



Z Spars UK is a leading manufacturer of alloy masts, booms, rigging, spars and fittings for sailing yachts around the world. We can supply spars & rigging to amateur & professional sailors alike, as well as providing the leading boat builders.

Our staff are available to discuss your requirements over the phone or via email. If you plan on visiting our premises please call us first to confirm that the relevant member of staff will be present when you arrive.

WE DELIVER WORLDWIDE



We have a modern factory on the outskirts of Hadleigh, Suffolk, where our craftsmen complete each mast, boom & spar by hand.

Current Mast & Boom Sections

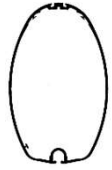


SECTION REFERENCE	DIMENSIONS mm	INERTIAE (see note 1) cm ⁴	WALL THICKNESS (see note 2) mm	WEIGHT / METRE kg		SCHEMATIC VIEW
Delta Masts						
Z145	81 x 68	45 x 29	2.1	1.45		
Z170	98 x 68	65 x 33	1.9	1.65		
Z190	108 x 78	94 x 50	2	1.92		
Z230	122 x 82	143 x 69	2.3	2.29		
Z265	143 x 96	238 x 118	2.2	2.72		
Z351	160 x 105	391 x 173	2.2	3.44		
01/02 Series Masts						
Z401	179 x 119	601 x 260	2.8	4.1		
Z502	190 x 125	750 x 323	3.4	4.6		
Z531	200 x 124	998 x 380	3.3	5.33		
Z532	201 x 124	998 x 380	3.3	5.33		
Z602	223 x 138	1411 x 518	3.3	6.21		
Z702	240 x 146	1951 x 726	3.3	7.61		
Z902	257 x 160	2641 x 1022	4.3	8.96		
Z1002	290 x 175	3677 x 1452	4.5	9.77		
Z1252	310 x 182	4994 x 1838	5.5	11.76		
Furling Masts						
Z300E	160 x 105	400 x 162	2.2	3.9		
Z400E	183 x 117	585 x 280	2.6	5.2		
Z532E	200 x 124	785 x 370	2.8	5.77		
Z600E	220 x 131	1250 x 490	3	6.4		
Z602E	223 x 137	1286 x 544	3.5	6.9		
Z702E	240 x 146	1624 x 731	3.5	7.64		
Z900E	255 x 160	2430 x 1000	3.7	9.72		
Z902E	257 x 160	2301 x 1032	3.7	9.7		
Z1100E	293 x 176	3550 x 1550	3.9	11.48		
Z1400E	340 x 200	6125 x 2613	4.7	14.77		
Booms						
Z162	104 x 64	97 x 37	1.7	1.62		
Z202	134 x 75	200 x 71	2.3	2.54		
Z362	170 x 95	460 x 180	2.6	3.64		
Z482	190 x 101	824 x 295	3.6	5.21		
Z692	230 x 136	1665 x 671	3.2	6.67		
Furling Booms						
Z162E	114 x 64	97 x 37	1.7	1.62		
Z202E	134 x 75	200 x 71	2.3	2.54		
Z362E	170 x 95	460 x 180	2.6	3.64		
Z482E	190 x 101	824 x 295	3.6	5.21		
Z692E	230 x 136	1665 x 671	3.2	6.67		

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.

Discontinued Mast & Boom Sections

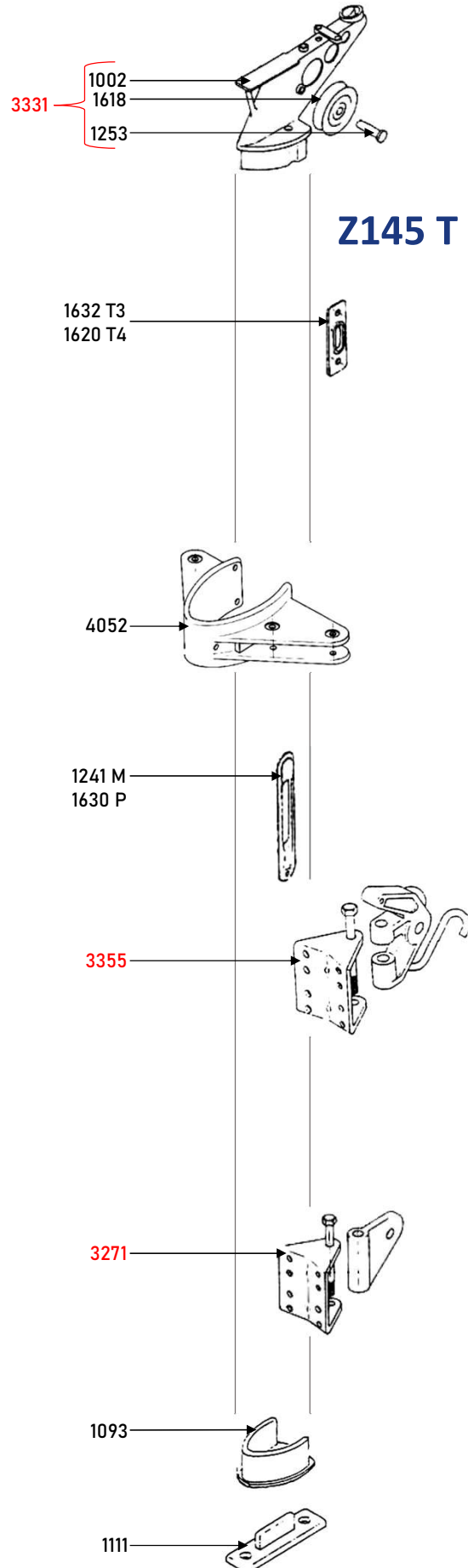
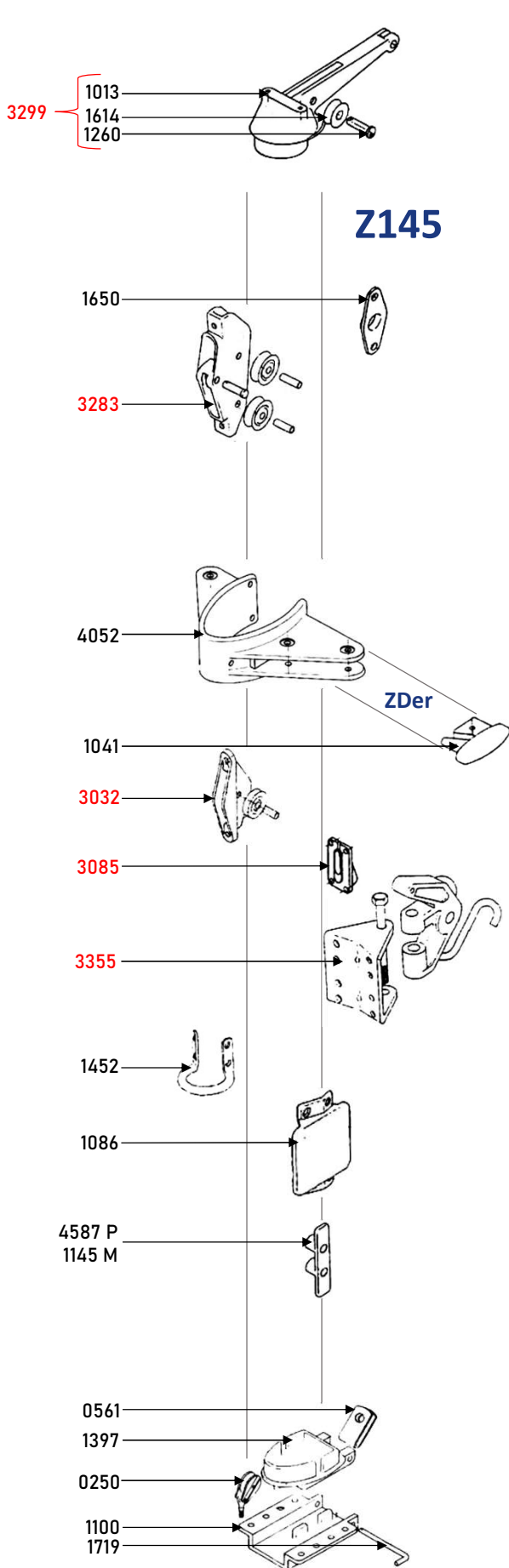
SECTION REFERENCE	DIMENSIONS mm	INERTIAE (see note 1) cm ⁴	WALL THICKNESS (see note 2) mm	WEIGHT / METRE kg	APPROX YACHT SIZE ft	SCHEMATIC VIEW
01/02 Series Masts						
Z402	180 x 118	601 x 260	2.8	4.1		
Z501	189 x 125	760 x 326	3.3	4.6		
Z601	223 x 138	1280 x 502	3.5	6		
Z701	232 x 145	1702 x 686	4	7.28		
Z901	255 x 160	2460 x 1100	4.4	8.7		
Z1001	290 x 175	3677 x 1452	4.5	9.77		
Furling Masts						
Z700E	231 x 137	1505 x 621	3.4	7.5		
Booms						
Z120	71 x 61	45 x 24	1.5	1.2		
Z160	94 x 68	60 x 32	1.5	1.56		
Z204	118 x 86	125 x 68	2	2.28		
Z360	145 x 105	380 x 150	2.5	3.29		
Z480	180 x 125	750 x 300	3	4.82		
Z690	232 x 145	1660 x 462	2.9	6.24		
Furling Booms						
Z160E	94 x 68	60 x 32	1.5	1.56		
Z204E	118 x 86	125 x 68	2	2.28		
Z360E	145 x 105	380 x 150	2.5	3.29		
Z480E	180 x 125	750 x 300	3	4.82		
Z690E	232 x 145	1660 x 462	2.9	6.24		

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

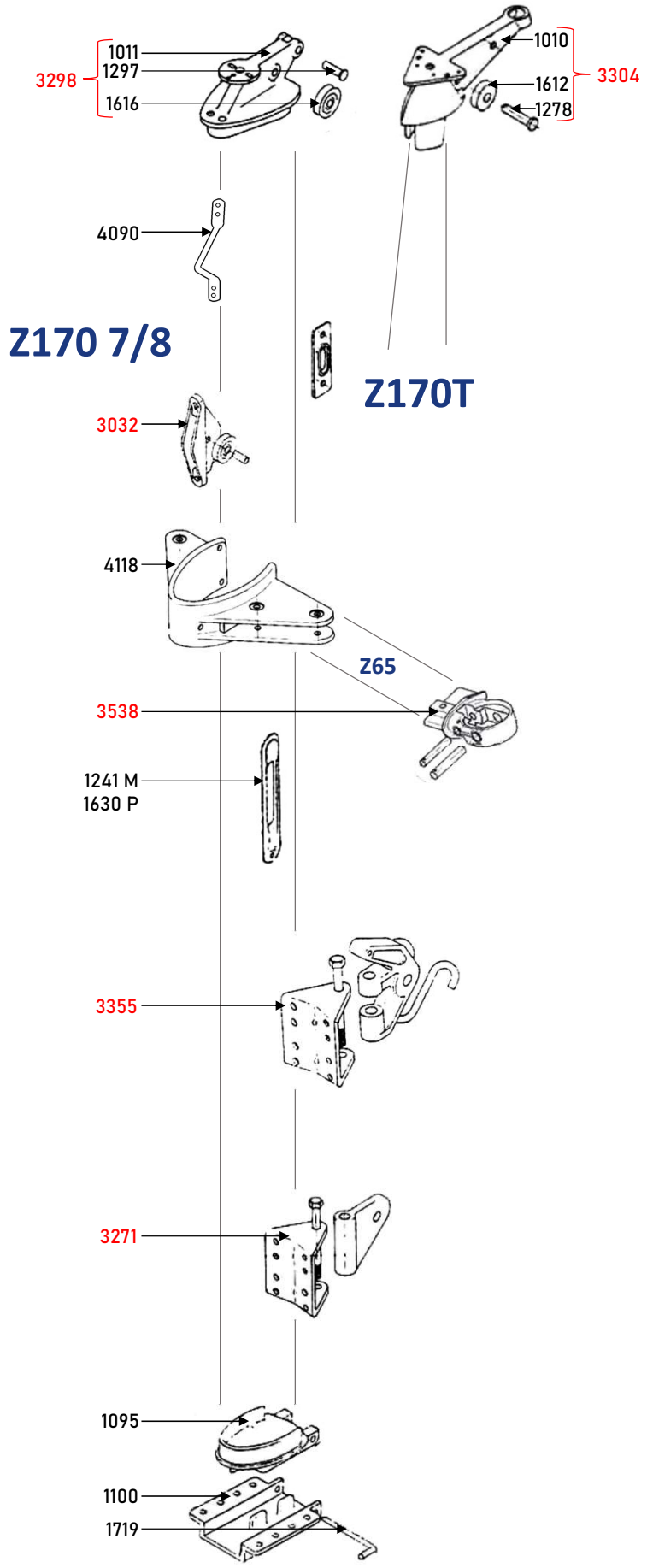
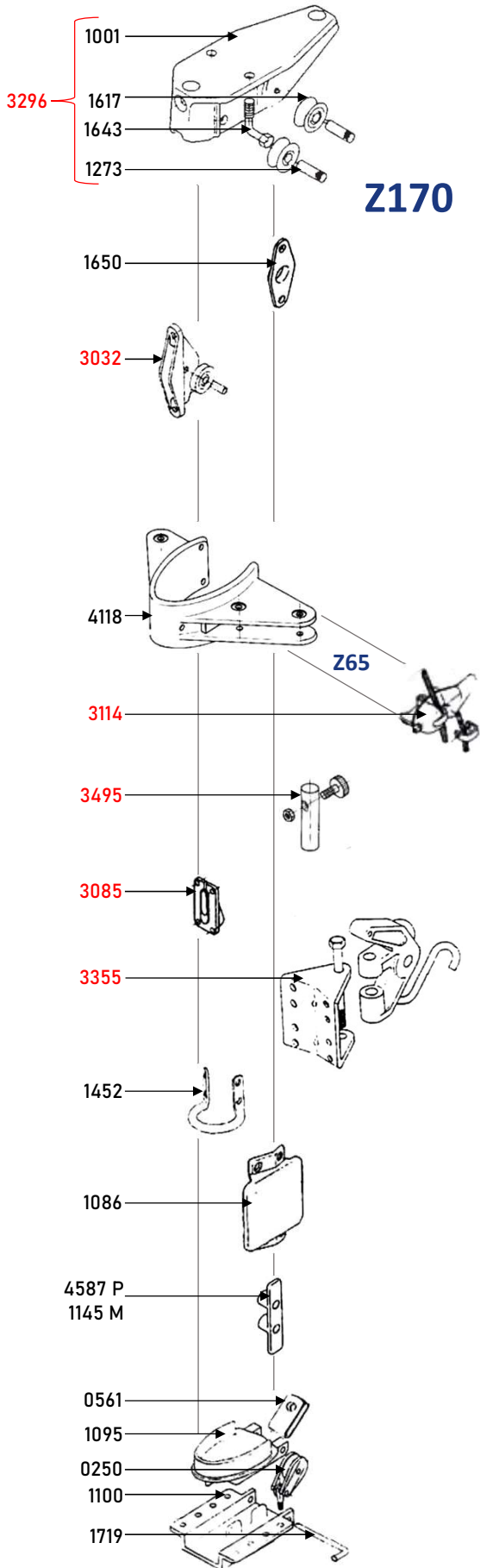
The yacht size for a particular section is a guide only. Please consult.

Mast Sections



Red = Assembly P = Plastic M = Metal Ø = Diameter

Mast Sections



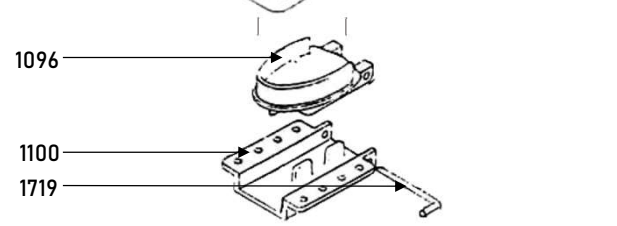
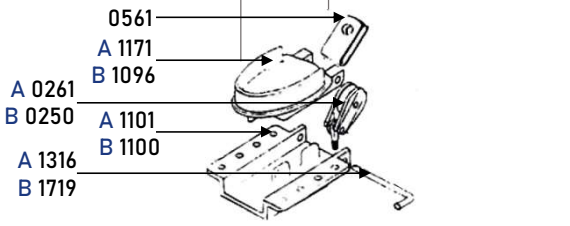
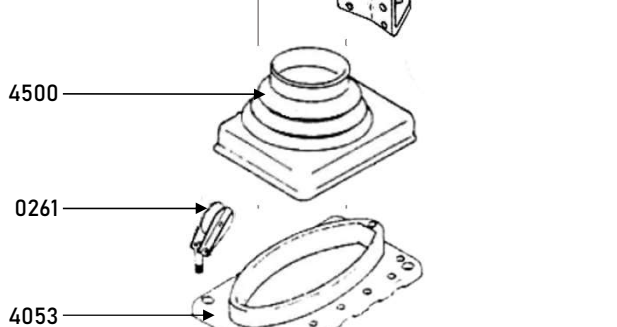
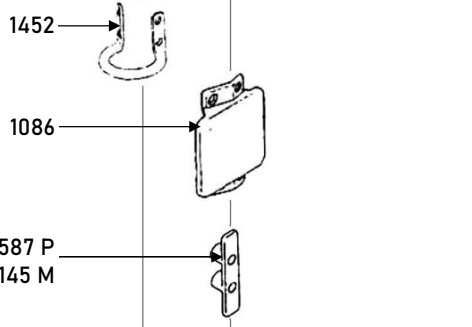
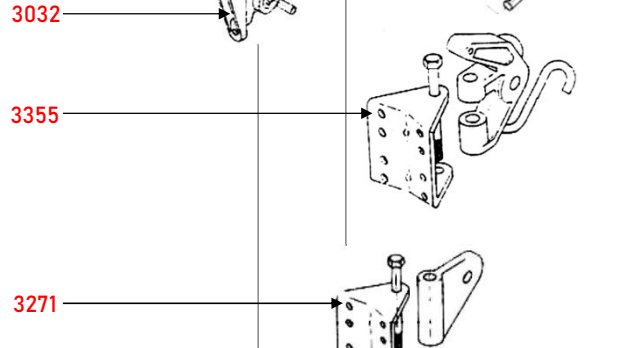
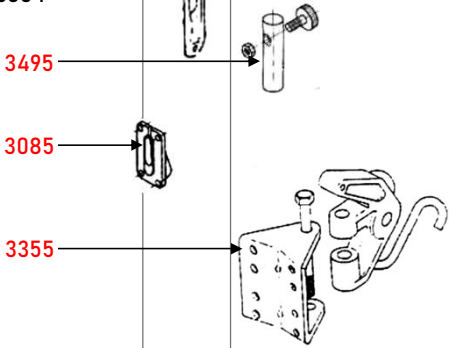
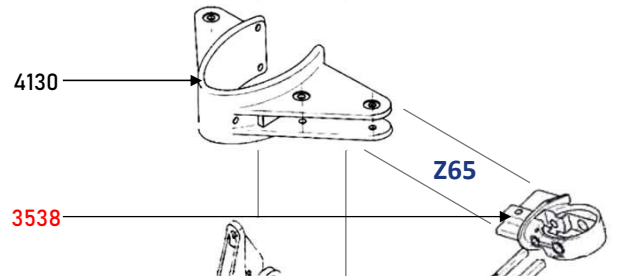
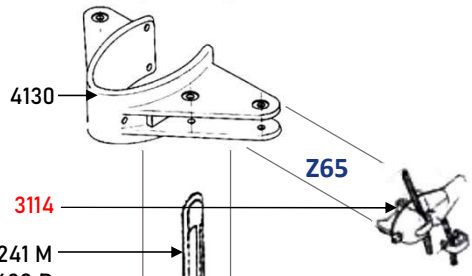
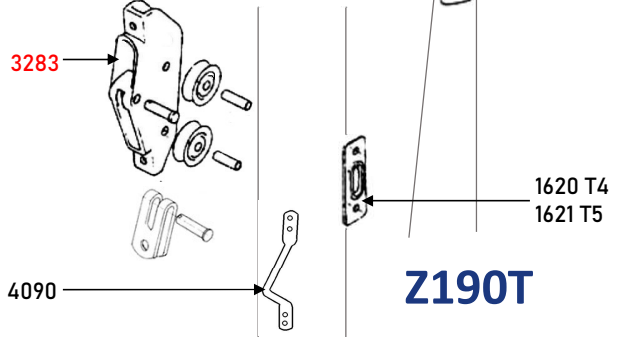
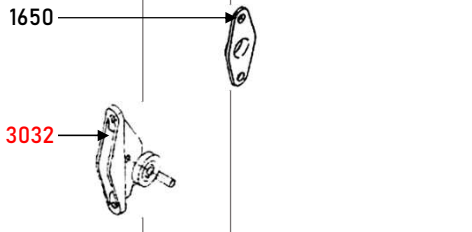
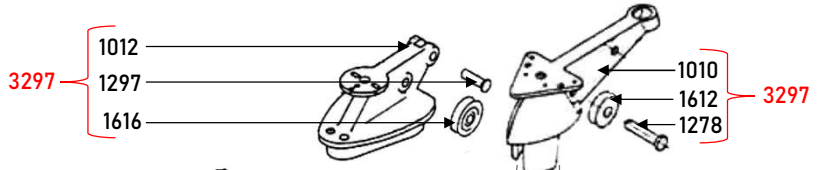
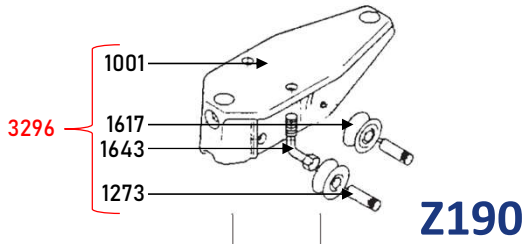
Red = Assembly

P = Plastic

M = Metal

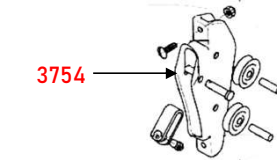
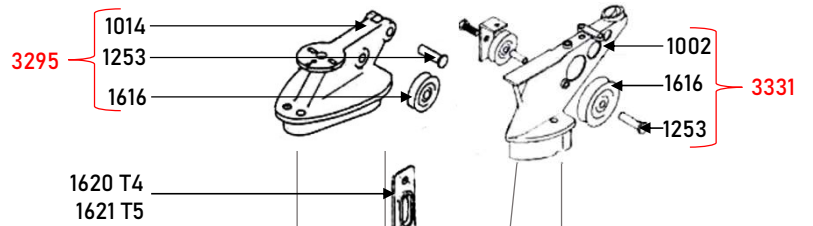
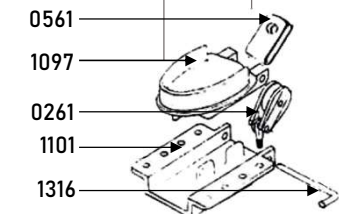
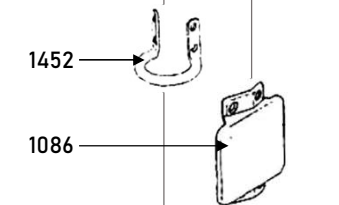
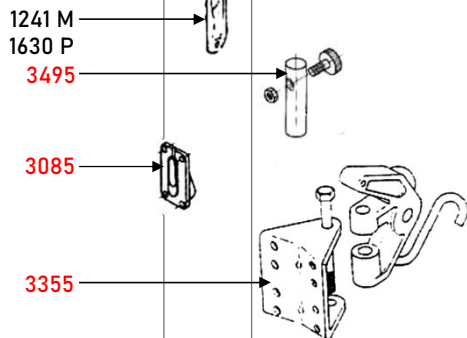
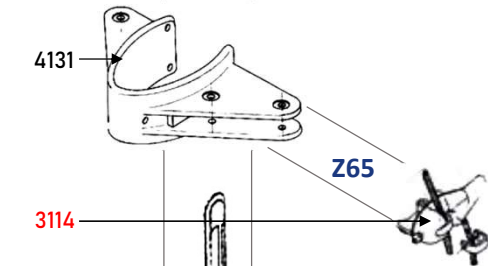
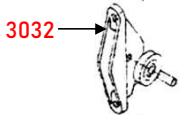
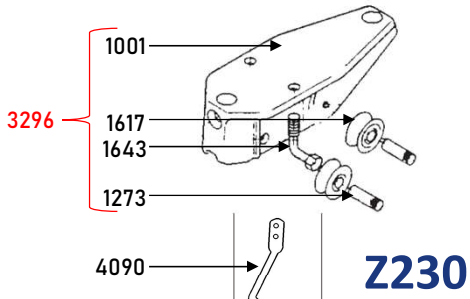
Ø = Diameter

Mast Sections

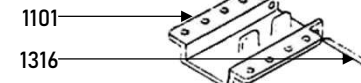
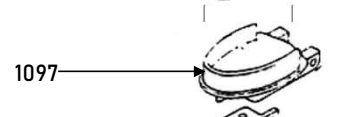
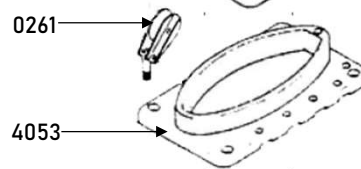
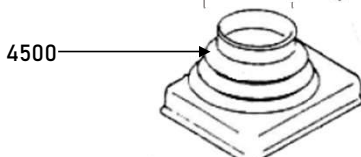
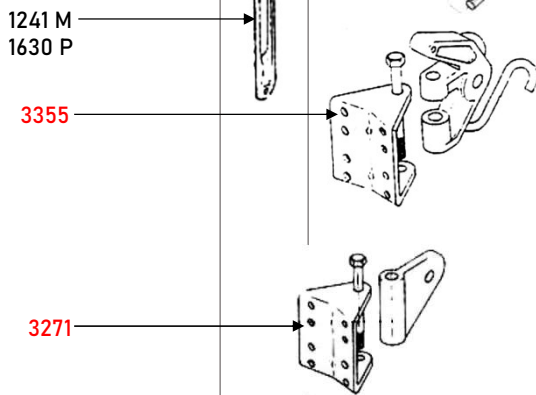
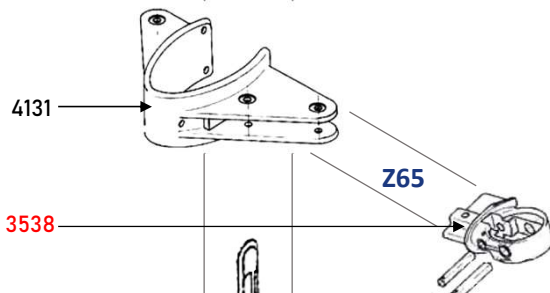


Red = Assembly P = Plastic M = Metal Ø = Diameter

Mast Sections

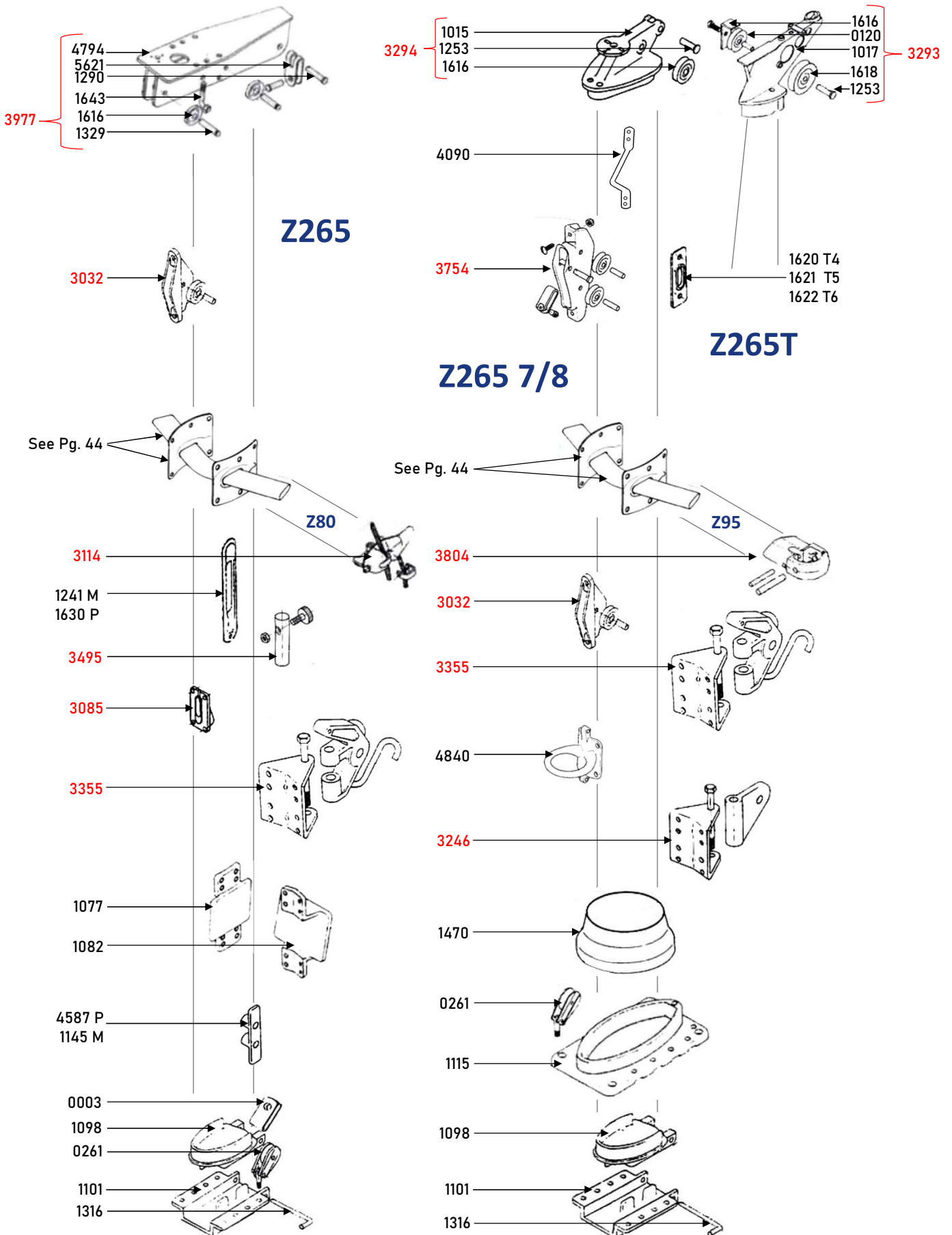


Z230 7/8



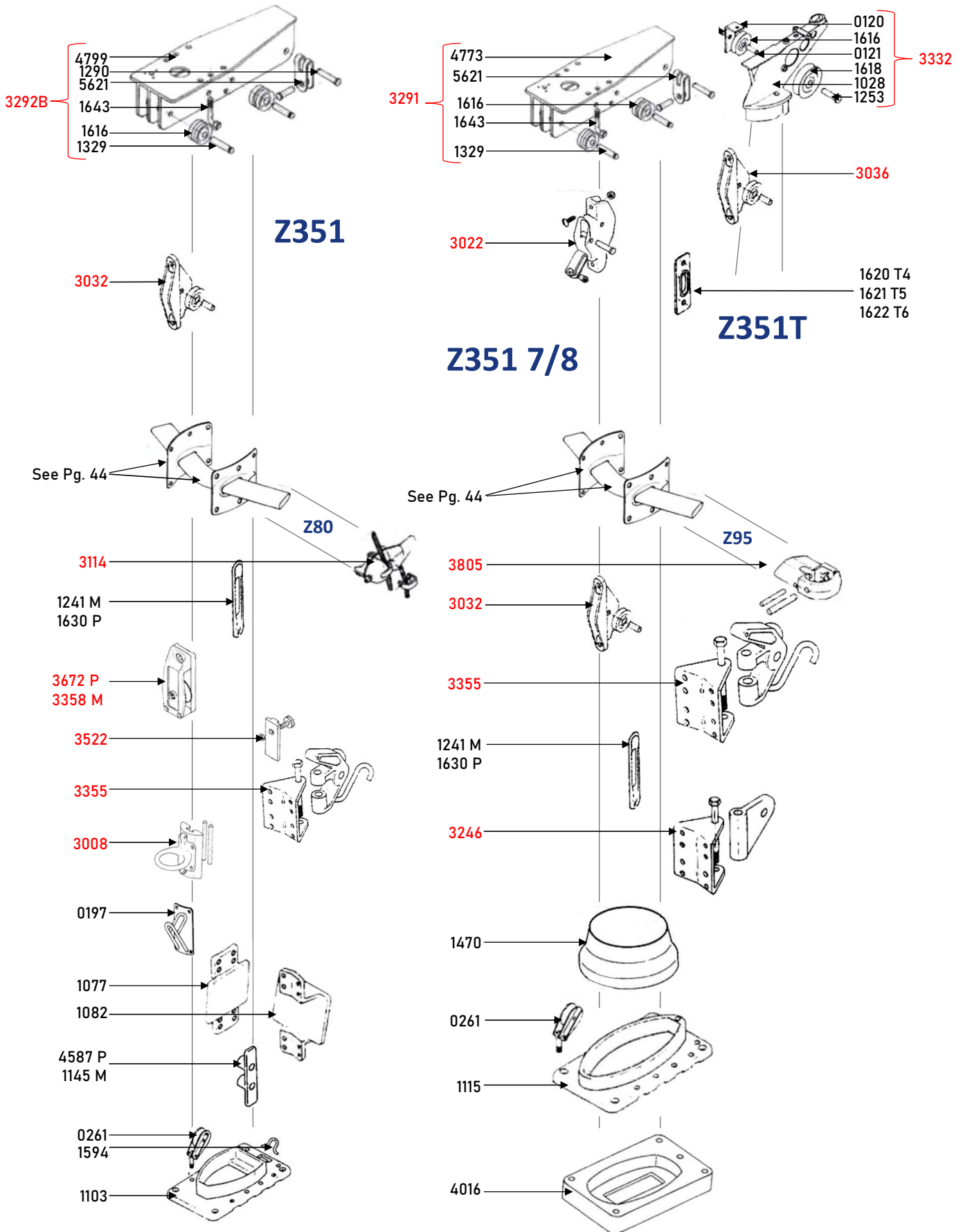
Red = Assembly P = Plastic M = Metal Ø = Diameter

Mast Sections



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Mast Sections



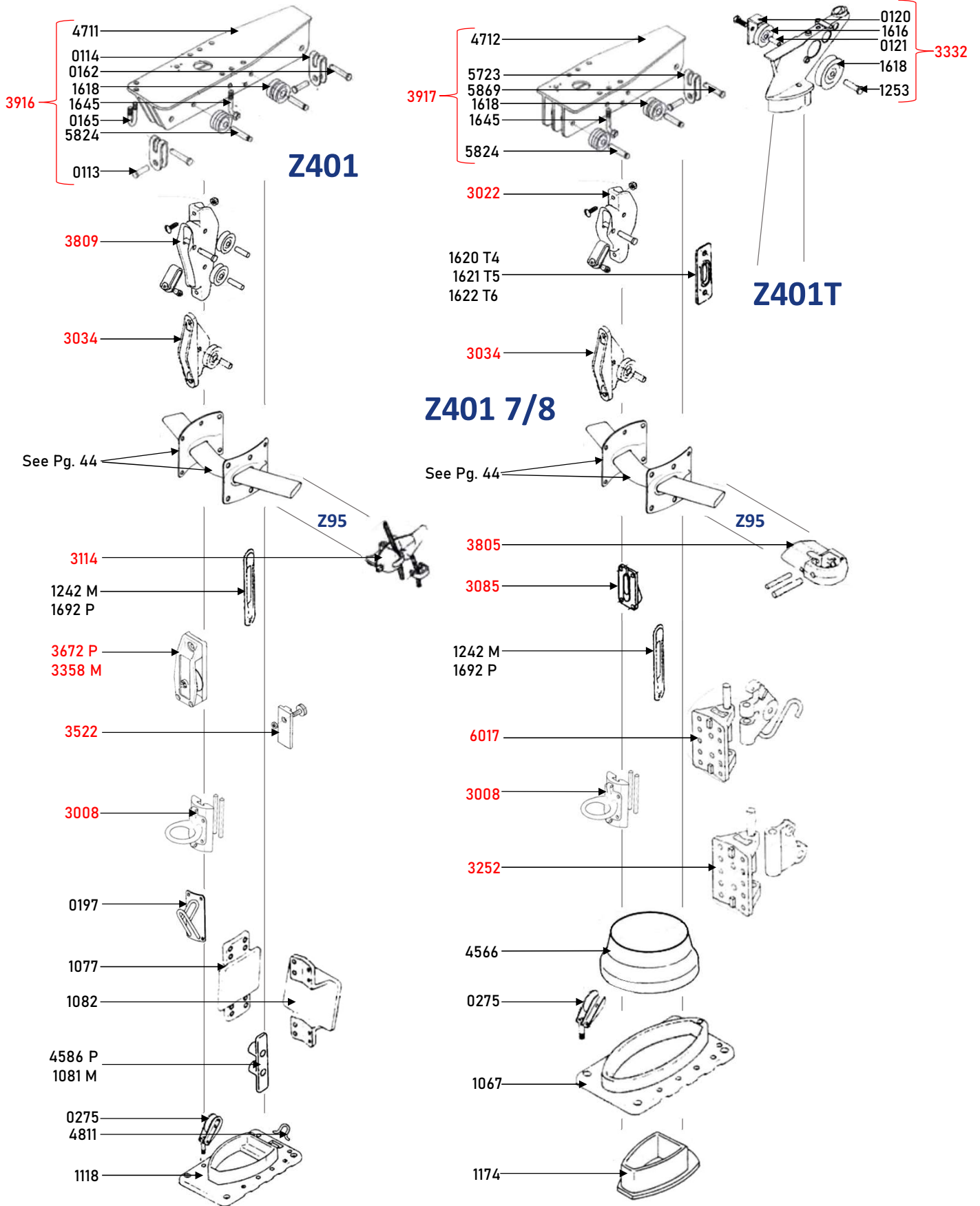
Red = Assembly

P = Plastic

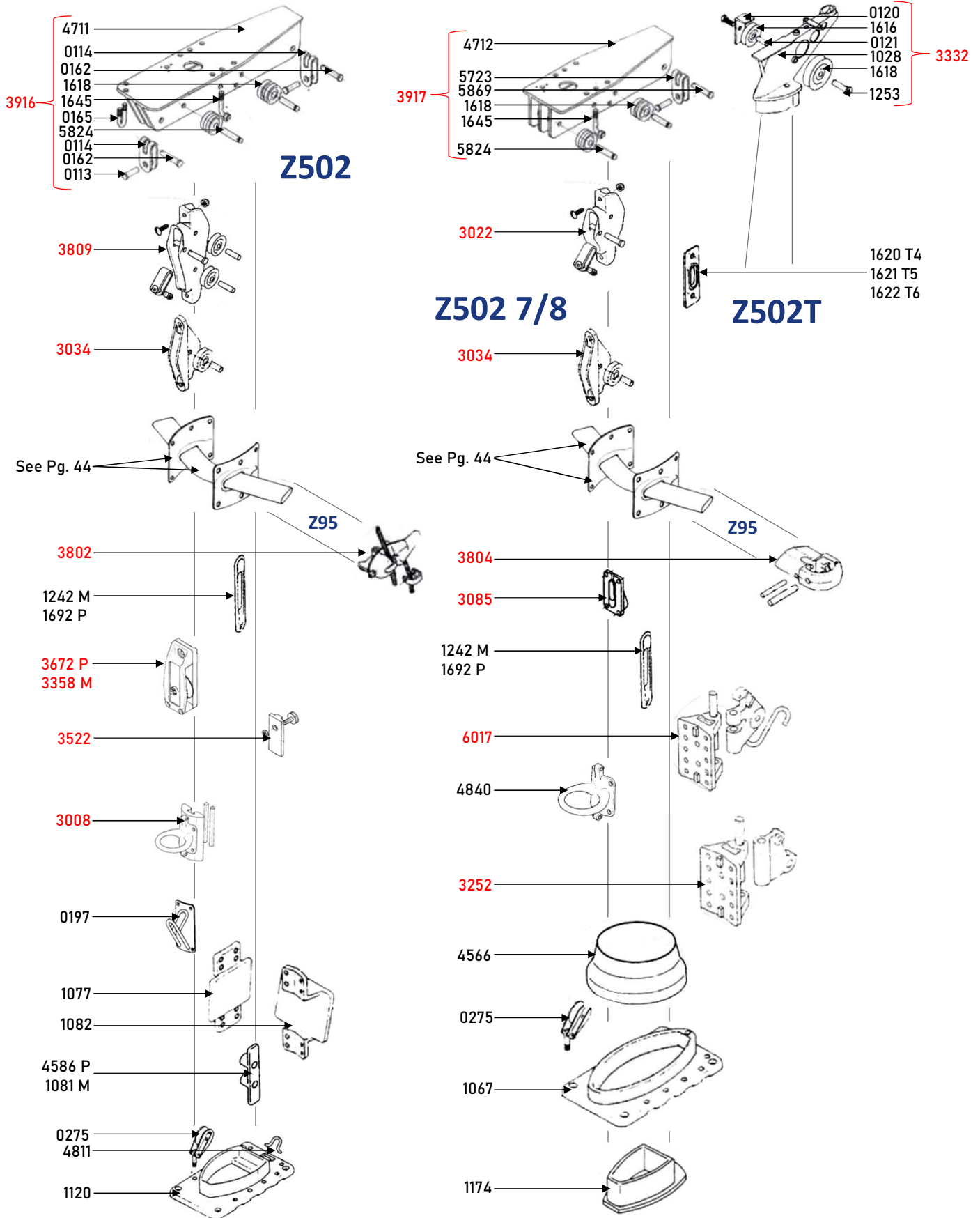
M = Metal

Ø = Diameter

Mast Sections



Mast Sections



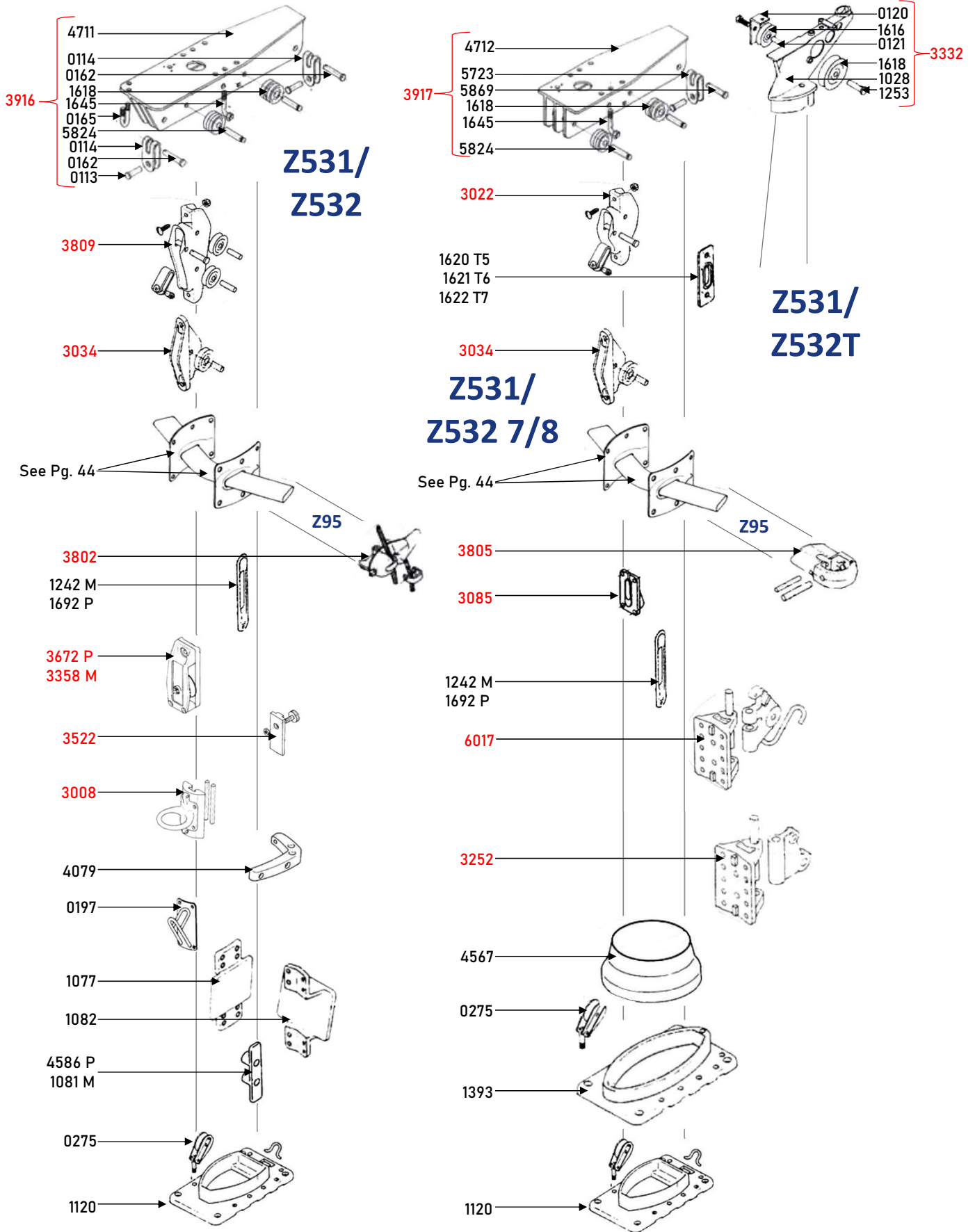
Red = Assembly

P = Plastic

M = Metal

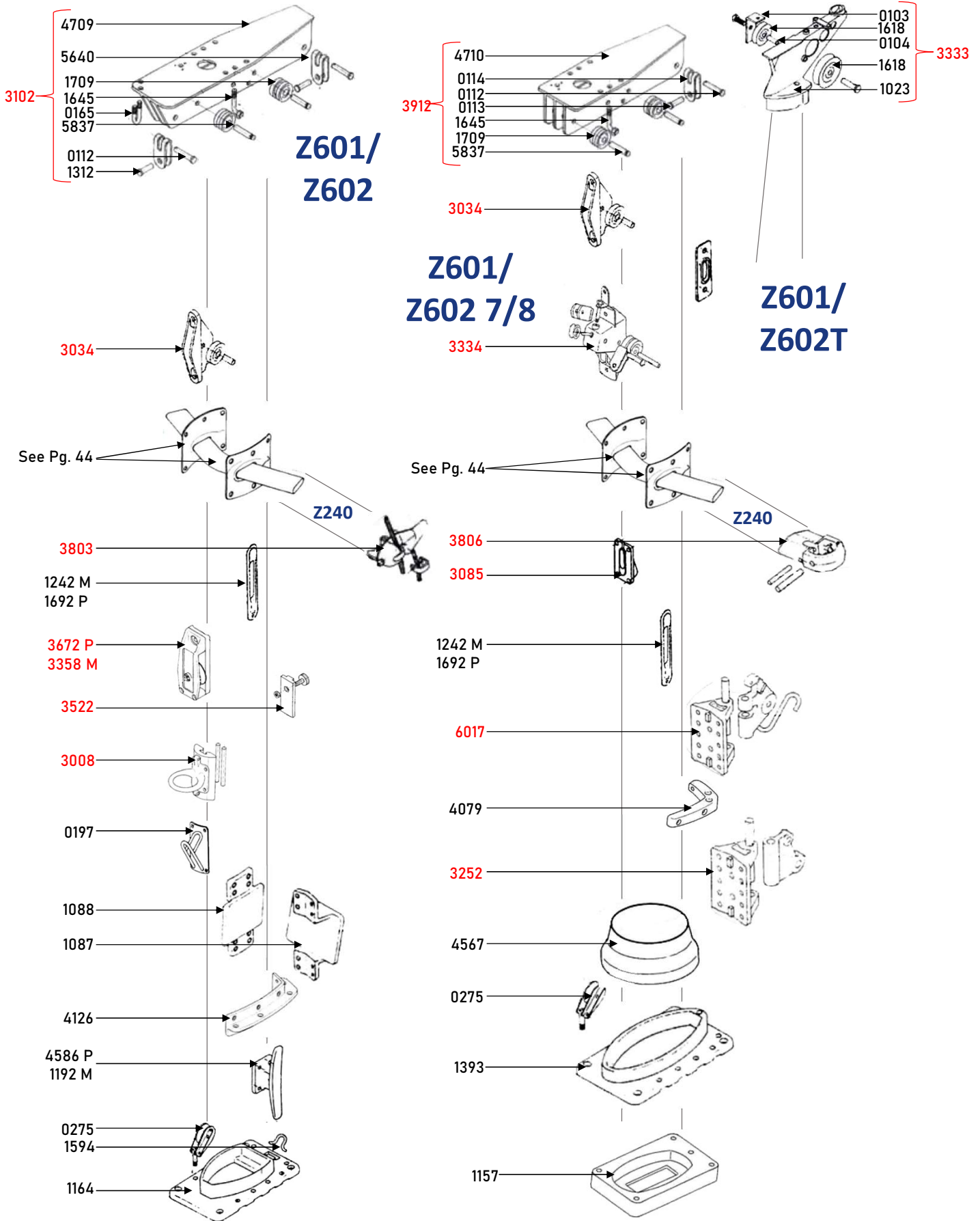
Ø = Diameter

Mast Sections

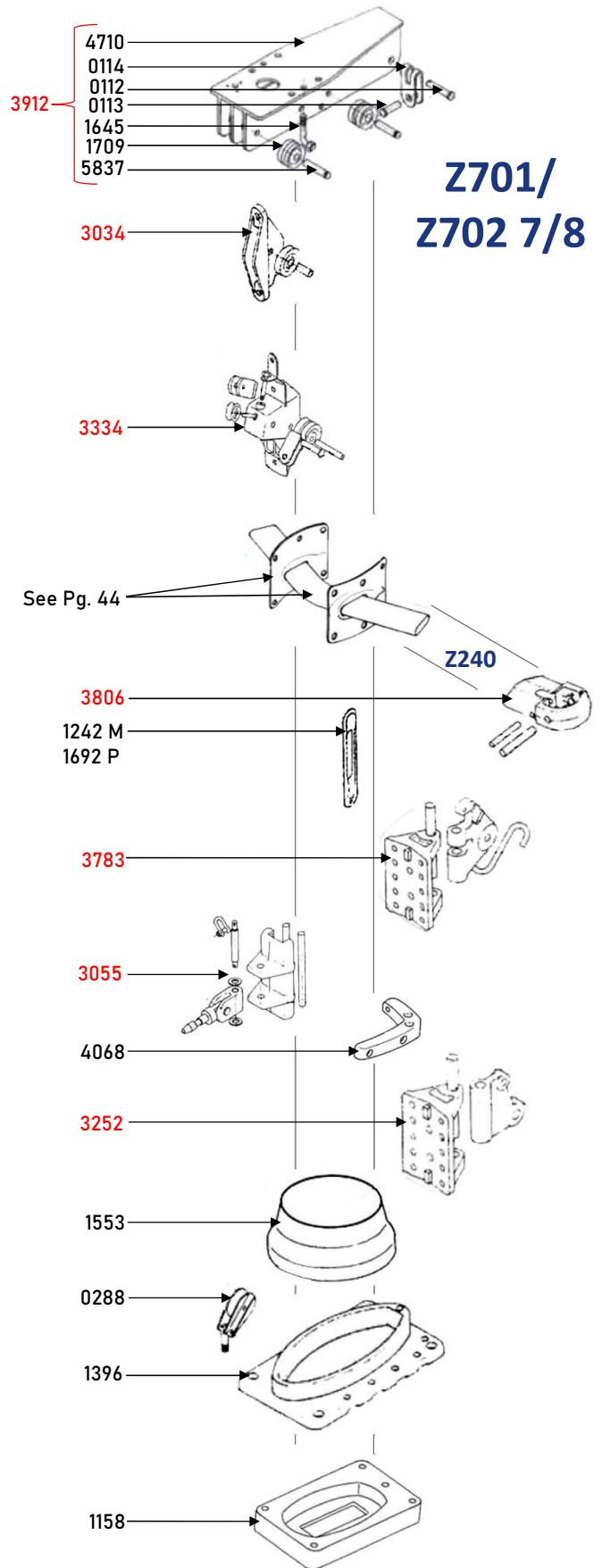
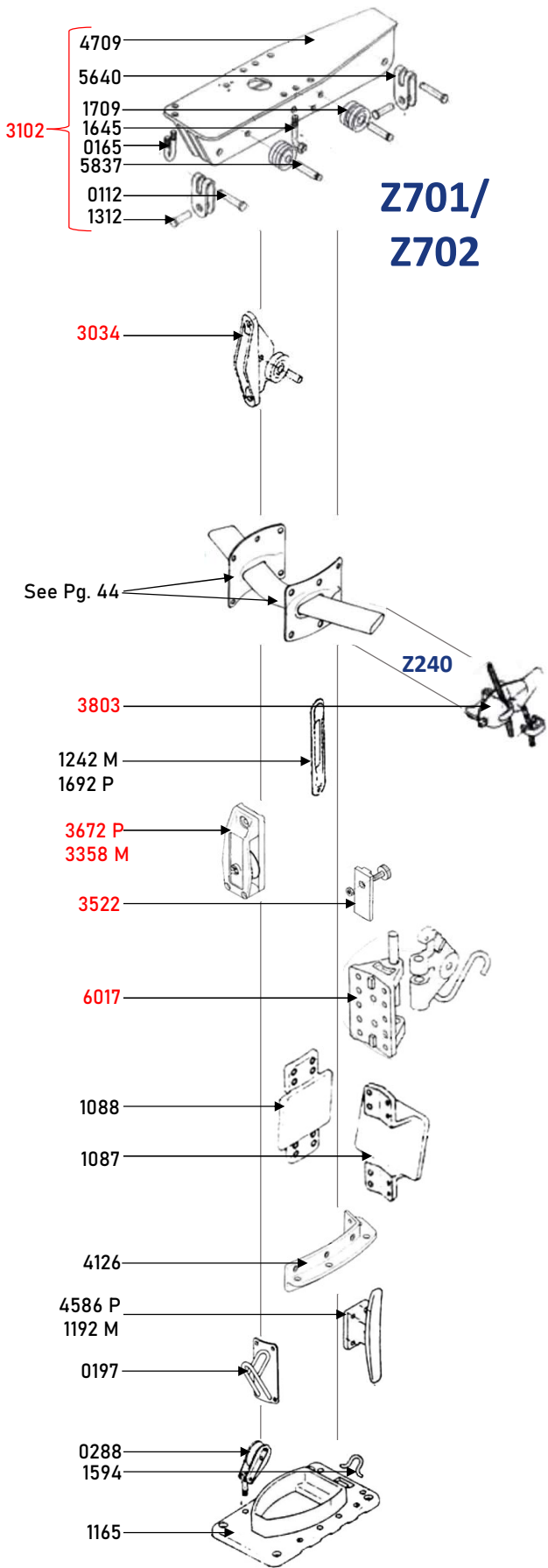


Red = Assembly P = Plastic M = Metal Ø = Diameter

Mast Sections



Mast Sections



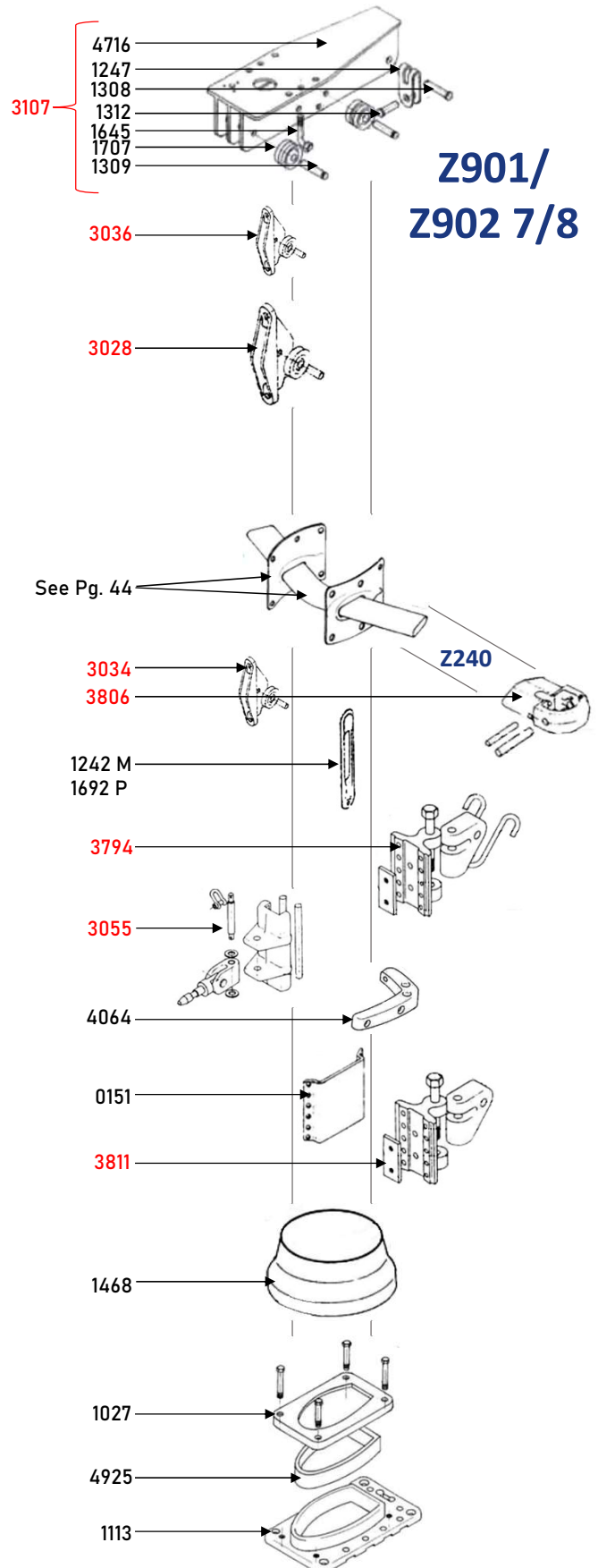
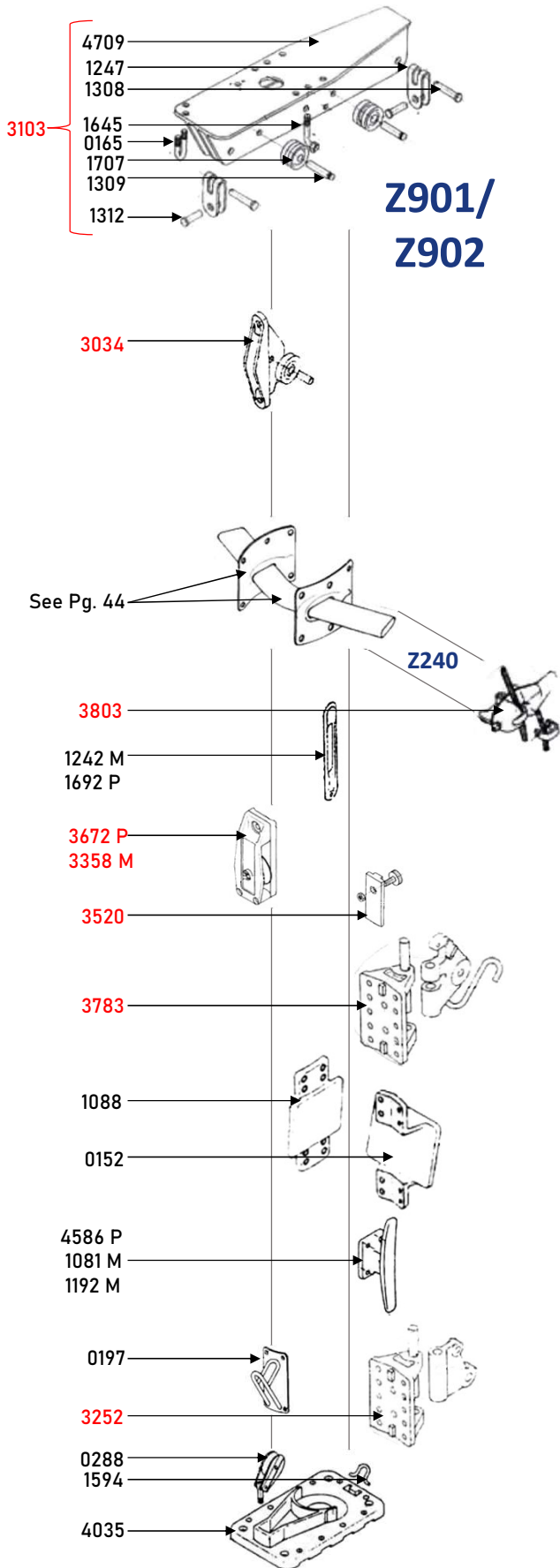
Red = Assembly

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Mast Sections



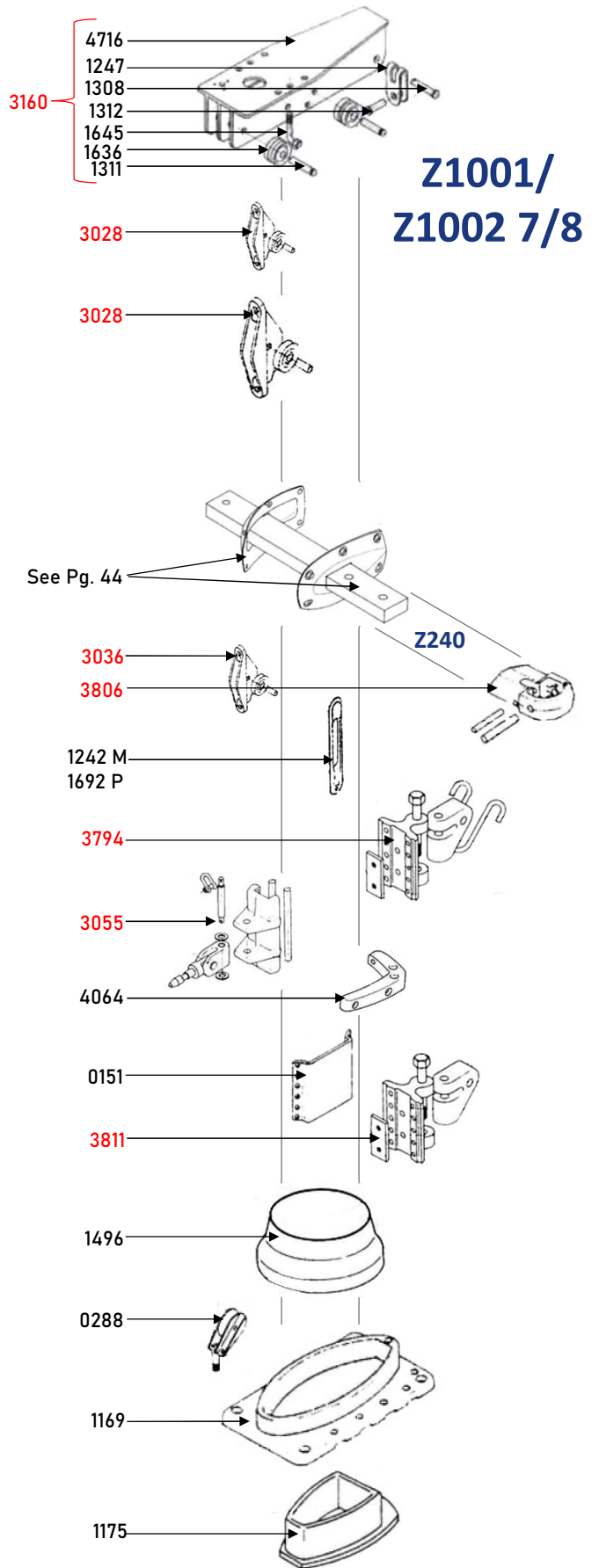
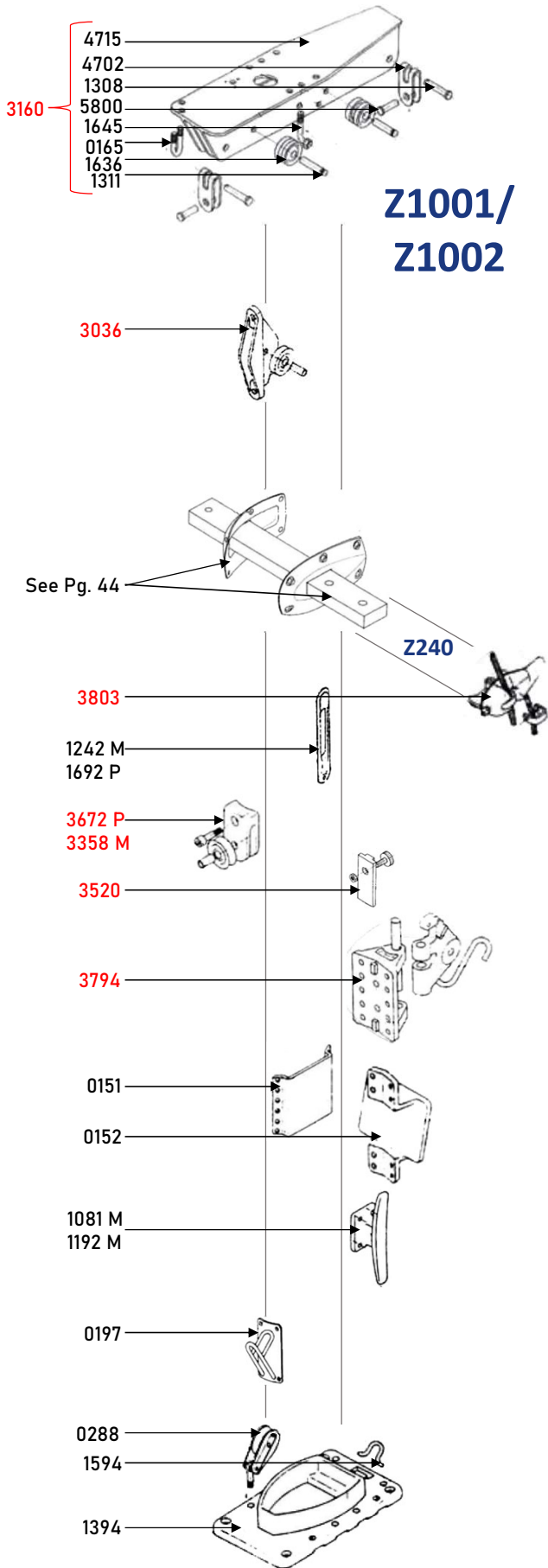
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Mast Sections



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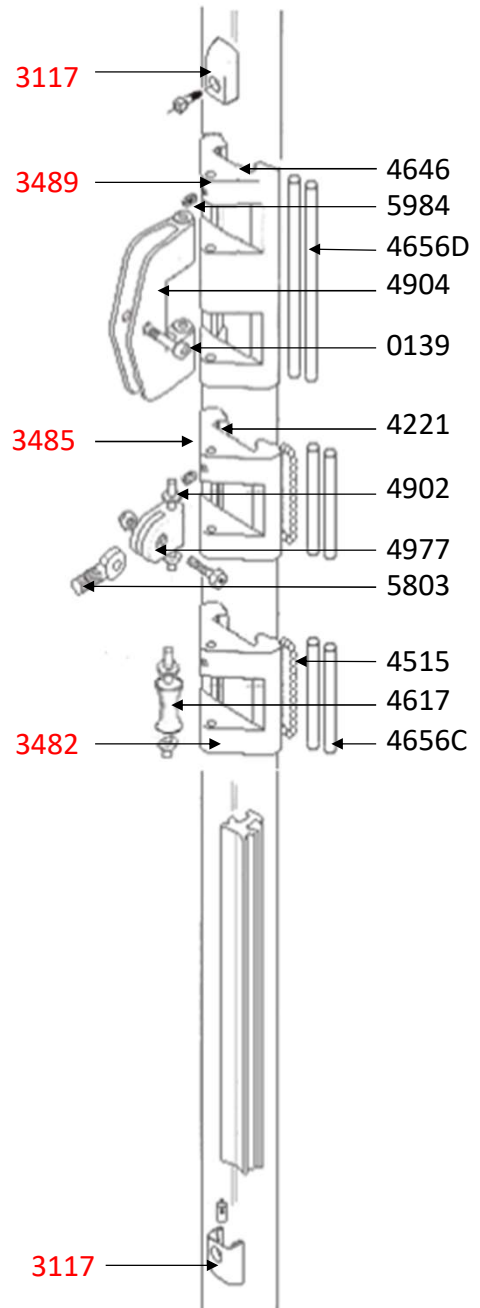
Batten Car Systems

We have developed a new car system to cope with the special requirements of fully battened mail sails. The system runs on Torlon ball bearings or rod bearings with all cars machined from solid aluminium. Track and cars are anodised silver.

A sail requires the following batten cars:

1 x Headboard Car, 1 x Car per Batten, 1 x Intermediate Car between each Batten.

25mm Tracks		System Parts	
R 25/1 932		Head Car	3489
		Batt Car	3485
		Inter Car	3482
		Masts	Z401-Z902 Z300E-Z902E
		Track End	3117
		Ball Bearing	4515
		Rod Bearing	4656
32mm Tracks		System Parts	
R 32 619		Head Car	3472
		Batt Car	3857
		Inter Car	3454
R 32/1 663		Masts	Z1002-Z1400 Z1100E-Z1252E
		Track End	3117
		Ball Bearing	4517



This system comes with a one-piece track and is compatible with any Z Spars mast section.

Batten Cars & Slides

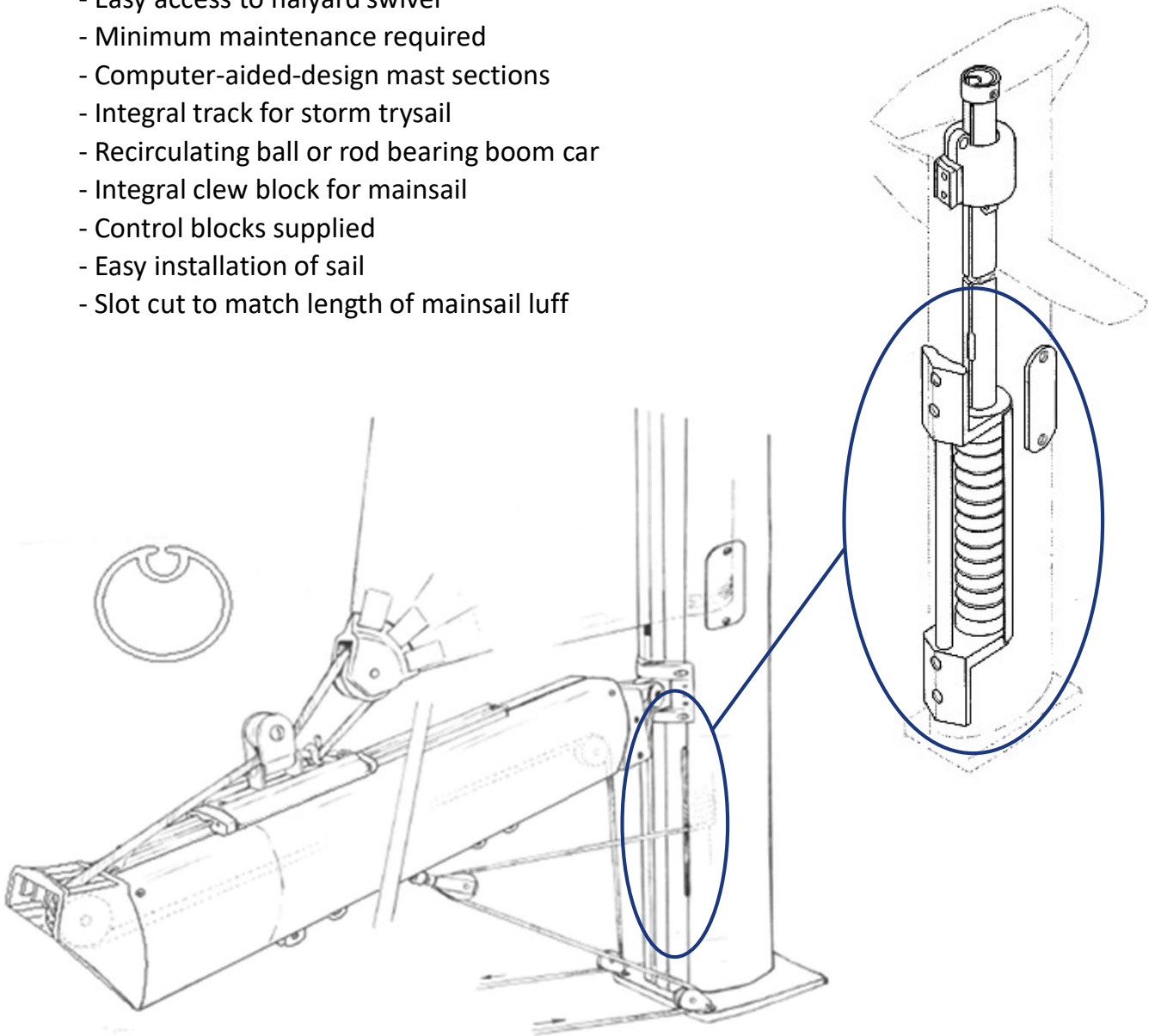
Batten Cars			
			
Part No	3489	3485	3482
Type	Headboard	Batten	Intermediate
Track Size	25mm	25mm	25mm
Bearing Type	Rod	Ball or Rod	Ball or Rod
			
Part No	3472	3857	3454
Type	Headboard	Batten	Intermediate
Track Size	32mm	32mm	32mm
Bearing Type	Ball	Ball	Ball
Spare parts available – Please ask for details			
Batten Slides			
			
Part No	3081	3080	3107
Type	Headboard	Batten	Intermediate
Mast	Z602-902	Z602-902	Z602-902
			
Part No	3086	3082	3108
Type	Headboard	Batten	Intermediate
Track	Z1001/1250	Z1001/1250	Z1001/1250
Spare parts available – Please ask for details			

Furling Spars

For Easy Control of the Mainsail

Features:

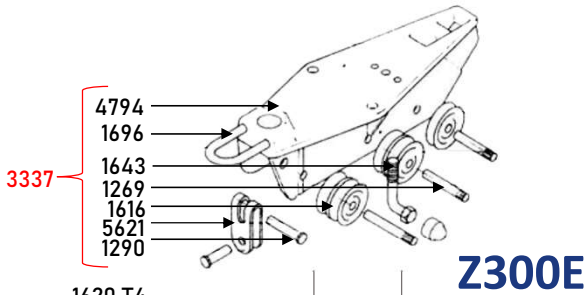
- Removable helical drum furling mechanism
- Easy access to halyard swivel
- Minimum maintenance required
- Computer-aided-design mast sections
- Integral track for storm trysail
- Recirculating ball or rod bearing boom car
- Integral clew block for mainsail
- Control blocks supplied
- Easy installation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



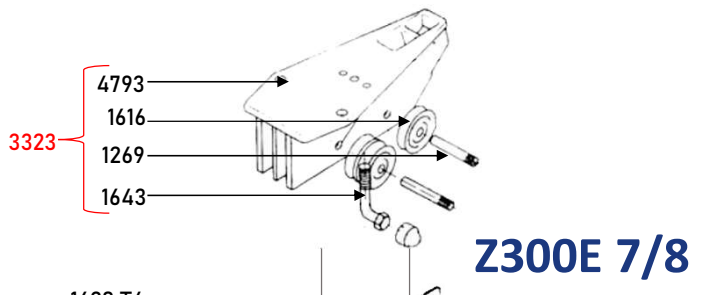
Note: Mainsail battens cannot be used

We reserve the right to change specification without notice

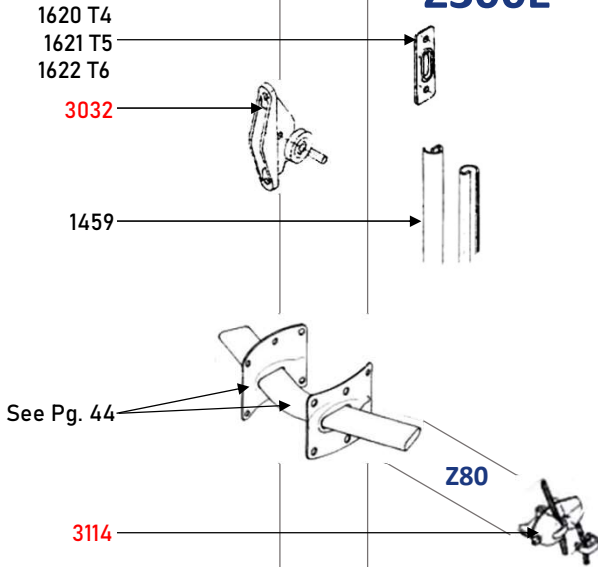
Mast Sections



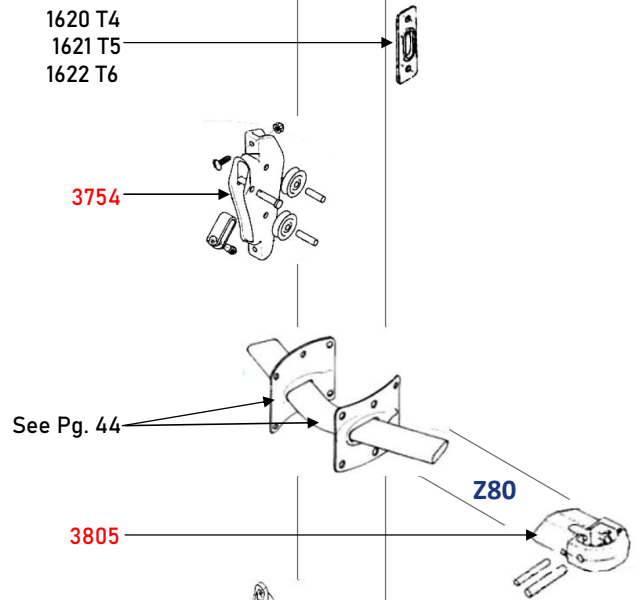
Z300E



Z300E 7/8



Z80



Z80

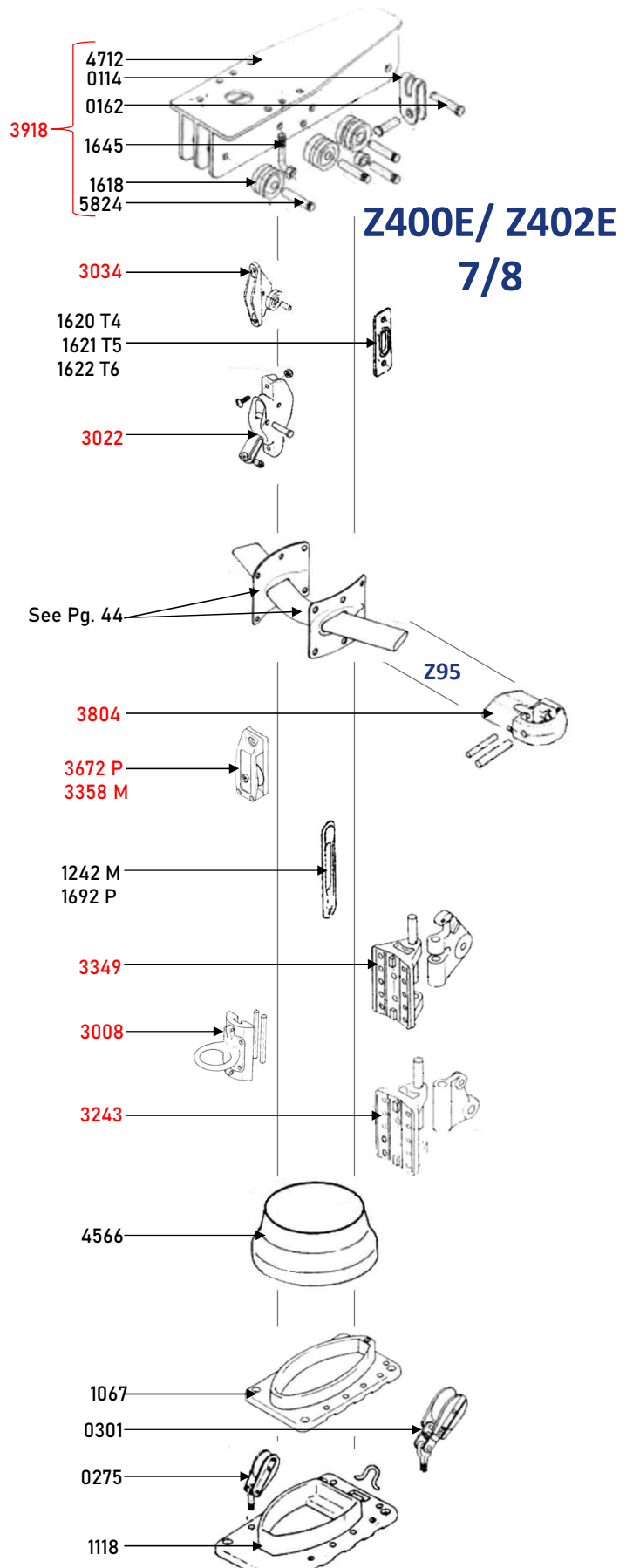
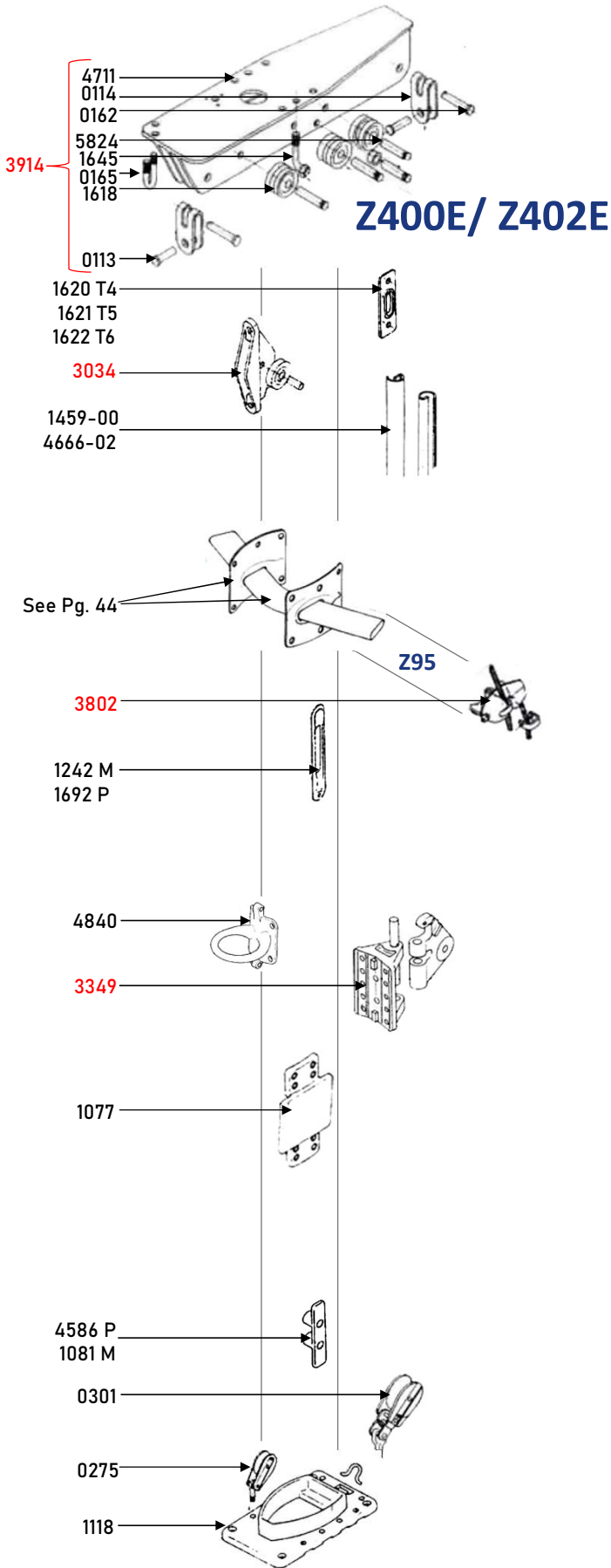
Red = Assembly

P = Plastic

M = Metal

Ø = Diameter

Mast Sections



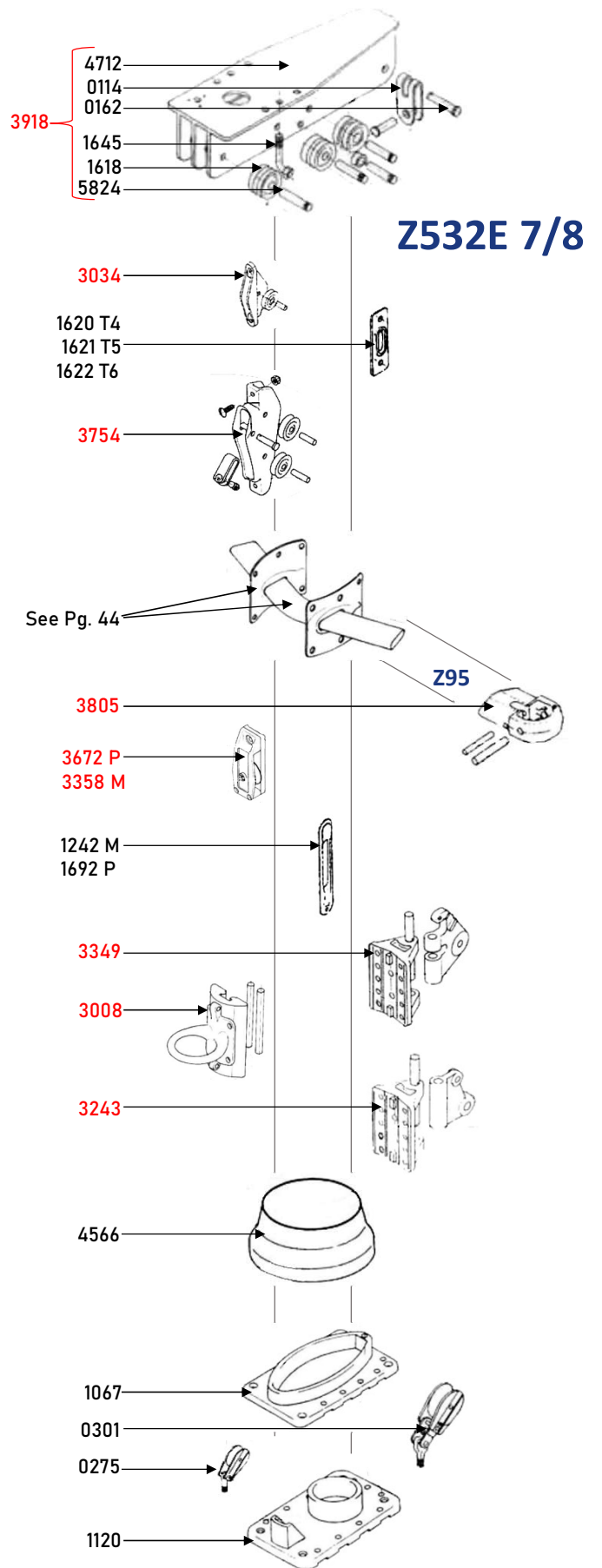
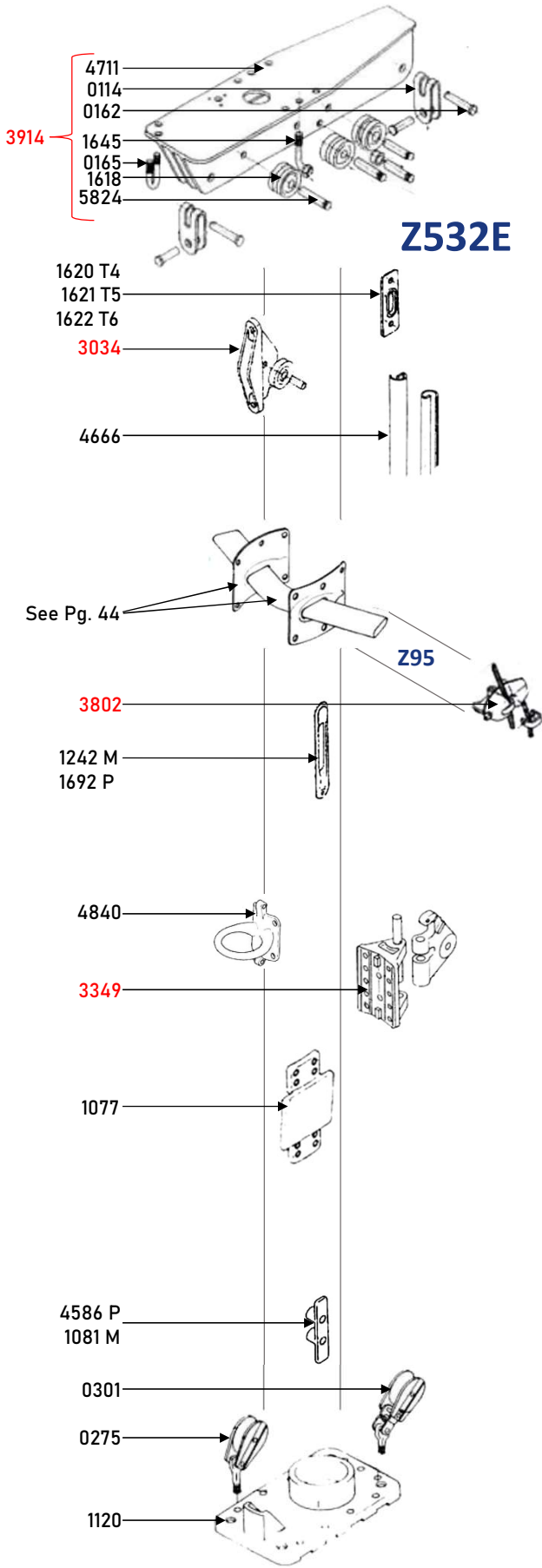
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Mast Sections



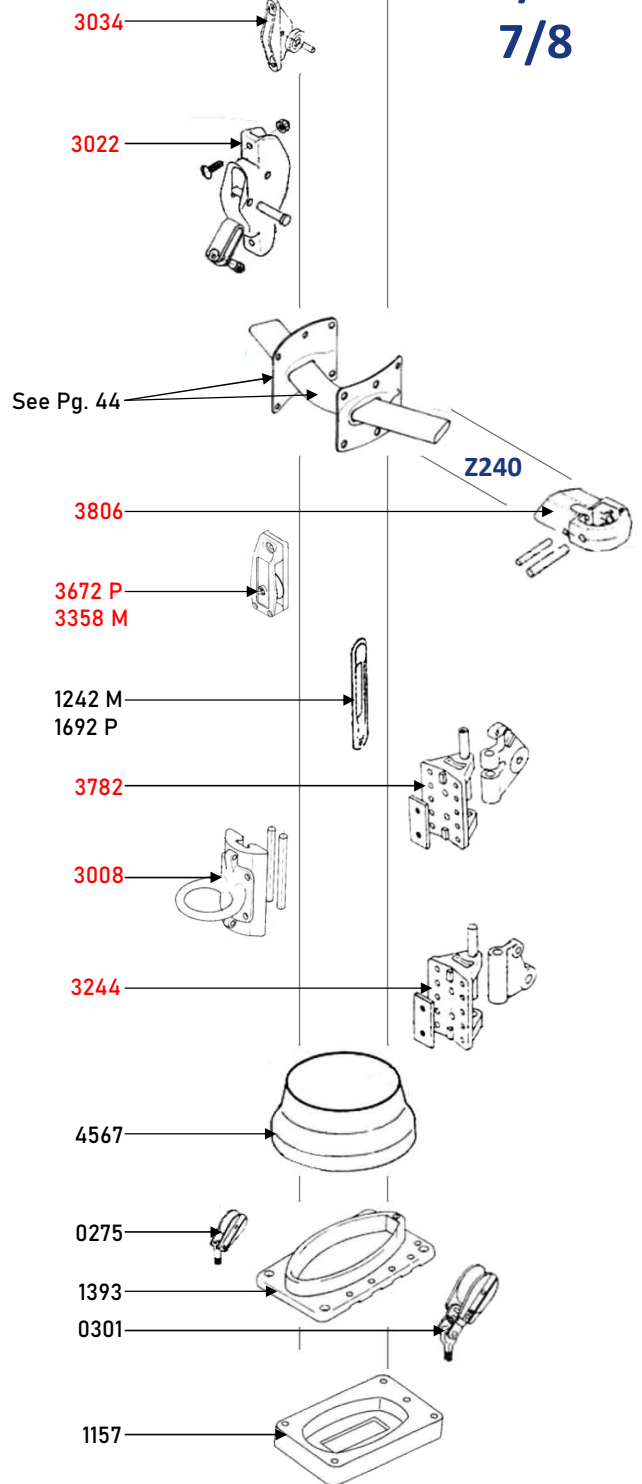
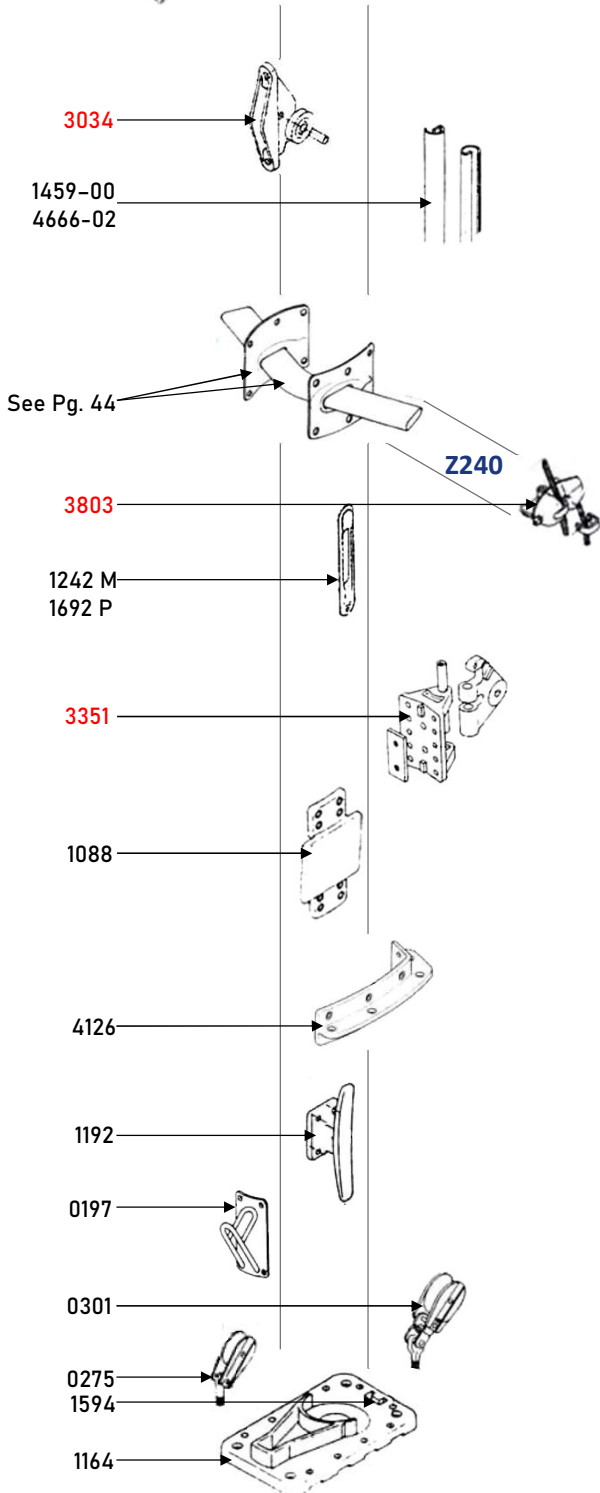
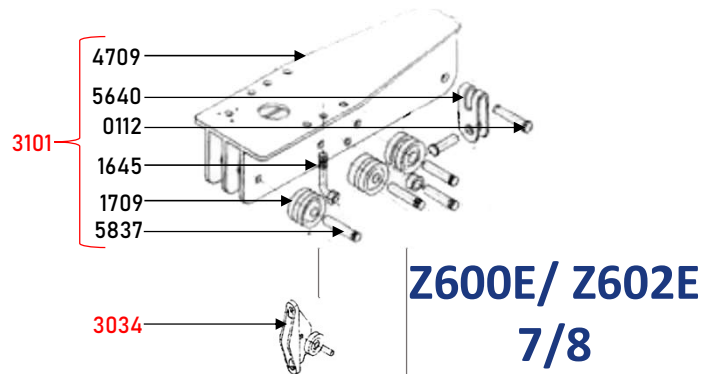
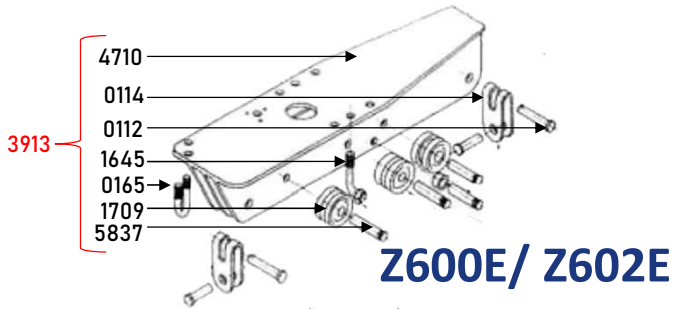
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Mast Sections



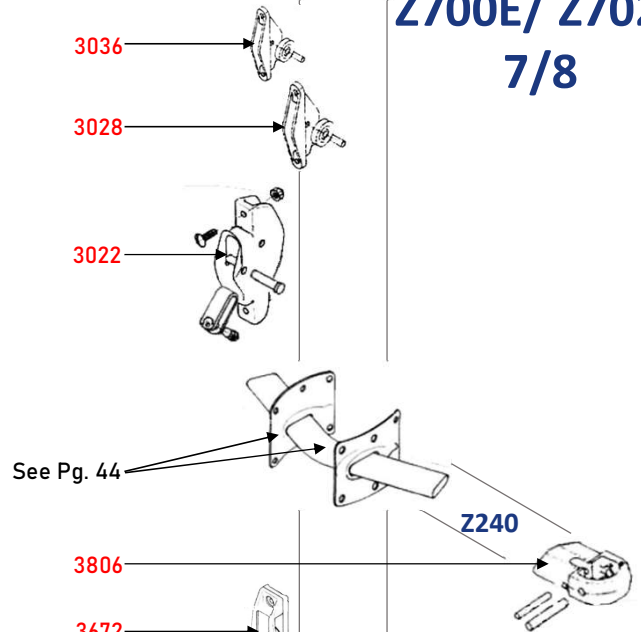
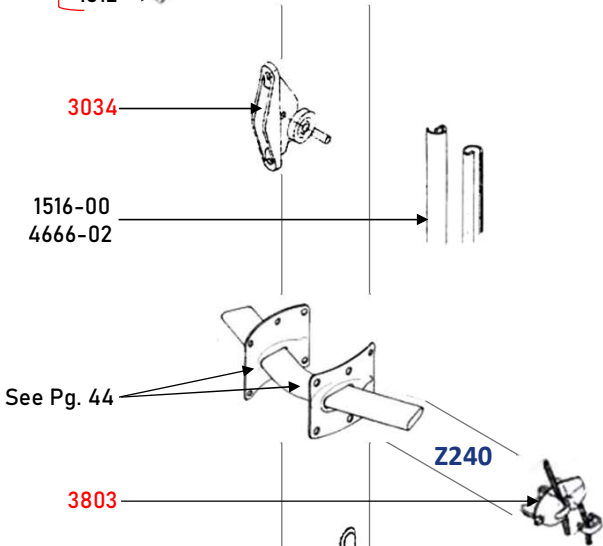
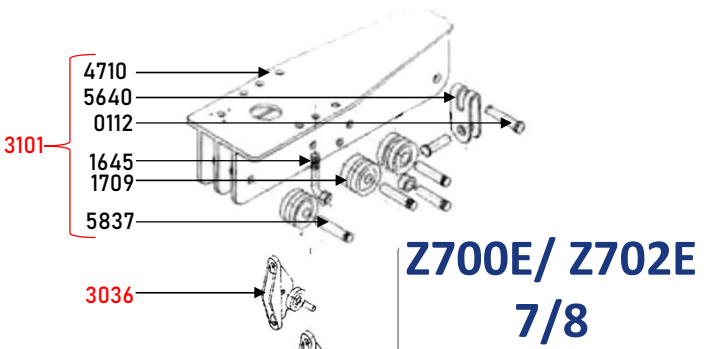
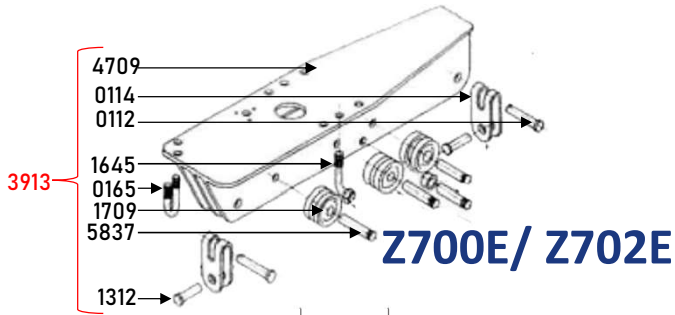
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Mast Sections



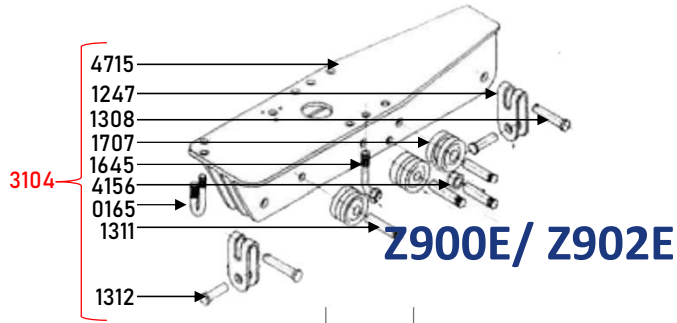
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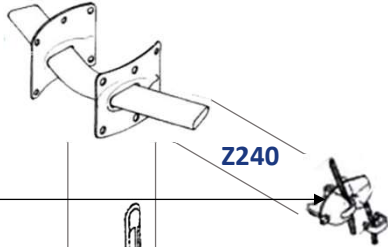
Ø = Diameter

Mast Sections



3034

1516-00
4666-02



3803

1242 M
1692 P

3672 P
3358 M

3782

0151

0152

1192

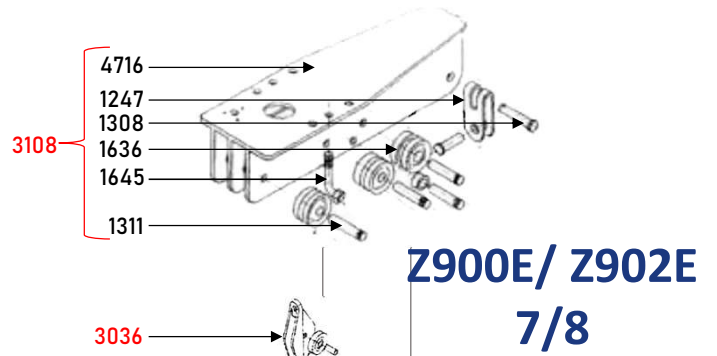
0197

0302

0288

1594

4035



3036

3028

See Pg. 44

3806

3034

1242 M
1692 P

3782

3055

3244

1468

1027

4925

1113

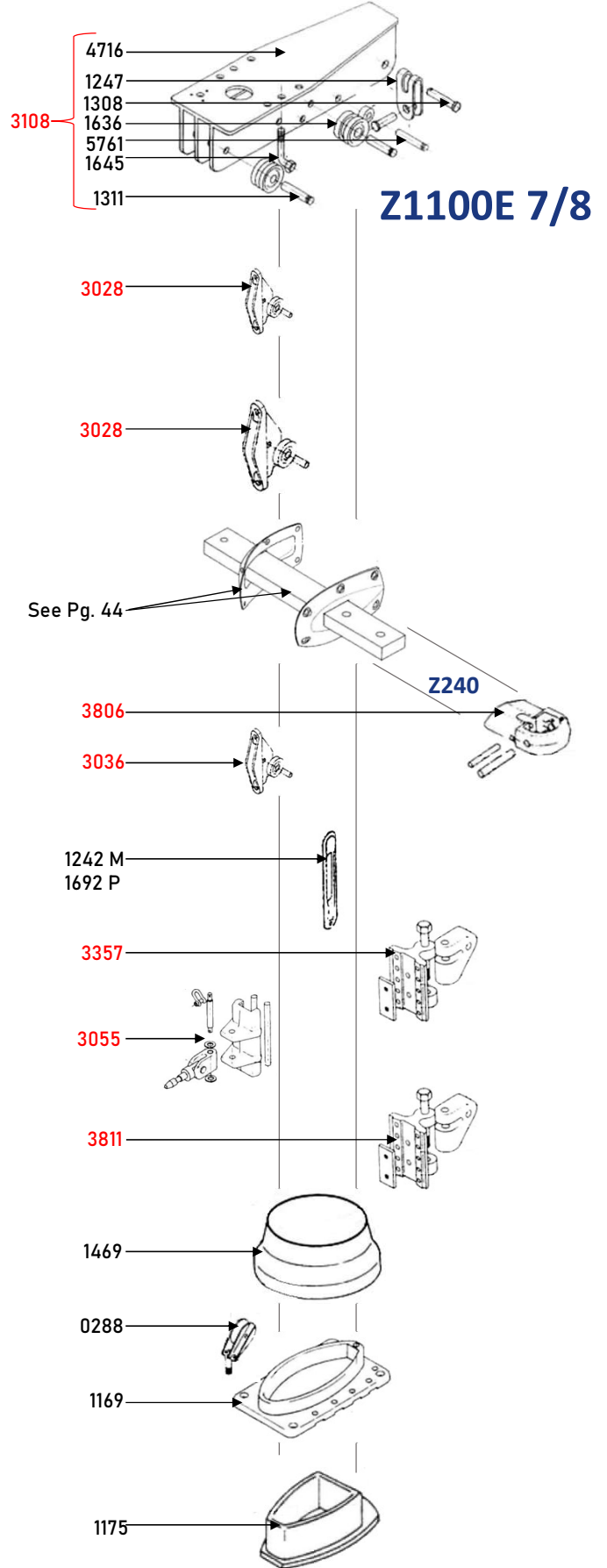
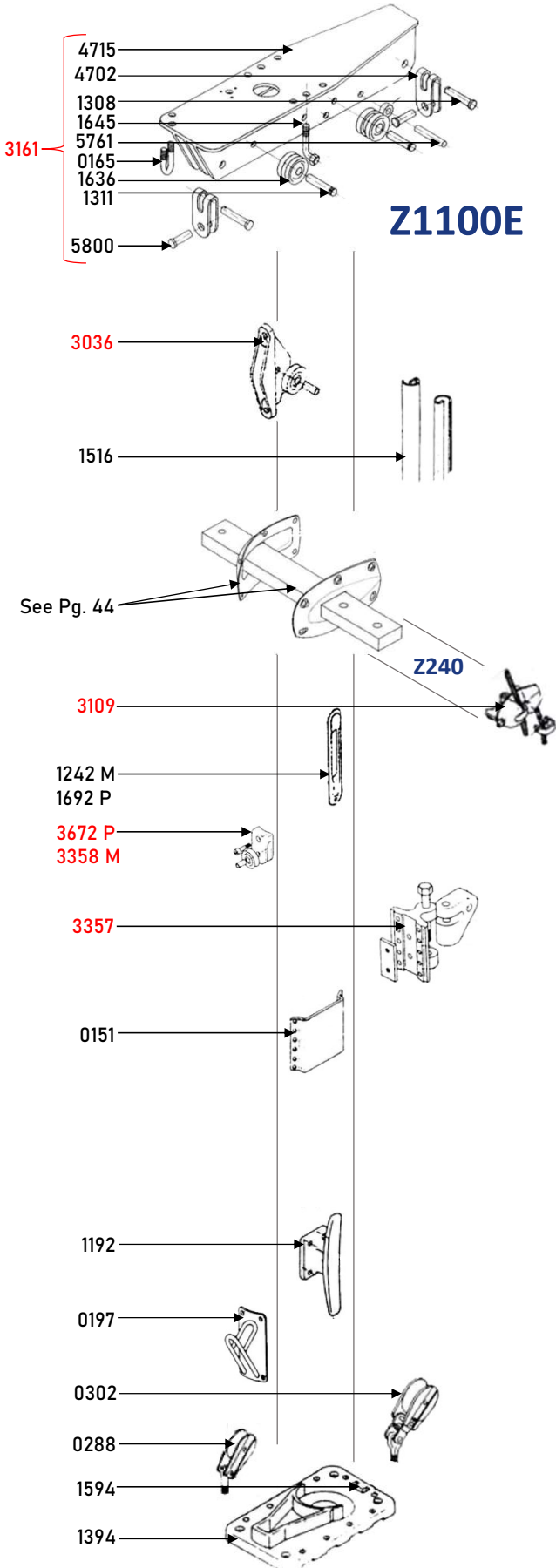
Red = Assembly

P = Plastic

M = Metal

Ø = Diameter

Mast Sections



Red = Assembly

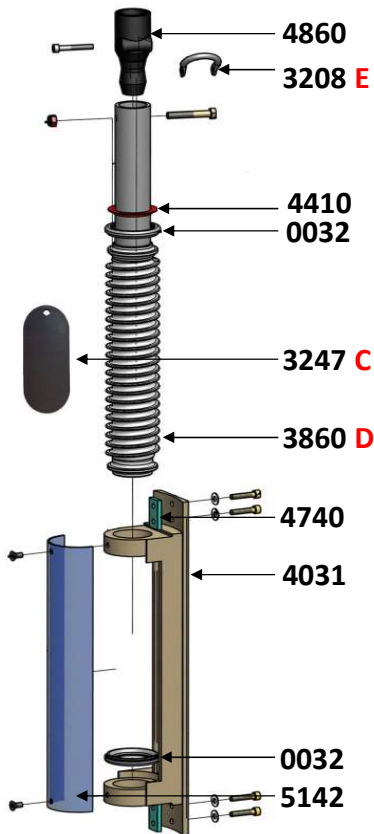
P = Plastic

M = Metal

Ø = Diameter

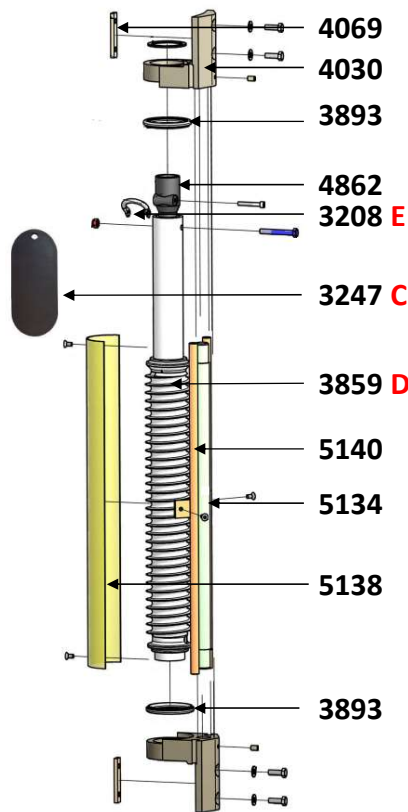
Furling Mechanisms

3626



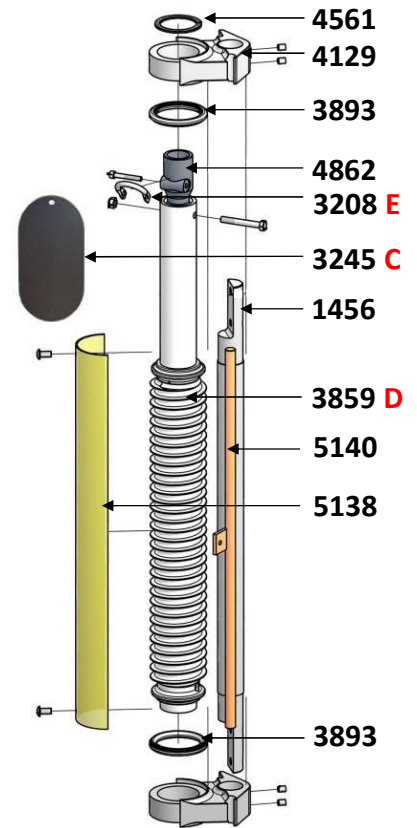
**Z300E –
Z532E**

3627/3001



**Z600E – Z1100E /
Z602E – Z902E**

3367



**Z1252E –
Z1400E**

**Halyard
Swivels**

A



3168 F



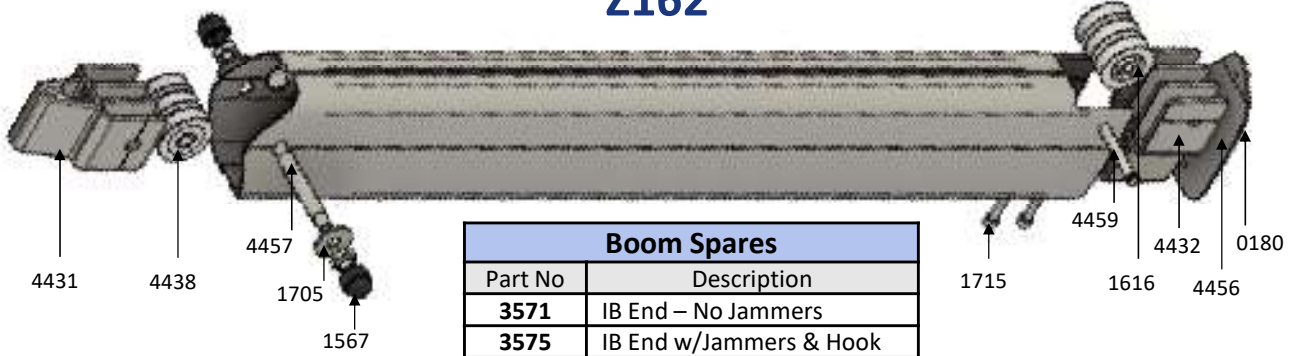
**Z55 Furling
Extrusion**

B

Section		Z300E	Z400E	Z500E	Z600E/ Z602E	Z700E/ Z702E	Z900E/ Z902E	Z1100E
Halyard Swivel	A	3504	3164	3164	3165	3165	3166	3159
Furling Extrusion	B	Z55	Z55	Z55	Z55	Z55	Z55	Z55
Maintenance Cap	C	3247	3247	3247	3245	3245	3245	3245
Furling Wormdrive	D	3860	3860	3860	3859	3859	3859	3859
Clew Shackles	E	3208	3208	3208	3208	3208	3208	3208
Halyard Shackles	F	3168	3168	3168	3168	3168	3168	1562
Complete Furling Unit		3626	3626	3626	3627	3627	3627	3627

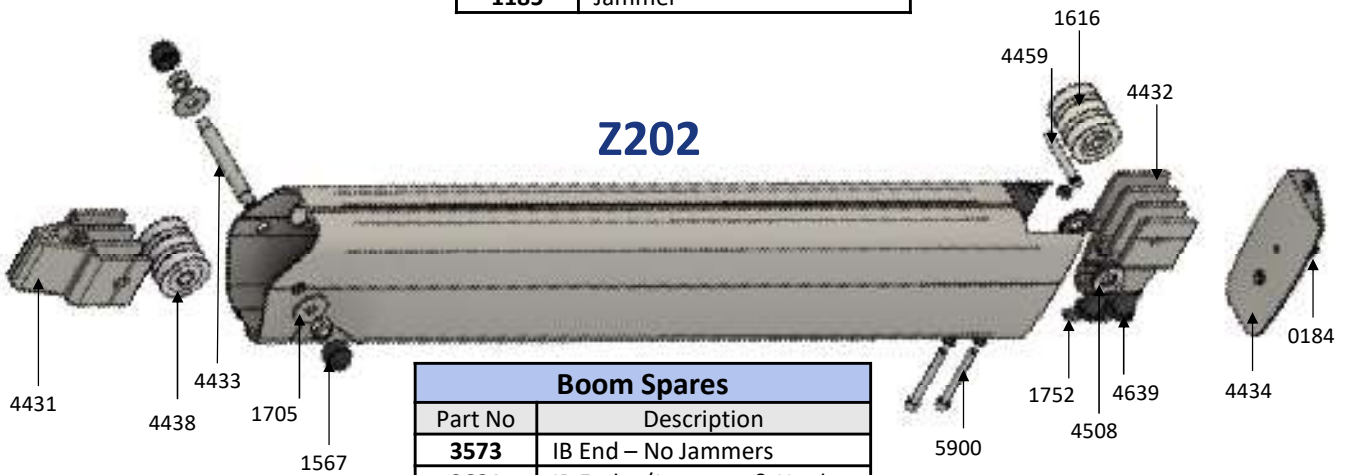
Current Boom Sections

Z162



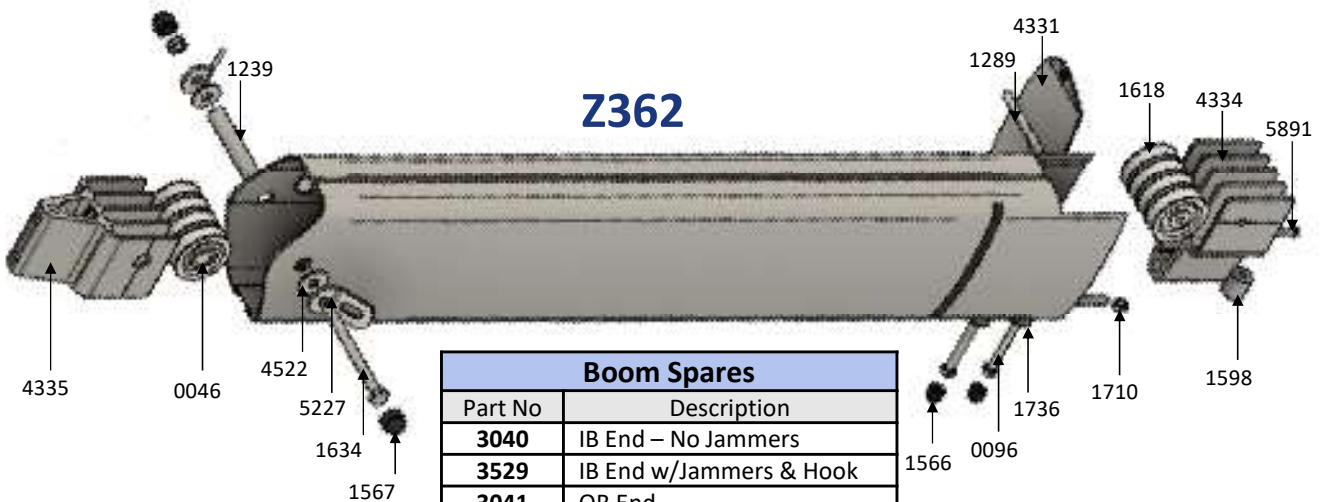
Boom Spares	
Part No	Description
3571	IB End – No Jammers
3575	IB End w/Jammers & Hook
3572	OB End
3044	Reef Slider
3484	Small Vang Tang
1185	Jammer

Z202



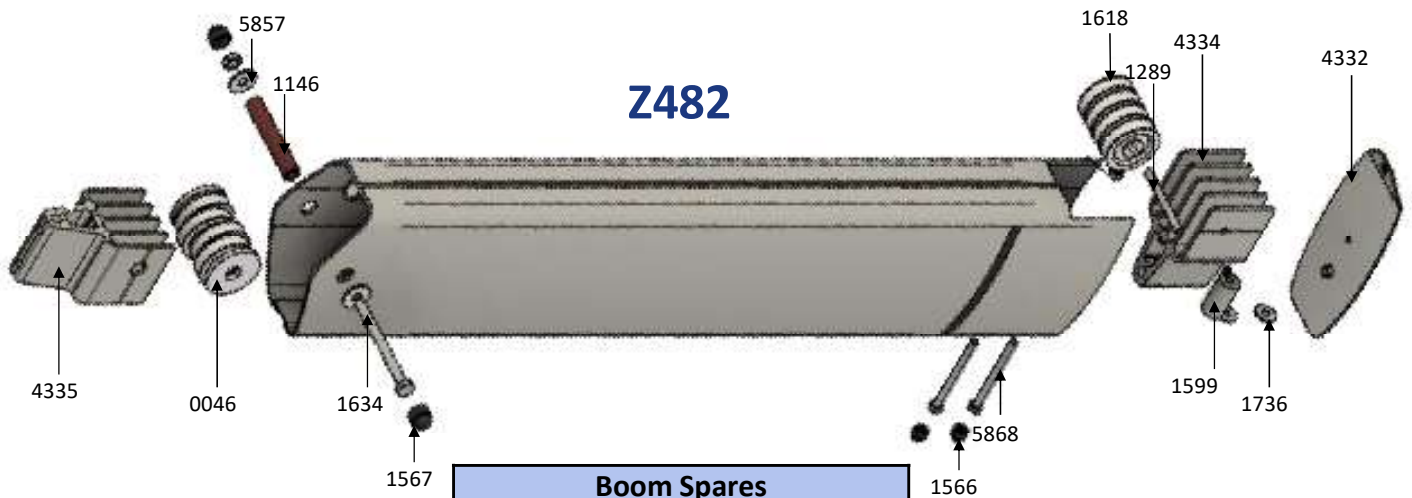
Boom Spares	
Part No	Description
3573	IB End – No Jammers
3681	IB End w/Jammers & Hook
3574	OB End
3044	Reef Slider
3484	Small Vang Tang
1186	Jammer

Z362



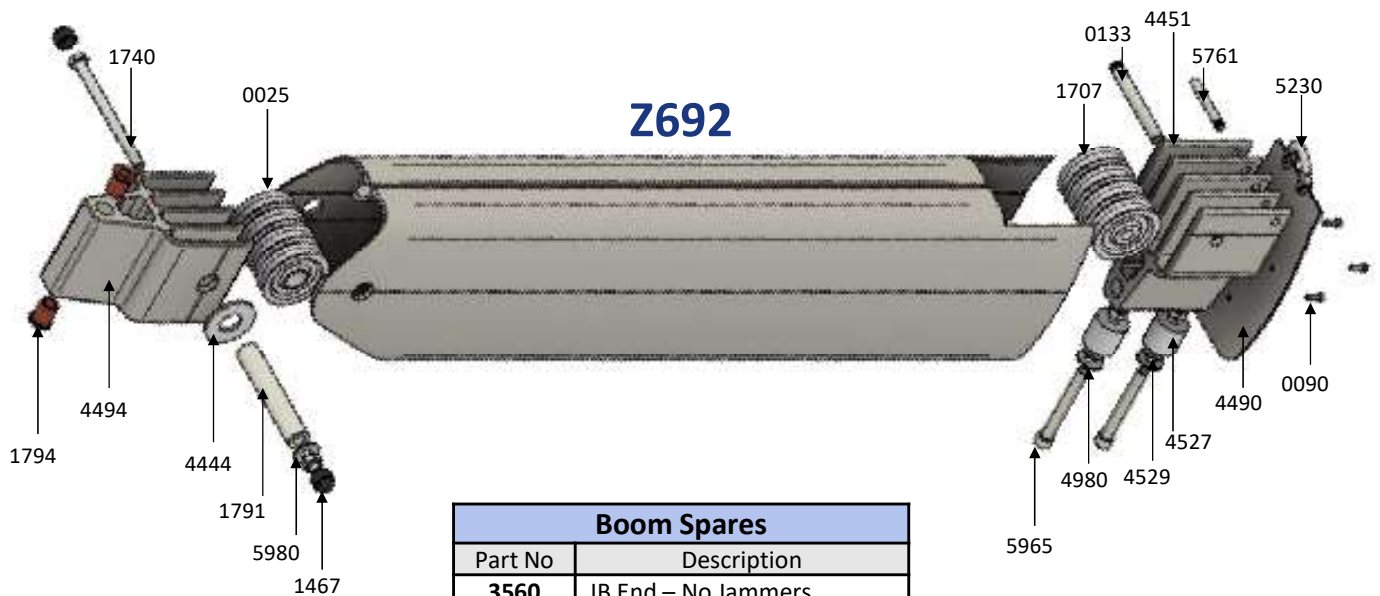
Boom Spares	
Part No	Description
3040	IB End – No Jammers
3529	IB End w/Jammers & Hook
3041	OB End
3045	Reef Slider
3651	Mainsheet Slider
3047	Medium Vang Tang
1076	Jammer

Current Boom Sections



Z482

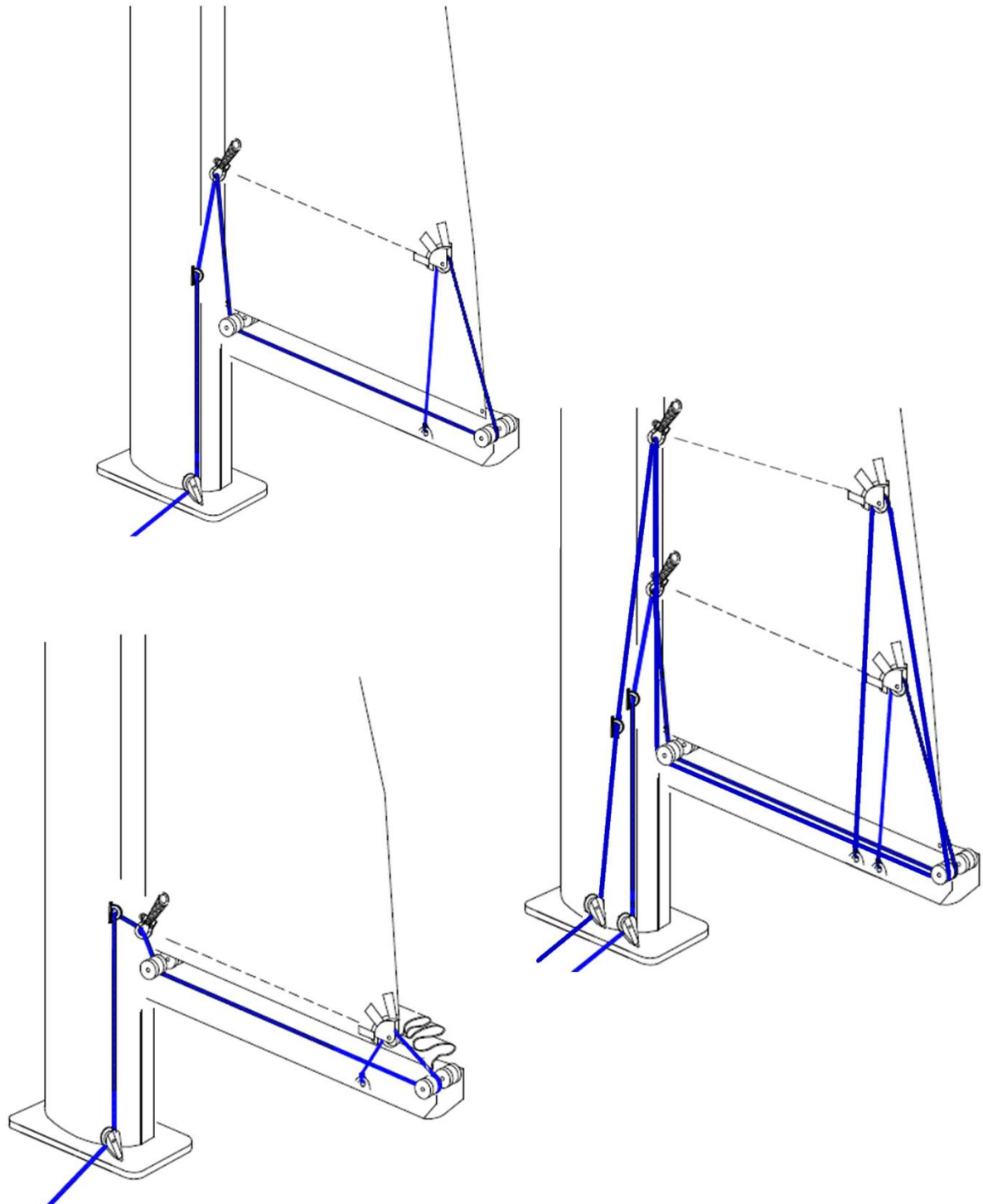
Boom Spares	
Part No	Description
3515	IB End – No Jammers
3530	IB End w/Jammers & Hook
3516	OB End
3045	Reef Slider
3651	Mainsheet Slider
3047	Medium Vang Tang
1076	Jammer



Z692

Boom Spares	
Part No	Description
3560	IB End – No Jammers
3613A	IB End w/Jammers & Hook
3554A	OB End
3455	Mainsheet/Reef Slider
3456	Large Vang Tang
1179	Jammer

Continuous Line Reefing



Continuous line reefing is available on all of our booms.

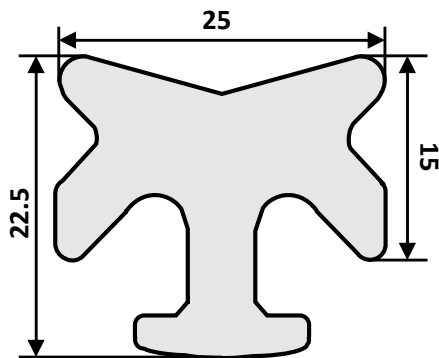
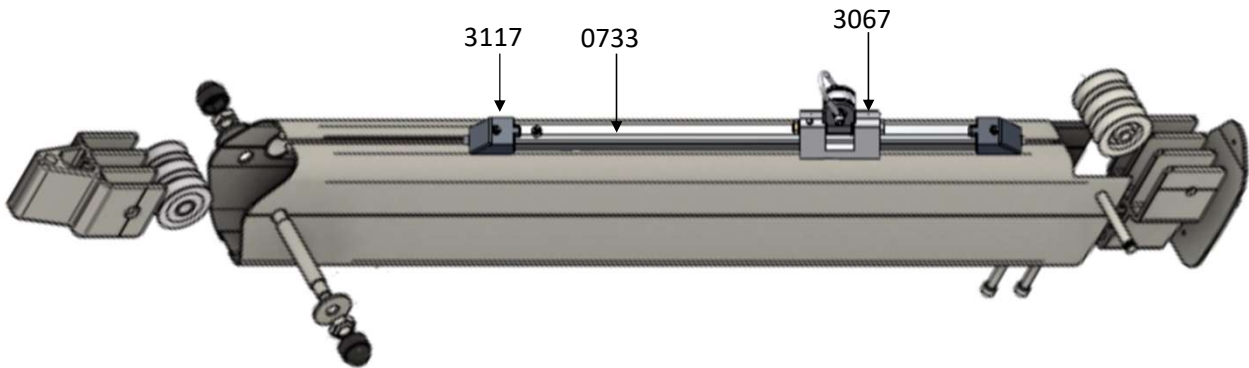
Please ask for details.

Furling Boom Sections

These booms are made specifically to accommodate our In-Mast Furling system.

For these booms we use our latest anodised sections and they are manufactured using the same processes as the standard boom sections.

The difference between a standard boom and a furling boom is the use of a 25mm track and outhaul car. The size of car depends on what boom section is being used.



Furling Boom Cars



Please see page 32 for more information about the above boom cars and their corresponding section.

Boom Cars & Sliders

Furling Boom Cars					
					
Part No	3074	3849	3067		
Type	Large	Medium	Small		
Boom	Z362-692	Z362-482	Z162-362		
Bearing Type	Rod	Rod	Ball or Rod		
Spare parts available – Please ask for details					
Boom Sliders & Vang Tangs					
	Part No	3044	3045		
	Type	Reef Slider			
	Boom	Z160-Z202	Z360-Z482		
	Bail Dims	80 x 20mm	120 x 30mm		
	Omega Ø x W x Drop	6.5 x 47 x 33mm	8 x 70 x 33mm		
	Part No	3651	3455		
	Type	Mainsheet Slider			
	Boom	Z360-Z482	Z690/692		
	Bail Dims	120 x 30mm	140 x 34mm		
	Omega Ø x W x Drop	8.5 x 40 x 47mm	9 x 41 x 53mm		
	Part No	3484	3047	3456	
	Type	Vang Tang			
	Boom	Z160-Z202	Z360-Z482	Z690/692	
	Vang Size	Small	Medium	Large	
	Bail Dims	80 x 20mm	120 x 30mm	140 x 34mm	
	Tang Dims	21x35x11mm	40x38x12mm	42x55x23mm	
	Pin Size	10mm	10mm	12mm	
Rivets included with purchase					

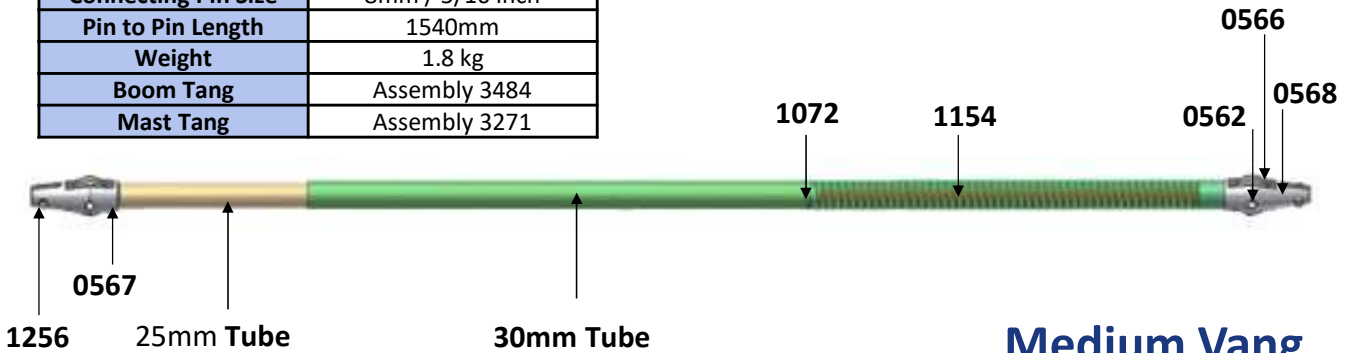
Rigid Vangs

All of our Rigid Vangs are supplied over length unless otherwise specified.

Spring length is 400mm in all sizes.

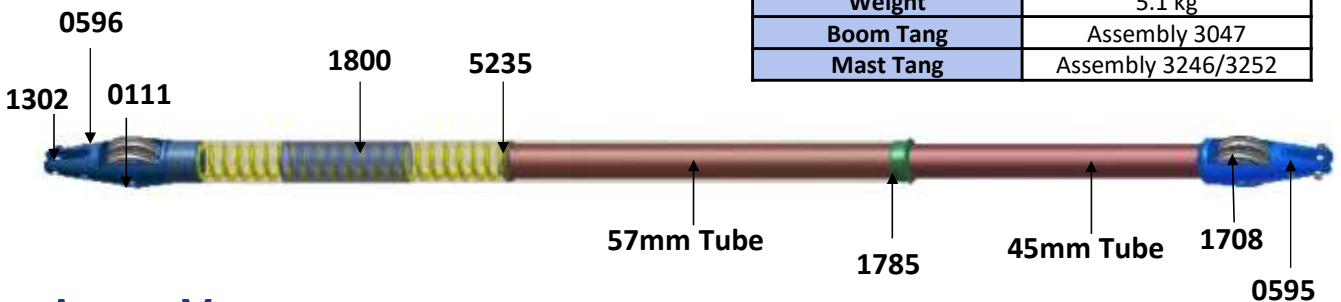
Small Vang

Vang Hold Load	100KG / 200LBS
Range of Vang	100mm / 4 Inches
Compatible With	Z162 & Z202
Fork Gap	7mm / 9/32 Inch
Connecting Pin Size	8mm / 5/16 Inch
Pin to Pin Length	1540mm
Weight	1.8 kg
Boom Tang	Assembly 3484
Mast Tang	Assembly 3271



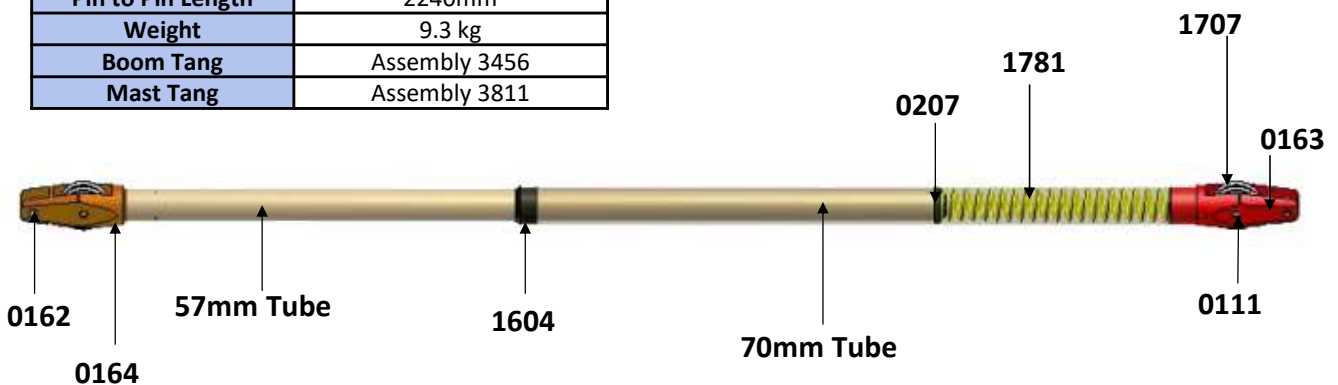
Medium Vang

Vang Hold Load	250KG / 551LBS
Range of Vang	180mm / 7 Inches
Compatible With	Z362 & Z482
Fork Gap	13mm / 1/2 Inch
Connecting Pin Size	10mm / 3/8 Inch
Pin to Pin Length	2040mm
Weight	5.1 kg
Boom Tang	Assembly 3047
Mast Tang	Assembly 3246/3252



Large Vang

Vang Hold Load	500KG / 1000LBS
Range of Vang	150mm / 6 Inches
Compatible With	Z482 & Z692
Fork Gap	28mm / 1 Inch
Connecting Pin Size	12mm / 1/2 Inch
Pin to Pin Length	2240mm
Weight	9.3 kg
Boom Tang	Assembly 3456
Mast Tang	Assembly 3811



Rigid Vang Installation

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 the deck to underside of the 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 fit 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 the mast bracket to the 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 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 in 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 go 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 the 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 questions 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).

Spinnaker Poles – Piston to Piston



Pole Ref	Pole OD	Pole ID	Wall Thickness	Max Tube Length	Pole Length	Weight KG
Ø 45	45mm	41mm	2mm	2300mm	2470mm	2.5
Ø 50	50mm	46mm	2mm	2900mm	3070mm	3
Ø 57	57mm	52.8mm	2.1mm	3500mm	3670mm	5.3
Ø 70	70mm	65mm	2.5mm	4500mm	4730mm	7.5
Ø 80	80mm	76mm	2mm	6000mm	6230mm	9
Ø 100	100mm	94mm	3mm	6000mm	6245mm	16.5

Spinnaker Poles – Cone to Piston



Pole Ref	Pole OD	Pole ID	Wall Thickness	Max Tube Length	Pole Length	Weight KG
Ø 80	80mm	76mm	2mm	6000mm	6215mm	9
Ø 100	100mm	94mm	3mm	6000mm	6245mm	16.5



Tube Size	Part No
Ø 45	3148
Ø 50	3150
Ø 57	3151
Ø 70	3153
Ø 80	3154
Ø 100	3155


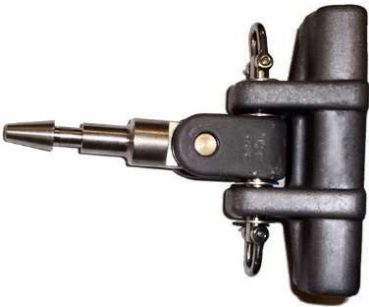






Tube Size	Part No
Ø 80	3442
Ø 100	3443
















Spinnaker VPS Track Kits

01 Series 25mm			No 0731 01 Series Track
Part No	Description	Quantity	
0731	Spin Track 01 Series	3.5 M	
3675	End Stop with Sheave	2	
1662	Clam Cleat	2	
3117	Track End	2	
0308	Control Line	1	
0197	Stowage Bracket	1	
2 Car Options:			
3055	Finger & Toggle	1	
3008	Car Ring	1	
No 0666 02 Series Track		02 Series 25mm	
	Part No	Description	Quantity
	0666	Spin Track 02 Series	3.5 M
	3674	End Stop with Sheave	2
	1662	Clam Cleat	2
	3117	Track End	2
	0308	Control Line	1
	0197	Stowage Bracket	1
	2 Car Options:		
	3055	Finger & Toggle	1
	3008	Car Ring	1
Rivet On 25mm (Discontinued)			No 0931 25mm Rivet on Track
Part No	Description	Quantity	
0931	Spin Track Rivet On	3.5 M	
3674	End Stop with Sheave	2	
1662	Clam Cleat	2	
3117	Track End	2	
0308	Control Line	1	
0197	Stowage Bracket	1	
2 Car Options:			
3055	Finger & Toggle	1	
3008	Car Ring	1	
No 0943 32mm Rivet on Track		Rivet On 32mm	
	Part No	Description	Quantity
	0994	Spin Track Rivet On	3.5 M
	3674	End Stop with Sheave	2
	1662	Clam Cleat	2
	3117	Track End	2
	0308	Control Line	1
	0197	Stowage Bracket	1
3055	Finger & Toggle	1	







Spinnaker Pole Accessories

Spinnaker Pole Cars		
	Part No	3008
	Pole End Type	Piston
	Track Size	25mm
	Ring ID	45mm
	Material	Extruded Alloy Car w/Stainless Steel Ring
	Bearing Type	Rod Bearings
	Part No	3077 (25mm) / 3055(32mm)
	Pole End Type	Cone
	Track Size	25mm & 32mm
	Finger Ø	15mm
	Material	Cast Alloy Car w/Stainless Steel Finger
	Bearing Type	Rod Bearings
Spinnaker Pole Mast Rings		
	Part No	1452
	Mast	Z145 - Z190
	Ring ID	35mm
	Material	Stainless Steel
	Part No	3003 / Halyard Diverter
	Mast	Z230 - 265
	Ring ID	45 x 29mm
	Material	Stainless Steel
	Part No	4840
	Mast	Z351 +
	Ring ID	45mm
	Material	Stainless Steel
Spinnaker Pole Stowage Bracket		
	Part No	0197
	H x D x W	120 x 105 x 56mm
	Ring ID	35mm
	Material	Stainless Steel

Mastheads

Standard Mastheads					
	Part No	1001		Part No	4794
	Mast	Z170-230		Mast	Z265
	Material	Ex. Alu		Material	Ex. Alu
	Part No	4799		Part No	4711P
	Mast	Z351/300E		Section	Z401-531
	Material	Ex. Alu		Material	Ex. Alu
	Part No	4709P		Part No	4715P
	Mast	Z602-702		Mast	Z901-1001
	Material	Ex. Alu		Material	Ex. Alu
Tapered Mastheads					
	Part No	1002		Part No	1010
	Mast	Z145 & 230		Mast	Z170-190
	Material	Cast Alu.		Material	Ex. Alu.
	Part No	1017		Part No	1028
	Mast	Z265		Mast	Z351-531
	Material	Cast Alu.		Material	Cast Alu.
	Part No	1023	Cast Alu. = Cast Aluminium Ex. Alu. = Extruded Aluminium		
	Mast	Z602			
	Material	Cast Alu.			
7/8 Fractional Mastheads					
	Part No	1013		Part No	1011
	Mast	Z145		Mast	Z170
	Material	Cast Alu.		Material	Cast Alu.
	Part No	1012		Part No	1014
	Mast	Z190		Section	Z230
	Material	Cast Alu.		Material	Cast Alu.

Mastheads

7/8 Fractional Mastheads					
	Part No	1015		Part No	4794
	Mast	Z265		Mast	Z300E
	Material	Cast Alu.		Material	Ex. Alu.
	Part No	4799		Part No	4712P
	Mast	Z351		Section	Z401-531
	Material	Ex. Alu.		Material	Cast Alu.
	Part No	4710P		Part No	4716P
	Mast	Z602-702		Mast	Z901-1001
	Material	Ex. Alu.		Material	Ex. Alu.




Combi & Forestay Boxes

Triple Combi Boxes – Genoa & Spinnaker Halyard with Forestay					
	Part No	3283		Part No	3754
	Mast	Z190		Mast	Z230/265
	Max Rope Ø	8mm		Max Rope Ø	10mm
	Forestay Pin Ø	8mm		Forestay Pin Ø	10mm
	Mast Cut Out Dims	96 x 18		Mast Cut Out Dims	160 x 25
	Part No	3809		Part No	3334
	Mast	Z351-531		Mast	Z601-1001
	Max Rope Ø	12mm		Max Rope Ø	14mm
	Forestay Pin Ø	12mm		Forestay Pin Ø	14mm
	Mast Cut Out Dims	160 x 30		Mast Cut Out Dims	122 x 60
Forestay Tangs					
	Part No	3022		Part No	3653
	Mast	Z351-601		Mast	Z701-1001
	Forestay Pin Ø	14mm		Forestay Pin Ø	20mm
	Forestay Wire Ø	6-8mm		Forestay Wire Ø	10-12mm
	Mast Cut Out Dims	66 x 32		Mast Cut Out Dims	90 x 58
	Part No	3898		Part No	4090
	Mast	Z601-701		Mast	Z170-351
	Forestay Pin Ø	16mm		Tang Ø	10mm
	Forestay Wire Ø	10-12mm		Forestay Wire Ø	10-12mm
	Mast Cut Out Dims	90 x 60		Rivet Hole Dist.	114/15
Fixings included with purchase					
Diverter Attachments					
	Part No	6333	0535	0553	
	Screw Size	M6	M8	M10	
	Ring Ø	5mm	8mm	10mm	
	OD / ID	26mm / 16mm	35mm / 20mm	45mm / 25mm	








Sheave Boxes

Cast Sheave Boxes				
	Part No	3030	3033	3882
	Sheave Ø	22mm	28mm	40mm
	Sheave Type	Aluminium		
	Max Rope Ø	5mm	8mm	10mm
	Rivet Hole Dist.	55mm	62mm	89mm
	Part No	3036		
	Sheave Ø	60mm		
	Sheave Type	Delrin		
	Max Rope Ø	14mm		
	Rivet Hole Dist.	115mm		
	Part No	3028A	3890	
	Sheave Ø	80mm	110mm	
	Sheave Type	Delrin		
	Max Rope Ø	14mm	14mm	
	Rivet Hole Dist.	158mm	205mm	
Plastic Sheave Boxes				
	Part No	3032	3034	3219
	Sheave Ø	28mm	45mm	60mm
	Sheave Type	Delrin		
	Max Rope Ø	8mm	10mm	14mm
	Rivet Hole Dist.	61mm	92mm	113mm
Rivets included with purchase				

Sheaves

Delrin Sheaves	Part No	Size Ø x W x Pin	Max Rope Ø
	0566	28 x 6.5 x 5	6mm
	1614	28 x 9.5 x 6	8mm
	1617	35 x 16 x 8	14mm
	1616	45 x 13 x 8	10mm
	0046	60 x 15 x 17	14mm
	1618	60 x 16 x 8	14mm
	1709	70 x 16 x 10	14mm
	1708	70 x 16 x 14	14mm
	1707	80 x 17 x 14	14mm
	1636	110 x 19 x 14	14mm
Aluminium Sheaves	Part No	Size Ø x W x Pin	Max Rope Ø
	1611	28 x 9.5 x 6	8mm
	1246	35 x 16 x 8	14mm
	1728	45 x 13 x 8	10mm
	1245	50 x 15 x 14	12mm
	1767	60 x 16 x 8	14mm
	6001	60 x 16 x 8	14mm
	1248	70 x 16 x 14	14mm
	1249	80 x 17 x 14	14mm
	6057	100 x 19 x 16	16mm
Delrin Ball Bearing Sheave	Part No	Size Ø x W x Pin	Max Rope Ø
	1619	60 x 16 x 8	14mm
	<p>Recommended for use within our boom outboard end only and is not recommended for use within the mast head.</p>		

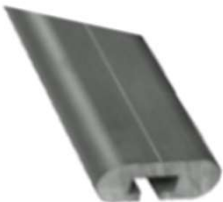
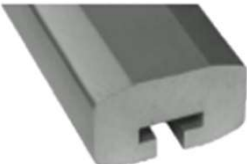

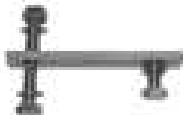








Spreader Sections

Profiles		Dimensions mm	Weight KG/Metre
	Z DER	44 x 9	0.4
	Z 65	56 x 21	0.5
	Z 60	55 x 20	0.5
	Z 80	56 x 25	0.8
	Z 95	80 x 25	1.25
	Z 240	130 x 40	2.4
	Z 341	155 x 49	3.4













Spreader Tip Information

Spreader	Style	Spreader Tip		Discontinuous Spreader Tip		
		Part No	Material	Part No	D2 Pin Ø	V1 Pin Ø
Z Der	Taper	3112	Aluminium	N/A		
Z 60	Taper	3113	Delrin	3527	6mm	8mm
Z 65	Taper	3114	Delrin	3538	6mm	8mm
Z 80	Taper	3114	Delrin	3500	8mm	10mm
	No Taper	3802	Delrin	3805	8mm	12mm
Z 95	Taper	3114	Delrin	3500	8mm	10mm
				3110	8mm	12mm
	No Taper	3802	Delrin	3804	8mm	10mm
				3805	8mm	12mm
Z 240	Taper	3115	Delrin	3378	12mm	16mm
		3109	Aluminium	3147	12mm	19mm
	No Taper	3803	Delrin	3806	12mm	16mm
				3822	Aluminium	3807
Z 341	Taper		Aluminium			





Spreader Mounting Hardware

		Z65/Z80/Z95				Z240				
Thru Bar		PN	Angle				PN	Angle		
		5095	0°				5040	0°		
		5088	5°				5041	10°		
		5089	10°				5042	15°		
		5090	15°				5043	20°		
		5091	20°				5044	25°		
		5093	25°				5081	30°		
		5092	30°							
Reinforcement Plate		Part No					Part No			
		0053					4905			
Base Plate		Part No	Angle	Mast		Part No	Angle	Mast		
		5096	0°-15°	Z265/351		5312	20°	Z502		
		5085	20°-30°	Z265/351		4911	0°-15°	Z601-902		
		5097	0°-15°	Z401-501						
		5086	20°-30°	Z401-501		4912	20°-30°	Z601-902		
		5098	0°-15°	Z531/532		4913	0°-15°	Z1001/1002		
		5087	20°-30°	Z531/532		4914	20°-30°	Z1001/1002		
		5106	25°	Z531/532						
Wrap Brackets										
	Part No	Mast	Part No	Mast	Part No	Mast	Part No	Mast		
	4052	Z145	4118	Z170	4130	Z190	4131	Z230		








Spreader Tips

Continuous Tips					
	Part No	3112		Part No	3113
	Section	Z Dinghy		Section	Z60
	Type	No Taper		Type	No Taper
	Part No	3114		Part No	3802
	Section	Z65/80/95		Section	Z65/80/95
	Type	Tapered		Type	No Taper
	Part No	3115		Part No	3803
	Section	Z240		Section	Z240
	Type	Tapered		Type	No Taper
Fixings included with purchase					
Discontinuous Tips					
	Part No	3527		Part No	3538
	Section	Z60		Section	Z65/80
	Type	No Taper		Type	No Taper
	Pin Ø	6/8mm		Pin Ø	6/8mm
	Part No	3500		Part No	3110
	Section	Z65/80/95		Section	Z65/80/95
	Type	Taper		Type	Tapered
	Pin Ø	8/10mm		Pin Ø	8/12mm
	Part No	3804		Part No	3805
	Section	Z95		Section	Z95
	Type	No Taper		Type	No Taper
	Pin Ø	8/10mm		Pin Ø	8/12mm
Fixings included with purchase					











Spreader Tips

Discontinuous Tips Continued					
	Part No	3147		Part No	3378
	Section	Z240		Section	Z240
	Type	Tapered		Type	Tapered
	Pin Ø	12/19mm		Pin Ø	12/16mm
	Part No	3806		Part No	3807
	Section	Z240		Section	Z240
	Type	No Taper		Type	No Taper
	Pin Ø	12/16mm		Pin Ø	12/19mm
Fixings included with purchase					



Winch Pads








Lateral Winch Pads					
	Part No	1086		Part No	1077
	Mast	Z145-230		Mast	Z265-500E
	Face Dims	90 x 90		Face Dims	120 x 120
	Material	Cast Alu.		Material	12/16mm
	Part No	1088		Part No	0151
	Mast	Z601-902		Mast	Z901-1100E
	Face Dims	140 x 140		Face Dims	200 x 195
	Material	Cast Alu.		Material	Ex. Alu.
Aft Winch Pads					
	Part No	1082		Part No	1087
	Mast	Z265-500E		Mast	Z601-702
	Face Dims	95 x 95		Face Dims	120 x 120
	Material	Cast Alu.		Material	Cast Alu.
	Part No	0152	Cast Alu. = Cast Aluminium Ex. Alu. = Extruded Aluminium Rivets included with purchase.		
	Mast	Z901-900E			
	Face Dims	160 x 160			
	Material	Ex. Alu			

Gooseneck & Vang Tang Assemblies











Standard Mast Gooseneck Assemblies					
	Part No	3355		Part No	6017
	Mast	Z145-351		Mast	Z401-702
	Boom	Z160/204		Boom	Z360
	Part No	3783		Part No	3794
	Mast	Z601-701		Mast	Z901-1001
	Boom	Z480		Boom	Z480
	Part No	3410		Part No	3051A
	Mast	Z145-351		Mast	Z401-532
	Boom	Z162/202		Boom	Z362
	Part No	3791		Part No	3010
	Mast	Z532-902		Mast	Z602-902
	Boom	Z362-482		Boom	Z362-482
<p>Assemblies with toggles are for use with our discontinued boom sections Z160 - Z690.</p> <p>Assemblies without toggles are for use with our current boom sections Z162 - Z692</p> <p>Rivets included with purchase.</p>					
Furling Mast Gooseneck Assemblies					
	Part No	3349		Part No	3782
	Mast	Z300E-500E		Mast	Z600E-900E
	Boom	Z204E-360E		Boom	Z480E

Gooseneck & Vang Tang Assemblies


Furling Mast Gooseneck Assemblies					
	Part No	3357		Part No	RHP3010
	Mast	Z1100E		Mast	Z1100E
	Boom	Z690E		Boom	Z692E
<p>Assemblies with toggles are for use with our discontinued boom sections Z160E - Z690E.</p> <p>Assemblies without toggles are for use with our current boom sections Z162E - Z692E</p> <p>Rivets included with purchase.</p>					

Vang Tang Assemblies					
	Part No	3271		Part No	3246
	Mast	Z145-265		Mast	Z145-351
	Vang	Small		Vang	Medium
	Part No	3243		Part No	3252
	Mast	Z300E-500E		Mast	Z401-701
	Vang	Medium		Vang	Medium
	Part No	3838		Part No	3244
	Mast	Z532-902		Mast	Z600E-900E
	Vang	Medium/ Large		Vang	Medium
	Part No	3811			
	Mast	Z701-Z1100E		t	
	Vang	Large			


Gooseneck & Vang Toggles

Vang Toggles					
	Part No	0561		Part No	0560
	Mast Base	Z145-230		Mast	Z145-230
	Vang	Small		Vang	Small
	Assembly	3484		Assembly	3271
	Part No	4066		Part No	1219
	Mast	Z265-351		Mast	Z401-902E
	Vang	Medium		Vang	Medium
	Assembly	3246		Assembly	3252
	Part No	4938		Part No	1178
	Mast	Z601-1100E		Mast	Z901-1100E
	Vang	Med/Large		Vang	Large
	Assembly			Assembly	3811
Gooseneck Toggles					
	Part No	1034		Part No	1083
	Mast	Z145-351		Mast	Z401-702E
	Boom	Z160/204		Boom	Z360
	Assembly	3355		Assembly	6017 3349
	Part No	4010		Part No	1187
	Mast	Z601-902E		Mast	Z901-1100E
	Boom	Z480		Boom	Z690
	Assembly	3782 3783		Assembly	3794





Gooseneck & Vang Brackets

Cast Brackets					
	Part No	4063		Part No	1062
	Mast	Z145-351		Mast	Z401-602
	Boom	Z160/204		Boom	Z360
	Assembly	3355		Assembly	6017
	Part No	1063		Part No	4008
	Mast	Z300E-500E		Mast	Z600E-902E
	Boom	Z360E		Boom	Z360E-480E
	Assembly	3349		Assembly	3782
	Part No	4009	Boom sections: Z160, Z204, Z360, Z480 & Furling Equivalent		
	Mast	Z601-902			
	Boom	Z360/480			
	Assembly	3783			
Extruded Brackets					
	Part No	4430P		Part No	4330P
	Mast	Z145-351		Mast	Z401-702
	Boom	Z162/202		Boom	Z362/482
	Assembly	3410		Assembly	3051
	Part No	0138		Part No	0565P
	Mast	Z901-1100E		Mast	Z902-1250E
	Boom	Z692		Boom	Z362/482
	Assembly	3794/3811		Assembly	
	Part No	4980		Part No	4979
	Mast	Z902/903		Mast	Z1102
	Boom	Z692		Boom	Z692
	Assembly			Assembly	
	Part No	1759P	Boom sections: Z162, Z202, Z362, Z482, Z692, Z690 & Furling Equivalent		
	Mast	Z1250			
	Boom	Z482			
	Assembly				



Shackles & Halyard Exits

Shackles					
	Part No	3039A		Part No	3168
	Dims	3x7x12		Dims	5x12x25
	Type	Pole Piston		Type	Halyard Swivel
	Part No	1558		Part No	3209
	Dims	5x20x40		Dims	5x11x18
	Type	Tack - Toggle		Type	Spinnaker Car
	Part No	3208		Part No	1556
	Dims	6x35x35		Dims	6x28x45
	Type	Tack - Furling		Type	Spare
	Part No	4803		Part No	4930
	Dims	8x16x35		Dims	8x15x35
	Type	Halyard		Type	Tack - Eye Bolt
	Delrin Halyard Slot Liners				
	Part No	1630 Small		1692 Large	
	Overall Size	115x21mm		125x29mm	
	Slot Size	90x15mm		95x20mm	
	Max Rope Ø	12mm		18mm	
	Stainless Steel Halyard Slot Liners				
	Part No	1241 Small		1242 Large	
	Overall Size	93x17mm		127x25mm	
	Slot Size	65x13mm		95x19mm	
	Max Rope Ø	10mm		16mm	
Delrin & Stainless halyard slot liners are not interchangeable with one another.					



Cleats

Alloy Cleats			
	Part No	1145	1081
	Length	120mm	170mm
	Rivet Hole Dist.	31mm	41mm
	Mast	Z145-190	Z230-602
	Part No	1192	
	Length	210mm	
	Rivet Hole Dist.	60mm x 43mm	
	Mast	Z601-1001	
	Part No	1662	1126
	Length	110mm	55mm
	Rivet Hole Dist.	92mm	31mm
	Rope Ø	8-12mm	<6mm
Delrin Cleats			
	Part No	4587	4586
	Length	120mm	170mm
	Rivet Hole Dist.	30mm	45mm
	Mast	Z145-190	Z230-602

Reefing Fairleads & Hooks

Double Line Fairleads				
	Part No	4079	4068	4064
	Masts	Z531/532	Z601-702	Z901-1002
	Max Rope Ø	12mm	12mm	12mm
	Material	Alloy		
Reef Hooks				
	Part No	1492	1365	1515
	Masts	Z145-351	Z401-702	Z901-1002
	Hook Dims Ø x W x H	8x90x85	9x110x108	10x140x180
	GN Assembly	3355	3783	3794

Sail Entry & Slide Stoppers

Slide Stoppers				
	Part No	3495	3522	3520
	Masts	Z170-265 Z405-902	Z351-701	Z901-1002
	Dims	Ø 13x85	6x17x81	5x21x90
Bolt Rope Sail Entry				
	Part No	3085		
	Masts	Z145-902		
	Max Bolt Rope Ø	8mm		

Halyard Blocks

Mast Base Block	Part No	Sheave \varnothing	Nut \varnothing	Max Rope \varnothing
	0250	28mm	M6	8mm
	0261	45mm	M8	12mm
	0275	60mm	M10	14mm
	0288	80mm	M10	16mm
Hanger Block	Part No	Sheave \varnothing	Width	Max Rope \varnothing
	0251	28mm	9.5mm	8mm
	0264	45mm	8mm	12mm
	0277	60mm	8mm	14mm
	0290	80mm	11mm	16mm
Mast Swivel Block	Part No	Sheave \varnothing	Nut \varnothing	Max Rope \varnothing
	0300	45mm	M8	12mm
	0301	60mm	M10	14mm
	0302	80mm	M10	16mm
Swivel Block	Part No	Sheave \varnothing	Shackle	Max Rope \varnothing
	0266	45mm	5mm	12mm
	0279	60mm	6mm	14mm
	0292	80mm	8.5mm	16mm
Ball Bearing Block	Part No	Sheave \varnothing	Width	Max Rope \varnothing
	1589	60mm	13.5mm	14mm
	4329	80mm	13.5mm	16mm
Spare parts available – Please ask for details				

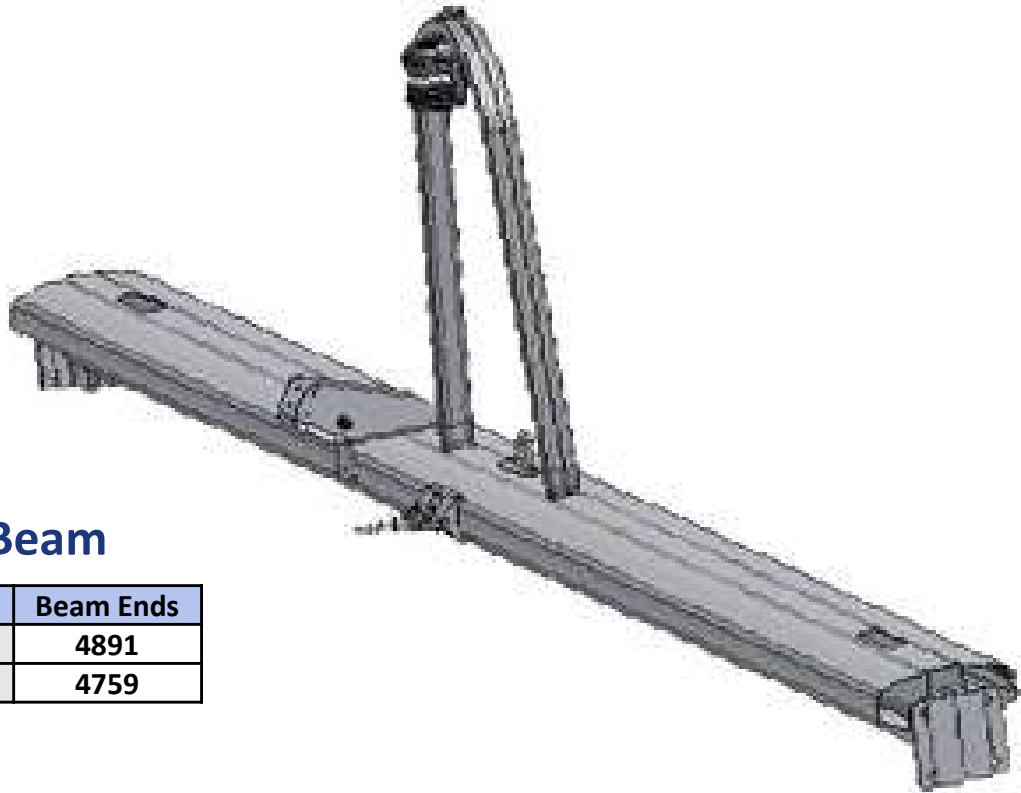
Halyard Blocks

	Part No	Sheave Ø	Gap	Max Rope Ø
	Part No	Sheave Ø	Shackle	Max Rope Ø
Delrin Cheek Block	Part No	Sheave Ø	Mast	Max Rope Ø
	3672	45mm		12mm
Alloy Cheek Block	Part No	Sheave Ø	Mast	Max Rope Ø
	3358	45mm		12mm
Clew Block	Part No		Flip Flop Block	
	3259	3340		
	Sheave Ø			
	60mm	60mm		
	Max Rope Ø			
	14mm	14mm		
Spare parts available – please ask for details				

Mast Foots, Steps & Bases

Mast Feet		PN	1397		PN	1095		PN	1096
		Mast	Z145		Mast	Z170		Mast	Z190
		Base	1100		Base	1100		Base	1100
		PN	1171		PN	1097		PN	1098
		Mast	Z190		Mast	Z230		Mast	Z265
		Base	1101		Base	1101		Base	1101
Mast Steps		PN	1103		PN	1118		PN	1120
		Mast	Z351		Mast	Z401		Mast	Z501 532E
		OAD	214 x 160		OAD	245 x 220		OAD	235 x 188
		PN	1164		PN	4866		PN	1165
		Mast	Z601 600E		Mast	Z602 602E		Mast	Z701 700E
		OAD	285 x 230		OAD	285 x 230		OAD	285 x 230
Mast Steps & Bases		PN	4873		PN	4035		PN	4871
		Mast	Z702 702E		Mast	Z901 900E		Mast	Z902 902E
		OAD	285 x 232		OAD	285 x 230		OAD	284 x 230
		PN	1394		PN	1100 Base		PN	1101 Base
		Mast	1001 1100		Mast	Z145- 190		Mast	Z190- 265
		OAD	214 x 160		Foot	1397 1095 1096		Foot	1171 1097 1098

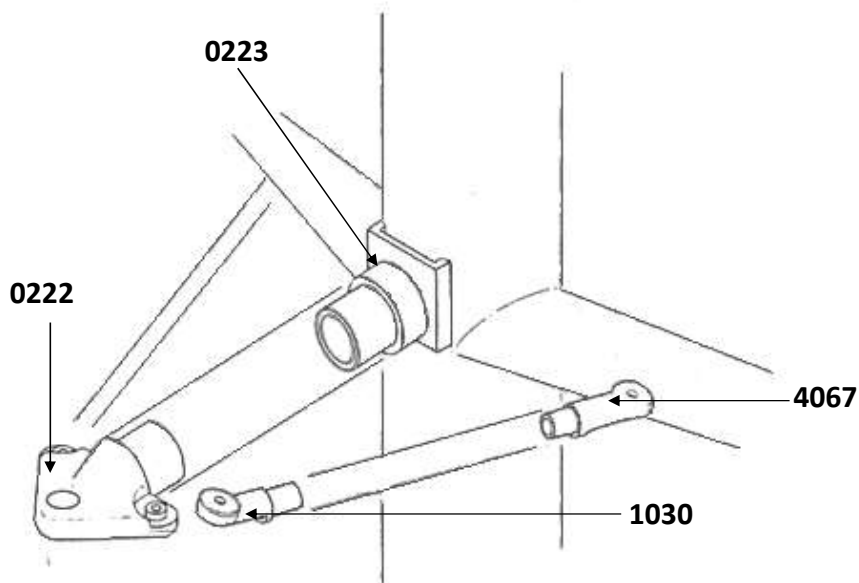
Catamaran Beams



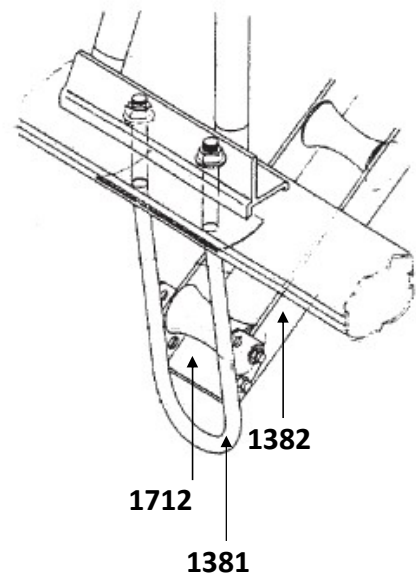
Fore Beam

Section	Beam Ends
Z 840	4891
Z 1370	4759

Triangulation Strut to Spreader



Anchor Roller



Sail Makers Information

	Z145	Z170	Z190	Z230	Z265	Z301	Z351	Z380	Z401	Z501/ 502*	Z531/ 532	Z602	Z702	Z902	Z1002	Z1400
Sail slide	A013	A013	A013	A013	A013	HA89	A013	A013	A014	HA89	A014	A015	A015	HA91	HA91	HA91
Alternative	A016	A016	A016	A016	A014	A014	A014			A014		A014	A014			
*Z501 sections: check with your specific mast for your appropriate slide																
Luff Rope	8	8	8	8	8		8	8	10	10	10	10	10			

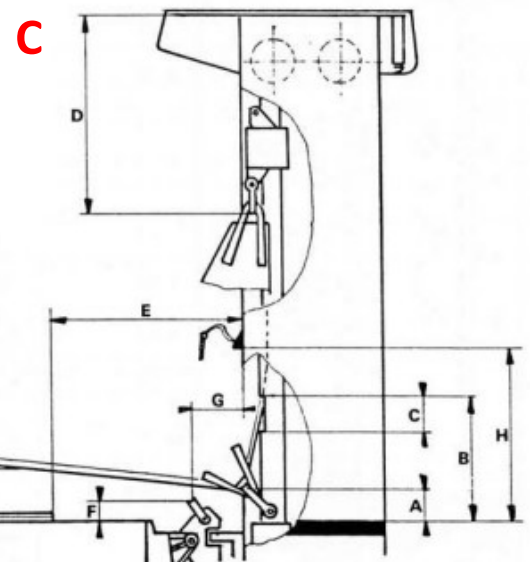
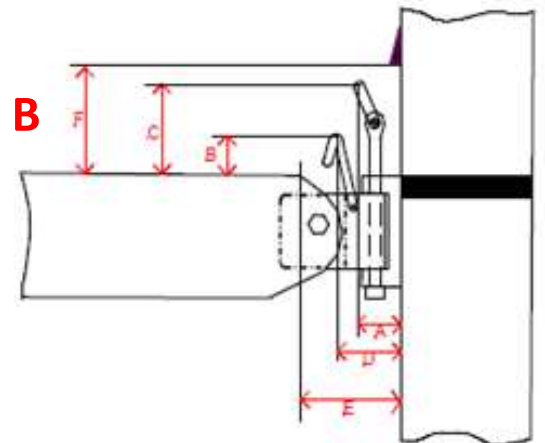
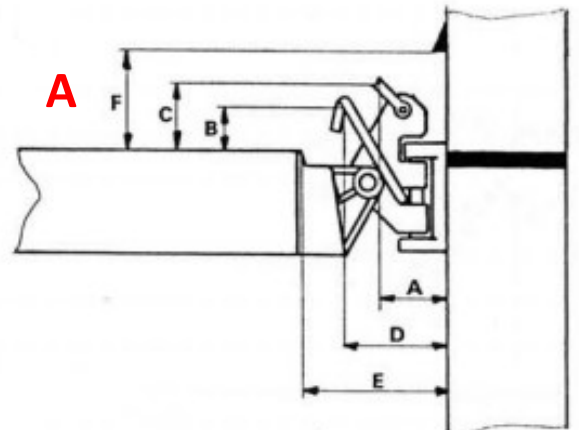
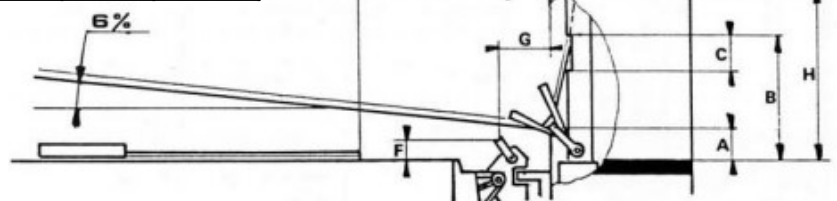
All Sections: G = 20mm

BOOMS	A	B	C	D	E	F	Foot Rope	Slide
	Drawing A							
Z120 dinghy	55	5	15	15	80	250	8	
Z120cruiser	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							

02 PROFILE BOOMS	A	B	C	D	E	F	Foot Rope	Slide
	Drawing B							
Z162	50	0	40	60	95	280	8	A032
Z202	50	-10	35	60	95	280	8	B032
Z362	60	40	50	100	140	280	10	B012
Z482	60	30	40	100	150	280	10	B012

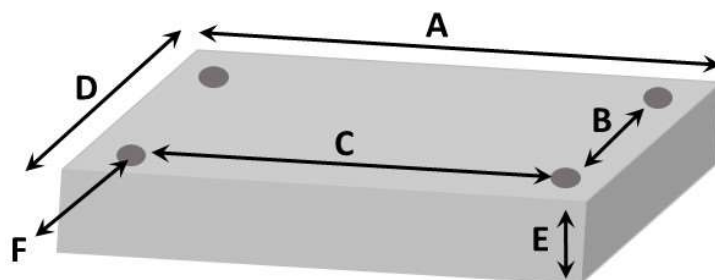
FURLING MASTS	A	B	C	D	E	H	Luff Rope	Trysail Slide
	Drawing C							
Z300E	60	500	100	400	800	100	6	HA89
Z400E	60	500	100	400	800	100	6	HA89
Z500E	60	500	100	400	800	100	6	HA89
Z600E	60	500	100	400	1000	100	6	HA91
Z700E	60	500	100	450	1000	100	6	HA91
Z800E	60	500	100	450	1000	100	6	HA91
Z900E	60	500	100	450	1200	100	6	HA91
Z1100E	60	500	100	450	1500	100	6	HA91
Z1400E	60	500	100	450	1500	100	6	HA91

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



Base Dimensions

Mast	Part No	A	B	C	D	E	Ø F
Z145	1100	124	32	80	108	11	6.5
Z145 T	1111	110	0	90	40	19	5
Z170	1100	124	32	80	108	11	6.5
Z190 A	1100	124	32	80	108	11	6.5
Z190 B	1101	154	59	87	130	9	6.5
Z190 7/8 & T	1100	124	32	80	108	11	6.5
Z230	1101	154	59	87	130	9	6.5
Z265	1101	154	59	87	130	9	6.5
Z351	1103	214	85	160	160	14	6.5
Z351 7/8 & T	4016	190	100	145	120		8.5
Z401	4032	245	150	200	220	14	6.5
Z501/502	1120	235	150	200	188	14	8.5
Z531/532	4022	235	150	200	220		8.5
Z601	1164	285	160	215	230	25	8.5
Z601 7/8 & T	1157	300	160	210	190		8.5
Z602	4866	285	161	216	230	18.5	8
Z701	1165	285	160	215	230	15	8.5
Z701 7/8	1158	305	161	210	190		7.5
Z702	4873	285	161	215	232	18.5	8
Z901	4035	285	160	215	230		8.5
Z901 7/8	1113	225	70	130	150	0	8.5
Z902	4871	284	159	215	230	18.5	8
Z1001/1002	1394	340	180	260	260		8.5
Z1001/1002 7/8	1161	300	90	150	190	5	8.5
Furling Mast	Part No	A	B	C	D	E	Ø F
Z300 E	1103	214	85	160	160	14	6.5
Z300 E 7/8	1115	235	150	200	220		8.5
Z400 E	4032	245	150	200	220	14	6.5
Z500 E	1120	233	151	200	187		7.5
Z600 E	1157	300	160	210	190		8.5
Z600 E 7/8	1164	285	160	215	230	25	8.5
Z602 E	4866	285	161	216	230	18.5	8
Z700 E	1165	285	160	215	230	15	8.5
Z700 E 7/8	1158	305	161	210	190		7.5
Z702 E	4873	285	161	215	232	18.5	8
Z900 E	4035	285	160	215	230	5	8.5
Z900 E 7/8	1113	225	70	130	150	0	8.5
Z902 E	4871	284	159	215	230	18.5	8
Z1100 E	1394	340	180	260	260		8.5
Z1100 E 7/8	1161	300	90	150	190	5	8.5



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
 - a. All quotations of price (whether written or verbal) 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.
 - b. 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
 - a. Payment for goods under the contract shall be on or before the date of delivery of the goods.
5. Deposit
 - a. One third of the value of goods is required as deposit when the order is placed.
6. Delivery
 - a. The Company will endeavour to deliver the goods without delay, but this depends upon availability of materials and the customer providing details of their requirements in writing and in good time.
 - b. The Company will 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
 - a. 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 the 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”.
 - b. Defects in quality in any delivery should not be a ground for cancellation of the remainder of the order or contract.
 - c. Any alteration by the buyer or agent shall vitiate the Company from any liability relating to defects in the goods quality.
8. Claims
 - a. No claims shall be entertained by the Company unless received by the Company in writing.
 - b. Claims arising from damage or partial loss in transit must reach the Company within 30 days from the date of delivery.
 - c. Claims for non-delivery must reach the Company within 10 days of the date of despatch.
 - d. All other claims must reach the Company within 6 weeks of the date of despatch.
 - e. Goods should be signed for “unexamined”.
9. Suspension of Deliveries
 - a. 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 Companies control.
 - b. The Company shall be under no liability for failures, variations and delays attributable to the causes beyond its control.
10. Reservation of Title
 - a. 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
 - a. 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.

WE RESERVE THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.