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YEADON AIRDOME DETAILS **DATE: 2013**

We are pleased to present the following proposal for a Yeadon Air Supported Structure. The following items are included in our proposal. Also shown are optional components and fabric finishes for your consideration. Our proposal addresses the specific site dimensions, double membrane structure, mechanical equipment, back-up system and other components as per your request.

THE COMPANY: Yeadon offers over **35 years' experience** in the manufacturing and installing of quality air structures. This experience has allowed Yeadon to develop the reputation as the worldwide industry leader in innovation, design and fail safe user-friendly controls. We have installed over **800 structures** throughout North America, Europe and Asia. Yeadon is the only manufacturer to offer in-house design, manufacturing, installation and a service department. We recently completed the build on one of the largest air structures in the world. A multi-sport facility in Anchorage, Alaska, the size of two full length football pitches, with a six lane running track around the pitches, as well as a two storey building housing the gymnasium, treatment rooms etc, inside the structure.

THE OUTER MEMBRANE: The outer membrane fabric is Seaman 8028, high tensile strength, heavy duty vinyl coated polyester. The fabric is fire resistant with a pro-rated warranty. It is designed to provide high tensile and tear strength and has exceptional stability under loads. The fabric also has maximum resistance to acid and chemicals and comes in a variety colours and weights.

THERMAL/ACCOUSTIC INNER MEMBRANE: The dome contains an inner thermal/acoustic fabric liner, which is welded to the dome's outer membrane. The liner is produced from acrylic coated, high strength, translucent vinyl coated polyester. Blue is normally used as a contrasting colour around the perimeter. It extends from ground level to 3 metres. White is used throughout the rest of the dome to provide the brightest interior possible. This highly durable liner provides maximum protection against abrasions and tears.

SEAMS: All seams are **dielectrically welded** together to form the dome's profile. This method of fabrication provides an airtight bond that is stronger than the material itself. Yeadon does not use sewn seams on its structures.

SECTIONS: The dome is normally manufactured in **sections** for ease of handling. If more than one section is required, Yeadon will provide **200mm aluminium seam clamps**, which are used to connect the sections together. These seam clamps form a strong, airtight and flexible connection. A continuous fabric flap with a VELCRO edge is also provided to conceal and weatherproof the seam connection.

REVOLVING DOOR: A **fully glazed Perspex panel revolving door** is supplied for the main entrance into the dome. This self-contained door unit comes complete with rigid frame and all attachment hardware. It is designed for and built to withstand continuous traffic.

PERSONELL AIRLOCK: The **airlock system is used for wheelchair access** and for moving large pieces of equipment into the dome. The doors are operated separately and should only be opened one at a time; thus maintaining the airlock.

EMERGENCY EXIT DOORS: Pressure balanced for ease of opening and closing against internal pressure and made from high quality steel and aluminium.

ANCHORING: Yeadon's unique anchoring system provides the most air-tight, water resistant base attachment and is therefore very energy efficient. It is the fastest, easiest system for seasonal put ups and take downs. There is no mechanical penetration of the fabric when anchoring. The anchoring system allows fabric stresses to be uniformly transferred to the grade beam and eliminates stress points common to bolted or catenary anchoring systems.

INFLATION/HEATING/BACKUP: This sophisticated "ALL IN ONE" inflation unit is capable of providing full design inflation pressure to the structure. The units are equipped with motorised, remote controlled dampers to allow for operation at the most efficient pressure. Thermostatically controlled temperature insures maximum comfort. The heating has a daytime timer; and a night-time temperature setback timer. The unit can be provided with a natural gas, oil or propane burners. The standby system is a specifically designed fan driven by a diesel engine and is an automated system. The system will start automatically in the event of a power failure or when low pressure is detected. The units are weatherised, highly reliable proven components and designed to the highest standards. There is only one electric and one gas connection required to get the system up and running. Yeadon will provide the initial start up/commissioning of the complete system once it arrives on site.

WIND SENSOR: A wind sensor is provided to automatically adjust the dome's internal pressure to its most energy efficient level as dictated by outside wind conditions. This device comes with a sensor to detect low-pressure situations. The wind sensor can pay for itself in energy savings within 2 years of operation.

INSULATION: As an option, only in case where a dome is not seasonal, Yeadon use a fibreglass insulation that is encased in a vinyl facing. This form of insulation out performs all others in 2 ways. It gives the dome an R12 average with only 1 layer of insulation. Foil faced bubble wrap needs at least 2 layers of bubble wrap and a dead air space to even come close to the fibreglass. We have independent tests to prove this. The second advantage is the acoustical sound absorbing action you

get from fibreglass. The interior of our insulated domes is much quieter than any other dome making it easier for the coach and players to communicate.

TEDLAR PVF FILM: If aesthetics are an important criteria, the goal is to have the top finish resist environmental elements and retain a bright, clean appearance over the expected life of the structure, then we can show that PVC coated fabrics bonded with Tedlar film resist dirt, pollution and solar radiation better than available acrylic and PVDF liquid surface coating systems. **NB. Tedlar also extends the warranty of the fabric.**

YEADON WARRANTY: Materials and workmanship employed in Yeadon fabric structures are guaranteed for a period of three (3) years against defects in workmanship and materials. Fabric warranties are 10 year and 15 year pro-rated.

OPERATION AND MAINTENANCE: Most of the equipment used is automatic and designed to deal with severe climactic conditions. Our maintenance manual provides full instruction on servicing and inspections to maintain your dome. We are renowned for our after-sales service capability and provide a 24 hour emergency service.

TECHNICAL SUPPORT: We provide a complete range of engineering and technical support. We provide design and technical information as well Building Control Certification on all our structures. Construction advice, site investigations and consultation, including feasibility studies can also be provided.

TENDERING: Yeadon are a one stop shop; have experience and a proven track record as a Principal Contractor and we would be happy to provide references with our tender. Our preference is take on the whole project, from pre-construction, to construction and groundworks, surface finishes, electrical package and through to completion. This allows the client to have one point of contact from inception through to handover.

SUSPENDED LIGHTING: Yeadon's unique suspended lighting system is built into the dome during construction. An 8 to10 lights per court system can be provided and allows the courts to be lit individually and is therefore more energy efficient. This complete hanging light system can be designed to meet any sport regulation requirements. Players have commented that the lighting provided is better for playing than that of pole lighting. They are also not affected by columns or glare in their field of play or the risk of running into a lighting pole. The 1000 Watt suspended lights have an 11000 hour rated life out performing the 4000 hour rated life of most 2000 Watt pole lights.

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LIGHTING SPECIFICATION: The design will achieve maximum lighting levels and uniformity within the air supported structure. Please note that our design has been tested to conform to the highest standards.

Lamps	1kW HPI-T metal halide, colour temperature of 4,500 degrees K
Luminaries	Luminaries are etch primed, 1000 LMN2000/LA
Power Factor	Ballasts and lamps are power factor corrected (PFC) to = 0.9
BS7671	Cables are coded to harmonised cable colours, to comply with BS7671:2011
Lighting DB	The control panel/distribution will house all circuit, MCB's, contactors and control devices for switching and controlling the lighting and power circuits. The panel will be fully labelled to give clear identification of all devices. A mains isolator is fitted on the front the panel.
Circuit Protection	Each circuit is protected by an MCB this will enable isolation of the luminaries in the unlikely event of a fault, or for maintenance.
Cabling	Complete wiring of luminaries from the Ballast unit. All wiring to the luminaries will be in flexible PVC insulated SY cable or Powerful cable. Final connection cable to the Luminaries shall be in heat resistant silicon cable to 185 degrees centigrade.
Lighting	Luminaries' cables are fitted with plugs and socket at high level and at the base of the Dome for ease of dismantling.
Hour Counter	One hour counter will be provided. This facility provides useful information to determine the best time to carry out maintenance.
Egress Timer	5 minute delay timer facility is fitted in the control panel. This will keep a minimum of two luminaries lit when lights are switched off. This will enable users to collect their equipment and leave safely.
Master Time Clock	The timing facility shall be to clients' requirement, thus preventing main lights from operating outside a set time period. Lights shall automatically switch off at the requisite time. The time clock alters for BST/GMS.

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Small Power	IP65 rated socket outlets can be fitted in the Dome. These are protected by an RCD breaker located within the distribution board.
Switching	Will be provided via single gang grid switches in a lockable box in the Dome or to the clients' requirement Our system is designed so that two luminaries can be switched on from one switch.
Emergency Lighting	There are two types installed. Maintained emergency exit signs (permanently illuminated), one above each exit door inside the dome and outside. Each fitted with a plug and socket for ease of dismantling. Non-maintained emergency twin spots fittings (permanently off) are fitted in the Dome for ease of escape in event of a power failure A separate circuit is provided in the DB for the emergency exit lighting. Test key facility for the emergency lighting is provided.
Amenity Lights	6 amps MCB only are fitted in the distribution board.
Fire Alarm	Can be supply and install with call points to all doors and sounder with strobe lights to comply with DDA regulations. Fire alarm System can be interfaced with an existing system or be a stand-alone with its own Fire alarm Panel located within the Dome.
Testing	Full electrical tests will be carried out and recorded to BS767 1:2011. Luminance lux level tests will be carried out on court by court basis with 35 readings taken and results recorded.

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COMPLETED PROJECTS

FULHAM FOOTBALL CLUB ACADEMY – SEASONAL

Registered Office:
13-14 Gelliwastad Rd, Pontypridd, CF37 2BW
Company Number: 7340750
Offices:
St Paul, Minnesota, USA - Guelph, Ontario, Canada - Beijing, China
Email: sbritz@yeadonairdomes.co.uk - Website: www.yeadonairdomes.co.uk - www.yeadondomes.com

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TEAMWORKS KARTING BISHOPSGATE

Registered Office:
13-14 Gelliwastad Rd, Pontypridd, CF37 2BW
Company Number: 7340750
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YEADON®
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NEXT GENERATION CLUBS - IPSWICH – 4 COURT TENNIS

Registered Office:
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Company Number: 7340750
Offices:
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BATCHWOOD TENNIS CLUB – 3 COURT SEASONAL – LTA HIGH PERFORMANCE CENTRE

Registered Office:
13-14 Gelliwastad Rd, Pontypridd, CF37 2BW
Company Number: 7340750
Offices:
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Email: sbritz@yeadonairdomes.co.uk - Website: www.yeadonairdomes.co.uk - www.yeadondomes.com

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THE HARBOUR CLUB – 2 X 2 COURT TENNIS

Registered Office:
13-14 Gelliwastad Rd, Pontypridd, CF37 2BW
Company Number: 7340750
Offices:
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Email: sbritz@yeadonairdomes.co.uk - Website: www.yeadonairdomes.co.uk - www.yeadondomes.com

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CRYSTAL PALACE FOOTBALL CLUB ACADEMY

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Company Number: 7340750
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EASTON COLLEGE – NORWICH- 4 COURT TENNIS

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HALTON TENNIS CENTRE – LTA HIGH PERFORMANCE CENTRE 3 COURT TENNIS WITH 20 X 20M KIDS ZONE ANNEX
1ST UK DOME USING TEDLAR FABRIC WITH SUSPENDED LIGHTS
ALONGSIDE A 3 COURT YEADON DOME BUILT IN 1991

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CRAIGLOCKHART TENNIS CENTRE - EDINBURGH -3 COURT CLAY –SEASONAL

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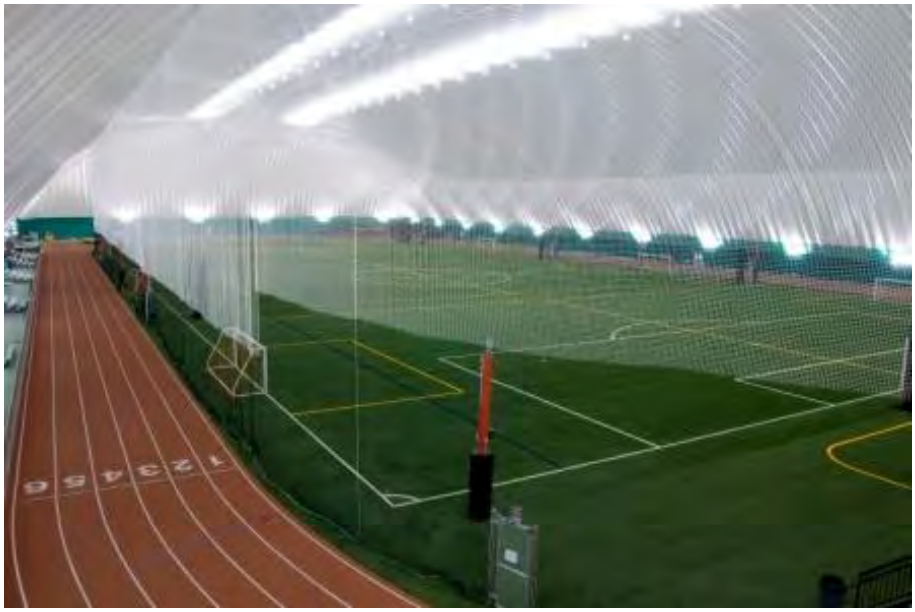
LATEST US PROJECT – 2 FOOTBALL PITCHES WITH 6 LANE RUNNING TRACK – ALASKA



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BROMLEY CRICKET CLUB – 2 COURT TENNIS – SEASONAL

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HALTON TENNIS CENTRE – REPLACEMENT THREE COURT DOME

Registered Office:
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Company Number: 7340750
Offices:
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Email: sbritz@yeadonairdomes.co.uk - Website: www.yeadonairdomes.co.uk - www.yeadondomes.com

AIRDOMES LTD

THE PARK CLUB – FOUR COURT TENNIS

Registered Office:
13-14 Gelliwastad Rd, Pontypridd, CF37 2BW
Company Number: 7340750
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AIRDOMES LTD

THE WIMBLEDON CLUB – SEASONAL – THREE COURT TENNIS

Registered Office:
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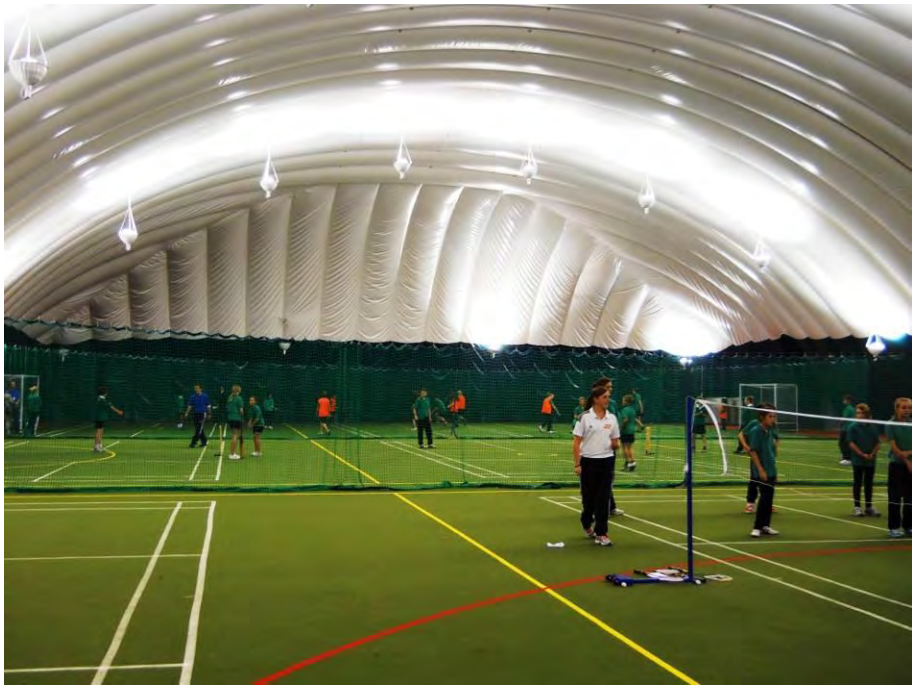
THE PRIORY SCHOOL – MULTISPORT – LATEST PROJECT



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49 Grove Road, London, E3 4PE

INFLATION UNIT INFORMATION

1 No. S&H / Nolting – Compact Inflation Unit – Type K180/D

Technical Data:
- heat capacity : 209 kW
- air capacity
- main blower : 14.400 m3/h
- stand-by unit : 12.000 m3/h
- motor capacity : 7.5 kW
- voltage : 3 x 400 v, 50 Hz PE+N
- pressure : 100 – 450 Pa
- blow out connection : ND 1.000mm
- return air connection : ND 800mm
- waste gas connection : ND 300mm
- with burner
- with exhaust system
- with burner housing
- with control system for temperature
- with day/night/week programme (type 1060)

1 No. Inflation unit without sound attenuation boxes
- size : L 4900 x W 2320 x H 1360
- size with sound attenuation boxes : L 6900 x W 2320 x H 1360

1 No. Inflation unit roof waterproofed

1 No. Natural gas burner – factory tested in Germany
- make : Riello
- burner rating : 235 kW
- Minimum gas flow pressure before gas fitting: 20 mbar

1 No. Wind dependant control system
- with signal transmitter
- remote indication is possible
- wind control system 0 – 60 m/s

1 No. Wind measuring mast
- for mounting of anemometer to inflation unit
- length of mast: 4m

1 No. Visual and acoustic warning system
- with control lamp and siren
- with connection to wind anemometer
- with connection to pressure control system

1 No. Analogue wind measuring instrument
- mounted to mast

1 No. Hall pressure control system
- to control the recirculating air louvre
- pressure gauge and pressure controller mounted inside cabinet

1 No. Recirculating air shutter
- with servo motor to control return air

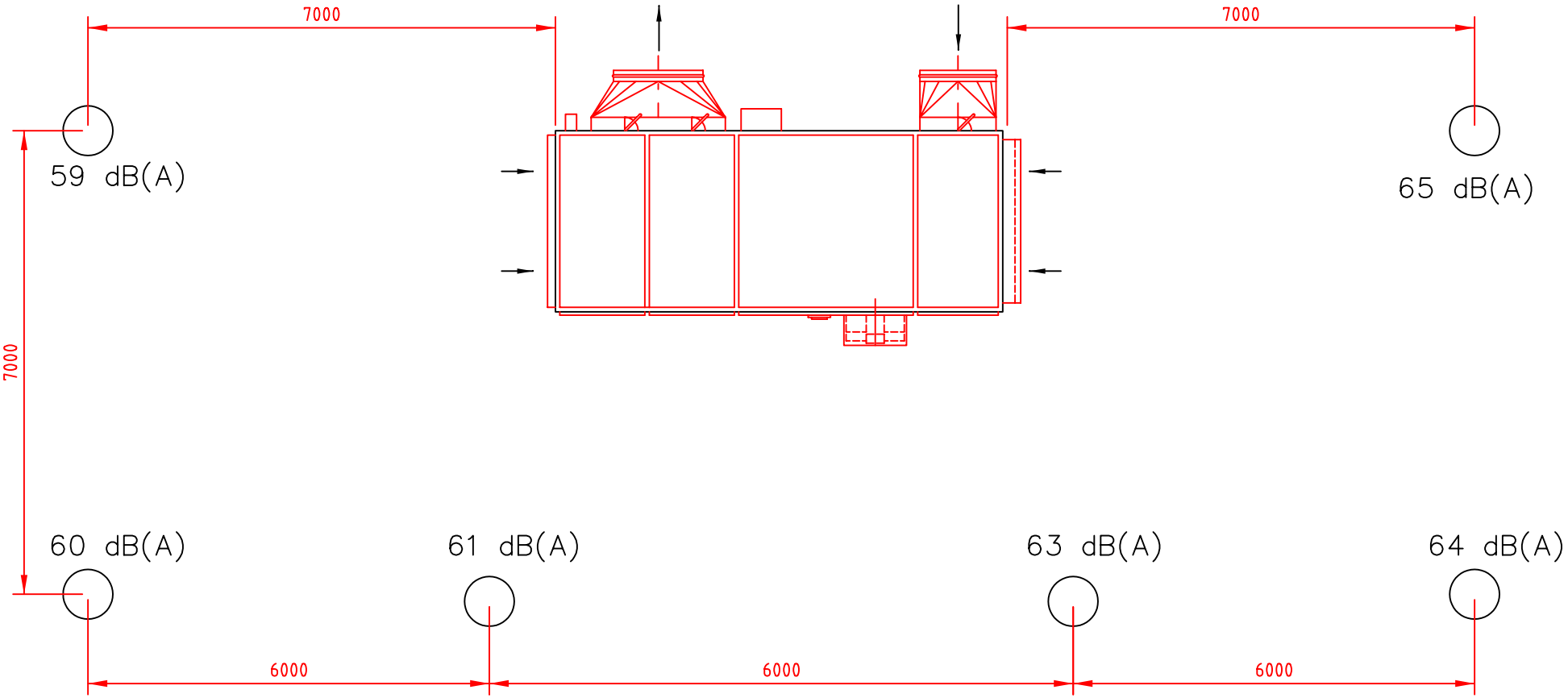
1 No. Analogue pressure indication instrument
- measures 0-500 Pa
- mounted inside the inflation unit

Sound Levels – Please see: Inflation unit sound levels drawing
Note: With sound attenuation boxes levels will reduce by 12-15 dB (A)

CONSUMPTION VALUES FOR INFLATION AND HEATING UNITS AS PER UK DESIGN

Type of Unit	Engine Output	Heating capacity	Max. Oil Consumption of Heating Oil	Average Consumption of Heating Oil	Max. Gas Consumption of Natural Gas (9.0 kW/m³)	Average Consumption of Natural Gas (9.0 kW/m³)	Average Current Consumption
K-140 / D 18 x 36m	5,5 kW	163 kW	17,0 ltr. / h	16.000 ltr. / a	18,0 m³ / h	18.000 m³ / year	24.000 KWh / year
K-180 / D 36 x 36m	7,5 kW	210 kW	22,5 ltr. / h	22.000 ltr. / a	25,0 m³ / h	25.000 m³ / year	32.000 KWh / year
K-250 / D 54 x 36m	11,0 kW	291 kW	31,5 ltr. / h	31.000 ltr. / a	35,0 m³ / h	35.000 m³ / year	47.000 KWh / year
K-350 / D 72 x 36m	2 x 7,5 kW	407 kW	45,0 ltr. / h	45.000 ltr. / a	50,0 m³ / h	50.000 m³ / year	65.000 KWh / year
K-480 / D 90 x 36m	2 x 11,0 kW	558 kW	62,0 ltr. / h	60.000 ltr. / a	67,0 m³ / h	67.000 m³ / year	95.000 KWh / year
K-580 / D 108 x 36m	2 x 15,0 kW	674 kW	75,0 ltr. / h	75.000 ltr. / a	83,0 m³ / h	83.000 m³ / year	130.000 KWh / year

The consumption values refer to an average operation time of about 6 months (October - March)
at an inside temperature of about 15 °C/day and 0 °C/night



S+H Nolting	GUSTAV NOLTING GMBH Orbker Straße 38, 32758 Detmold Tel.: 05231/6001-0, Fax: 6001-51	Bauvorhaben : Schallmessungen Bauherr : Nolting GmbH	Projekt-Nr.: Meßprotokoll Bauort : -	Zeichnungs-Nr.: 440000-07
		Bauteil : Kompaktgebläse K 180/D	Maßstab : -	Datum : 26.08.98 Name : Brink

THE NEW STANDARD IN COURT LIGHTING.
NO GLARE.
OVER 40% SAVINGS.

	Metal Halide	Fluorescent Technology	HammeLite
Total Consumption (Lamp + Ballast) per court for 10 fixture court	10,080W	10,000W	6,000W
Average Lifespan	20,000 hours	30,000 hours	100,000 hours
Lumen Depreciation	40% within 1st year of use	40% within 2nd year of use	5% over 10 years
Color Rendering Index (CRI)	85	78	95

- Free Energy Savings Analysis
- The First Ever Direct/Indirect Court light solution without glare
- Patented Design and Technology
- Easy plug and play solution to existing Metal Halide Infrastructure
- Dramatically improve illumination and ball visibility
- Eliminate lamp and ballast replacements for 15+ years
- Silent, dimmable electronic ballast
- Instant Strike, restrike
- Reduce your annual court lighting expense by 40% or more
- Successfully implemented in numerous facilities

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ReThink. ReLite.

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Matchplay 2 – Multi Sport Surface

- Matchplay 2 is an excellent multi-sport surface and offers a more natural feel compared to other artificial products.
- Whether sand dressed or not, after installation the performance characteristics are evident from day one and play can continue almost immediately.
- Matchplay 2 is an ideal choice for multi-use games areas and can offer high performance and durability for a range of sports, particularly, netball and racquet sports.
- The built in cushion layer makes for medium-paced play and is easy on player's leg joints.
- Inlaid lines can be permanently added in white, yellow, red and blue.
- High level porosity, low maintenance and all weather usage are an added value, which in return maximises playing time and increases potential revenue.
- Excellent needlepunch multi sports surface.
- Low maintenance required.
- Classified to ITF Category 2 Medium Slow and meets EN 15330 Part 2.
- Available in Playrite green, sporting green and terracotta.

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What is Needlepunch?

- A needlepunch product is manufactured by layering staple fibres to the required weight. These are then needled to the correct density. A polyester scrim may be incorporated into the product to aid stability and reduce sand filtration. The surface is then textured to suit the particular application. The surface can then be resin impregnated and cured in our purpose built finishing lines.

- Needlepunch products are suited to all sport and recreational applications whether indoor or outdoor. Needlepunch geotextiles can also be used for soil stabilising, land reclamation and shock pad purposes.

- Needlepunch sports surfaces give superior grip under foot when compared to tufted synthetics or natural grass and are less stressful on the joints than tarmacadam, acrylic or compacted sand-filled products. The fibre bonded products are extremely durable, hard-wearing and represent good value for money.

- Due to their forgiving nature and non-fray construction they are both quick and easy to install and, should they be damaged or vandalised, repairs can be readily carried out. Seams made on needlepunch surfaces are stronger and more durable than any other type of product.

- For the manufacture of synthetic clay tennis courts structured needlepunch with a dressing of crumb-rubber granules has proved to be very acceptable for tennis clubs wanting the playing characteristics of clay but much reduced maintenance cost and maximum availability for play.

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Matchplay 2 – Multi Sport Surface

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High Performance 8028 Architectural Fabric

Base Fabric Type	Polyester
Base Fabric Weight (Nominal)	254 g/m^2
Finished Coated Weight ASTM D751	950 g/m^2 +70/-35 g/m^2
Tongue Tear ASTM D751	20.3cm x 25.4cm sample @ 30.5 cm/min 1223/1223 N
Trapezoid Tear ASTM D4533	378/378 N
Grab Tensile ASTM D751	3115/3115 N
Strip Tensile ASTM D751 Procedure B	458/458 daN/5cm
Adhesion ASTM 751 Dielectric Weld	9 daN/5cm
Hydrostatic Resistance ASTM D751 Procedure A	3.45 MPa
Dead Load MIL-T-52983E (modified) Para.4.5.2.19	5cm seam, 4hr, 2.5cm strip 1183 N @ room temperature 591 N @ 71^{0}C
Low Temperature ASTM D2136 LTC 1/8” mandrel, 4hr LTA	Pass -40^{0}C Pass -55^{0}C
Flame Resistance	2 second flameout

AIRDOMES LTD

WHY YEADON AIR STRUCTURES?

YEADON STRUCTURES ARE CUSTOM DESIGNED

- More than 30 years experience
- Over 800 structures worldwide
- Industry leader in quality and technology
- Latest innovation in design and anchoring
- Utilising quality mechanical and electrical systems
- Provide state-of-the-art energy efficient structures

YEADON INSULATED AIR STRUCTURES

- Insulating glass fibre installed in the liner cavity
- Reduces energy costs for heating and air conditioning
- Unique suspended ducts provide minimum air stratification

YEADON HIGHEST QUALITY FABRICS

- Highest quality heavy duty vinyl coated polyester fabrics
- Flame resistant with a pro-rated warranty
- Designed to provide high tensile and tear strength
- Exceptional stability under loads
- Maximum resistance to acid and chemicals
- Variety of colours and weights of fabric
- Top coated finishes (Tedlar) for maximum UV and dirt protection
- Top finishes extend life and enhance the aesthetics of its domes

YEADON DIELECTRIC WELDS FOR MAXIMUM STRENGTH

- Dielectric welding of fabric by use of Radio Frequency
- Recognised as the highest standard for seaming fabric
- Creates a dependable bond that is stronger than the fabric
- 100% of structural seams are dielectrically welded

YEADON'S UNIQUE ANCHORING SYSTEM

- Provides the most air-tight, water resistant base attachment
- Fastest, easiest system for seasonal put ups and take downs
- No mechanical penetration of fabric when anchoring
- Allows fabric stresses to uniformly transferred to the grade beam
- Eliminates stress points common to bolted or catenary anchoring systems

YEADON'S PRIMARY AND BACKUP INFLATION UNITS

- Full design inflation pressure to the dome
- Motorised, remote controlled dampers for efficient operation
- Thermostatically controlled temperatures ensure maximum comfort
- Natural gas, oil, propane, electrical or steam heating furnaces
- Automated diesel backup motor starts in event of power failure
- Weatherised units and highly reliable
- Automated wind-sensing controls

Registered Office:
13-14 Gelliwastad Rd, Pontypridd, CF37 2BW
Company Number: 7340750
Offices:
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Email: sbritz@yeadonairdomes.co.uk - Website: www.yeadonairdomes.co.uk - www.yeadondomes.com

AIRDOMES LTD

YEADON'S REVOLVING DOORS

- Designed and built to withstand heavy continuous traffic
- Reinforced aluminium construction with roller bearing pivots
- Tempered glass window with push bars, air seals and dead bolt lock
- Base tread is an aluminium "non-slip" plate

YEADON'S PRESSURE BALANCED FIRE EXITS

- High quality steel and aluminium doors
- Pressure balanced for ease of opening and closing against internal pressure

YEADON DOMES ATTACHED TO BUILDINGS

- Can attach our structures to permanent buildings
- Custom design of transition curtains to meet building codes and conditions

YEADON LIGHTING FIXTURES

- Custom designed systems on tilt-type stands for easy emergency demounting
- 2000 or 1000 watt metal halide lamps with reflectors and guards
- Hanging light systems provide an even, pleasant level of lighting

YEADON OPERATION AND MAINTENANCE

- Most equipment used is automatic
- Designed to deal with severe climatic conditions
- Regular inspection and normal servicing as per manuals
- 24 hour emergency service available
- Renowned for our after-sales service capability

YEADON TECHNICAL SUPPORT

- Provide a complete range of engineering and technical support
- Complete design and specifications
- Preparation of tender packages including site investigations
- Planning feasibility studies
- Construction advice and consultation

YEADON WARRANTY

- Materials and Workmanship employed in Yeadon fabric structures are guaranteed for a period of three (3) years against defects in workmanship and materials
- Fabric warranties are 10 year and 15 year pro-rated

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