

STANDARD CONSTRUCTION MATERIAL SMART SERIES 1-2564

TYPE OF WORK	SMART SERIES
1.STRUCTURES	
Piling	<p><u>Bangkok area and surrounding area</u></p> <ul style="list-style-type: none"> - One storey house pre-stressed concrete pile I-22 not exceed 12.00 m. long (2 piles welded connection) - Two storey house pre-stressed concrete pile I-22 not exceed 18.00 m. long (2 piles welded connection). - Three storey house pre-stressed concrete pile I-22 not exceed 21.00 m. long (2 piles welded connection) <p>In case driven pile cannot be used, drilled pile as engineer specified is used (extra cost)</p> <p><u>Provincial area (stiff soil),</u></p> <ul style="list-style-type: none"> - One storey house pre-stressed concrete solid square pile 22 X 22 cm., length not exceed 10.00 m. is used. - Two -3 storey house pre-stressed concrete solid square pile 22x22 cm. length not exceed 10.00 m. is used. <p>In the area where pile cannot be driven, soil bearing foundation as engineer specified is used.</p>
Footing/Column /Beam /First floor/Upper floor	Prefabrication structure with Multi Joint Lock System. Some parts of structure are cast-in-place as engineer specified.
Floor of parking	Prefabrication structure with Multi Joint Lock System. Some parts of structure are cast-in-place as engineer specified.
Floor of washing area	Reinforced concrete slab on ground as engineer specified.
Entrance pavement	N/A
Concrete	Ready mixed concrete by SCG, INSEE, TPI
2.FLOOR LEVEL	
First floor level	0.80 meter high from the ground or as specified in the drawing (In case of multilevel floor).
3.FLOORING MATERIALS	
General first floor	12 mm. thick laminated floor by “KRONOTEX”: Robusto with PVC floor skirt.
Elder room floor	Shock absorb Safety Floor – PVC type, by KRONOTEX with PVC floor skirt
General upper floor	12 mm. thick laminated floor by “KRONOTEX”: Robusto with PVC floor skirt.
Master toilet floor	Ceramic tile "A" grade (price not exceed 600 baht/sq.m.).

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General toilet floor	Ceramic tile "A" grade (price not exceed 350 baht/sq.m.).
Main entrance terrace	Ceramic tile "A" grade (price not exceed 550 baht/sq.m)
Kitchen floor	Ceramic tile "A" grade (price not exceed 350 baht/sq.m.) with PVC floor skirt.
Terrace /Balcony floor	Ceramic tile "A" grade (price not exceed 350 baht/sq.m.).
Maid Room floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Maid's toilet floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Storage room floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Laundry floor (If any)	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Parking floor	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Washing area	Ceramic tile "A" grade (price not exceed 200 baht/sq.m.).
Footpath (If any)	Coarse polished cement.
Entrance pavement	N/A

4.WALL

General wall	<p>10 cm. thick Autoclave concrete with plastering and skim coat.</p> <p>Plastering material is Mortar cement by “SCG”, “INSEE”, “TPI”, “SINGHA MORTAR” or equal with skim coat. For exterior wall, the wall protective formula mortar “PD Mortar Plus” is used.</p>
Master bathroom wall	Ceramic tile "A" grade (price not exceed 600 baht/sq.m.) height not exceed 2.40 m.
General bathroom wall	Ceramic tile "A" grade (price not exceed 300 baht/sq.m) height not exceed 2.40 m.
Maid's toilet wall	Ceramic tile "A" grade (price not exceed 200 baht/sq. m) height not exceed 2.40 m.
Decorated wall (If any)	<ul style="list-style-type: none"> - 7.5 cm. thick. Autoclave Concrete - Natural color granite “BEZEN” 2”x9” (price not exceed 800 baht/sq.m.) or equal, spaced grooves, no grouting. - In case of fiber cement decorated wall, use “SCG” or “CONWOOD” or Wood Plastic Composite (WPC) by PD WOOD Model pw 100 natural color or as drawing specified.

5.CEILING

General interior ceiling	Beveled edge gypsum board 9 mm. thick by “SCG” or “GYPMANTECH” with galvanized metal studs#26. 1 set of 60x60 cm. instant service access on the second floor ceiling.
Eave ceiling	<p>Wood Plastic Composite (WPC) by PD WOOD by Maxis Wood model QB-003</p> <p>Teak color or equal with Zinc galvanized studs#26 and insect prevention screen.</p>

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	Except house with Insulated Roof, use white powder coated steel-Insulated Roof by AQUALINE or equal
Exterior ceiling (Balcony/Garage)	Beveled edge moisture resistant gypsum 9 mm. thick by “SCG” or “GYPMANTECH”. with galvanized metal studs#26
Ceiling for bathroom	Beveled edge moisture resistant gypsum board 9 mm. thick by “SCG” or “GYPMANTECH” with galvanized metal studs #26
6. ROOF	PD Roof System: Smart
Roof beam	Prefabrication structure with Multi Joint Lock System as engineer specified.
Roof Truss	Alu-zinc (AZ-150) coated high strength steel structure with screw and nut system as engineer specified. For Insulated Roof, the roof truss is steel, size is as engineer specified.
Roof tile	<ul style="list-style-type: none"> - Concrete roof tile model Adamas Tile, chalet shake or smooth tile model with premium color coated (Sunny red, Amber shining orange, Gold shining brown, Brightly brown) with “Dry ridge system”, stainless #24 for valley rafter. - In case of Metal sheet roof, 0.47 mm. thick metal sheet, Alu-zinc color, with 5 mm. PE Foam insulation will be applied. - In case of polished concrete roof, the paint type waterproofing system, TOA Roof seal Sunblock or equal will be applied. - In case of Insulated Roof, the Smart Seam Roof Cool System EPS by AQUALINE or equal will be used. - In case of Shingle Roof, use the Double layer type (the color chosen later) with equipment from manufacturer
Heat prevention beneath the roof	<ul style="list-style-type: none"> - 3 inches thick insulator by “STAY COOL”: Premium placed on ceiling beneath upper and lower roof level (except garage, upper/ lower terrace area external ceiling and Insulated Roof). - For the concrete roof or concrete floor, 6 inches thick “STAY COOL”: Premium is used.
Facia	Synthetic wood “Eave Plus” or equal In case of Metal Sheet roof, the flashing is the same color as the roof.
7.WINDOWS	
General Window	White vinyl window, Multi point lock system by “WINDSOR”: Mark II with 4.5 mm. thick clear green glass
Window of toilet	White vinyl window, Single point lock system by “WINDSOR”: Mark II with 4.5 mm. thick frosted glass (as drawing specified)

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Adjustable Louver (if any)	White vinyl window by “WINDSOR”: Mark II or equal with 4.5 mm. thick green clear glass.
8.DOORS	
Door to Terrace / Balcony/ main entrance	White vinyl door with Multi point lock system by “WINDSOR”: Mark II or equal with 4.5 mm. thick green clear glass.
General interior door/ Bedroom/ Parking/ Storage room (If any)	Laminated Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame by “PD WOOD” : L-WPC-004-006 (choose color later)
Door for Bathroom	White vinyl window, Single point lock system by “WINDSOR”: Mark II with 4.5 mm. thick frosted glass.
Door for kitchen/ garage (open to exterior)	White Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame with steel structure by “PD WOOD” model C1-WPC-008, 011, 012
Door for bathroom of maid room	White Wood Plastic Composite (WPC) door and white wood pattern film coated Wood Plastic Composite (WPC) door frame by “PD WOOD”
Door for storage room under stair (if any) / Door for electric control unit panel	Vinyl door with louver by “WINDSOR”
Handrail	Vinyl handrail by “WINDSOR” as specified drawing (steel/ stainless).
9.DOOR AND WINDOW ACCESSORIES	
Handle / Lock set for general doors	Stainless steel mortise lock set by “MATURE” model Premium MSL-018 (silver hairline) or equal with stainless steel door stopper
Hinge for general doors	3”x4” Stainless steel hinge by “MATURE” or equal, 4 pieces/door
Hing for toilet doors	By “WINDSOR” or equal
Lock set for bathroom	Stainless steel knob by “HAFELE” or equal with stainless steel door stopper
Lock set for maid bathroom	Stainless steel knob by “MATURE”: MK-001-BK-SS or equal with stainless steel door stopper
Adjustable louver (If any)	By “WINDSOR” or equal
Hung type sliding door	By “HAFELE” or equal
10.SANTARY WARE	“AMERICAN STANDARD” or COTTO” (White color) or equal (as specified by company)

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Water closet for master bathroom	Model: TF-2019-WT9 , electronic seat with accessories
Water closet for general bathroom	Model: STD MILANO TF-2327SC-WT-0 with accessories Cleaning spray model: A-4700A-WT with chromium stop valve model STD A-4401
Water closet for maid bathroom	Model: STD WINSTON II TF-2695SCW-WT-0 with accessories Cleaning spray by VYV with chromium stop valve model STD A-4401
Wash basin	General bathroom model: WP-F507-WT, under the counter type Main bathroom model: STD WINSTON II TF-0979-WT-O, wall hung type
Bathroom counter	General bathroom counter topped with granite stone (Engineer grey, Chinese pink, white tone or equal), counter edge topped with ceramic tile “A” grade same as the wall.
Bathtub (only 1 master bathroom)	Model: TF-8151 with wall mounted type mix faucet and shower set model: NEO MODERN A-0711-200 with hot water pipe.
Urinal	Model: TF-6747 NEO MODERN with automatic electronic flush valve accessories model: A-8014AC-WT (in 1 bathroom downstairs)
Mirror	Model: LV02 (Model : VYV for maid bathroom)
Soap holder	Model: TF-9402 (model TF-9000 for maid bathroom)
Tissue holder	Model: TF-9411 (model TF-9011 for maid bathroom)
Towel bar	Model: TF-9485 (Model : TF-9085 for maid bathroom)
Wall mounted faucet for shower	General bathroom model: NEO MODERN MONO A-0726-10-A with chromium shower set Bathroom with hot water piping model: NEO MODERN A-0712-300 with chromium shower set Maid bathroom “VYV”
Wash basin faucet	Master bathroom, bathroom with hot water piping model: STD NEO MODERN A-0701-100 (2 points in total) General bathroom model: STD NEO MODERN MONO A-0706-10 Maid bathroom model: STD WINSTON FFAST 601-1T1500BT0
Wall mounted faucet	General bathroom model: STD WINSTON FFAST602-0T0500BT0 (one in each bathroom) Maid bathroom “VYV”
Shelf	Model: TF-9075 for maid bathroom
Bathroom floor drain	2" diameter odor trap floor drain (square type) model: STD A-8200-N chromium color, 2 for each bathroom.

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11. ELDER BATHROOM (If any)	“AMERICAN STANDARD” or COTTO” (White color) or equal (as specified by company)
Water closet	Model: COTTO For All SC5622 with white seat C9251 and equipment Cleaning spray model: A-4700A-WT with stop valve mode STD A-4401
Wash basin	Model: COTTO For All SC00537
Bathroom counter	Topped with granite stone (Engineer grey, Chinese pink, white tone or equal), counter edge topped with ceramic tile “A” grade same as the wall.
Mirror	Model: American Standard LV02
Soap holder	Model: American Standard TF-9402
Tissue holder	Model: American Standard TF-9411
Towel bar	Model: American Standard TF-9485
Wall mounted faucet for shower	Model: American Standard NEO MODERN MONO A-0726-10-A with chromium shower set
Wash basin faucet	Model: American Standard STD NEO MODERN MONO A-0706-10
Wall mounted faucet	Model: American Standard STD WINSTON FFAST602-0T0500BT0
Bathroom floor drain	Model: CT699Z1 by COTTO (size 80 cm.)
Safety accessory for Elder bathroom	- Handrail model: COTTO HANDICARE CT752#SA - Foldable support arm model: COTTO CT0190
13. INTERIOR STAIR	
Stair structures	Prefabrication structure with Multi Joint Lock System as engineer specified.
Wooden stair set	A set of Engineered Wood by MUKU , color coated from the factory
Stair tread	Size 300x30 mm.
Riser	Size 200x20 mm.
Handrail	Size 100x50 mm.
Post	Size 125x125 mm.
Baluster	Size 50x50 mm.
Landing	30 mm. thick, 2 pieces (V groove connect)
12. WATER: Comply with Standard of Metropolitan Water Authority or Provincial Water Work Authority. PVC pipes by SCG or THAI PIPE	
Clear water pipe	$\frac{3}{4}$ ” dia. PVC pipe (class 13.5) for main pipe from building to meter, length not exceed 30.00 m. with ball valve, metal hand, separating for each floor. $\frac{1}{2}$ ” dia. PVC (class 13.5) for branch pipe. For hot water pipe, Pimaflex Multi-pipe size 11.6 mm. by PIMATEC

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Waste water/ Drain	4" dia. PVC pipe (class 8.5) for sewage pipe. 2" dia. PVC (class 8.5) for drainage pipe and 3" dia. For main pipe (class 8.5)
Ventilation pipe	1" dia. PVC pipe (class 5.0)
Rain water drainage	2" dia. PVC pipe for branch rain water pipe and 3" dia. for main water pipe (class 8.5). Skull shape stainless steel floor drain for balcony or concrete slap roof.
Solar Water Heater	Capacity 160 litres with hot water piping (Pimaflex) for 2 bathrooms upstairs for wash basin and shower, 2 for each bathroom.
13. SANITARY SYSTEM	
Treatment Tank	Fiberglass tank by "DOS": ST-21/GY or "PP": Ecotank or equal (put underground).
Grease trap Tank	Fiberglass tank by "DOS": GT-09/BK-40 or "PP":GT-30UG (put underground).
Drainage pipe	Asbestos cement pipe dia. 8" to public drain (Not exceed 20.00 m. long from the house).
Manhole	30x40 cm. precast manhole every 6.00 m. interval and every bends or corners.
14.ELECTRICAL SYSTEM : Comply with Standard of Metropolitan Electricity or Provincial Electricity Authority	
Main income wiring	Single copper wiring PVC insulated (NYY#35 sq.mm.) The length from wall to meter not exceed 30.00 m (put in PE conduit dia. 2" underground).
Main income telephone wiring	Four cores wiring not exceed 30.00 m.from meter to the house put in PE conduit ½" underground.
Internal wiring	Single copper wiring with PVC insulated with yellow PVC conduit in wall or on ceiling.
Air condition wiring	1 point at Master Bedroom
Control panel	15 Amps. 19 circuit breaker by "HACO": HD-S119 or equal with Residual Current Device (RCD).
Lighting switch	Wall mounted lighting switch by "HACO": Primo PR-F001-3 / PR-FS111 (2 way type switch only at stair hall) 1 for each room and 2 for Master Bedroom.
Receptacle	Wall mounted receptacle by "HACO": Primo PR-E233, 2 for each room and 3 for reception room (except storage/bathroom).
T.V. / Telephone outlet	Wall mounted T.V./Telephone outlet by "HACO": Primo PR-T075 (TV) / PR-R024 (telephone) 3 for each.
Emergency light	1 set of single LED lamp head emergency light
Luminaire	Provided by the owner
15. ELECTRICITY AND WATER METER	

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Permanent electric meter	15 Amps, Fee covered by company. (Exclude the service area extension fee)
Permanent water meter	3/4" Diameter, Fee covered by company. (Exclude the service area extension fee)
16. PAINTING	
External wall	External acrylic paint " TOA ": Supershield or equal, 1 primer and 2 final coated
Internal wall	Internal acrylic paint " TOA ": Supershield Duraclean or equal, 1 primer and 2 final coated
Steel surface	Emulsion paint " TOA ": Glipton or equal 1 primer and 2 final coated
Facia/Fiber Cement Board	External acrylic paint " TOA ": Supershield or equal, 1 primer and 2 final coated
17. AIR VENTILATION SYSTEM	
Air ventilation equipment	PM2.5 prevention and clean air ventilation equipment by PD Fresh Airflow model Fresh II, wall mounted in the bedrooms.
18. OTHER WORK	
Termite protection system	Piping and springers, for termite chemical treatment, are provided by company. The owner respond for termite service provider.
Tile adhesive	Glue cement by PD Mortar or equal
Warranty	20 years warranty for the structure of the house and 2 years for general work Exclude natural depreciation of materials due to long used and misused.

Remarks: The company reserves the right to change the list if needed but the price of the materials is not less than that stated above. The cost of the construction does not include:

- Old building demolition
- Interior decoration and garden
- Air conditioner system.
- Water drainage outside the construction site.
- Mosquito net, door and window steel bars, rain gutter.