KIRBY'S AFX LTD
FLYING EFFECTS SINCE 1898

METHOD STATEMENT & SPECIFICATIONS

MS 02 Standard fixed point system

INSTALLATION:

Pulleys are hung as tightly as possible using roundslings and 2 tonne bow shackles in conjunction with a wire rope safety bond (strop). Shackles are moused to eliminate the possibility of pins working loose over time.

This type of system can be installed on a truss or flying bar, direct to the grid or other suitable load bearing structure. Bars or trusses rigged at floor level are flown out to dead height and securely tied off. In the case of counterweighted theatre flying bars the counterweight cradle is also fastened down.

LIFT SYSTEM:

The lift system consists of a 4mm, 6x19 FC wire rope which is attached to a large diameter fibre pulling rope. It runs through a pulley over the operating position then through a second pulley over the performer's position down through the bridle assembly and back up to a swivel termination.

Both ends of the pulling rope are linked via a return line which passes through another pulley above the operating position, this enables the bridle to be lowered in when there is no load on it.

The system incorporates a 2:1 mechanical advantage to the operator. If additional assistance is required to achieve a smooth or faster lift, counterweights can be attached to the pulling rope.

Depending on the type of harness to be employed, either a single 3mm or pair of 2.5mm cables suspend the performer from the bridle assembly.

TERMINATIONS:

Terminations - eyes - are formed in stranded ropes using standard splicing techniques. Kernmantle ropes are finished with a figure eight knot. Terminations to wire rope are made by crimping a ferrule with a hydraulic bench press or on-site, using the Nicopress system.

TESTING:

All systems are proof loaded to a minimum of 1.5 times the anticipated maximum load, prior to first use by the performer.

COMPONENT	TYPE/SIZE	M.B.L.	S.W.L.	W.L.L.	SOURCE
Pulling rope	24mm / 3 strand Manila	4570 Kgs.			*Flints*
Return line	10mm low stretch kernmantle	2500 Kgs.			*Flints/Liros*
Wire rope	4mm 6 x 19 FC galvanised	890 Kgs.			*Ormiston*
Wire rope	3mm 6 x 19 FC galvanised	500 Kgs.			*Ormiston*
Wire rope	3mm 7 x 19 IWRC black	540 Kgs.			*Flints*
Wire rope	2.5mm 7 x 7 IWRC galvanised	405 Kgs.			*Ormiston*
Wire rope	2.5mm 7 x 7 IWRC black	484 Kgs.			*Flints*
Roundsling	2 tonne / 1 meter black		2.0 tonne		*Flints*
Roundsling	2 tonne / 2 meter black		2.0 tonne		*Flints*
Bridle assembly	Full (c/w swivelling lower bar)		250 Kgs.		*KAFX*
Pulleys	75mm sheave	3720 Kgs.			*S.A.S.*
Wire rope strops	4mm galvanised wire rope	890 Kgs.			*KAFX/Ormiston*
Shackles	Bow			2.0t (Tonne)	*Crosby*
Shackles	Bow			0.5t (Tonne)	*Crosby*
Shackles	Bow			0.75t (Tonne)	*Crosby*
Shackles	Bow			1.0t (Tonne)	*Crosby*
Carabiner	Steel oval screwgate	22 kN.			*Lyon*
Carabiner	Alloy screwgate	23 kN.			*Wild Country*
Swivel	Petzl P58S	23 kN.			*Petzl*
Swivel	Katimex	22.2 kN.			*Katimex*
Rope link	Pear pattern Maillon Rapide			880 Kgs.	*Lyon*
Harness connector	Oval pattern Maillon Rapide			160 Kgs.	*Lyon*

Our own destructive testing reports show that in practice the actual strength of components often far exceeds the quoted figures. Figures quoted are direct from manufactuers and suppliers, therefore they appear in various formats: Calculations are best based on the minimum breaking load (M.B.L.) as different manufacturers can use various safety factors - ranging between 2.4:1 and 12:1 - to determine the safe working loads (S.W.L.) of their products.

Pounds (Lbs.)	1lb / 16 ounces ~ 0.454 Kg. / 454 grams
Kilograms (Kgs.)	1Kg ~ 2.204 lbs.
Kilonewton (kN)	1kN ~ 102 Kgs. force
U.S. (short) Ton	2000 lbs. ~ 907 Kgs.
U.K. Ton	2240 lbs ~ 1016 Kgs.
Metric Tonne	2204lbs. ~ 1000 Kgs.

M.B.L.	Minimum breaking load
W.L.L.	Working load limit
S.W.L.	Safe working load

telephone	address	e-mail/web
+44 (0)20 8723 8552	8 Greenford Avenue, Hanwell,	mail@afxuk.com
+44 (0)7958 285608	London, W7 3QP, United Kingdom.	www.afxuk.com

Company registration No. 6147743 VAT registration No. 906 4188 22