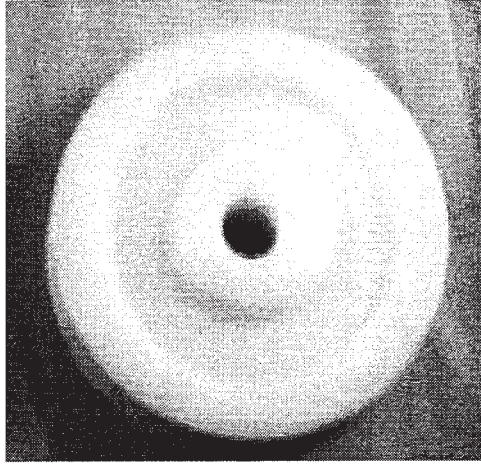
Pole tubes are made from aluminum alloy. The spinnaker pole length normally equals your yacht's J measurement (distance from mast to forestay at deck). Longer poles can be supplied.

Note: we do not guarantee our pole ends if not set on a Z Spars mast with our fittings. An incompatible mast fitting may result in breakage of the pole end.

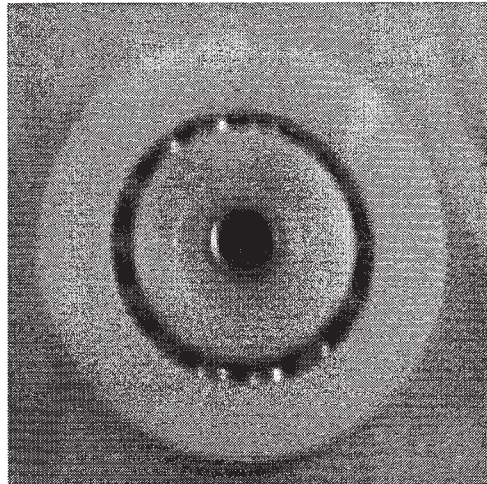
POLE SIZE O/D	Standard Pole Length (J)	Weight Kg	Wall mm	Outer end	Inner end
45mm	2900mm	3.64	2	Piston	Piston
50mm	3000mm	4.55	2	Piston	Piston
57mm	3000mm	5	2.1	Piston	Piston
70mm	4500mm	6.37	2.5	Piston	Piston
80mm	5000mm	7.37	2	Piston	Piston
80mm	5000mm	7.37	2	Z-Cone	Piston
100mm	6000mm	10	3	Z-Cone	Piston
100mm	6000mm	10.91	3	Harken Cone	Harken Piston



## Z SPARS SHEAVES



**DELRIN**



**DELRIN WITH  
BALL BEARING**

<b>PART #</b>	<b>SIZE D x W x PIN</b>
1614	28 x 9.5 x 6
1616	45 x 13 x 8
1617	35 x 16 x 8
1618	60 x 16 x 8
1707	80 x 17 x 14
1708	70 x 16 x 16
1709	70 x 16 x 10
1619	60 x 16 x 8

**NOTE: ALUMINIUM SHEAVES ARE ALSO AVAILABLE**

## Z SPARS RIGID VANGS

Our rigid vang have a stainless steel spring operation, which works in compression.  
With our vang fitted there is no need to use your boom topping lift.

VANG SIZE	Load KG	Range mm	Use with boom
Small 25/30	100	100	Z160 Z204
Medium 45/57	250	180	Z360 Z480
Large 57/70	500	150	Z690

### VANG END DATA

Vang Size	Fork Gap	Pin Size
Small	7mm	8mm
Medium	13mm	10mm
Large	28mm	12mm

Boom End



Mast End

## Z SPARS UK RIGID VANG

The optimum angle for the vang is approximately 30° to the horizontal. If the distance of the boom tang aft of the mast is 1.75 times the distance from the mast tang to the top of the boom, this is about the correct angle. At this angle, the overall length of the uncompressed vang should be approximately 2.1 times the distance from the mast tang to the top of the boom.

The mast attachment is best located as close to the deck as possible. We suggest 80mm from deck to underside of bracket.

### INITIAL SETUP:

1. Fix the mast bracket on the mast,
2. Slide the boom bracket onto the underside track on the boom, but do not fix it permanently. (note: the forward boom end fitting must be removed to insert the boom bracket in the track). Temporarily locate the boom bracket aft of the mast at 1.75 x the distance from mast bracket to top of boom; hold it in place by, for example, tying a piece of line around the mast and onto the bracket.
3. With a boom topping lift used to raise the boom, attach the vang to the two brackets. The vang should be installed with the larger tube uppermost – otherwise water will accumulate around the stainless spring and corrosion of the alloy tube will result.
4. With the mainsail installed on the boom, release the topping lift. With no tension on the vang rope, check the boom angle: it should be a little above horizontal. You can adjust the boom bracket fore and aft to increase or decrease the 'lift' of the boom. If the boom bracket needs to move more than say 200mm forward, then the vang is too short – get a longer vang from Z Spars. If the bracket needs to move more than 200mm aft, then the vang is too long – shorten the vang as described below.
5. Once you are happy that the vang is supporting the boom plus mainsail above horizontal, pull the boom down with the mainsheet as far as it will go. The vang is now fully compressed, and the boom should be about 4 degrees below horizontal (i.e. outboard end of boom about 70mm below horizontal for every 1 metre of boom length). If the vang is fully compressed before this angle is reached, then move the boom bracket aft a little, and go back to step 4. If the boom is then below horizontal, the movement range of the vang is inadequate: get an additional half spring from Z Spars and install it in the vang. This will provide additional power and range of movement to the vang.
6. Once you have achieved the required vang length and angle, fix the boom fitting permanently (or you may wish to go sailing with the bracket fixed temporarily, before final positioning).
7. The vang comes with a built-in 5:1 purchase: the rope must exit the final sheave at the boom end and run back to a block at the mast base, then back to the cockpit. Fitting a 2:1 purchase on the rope tail (e.g. by fitting a single block on the vang rope tail, and a single and becket block at the mast base) will double the final purchase to 10:1.
8. When the vessel is at moorings, then the vang rope can be released and a boom topping lift can be used to raise the boom well above horizontal (but not so far that the vang tubes disengage!).
9. If you have any question regarding the installation of your Z Spars vang, please contact us – details below.

**TO SHORTEN THE VANG LENGTH:** shorten the smaller tube ONLY. Remove the rope tackle and pull apart the two tubes. Remove the plastic bush from the end of the smaller tube (push fit) and cut the smaller tube to the required length. Reassemble.

**MAINTENANCE:** Rinse occasionally with fresh water (e.g. at end of season).

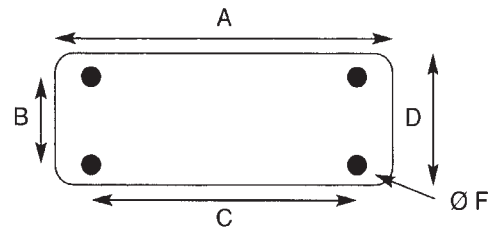
Z SPARS UK  
Unit 2, Pond Hall Road  
Hadleigh  
IPSWICH  
Suffolk  
IP7 5PW

Tel: 01473 822130  
Fax: 01473 827354  
Email: [sales@zsparsuk.com](mailto:sales@zsparsuk.com)

## BASES DIMENSIONS

Section	Réf.	A	B	C	D	E	F
Z 105	1 111	110	0	90	40	16	5
Z 125	1 111	110	0	90	40	16	5
Z 145 a	1 111	110	0	90	40	19	5
Z 145 b	1 112	118	32	80	59	20	6,5
Z 145 c	1 100	124	32	80	108		6,5
Z 170	1 100	124	32	80	108	11	6,5
Z 190	1 100	124	32	80	108	0	6,5
Z 190 a	1 101	152	59	87	130		6,5
Z 230	1 101	152	59	87	130	9	6,5
Sabot	1 170	150	94	130	113	12	6,5
Z 230 E	1 101	152	59	87	130		6,5
Z 265	1 101	152	59	87	130	-15	6,5
Sabot	1 102						
Z 301	1 103	214	85	160	160	14	6,5
Sabot	4 016	190	100	145	120		8,5
Z 300 E		214	85	160	160		6,5
Z 401	4 032	245	150	200	220	14	6,5
Sabot	1 174						
Z 400 E	4 032	245	150	200	220	14	6,5
Z 531	4 022	235	150	200	220		8,5
Sabot	4 024						8,5
Z 501	1 120	235	150	200	188	14	8,5
Sabot	4 023						8,5
Z 500 E	1 163	235	150	200	220		8,5
Sabot	4 026						8,5

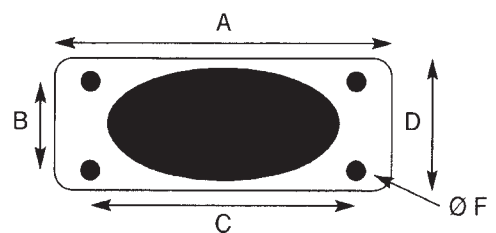
Section	Réf.	A	B	C	D	E	F
Z 601	1 164	285	160	215	230	25	8,5
Sabot	4 027						8,5
Z 600 E	1 164	285	160	215	230	25	8,5
Sabot	1 157	300	160	210	190		8,5
Z 701	1 118	280	160	215	230	7	8,5
Sabot	1 113	225	70	130	150	0	8,5
Z 700 E	1 165	285	160	215	230	15	8,5
Sabot	1 158						8,5
Z 901	4 035	285	160	215	230		8,5
Sabot	1 160	305	160	210	190	0	8,5
Z 900 E	4 035	285	160	215	230	5	8,5
Sabot	1 160	305	160	210	190	0	8,5
Z 1001	1 394	340	180	260	260		8,5
Sabot	4 028	290	98		182	0	8,5
Z 1100 E	1 395	340	180	260	260	25	8,5
Sabot	1 161	300	90	150	190	5	8,5
Z 1400	5 026	410	220	310	320		8,5
Sabot	4 029						8,5



## DECK COLLARS DIMENSIONS

Section	Réf.	A	B	C	D	F
Z 230	4 053	180	106	116	170	6,5
Z 265	1 115	235	150	200	220	8,5
Z 301	1 115	235	150	200	220	8,5
Z 401	1 067	285	160	215	230	8,5
Z 400 E	1 067	285	160	215	230	8,5
Z 501	1 067	285	160	215	230	8,5
Z 500 E	1 067	285	160	215	230	8,5
Z 531	1 067	285	160	215	230	8,5
Z 601	1 393	340	180	260	260	8,5
Z 600 E	1 393	340	180	260	260	8,5
Z 701	1 396	340	180	260	260	8,5
Z 700 E	1 396	340	180	260	260	8,5

Section	Réf.	A	B	C	D	F
Z 901	1 396	340	180	260	260	8,5
Z 900 E	1 396	340	180	420	310	8,5
Z 1001	1 174	460	262	415	310	8,5
Z 1100 E	1 174	460	262	415	310	8,5
Z 1400	4 035	520	300	470	370	8,5





# Z SPARS UK

## SPARS SPECIFICATION AND QUOTATION QUESTIONNAIRE

## MONOHULLS

Page 1 of 2

NAME \_\_\_\_\_ TEL \_\_\_\_\_ FAX \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
EMAIL \_\_\_\_\_ POST CODE \_\_\_\_\_

### **YACHT DETAILS**

All of the yacht details below are essential for the purpose of establishing the correct mast section for the yacht.

YACHT MODEL \_\_\_\_\_

LOA \_\_\_\_\_ LWL \_\_\_\_\_ BMAX \_\_\_\_\_  
KEEL/BALLAST WEIGHT \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_  
CHAINPLATE WIDTH ACROSS BOAT \_\_\_\_\_ HEIGHT OF FORETRIANGLE (I) \_\_\_\_\_  
WATERLINE BEAM \_\_\_\_\_ DRAFT \_\_\_\_\_  
KEEL CONFIGURATION \_\_\_\_\_  
IF BULB KEEL INDICATE C of G BELOW WL \_\_\_\_\_

### **MAST CONFIGURATION.**

(Tick where appropriate)

MASTHEAD SLOOP \_\_\_\_\_ FRACTIONAL RIG \_\_\_\_\_ TOPMAST TAPER \_\_\_\_\_  
ONE SET SPREADERS \_\_\_\_\_ TWO SETS SPREADERS \_\_\_\_\_ CUTTER \_\_\_\_\_  
JUMPERS \_\_\_\_\_ RUNNERS \_\_\_\_\_ DIAMONDS \_\_\_\_\_  
SPREADERS RAKED AFT \_\_\_\_\_ SPRDR ANGLE (degrees) \_\_\_\_\_  
MAST HEIGHT ABOVE CABIN TOP \_\_\_\_\_ MIZZEN HEIGHT \_\_\_\_\_  
HEIGHT OF BOOM ABOVE CABIN TOP \_\_\_\_\_ MAINSAIL LUFF LENGTH (P) \_\_\_\_\_  
SAIL SLIDES \_\_\_\_\_ BOLT ROPE \_\_\_\_\_ DECK STEPPED MAST \_\_\_\_\_  
KEEL STEPPED MAST \_\_\_\_\_

### **BOOM**

WHAT IS MAXIMUM LENGTH OF MAINSAIL FOOT FROM MAST \_\_\_\_\_ MIZZEN \_\_\_\_\_  
WILL REEF LINES BE TERMINATED AT MAST \_\_\_\_\_ LED AFT TO COCKPIT \_\_\_\_\_  
DISTANCE FROM MAST TO END OF BOOM \_\_\_\_\_

### **ADDITIONAL REQUIREMENTS OR COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SPARS SPECIFICATION AND QUOTATION QUESTIONNAIRE**

**MONOHULLS**

Page 2 of 2

**STANDING RIGGING IN STAINLESS STEEL FIRM STRAND 1x19**

(Tick where appropriate)

CONVENTIONAL _____	DYFORM _____
FORWARD AND AFT LOWERS _____	AFT LOWERS AND BABY STAY _____
SINGLE BACKSTAY _____	SPLIT BACKSTAY _____
DOUBLE BACKSTAY _____	

**RUNNING RIGGING**

WILL HALYARDS BE SECURED AT MAST \_\_\_\_\_ OR LED AFT \_\_\_\_\_

**EXTRAS** (Tick if required)

CLEATS FITTED _____	BASE BLOCKS TO LEAD HALYARDS AFT _____	
MASTHEAD TRICOLOUR _____	MASTHEAD TRIWHITE _____	MASTHEAD WHITE _____
SPREADER LIGHTS _____	COMBINED DECK FLOOD STEAMING _____	
HAWK VHF AERIAL _____	WHIPFLEX VHF AERIAL _____	
SEPARATE SPI POLE TRACK _____	WITH SLIDER _____	
FIXED SPI POLE EYE _____		
SIDE WINCH PAD(S) _____	REEF WINCH PAD _____	
RADAR REFLECTOR (SPECIFY) _____		
ROD KICKER _____		
SPINNAKER POLE _____	LENGTH OF POLE _____	BRIDLE(S) _____
POLE STOWAGE ON MAST _____		

**DELIVERY**

INDICATE DELIVERY DESTINATION REQUIRED \_\_\_\_\_  
\_\_\_\_\_

Z Spars UK. Unit 2 Pond Hall Rd, Hadleigh, Suffolk. IP7 5PW Tel 01473 822130 Fax 827354.  
E-mail: sales@zsparsuk.com. Website: www.zsparsuk.com

## Z SPARS UK CONDITIONS OF SALE

1. All goods sold by Z Spars UK (hereinafter called the "Company") are sold subject to these conditions.
2. All references to the Company apply to its authorised agents.
3. Quotations and Prices.  
All quotations of price (whether written or oral) are subject to withdrawal or amendment by the Company at any time prior to receipt by the Company of an order and thereafter are subject to correction of errors at any time.  
If the Company has not received an order within 30 days of the date of quotation, the quotation shall be deemed to have lapsed.
4. Payment  
Payment for goods under the contract shall be on or before the date of delivery of the goods.
5. Deposit  
One third of the value of the goods is required as deposit when the order is placed.
6. Delivery  
The Company will endeavour to deliver the goods without delay, but this depends upon availability of materials and the customer providing details of his requirements in writing and in good time. The Company will also endeavour to comply with reasonable delivery instructions but any specified time of delivery shall not be the essence of the contract and the Company shall not be liable for late delivery howsoever caused nor shall such failure to deliver be deemed to be a breach of any contract.
7. Liability  
Subject to the Unfair Contract Terms Act 1977 and the " requirement of reasonableness " therein, in the event of any claim against the Company in respect of any matter whatsoever the liability (if any) of the Company shall be limited to the replacement of goods sold by the Company in respect of when the liability (if any) arises only, and under no circumstances shall the company be liable to the buyer or any other party for any consequential loss or damage whatsoever.  
Defects in quality in any delivery should not be a ground for cancellation of the remainder of the order or contract.  
Any alteration by the buyer or agent shall vitiate the Company from any liability relating to defects in the goods quality.
8. Claims  
No claims shall be entertained by the Company unless received by the Company in writing. Claims arising from damage or partial loss in transit must reach the Company within 30 days from the date of delivery. Claims for non-delivery must reach the Company within 10 days of the date of despatch. All other claims must reach the Company within 6 weeks of the date of despatch. Goods should be signed for " unexamined " .
9. Suspension of Deliveries  
Every effort will be made to carry out the Contract but its due performance is subject to cancellation by the Company and to such variations as the Company may find necessary as a result of inability to secure labour, materials, or supplies as a result of any act of God, war, strike, lock-out and other labour disputes, fire, flood, drought, legislations or other cause (whether of the foregoing class or not) beyond the Company's control. The Company shall be under no liability for failures, variations and delays attributable to causes beyond its control.
10. Reservation of Title  
Title to any goods supplied by the Company shall not pass to the buyer until all payments due in respect of the goods are paid in full.
11. Indemnity  
The buyer shall indemnify the Company against all damages, penalties, costs and expenses to which the same may become liable as a result of work done in accordance with the buyer's specification which involves an infringement of any letters patent or registered design.



**2006: Z SPARS RIGS WIN EVERY RACE IN THE RED FUNNEL QUARTER TON CUP SERIES AT COWES.**

Congratulations to Ed Dubois & the crew of 'Enigma' (first over all) and Peter Morton & the crew of 'Espada' (2nd over all). Both yachts had Z230 masts made by Z Spars UK.

**2007: Z SPARS WINS AGAIN**

Peter Morton does one better than the previous year to win the Coutts Quarter Ton Cup series.

**Z SPARS INTERNATIONAL LTD  
UNIT 2, POND HALL ROAD  
HADLEIGH  
IPSWICH  
SUFFOLK  
IP7 5PW**

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Web: [www.zsparsuk.com](http://www.zsparsuk.com)  
Email: [sales@zsparsuk.com](mailto:sales@zsparsuk.com)