**MEDICAL INFRASTRUCTURE CATALOGUE**

EVALUATION CRITERIA

**TECHNICAL CHARACTERISTICS Page 2**

**QUALITATIVE (PRE) VALIDATION Page 4**

**Rating**

|  |  |
| --- | --- |
| 1 | Very poor |
| 2 | Poor |
| 3 | Average |
| 4 | Good |
| 5 | Very Good |
| 6 | N/A |

**TECHNICAL CHARACTERISTICS**

(TO BE FILLED IN BY MSF OR SUPPLIER)

|  |  |
| --- | --- |
| Reference/name | DESIGN SHELTER |
| Date of last update | Generated automatically |
| Image+ |  |
| Name of assessor | <Céline van Lamsweerde> |
| Date | <19-12-16> |

**Supplier/manufacturer**

|  |  |
| --- | --- |
| Name | <Design Shelter Inc.> |
| Location | <Ontario/Canada (HQ), Subic Bay/Philippines (Production)> |
| Contact person | <Brad Matchung/bmatchung@designshelter.com/001-778-558-2172> |
| Website | <778-558-2172> |
| Description | <Designing and delivering large scale tension supported structures> |
| Size | <#employees, #clients> |
| Average stock availability | <60 units/01-08-17 > |
| Production capacity | <units/year or month> |

**Physical characteristics**

|  |  |
| --- | --- |
| DIMENSIONS | |
| Dimensions | <Length MH20 6m/MLH1935 10m/MLH1950 15m ><Width 5,6m ><Eave Height 1,83m ><Ridge height 3,1m ><Distance between trusses 2,3m > |
| Covered surface | < MH20 26m2/MLH1935 52m2/MLH1950 78m2> |
| Extendibility | <Y ><extension by trusses 2,3m> |
| ENVELOPE CHARACTERISTICS | |
| Structure material | <pre-assembled aluminum structure> |
| Walls material | <Vinyl or thermal fabric with integrated argon gas bubbles> |
| Roof material | <vinyl or thermal fabric with integrated argon gas bubbles > |
| Floor surface | <Y><#if applicable><e.g. PVC, etc> |
| Windows | <1 per 2,3m module><type><exterior storm flap/bug screen/clear vinyl/interior privacy flap><dimensions Height x Width cm> |
| Openings/doors | <1 per 2,3m module><zipper door or double door><vinyl><dimensions Height x Width cm> <closing mechanisms zipper or > |
| ACCLIMATIZATION | |
| Thermal value | <1,5 K.m2/W><with insulated roof and sidewalls> |
| Insulation liner | <N><notes> |
| Natural ventilation system | <Y ><extractor at the peak of the structures (approx. 1 every 6m)> |
| Adaptable to heating system | <Y ><sidewall panel with integrated opening> |
| ADDITIONAL ADD-ONS AND THEIR FIXTURE | |
| Shadow net kit | <Y><#if applicable><notes> |
| Winterization kit | < Y ><vinyl roof and sidewall panels can be replaced by insulated ones> |
| Flooring kit | <Y><#if applicable><notes> |
| Partitioning kit | <Y/N><#if applicable><notes> |
| Possibility for hanging furniture? | <Y/N><#if applicable><notes> |
| SAFETY AND ROBUSTNESS | |
| Fire resistance (EU norm or eq.) | <Y/N ><notes> |
| Snow load | <kN/m2> |
| Wind resistance | <100 km/h; 120 km/h windguts> |
| Security | <Y/N><#locks><type of locks> |

**Installation**

|  |  |
| --- | --- |
| Assembly manual | <Y/N ><to be checked> |
| People required | <6, not trained> |
| Estimated set-up time | <4h for 78 m2> |
| Installation team provided | <N ><notes> |
| Ground preparation required | <Y ><notes> |
| Equipment required | <N><no tools needed for installation> |
| Possible to dismantle | <Y ><notes> |

**Transport and pricing**

|  |  |
| --- | --- |
| Price (excl. transport & installation) | <280 €/m2 + if insulated panels and roof 50€/m2 + 20€/m2 flooring>< date of request 26/07/16> |
| Packaging dimensions | <Height x Weight x Depth m> |
| Type of transport | <Container/Plane/Truck/Pickup> |
| Loading volume | <m3 or type and number of containers> |
| Loading weight | <kg> |
| Special/sensitive parts | <N ><notes> |
| Lifespan | <20 years> |
| Warranty | <Y/N ><duration> |
| In use by MSF  In use by other humanitarian organizations | <MSF OCP><MLH1950 78m2 in Liberia as pharmacy (2015); MLH1950 468m2 + MLH1935 156m2 in Nepal as pharmacy (2015); MLH1950 78m2 in Mali as pharmacy (2016)>  <Country><Project><m²><status> |
| Comments | <Other things to highlight> |

**QUALITATIVE (PRE)VALIDATION**

(TO BE FILLED IN BY MSF HQ AND/OR FIELD)

|  |  |
| --- | --- |
| Name of assessor | <Céline van Lamsweerde> |
| Position of assessor | <Construction Referent> |
| Date | <19-12-2016> |

**Trustworthiness and durability**

|  |
| --- |
| **Stability/robustness** <4/5><consider material, shape, fragility of components and structural connections, safety> <Light and solid structure due to the aluminum frame and the trapezoidal form. Foundations + fixation to the ground?>  **Trustworthiness** <4/5><consider lifespan, components, resistance to elements and cleaning agents> feed-back OCP?  **Tendency to aging** <rating><consider materials, friction on structural elements> feed-back OCP?  **Maintenance plan** <rating><Y/N ><notes> |

**Modularity and customization**

|  |
| --- |
| **Modularity** <4/5><consider flexibility offered to design different matrixes, being supportive of patient flow, #patient beds, number of components available, ease to extend or reduce, quality of connections>< The structure can be accommodated to changes in configuration by adding 2.3m trusses module. The width allows a ward with 2 beds in front of each other and a 1.6m passage. However the trapezoidal shape strengthen the structure but reduces the usable space on both ends of the structure.  Different model in size can be assembled with a connection module.>  **Customization** <4/5><consider possibility of drilling holes/attach sharp container/hand washing on wall) ><The structure offers good flexibility by adapting the design of side wall panels (plain/door/window). Side walls and roof panels can be insulated or not according to the weather conditions. >  **Continuity/sustainability** <3/5><consider adequacy for transitional shelter><Damaged panels can be replaced by new ones to expend the lifespan of the structure. The structure can’t be improved to change the softwall panels to other type of panels.> |

**Building Envelope performance**

|  |
| --- |
| **Thermal performance** <5/5><Y><excellent thermal performance for a soft walled shelter. A delta in temperature was calculated up to 12°C inside the shelter without mechanical cooling.>  **Natural light** <4/5><Y><Possibility of adding 1 window for each 2.3m truss for … % natural sunlight inside (according to the dimensions of windows)>  **Natural ventilation** <4/5><Y ><cross ventilation, extractors, tendency for condensation><good cross ventilation allowed by non-mechanical roof extractors provided (whirly birds). These extractors can be regulated as well. Condensation can be avoided if insulated wall and/or roof panels are foreseen instead of vinyl. > |

**Hygiene performance**

|  |
| --- |
| **Cleanability of floor and walls** <3/5><consider ease of cleaning and materials resistance><The fabric is treated with antimicrobial inhibitors for better performance against mold and fungus. Washable and chlorine resistant? >  **Tendency to get dirty/slippery** <3/5><consider materials, shape and openings><Inside structure and joints between wall panels has to be taken into account for infection control. +According to type of floor > |

**Installation/supply**

|  |
| --- |
| **Required training** <5/5><<consider #people to setup, required degree of specialized training>  **Ease, duration and safety of setup** <5/5><<consider estimated time, #people required,#steps to install><simple and quick to assemble>  **Required tools and machinery** <5/5><<consider type and # of needed tools ><no tools needed, intuitive set-up by pre-assembled structural nodes.>  **Clarity of manual** <rating><justify> |

**Mobility**

|  |
| --- |
| **Mobility** <5/5><consider foldability, weight setup time, volume for transport> |

**Quality of service**

|  |
| --- |
| **Quality of service** <5/5><consider ease/speed of communication/languages, professionalism; reactiveness; capacity to expand>  **Pricing** <2/5><Expensive for a soft walled shelter, however one of the best alternative for extreme climate due to the insulated fabric. > |

|  |  |
| --- | --- |
| Comments | <Improvement required, general impressions or things to highlight> |