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 Terms

 Types of stairs

 Material for stairs

 Types of stairs
**construction of stairs**

![Diagram of stairs with measurements and explanations]

Neufert, Ernst; Neufert, Peter. Architects Data. 3rd edition 2000 page 191

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**Building regulation in Hong Kong**

- Clear height of staircase min. 2.00 m
- Clear width of stair/flight min. 1.050 mm
- Landing not be less than the width of the staircase
- Treads not less than 225 mm, better 280 mm
- Riser not more than 175 mm
- Max. 16 steps in one flight
- Handrail for stair between 850 and 950 mm

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**calculation of stairs**

![Diagram showing calculation of stairs]

630 mm = 2 x step height/riser + 1 x step width/tread

François Blondel 1683

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**How to draw stairs and staircases?**

![Examples of stair drawings]

Source: Bielefeld, Skills technical drawing page 44

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**Banister and handrails**

![Diagram showing banister and handrails]

Source: Kilmer. Construction drawings and details for interiors. Basic skills 2009 page 163

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Banister and handrails

Handrail
Steel balustrade

Source: R. Allen: Construction Detailing, 1993

ramps

How to draw ramps?

Source: Bielefeld, Skills technical drawing, page 44

Exercise stair drawing

please sketch and fill – in the gaps / information with symbolic for different floors
staircase width min. 1050 mm
tread, riser, landing width and length
2 m headroom
Floor to floor height
handrail, banister

Ground Floor drawing
Single Flight
Max 16 risers
Intermediate floor
Stair with half landing
and 2 risers at the landing
Roof plan
Stair with Intermediate landing

stair drawing

2.0 General Stairs Illustration-3 Storey Illustration
-Show what you see in solid lines and what you do not see in dotted (hidden) lines
Dotted lines shown the stair steps above the eye level, Show necessary dotted components

Source: Design Drawing, 1998

stair drawing

2.0 General Stair-Plan at Level 1-Ground Level
- Nos of Risers;
- starting riser to be marked by a short line besides the arrow line or a circle at the beginning of arrow line
- Handrail;
- Turning radius

Presentation Dwg
stair drawing

2.1 Stair

An continuous arrow should be used for illustrated the direction of travel or movement.
- Nos of Risers;
- Show all steps;
- End of arrow to be shown in the second flight of second flight;
- Guard rail;
- turning radius;
- Use this for your assignment (similar)

Exercise stair drawing

1. Calculate a staircase with floor to floor height from 4200 mm
2. The staircase should have three floors.
3. Sketch the staircase in floor plan and section in scale 1:50/1:100
4. Add all annotation like dimensions, and identify the elements: flight, landing, floor-to-floor height, clearance height, stair width, width of the landing, tread, rise; handrail
5. Sketch ground floor plan, first floor plan and roof plan from your staircase with the special lining for each floor.

details

Rich, Dean. Principles of element design 1999 page 145

details


details

Blanc, Stairs, steps and ramps. 1996 page 143

bibliography