HunterDouglas® NBK Ceramic TERRART® *[Large/Mid/Shingle/Light/Baguette)*
Terracotta Façade System

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PRODUCT SPECIFICATION

PART 1: SYSTEM GENERAL

1.1 INTRODUCTION

HunterDouglas® TERRART® _____ Terracotta Façade System as Manufactured by HunterDouglas® NBK Ceramic as part of Hunter Douglas Architectural Projects.

1.2 DESCRIPTION OF THE SYSTEM

[Open-jointed cladding system based on Rainscreen technology / Cladding system based op Open Façade technology]. Cladding consists of HunterDouglas® TERRART® _____ Terracotta Façade elements with an overall thickness of __mm. [*The system includes a proprietary extruded aluminium support structure with brackets for concealed fixation and adjustable connectors].* The versatility of the system, with respect to dimensions, multiple corner solutions, textures, profiles, colours and glazing offers many design alternatives. *[The HunterDouglas® TERRART® Terracotta Façade System is completely made-to measure and arrives the building site ready to be installed]*

PART 2: PRODUCT

_____m2 HunterDouglas® TERRART® _____ Terracotta Façade System consisting of:

2.1 VENTILATED RAINSCREEN FAÇADE ELEMENT:

Extruded terracotta façade element in modules of _____ mm (manufacturer availability height _____ mm maximum) and variable lengths up to _____ mm, as specified in the drawings _____, as approved by HunterDouglas® NBK Ceramic.

The ceramic elements will be made of natural clay and extruded in factory controlled conditions, where the dye used for the ceramic elements must penetrate the material (surface paint is unacceptable). The material used will be high quality natural clay to meet material performance criteria (without silicone coating or other surface sealants), like to prevent pores (>1.0 mm) in the clay body under press skin, in order to prevent problems in connecting with freezing and thawing. Randomly selected

elements need to be inspected before and during installation by cutting or grinding off sections of the surface. The ceramic elements must have a water absorption rate of minimum 4% in order to prevent long-term condensation on the element surface. The ceramic elements shall not meet the definition of stoneware or porcelain products to maintain the authentic natural look of terracotta. The ceramic elements are equipped with hollow chambers aligned in longitudinal direction whose dimensions are specified by the manufacturer based on outer dimensions of the elements, as specified in the drawings _____, as approved by HunterDouglas® NBK Ceramic. The ceramic elements are cut to the desired size after burning.

The ceramic elements will have a TERRART® natural base colour, specified as _____. The colour depends on the clay source, burning temperature and additives.

[The ceramic elements will have a glazing as surface finish, specified as _____. The glazing will be applied at the front, [back, cut sides] and longitudinal sizes of the ceramic element. After applying the glazing the element will undergo a firing cycle. Glazed terracotta façade elements could show hairline cracks called Craquelé. This is a well known effect on glazed terracotta ceramics which could appear in a short of over a longer period of time. The craquelé will not affect any of the mechanical properties of the product.]

The ceramic elements must be provided in the colours, finishes, textures, sizes and profiles specified and specified in the drawings _____, as approved by HunterDouglas® NBK Ceramic. Prior to the tender date, HunterDouglas® NBK Ceramic shall supply a full-size terracotta sample element (scale 1:1) of the proposed colour, size, format and quality to the architect for preliminary acceptance. The use of sealants is not permitted. Small variations in colour, size and consistency from the sample element are due to the production process and cannot be eliminated.

2.2 SUPPORT SYSTEM

The HunterDouglas® TERRART® _____ Terracotta Façade elements will be secured to the proprietary HunterDouglas® NBK Ceramic TERRART® support system or alternative support system _____, as approved by HunterDouglas® NBK Ceramic.

The support system (substructure) is designed in such a way that the shell tolerances according to DIN are catered for, and the alignment in all three directions is possible (level surface, alignment and plumb line). All elements of the support system are tested for static strength. The support structure must be designed and laid down in the DIN standards as amended, in particular DIN 18516 parts 1 and 3. The installation of all elements must be stress-free, where elongation and/or construction joints must be taken into account in the planning.

[The proprietary HunterDouglas® NBK Ceramic TERRART® support system secures the elements by means of the proprietary element holders, at two places only (as a statically well-defined system), creating a concealed fixation. The element holders must be designed in such a way that they are not visible when looking straight at the façade. The ceramic elements must be mounted in such a way that the elements are firmly secured to the element holders and cannot fall or slip of.]

[The element will be fixed to and supported by the proprietary HunterDouglas® NBK Ceramic TERRART® extruded aluminium support system. The extruded aluminium support profiles are installed at distances that are determined by the lengths of the elements according to the specifications (one profile each located behind the joint of the elements). The securing brackets fixate the extruded aluminium support profiles to the primary support structure. The vertical profile behind the joints of the ceramic elements is equipped with a rubber (or plastic) seal to repel water.]

[A suitable thermal insulation must be established between the brackets (angle brackets, T-profiles) and the wall of the building to eliminate cold bridges.]

2.3 FASTENING MATERIALS

All materials to be stainless steel in either A2 (304) or A4 (316) quality *[to be specified by architect]*

[2.4 THERMAL INSULATION

A suitable thermal insulation must be established between the brackets (angle brackets, T-profiles) and the wall of the building to eliminate cold bridges. Only use approved mineral non-flammable façade insulation panels. The insulation must be hydrophobic and must be secured with approved wide-head plugs to the shell. The insulation must be seamless. Cold bridges must be avoided, and special attention is needed to the fixture of the support structure at the element joints. Ensure an air gap according to DIN 18516 between the insulation and the rear side of the terracotta façade.]

PART 3: ADDITIONAL SPECIFICATIONS

3.1 MATERIAL

3.1.1 TERRACOTTA FAÇADE ELEMENTS

According to technical datasheet _____, as approved by HunterDouglas® NBK Ceramic

3.1.2 SUPPORT STRUCTURE

Alloy extrusions: Al-Mg-Si 0.5 F22 (AW 6060) *[30% recycled content].*

3.2 SURFACE TREATMENT

The ceramic elements will have a TERRART® natural base colour, specified as _____. The colour depends on the clay source, burning temperature and additives.

[The ceramic elements will have a glazing as surface finish, specified as _____. The glazing will be applied at the front, [back, cut sides] and longitudinal sizes of the ceramic element. After applying the glazing the element will undergo a firing cycle.

Glazed terracotta façade elements could show hairline cracks called Craquelé. This is a well known effect on glazed terracotta ceramics which could appear in a short of over a longer period of time. The craquelé will not affect any of the mechanical properties of the product.]

Consult HunterDouglas® NBK Ceramic for availability of colours and to obtain samples.

3.3 INSTALLATION

Upon awarding of the contract, the parties will make arrangements regarding the storage of reserve elements for repairs that might become necessary at a later stage. *[The HunterDouglas® TERRART® Terracotta Façade elements are individually mountable and demountable]*. All materials shall be installed in strict compliance with all local codes, ordinances and manufacturers recommendations including additional requirements as may be called for in the specifications or shown on the drawings.

Consult HunterDouglas® NBK Ceramic for recommendations and details.

3.4 PRIMARY SUPPORT STRUCTURE

To be advised by the architect and to facilitate the HunterDouglas® TERRART® Terracotta Façade elements being erected in accordance with the recommendations as provided by HunterDouglas® NBK Ceramic giving particular regard to span, deflection, loading and cantilevers.

3.5 GENERAL

For the calculation of the m² for costing, the horizontal and vertical joints are measured.

The costs for completion of design drawings, workshop drawings, position drawings, the computation of static strength data and acquisition of required approvals must be included in the unit price. Scaffolding is considered a separate subunit and is tendered for and awarded separately.

PART 4: OVERVIEW

item	quantity	Unit	Performance	Unit price EUR	Total price EUR
3.00			*[Ventilated Rainscreen Terracotta Façade/ Terracotta Open Façade]*		
3.01	……..	m²	Production of a Terracotta Façade -Supply *[and installation*] of HunterDouglas® NBK Ceramic elements of dimensions H/L/D = …../……./…… mm in a natural ceramic base colour, specified as _____. The colour is defined after sampling. *[The ceramic elements will have a glazing as surface finish, specified as _____. The glazing will be applied at the front, [back, cut sides] and longitudinal sizes of the ceramic element. After applying the glazing the element will undergo a firing cycle.]* The ceramic elements are equipped with a rebate edge for hidden installation on element holders of the support structure. *[The support structure must be designed in such a way that individual elements can be replaced or mounted at a later stage]*. *[The unit price includes the trimming of the vertical profiles of the support structure in the area of the sun protection (see enclosed drawings, views and cross-sections. If elements of various lengths are to be produced, according to plan, the trimming of these elements at factory must be included in the unit price.]* *[-Supply and installation of Support System (evidence of approval must be provided). The substructure is to be connected to the shell with approved plugs, and evidence of proper installation is to provided (see item 2.01 of the technical preface)]* *[-Supply and installation of mineral, nonflammable and approved hydrophobic thermal insulation with approved wide-head fittings according to instructions. The thermal insulation has a thickness of …… mm and a K-factor of …… The insulation is*		

			laminated on the outside.]		
3.02	……	Pcs	Addition to item 3.01 For the supply *[and installation*] of reveal elements, that correspond with the grid height, colour and material thickness as in 3.01 The support structure must be modified for the installation of these shaped elements according to the enclosed details drawing, and evidence of modification must be provided. The reveal elements are produced manually by pottery methods and there is thus a greater tolerance as regards their colour and shape This fact must be taken into account when choosing and installing the substructure		
3.03	1	unit	Surcharge for one additional row of elements (where a new press mould must be produced		
3.04	……	m	Surcharge for production of miter cuts at factory, for the construction of outer and inner corners at the building (1 corner = 2 cuts)		
3.05	1	m	Longitudinal cuts produced at the fitting elements as additional performance		
3.06	1	m	Diagonal cuts produced at the fitting elements as additional performance		
3.07	1	m	Cross-sections produced at the factory on request of the construction management for fitting elements, special elements, etc.		
3.08	1	Pcs.	Producing holes in ceramic elements at the factory maximum diameter 60 mm, as additional performance		
3.09	1	Fixed price	Supply and installation of sample façade of ……. m²		

FURTHER INFORMATION

LITERATURE:

www.hunterdouglascontract.com / www.nbk.de

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