

HARRISONFLAGPOLES

Contents

Introduction	5
History	6
How we work	8
Royal Edinburgh Military Tattoo	10
Royal Albert Hall	12
Horse Guards Parade & The Mall	14
Bannockburn Heritage Centre	16
Technical Data	18 - 23

Harrison Flagpoles
38 Borough Road | Darlington | DL1 1SW | UK
phone: 01325 355 433
web: www.harrisonflagpoles.com
email: sales@harrisoneds.com





The National Museum of Scotland

Introduction

Harrison Flagpoles are the specialists in flagpoles and banner pole solutions. We are widely recognised as the UK's leading authority in the design and supply of flagpoles for all applications and with almost 50 years of manufacturing and installation experience we are well equipped to meet any requirements.

At Harrisons we understand that every customer will have different or completely bespoke requirements so our experience enables us to find solutions to a wide range of potential design and installation challenges

to meet any brief. Our quality products and years of service have helped us build an enviable reputation as leaders in the industry.

With our knowledge, expertise, experience and quality, we are extremely proud to be the largest independent manufacturer of glassfibre, aluminium and stainless steel flagpoles in the UK.

History

From our origins as steeplejacks, the business developed in the 1970s into sourcing and importing flagpoles from Scandinavia and Canada and then installing them here in the UK. In 1980 we started manufacturing glassfibre flagpoles ourselves and currently manufacture 15,000 glassfibre, aluminium and stainless steel flagpoles a year, in our UK facilities.

We have established a network of European flag and flagpole distributors and maintain a consignment stock of flagpoles in Dubai with additional agents representing our flags and flagpoles in UAE, Jordan, Saudi Arabia, Kuwait, Oman, Qatar and Israel.

In Hong Kong, we have a flagpole distributor who manages a large roll-out of replacement flagpoles for Government buildings; using our very own UK manufactured aluminium flagpoles. Over 2000 of our glassfibre flagpoles are shipped to the USA each year, retailing through America's largest and oldest flag producer, Annin.



How we work

We recognise that every project presents a series of challenges and it is our responsibility to understand those challenges and deliver the right solution for our clients.

Our exceptional team have been the key factor behind our growing success; they have always had an unwavering commitment to gaining an accurate interpretation of the client's brief. We deliver for every client on communication, interpretation, quality and punctuality.

We control the entire process for our clients; from initial concept through to brief of design, technical drawings, calculations

and finally manufacture and installation. Our manufacturing factory is set up to make standard poles up to 18m tall, but through our innovative design our facilities are frequently used to manufacture poles exceeding 30 metres.

Our customers are at the forefront of our business and we are proud to have worked on a number of high profile jobs which allow for our exceptional products to be showcased around the world.



The Royal Edinburgh Military Tattoo Building

Royal Edinburgh Military Tattoo

The Royal Edinburgh Military Tattoo came to us wanting resilient flagpoles which were easy to assemble and disassemble each year for easy storage. Our dedicated special projects team worked on the planning, design, manufacture and delivery of the flagpoles.

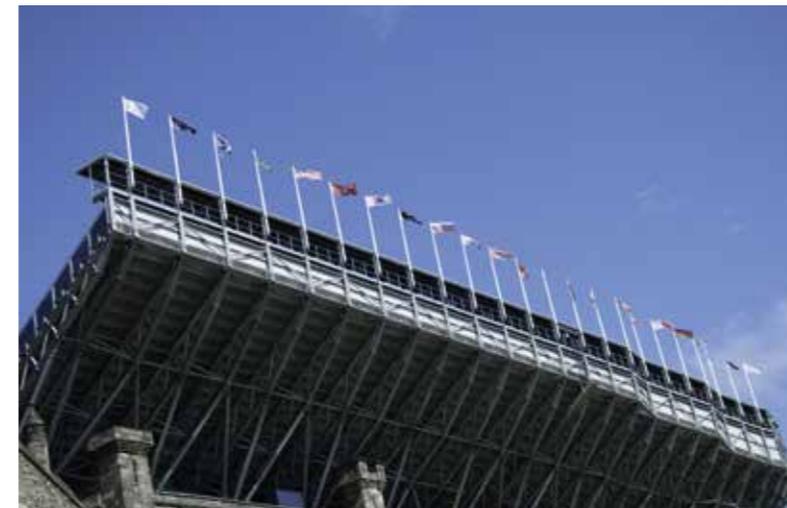
Harrisons custom-designed 2 sizes of glassfibre flagpoles (8m and 6m) to fit the existing steel framework. Our innovative

collapsible design was an economical solution as they are easy to store, negating the need for annual repaints and repairs to the poles.

Our team were honoured to be selected to work closely with the Royal Edinburgh Military Tattoo on this complex technical requirement and to provide a unique long term solution that can be used year after year.



"Harrison Flagpoles have supplied flags, flagpoles and banners expertly for our world nations and military performers. A mix of sound technical advice and quality customer service."



Harrison Flagpoles designed and supplied 70 flagpoles with bespoke bracketry to the Royal Edinburgh Military Tattoo to decorate the military showcase in an event which is televised around the world.

Royal Albert Hall

The client gave us a brief to design, supply and install a set of banner poles that would complement the façade of this iconic building in the centre of London and be delivered in time for the Queen's Golden Jubilee celebrations. We supplied the client with a winch operated lowerable banner system and custom coronet mouldings on the top of the poles to complement the structure.

The black galvanised premium steel banner poles were put into place using a crane as access to the building was quite limited. It was a delicate operation, expertly handled by our team of installation engineers who liaised closely with the client's architects and borough councillors.



Harrison Flagpoles designed, supplied and installed the banner poles around the entrance to the Royal Albert Hall with each pole being capped by specially designed gold crowns.

Horse Guards Parade & The Mall

The client came to us requesting the design, supply and installation of custom made permanent flagpoles to line the Mall and Horse Guards Parade. These were to replace the series of temporary wooden flagpoles which were present. The poles were to be used for State Occasions and required to support large weighted flags.

Harrisons designed and supplied over 60 robust steel and aluminium flagpoles complete with gaff arm, moulded finials and a basket fitting. The designs were based on

the original timber masts in terms of height and appearance but were fully supported by our full technical drawings and calculations. Due to their prominent position in London their appearance was critical and great care was taken in selecting the correct materials and paint finish.



We supplied London's famous Horse Guards Parade and The Mall with custom designed flagpoles with gaff arm and decorative fittings.

Bannockburn Heritage Centre

The National Trust for Scotland came to us requesting a design, supply and install of a like for like flagpole to maintain the historical significance of the site. Over time and due to weather conditions the flagpole that was installed at the Battle of Bannockburn monument in 1964 had become damaged. A replacement was commissioned to coincide with the 700th anniversary of the battle.



Harrison Flagpoles worked alongside the National Trust for Scotland and Historic Scotland to supply a large 39m stainless steel flagpole for the Bannockburn Heritage Centre.

Technical Data

Harrisons have been manufacturing flagpoles and banner poles since the early 1970s; from our first timber poles to our current comprehensive range of high quality glassfibre, aluminium and stainless steel flagpoles. In addition to our standard range, we also specialise in the production of bespoke custom made flagpoles and banner poles offering a full design, manufacture and installation service.

As you would expect from a leading flagpoles manufacturer, we ensure that all of our products are supported by structural calculations and meet the applicable

national wind speed standards in Europe, USA and Asia. We understand that the safety of our products are of paramount importance, so our technical team are always on hand to offer their knowledge, expertise and advice on any specification.

In this section you will find all the technical information required to give you a greater understanding of our products.

Glassfibre Flagpoles

20 - 21

With almost 40 years' experience manufacturing the highest quality glassfibre flagpoles in the industry we ensure strength, durability and performance in all of our flagpoles. Glassfibre is the most popular material for flagpole construction; this durable elastic composite performs brilliantly in the harshest environments. We finish our flagpoles with a UV resistant gel coat to give a high gloss sheen which requires minimum maintenance throughout the long-life of the flagpole. Beneath this gelcoat, every pole is made up of resin rich layers of woven and chopped glassfibre.

Our standard poles are available in sizes up to 18m (60ft) and all of our popular poles are held in stock for a fast delivery. For bespoke non-standard requirements, the poles can be manufactured to order. Our product range includes a variety of rigged and wall mounted flagpoles in addition to a comprehensive range of accessories which include finials, ground collars, security systems and swivel arms. Our flagpoles can be made in one or two sections for ease of installation and transport.

Aluminium Flagpoles

22 - 23

Our aluminium flagpoles are manufactured from 6063 T6 aluminium to ensure long life and durability in all weather conditions. Complete with a hinged base plate, ground sleeve or wall brackets all of our poles have a satin brush seamless finish and for a virtually maintenance free finish, all poles are available anodised or powder coated. We also offer a number of accessories including: a finial, saddle, halyard, cleat or internal halyard system for added security.

The product is available with a ground sleeve, hinged base plate or wall brackets. Our Superform model is available in sizes up to 25m (82ft) and is manufactured in heavy duty aluminium with a wide taper.

Stainless Steel Flagpoles

24 - 25

At Harrisons all of our stainless steel flagpoles are manufactured from a seamless high grade stainless steel and finished with a continual taper and highly polished surface. Our stainless steel flagpoles do not stain, corrode or rust due to their chromium content which makes the steel resistant to air and water and once installed they are virtually maintenance free, offering a lifelong service.

Our stainless steel flagpoles are manufactured to the highest quality offering great strength and rigidity and are designed to withstand wind speeds exceeding 80mph when correctly installed. All stainless steel flagpoles come complete with a stainless steel finial, rotating saddle and internal winch mechanism, offering ease of operation and security.

Glassfibre Flagpoles Technical Data

Overall Length of Flagpole	A	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m
Butt Diameter of Flagpole	-	95	100	120	120	120	120	140	140	140	140	185	185	185	185	185	185
Top Diameter of Flagpole	-	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
*Weight of Flagpole (naked)	-	5kg	6kg	8kg	9kg	11kg	13kg	22kg	24kg	31kg	34kg	60kg	65kg	75kg	72kg	81kg	85kg
Wt. of flagpole with Steelwork	-	-	-	20kg	21kg	23kg	25kg	36kg	38kg	45kg	48kg	100kg	105kg	112kg	115kg	126kg	130kg
Ext. Diameter of Gold Finial	-	120	120	120	120	120	120	120	120	120	150	150	150	150	150	150	150
Maximum Flagsize	-	1m	1.5m	1.5m	2m	2m	2.5m	3m	3m	3m	3m	4m	4m	5m	5m	5m	5m
Overall Length of Bolts	-	-	-	500	500	500	500	500	500	500	500	700	700	700	700	900	900
Depth of Bolts in Concrete	B	-	-	425	425	425	425	425	425	425	425	610	610	610	610	800	800
Diameter of Foundation Bolts	C	-	-	16	16	16	16	16	16	16	16	20	20	20	20	20	20
Hole Centres	D	-	-	135	135	135	135	135	135	135	135	230	230	230	230	230	230
Hole Centres	E	-	-	128	128	128	128	128	128	128	128	200	200	200	200	200	200
Baseplate Dimension	F	-	-	180	180	180	180	180	180	180	180	280	280	280	280	280	280
Baseplate Dimension	G	-	-	180	180	180	180	180	180	180	180	280	280	280	280	280	280
Internal Halyard Door	L	-	-	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m								
Ground Collar Diameters	M	108 (ID) 385 (OD)		125 (ID) 385 (OD)		145 (ID) 385 (OD)		180 (ID) 445 (OD)		180 (ID) 445 (OD)		195 (ID) 445 (OD)		195 (ID) 445 (OD)		195 (ID) 445 (OD)	

All measurements are in millimetres unless otherwise stated. Please note that the ground collar (M) is an optional extra. Key: (ID) = Internal Diameter (OD) = Outside Diameter. This information applies to ground mounted poles only. For any other application please seek additional information from the manufacturer.

Foundation Technical Data

Foundation Data		2 - 8 m	9 - 12 m	14 - 18 m
Depth of Foundation Slabs	J	1000*	1250*	1500*
Width of Foundation Slabs	K	500	650	750

*This assumes clay foundations or similar. If in doubt please consult your architect.

Glassfibre Wall Bracket Technical Data

Overall Length of Flagpole	-	3m	4m	6m	8m	9m	10m	12m
Maximum Diameter of Flagpole	-	100	100	120	120	140	140	140
Maximum Flagsize	-	1m	1.5m	1.5m	2m	2m	2.5m	3m
Centres Between Brackets	A	1m	1m	1.5m	2m	3m	3m	4m
Twin Bracket Hole Centres	B	250	250	250	250	250	330	330
Flagpole Offset	C	75	75	75	75	75	75	75
Unstayed Hole Centres	D	150	150	-	-	-	-	-
Vertical Hole Centres	E	150	150	150	-	-	-	-
Pre Drilled Hole Diameter	F	22	22	22	22	22	22	22
Diameter of Bolts Required	-	20	20	20	20	20	20	20
Steel Plate Thickness	-	10	10	10	10	10	10	10

Specific increases in distances between vertical wall brackets can be accommodated at no extra cost. All flagpoles above 4 metres in length with angled wall brackets require support stays. These can be supplied in line with your specification as an extra.

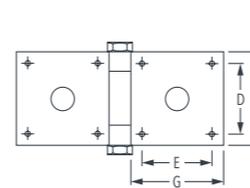
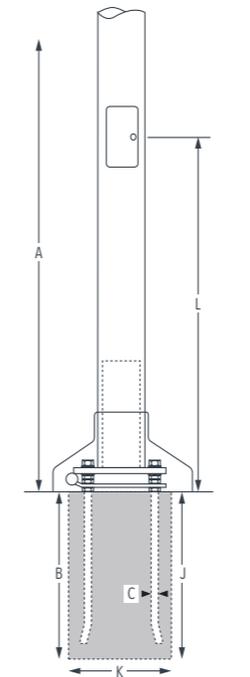
Rigged Flagpoles Technical Data

Rigged Flagpoles	8m	9m	10m	12m	14m	16m	18m
Overall Height of Main Mast	8m	9m	10m	12m	14m	16m	18m
Overall Length of Yardarm	3m	3.5m	4m	4.5m	5m	6m	7m
Length of Gaff	2.5m	2.75m	3m	3.5m	4m	5m	5m
Location of Gaff Steelwork	4m	4.5m	5m	6m	7m	8m	9m
Location of Yardarm	6m	6.5m	7.5m	8.5m	10m	12m	13m
No. of Main Guy Wires	3	3	3	3	4	4	4
Diameter of Guy Wires	9	9	9	9	9	9	9
Guy Wired Construction	6/12	6/12	6/12	6/12	6/12	6/12	6/12
Location of Wires on Pole from Base	4m	4.5m	5m	6m	8.5m	10m	11m
Length of Guys	4.5m	5m	6m	6.5m	9.5m	11m	12m
Guy Anchor Foundation (square)	0.5m	0.5m	0.5m	0.5m	0.5m	0.5m	0.5m

For centre pole foundation refer to data on opposite page. Consult your architect if unsure about ground conditions.

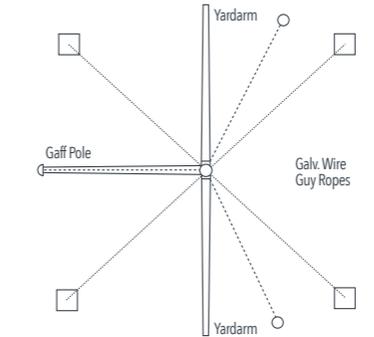
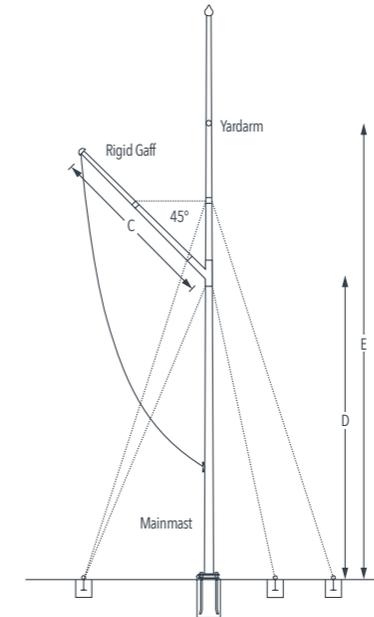
Glassfibre Technical Drawings

Technical Data for Flagpoles with hinged baseplates



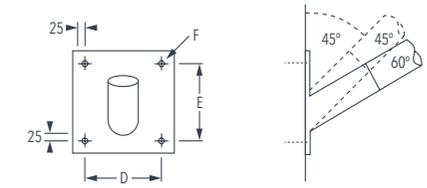
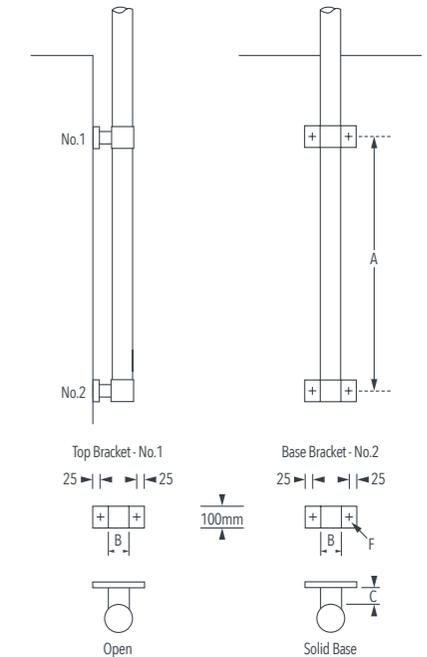
Glassfibre Rigged Flagpoles

Standard Rigged Flagpoles in Glassfibre - Side Elevation



Standard Mounting Brackets for Glassfibre Flagpoles

Support Steelwork for Vertical Flagpoles



All Harrisons' glassfibre flagpoles, ground mounted, are manufactured to withstand speeds up to 100mph, unflagged.

Aluminium Superform Range

Exposed Height	A	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
Butt Diameter of Flagpole	D1	114	114	114	120	135	165	165	177	177	177	177	200	202	222	222	222
Top Diameter of Flagpole	D2	60	60	60	60	60	60	76	76	76	76	76	76	76	76	76	76
Wall Thickness		2.5	2.5	2.5	3	3	3	3	4	4	4	4	4	5	5	5	5
Tapered Distance	M	2.7	4.2	4.2	5.06	5.06	6.86	6.86	7.28	9.47	9.47	13.2	13.2	16.1	16.1	16.1	16.1
Number of Sections		1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3
Weight of Pole Only		10.1k	11.7k	14k	17.7k	25k	34k	38k	58.7k	55k	61k	67k	79k	108k	126k	135k	142k
Maximum Flag Size		2m	2m	2m	2.5m	2.5m	3m	3m	3m	3.5m	3.5m	4m	4m	5m	5m	5m	5m
Internal Halyard	L	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m	1.5m
Weight of Hinged Baseplate	-	7k	7k	7k	7k	9k	17k	17k	17k	17k	17k	17k	17k	35k	35k	35k	35k
Height of Inner Tube	I	0.6m	0.6m	0.6m	0.75m	1m	1m	1m	1m	1m	1m	1m	1.2m	1.2m	2m	2m	2m
Diameter of Inner Tube (prebonded)	D3	100	100	100	121	121	152	152	152	152	152	152	177	177	177	177	177
Hole Centres	D	135	135	135	135	135	230	230	230	230	230	230	230	300	300	300	300
Hole Centres	E	128	128	128	128	128	200	200	200	200	200	200	200	300	300	300	300
Baseplate	F&G	180	180	180	180	180	280	280	280	280	280	280	280	400	400	400	400
Baseplate Thickness	-	10	10	10	10	10	20	20	20	20	20	20	20	20	20	20	20
Overall Length of Foundation Bolts	-	500	500	500	500	500	500	500	700	700	700	700	700	900	900	1000	1000
Depth of Bolts in Concrete	B	440	440	440	440	440	440	440	610	610	610	610	610	800	800	900	900
Diameter of Bolts	C	16	16	16	16	16	20	20	20	20	20	20	20	20	20	20	20
Ground Collar		TO SPECIFICATION															

All measurements are in millimetres unless otherwise stated.

Aluminium Foundation Data - Superform Flagpole

Height of Flagpole		4m - 7m			8m	9m - 11m			12m - 16m					17m - 20m			
Depth of Foundation	J	1m	1m	1m	1.2m	1.5m	1.5m	1.5m	1.7m	1.7m	1.7m	1.7m	1.7m	2m	2m	2m	2m
Width of Slab	K	0.5m ²	0.5m ²	0.5m ²	0.5m ²	0.65m ²	0.65m ²	0.65m ²	0.75m ²	1m ²	1m ²	1m ²	1m ²				

Aluminium Wall Bracket Technical Data

Overall Length of Flagpole	-	4m	6m	8m	9m	10m	12m
Maximum Diameter of Flagpole	-	114	114	120	135	165	177
Maximum Flagsize	-	1.5m	1.8m	2m	2m	2.5m	3m
Centres Between Brackets	A	1m	1.5m	2m	2.25m	2.5m	3m
Twin Bracket Hole Centres	B	250	250	250	250	330	330
Flagpole Offset	C	75	75	75	75	75	75
Unstayed Hole Centres	D	250	-	-	-	-	-
Vertical Hole Centres	E	250	-	-	-	-	-
Pre Drilled Hole Diameter	F	22	22	22	22	22	22
Diameter of Rawbolts Required	-	M12	M12	M12	M12	M12	M12
Steel Plate Thickness	-	10	10	10	10	10	10

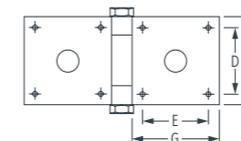
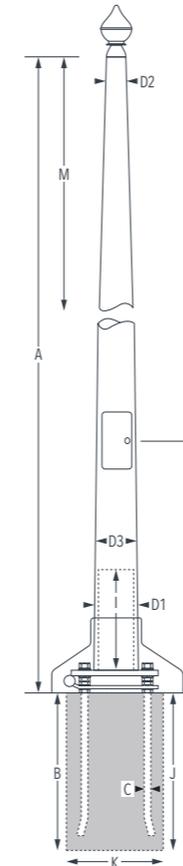
All measurements are in millimetres unless otherwise stated.

- Specific increases in distances between vertical wall brackets can be accommodated at no extra charge.
- All flagpoles above 4 meters in length with angled wall brackets require support stays. Harrisons can supply these in line with your specification as an extra.

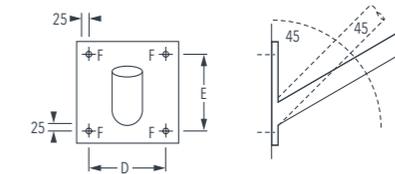
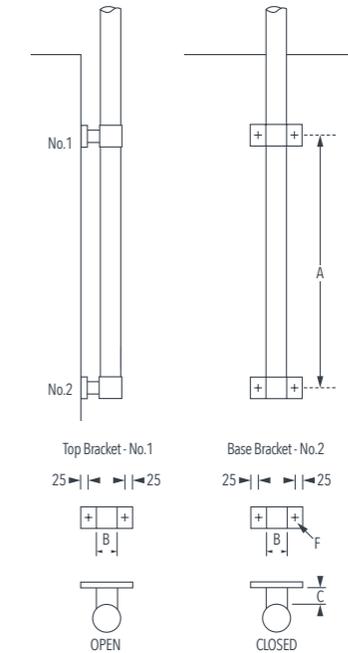
Aluminium Technical Drawings

HBS Superform Aluminium Flagpole

Support Steelwork for Vertical Flagpoles



Steelwork for Wall Mounted Flagpoles



Stainless Steel Technical Data									
Flagpole Height (A)	4m	6m	8m	10m	12m	14m	15m	16m	18m
Top Diameter of Flagpole	80	80	80	80	80	80	80	80	80
Butt Diameter of Flagpole	130	140	160	180	200	220	230	240	260
Wall Thickness	2.5	2.5	2.5	3	3	3	3	3	3
Baseplate Size (BxC)	300 x 300	350 x 350	350 x 350	400 x 400	400 x 400	420 x 420	420 x 420	440 x 440	550 x 550
Baseplate Thickness	6	10	10	14	14	20	20	20	25
Ground Rod Type	m16	m20	m20	m20	m20	m20	m20	m22	m22
Foundation Size (ExExf)	500 x 500 x 500	600 x 600 x 800	600 x 600 x 1000	700 x 700 x 1200	700 x 700 x 1500	750 x 750 x 1700	750 x 750 x 1700	750 x 750 x 1700	1000 x 1000 x 2000
Door Height	1200	1200	1200	1200	1200	1200	1200	1200	1200

All measurements are in millimetres

Entire Pole and Foot 316 Grade Stainless Steel, available in satin brush or mirror finish.

Ground Rods, 308 Stainless Steel.

Internal Winch Mechanism on all flagpoles.

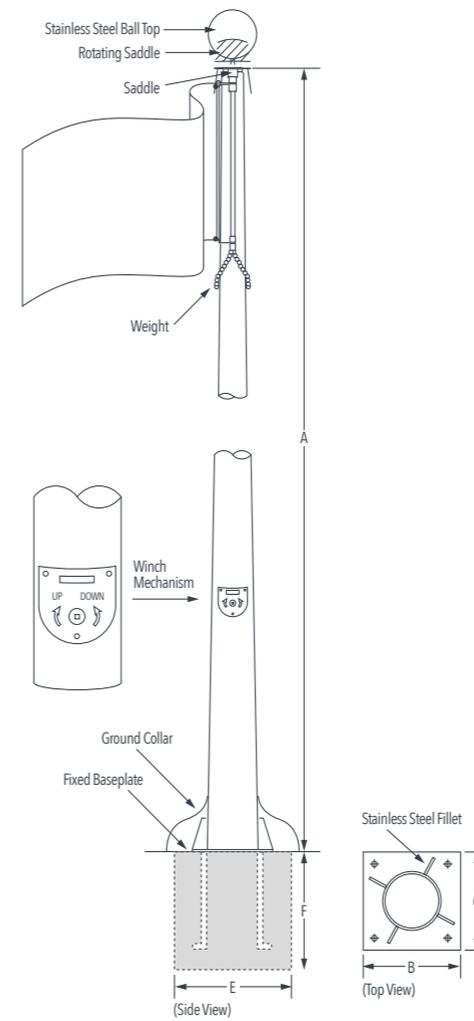
Truck, cast aluminium construction, revolving 360 degree.

Stainless Steel Ball Ornament Top available in Brush or Mirror finish.

*Foundation guide assumes clay soil conditions or similar: If in doubt please consult your architect.

Stainless Steel Technical Drawings

Stainless Steel Flagpole



With our knowledge, experience and expertise we are able to meet the requirements of any brief; from our standard range to our fully bespoke custom-made poles. Through our design, supply and installation we are able to control the entire process and ensure quality is present throughout. This has built us an incredible reputation as leaders in the industry and allows our clients to put their trust in us, knowing we are able to deliver their project requirements.

We hope this brochure has given you a full introduction to Harrison Flagpoles, showing our origins, brand values, products and our incredible work and if you require any more information please get in touch with one of our specialists.

Harrison Flagpoles

38 Borough Road | Darlington | DL1 1SW | UK

phone: 01325 355 433

web: www.harrisonflagpoles.com

email: sales@harrisoneds.com

Harrison Flagpoles

38 Borough Road | Darlington | DL1 1SW | UK

phone: 01325 355 433

web: www.harrisonflagpoles.com

email: sales@harrisoneds.com