

Etude et Dimensionnement de Structure
Béton Armé, Bâtiment et Génie Civil

SIEGE SOCIAL

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Plan n° : 100^A

Dossier : DCE

Dessiné par :
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SAGEC
ESPRIT HORIZON

74 - CRANVES SALES

ABCD

Cahier de Détails

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74 - Douvaine

Tel : 04.50.85.02.40

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74 - Margencel

Tel : 04.50.70.33.20

Architecte : PHILIPPE CHEYSSON

74 - Thonon-les-Bains

Tel : 04.50.26.67.69

Entreprise :

MODIFICATIONS

Indice	Date	Objet
-	06/04/20	1 ère diffusion
A	16/06/20	M.A.J.
B		
C		
D		

SAGEC
ESPRIT HORIZON
74 Cranves Sales

Habitat collectif
Batiments A B C D



Les modifications structurelles apportées aux plans architecte sont indiquées sur les plans d'ensemble par des nuages



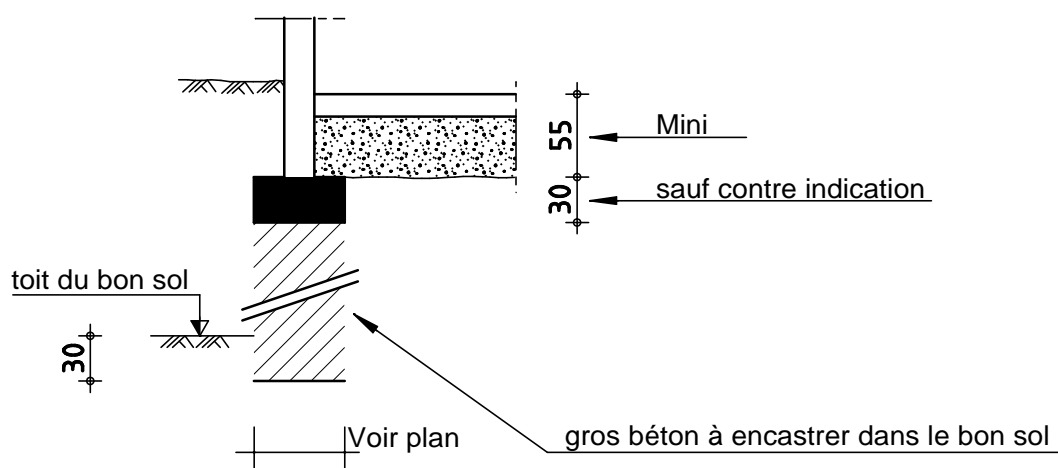
1 - HYPOTHESES DE CALCULS

- Nuance d'aciers : T.S. et H.A. : FeE 500
- Résistance du béton : $F_c 28 = 25 \text{ MPa}$
- Application des règles parasismiques EC8 . Zone 4 . Catégorie II
- Charges d' exploitation des dalles : voir plan d'ensemble
- Charges permanentes sur dalles : voir plan d'ensemble
- Coupe feu 1 heure par la structure, prévoir complément si besoin

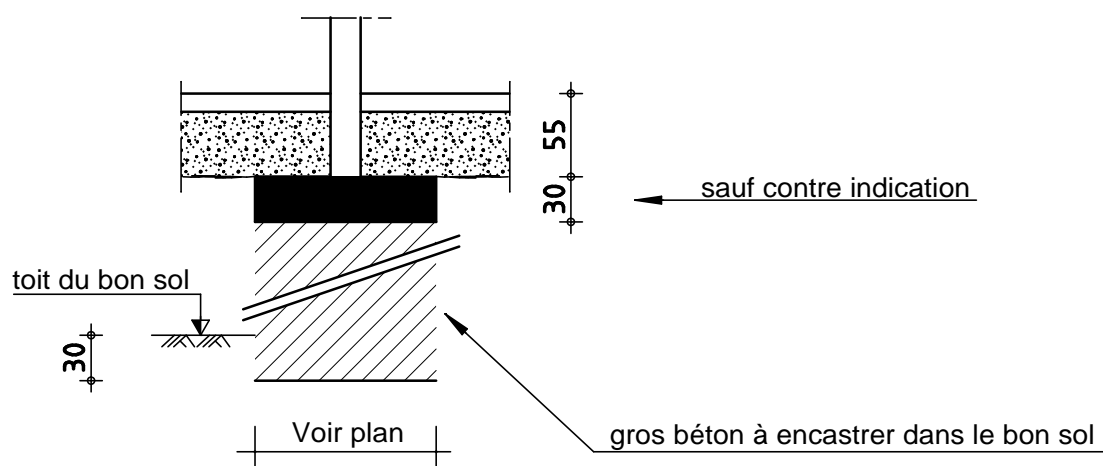
2 - FONDATIONS

- Taux de travail du sol = 3,0 Bars à l'E.L.S. suivant rapport géotechnique IMOGEO de Décembre 2019
- Encastrement mini dans le bon sol xx cm avec traversée des couches altérées par rattrapage en gros béton.
- Mise hors gel mini à -0.90 du sol extérieur fini du projet .
- Fondations coulées en pleine fouilles.
- Empierrement sous dallage 30cm mini

SEMELLES FILANTES : H.A. = 60 Kg / m³



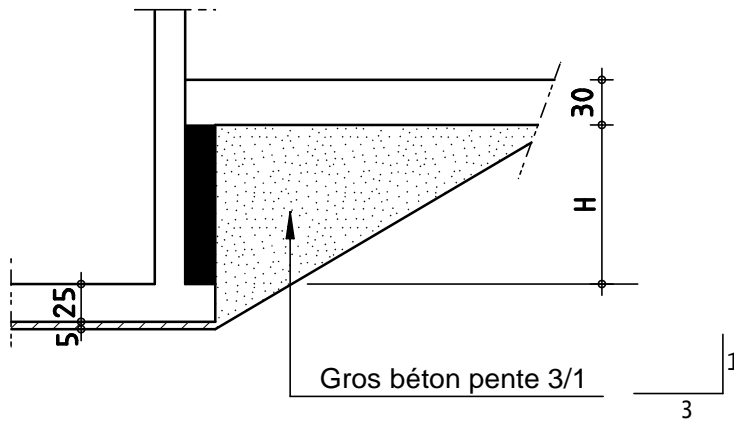
MASSIFS ISOLES : H.A. = 70 Kg / m³



DALLAGE armé et liaisonné à la structure:

- Epaisseur 15 cm . T.S = 6 Kg/m² non compris aciers de calage
H.A. = 0.5 Kg/m²
- Couche de forme 40cm.

REDANS R : H.A. = 150 Kg / m³



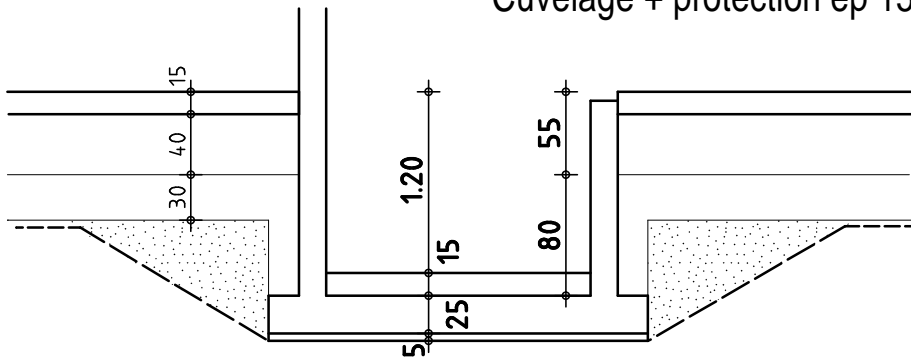
REDAN -R- H = 80 cm
 -R1- H = 15 cm
 -R2- H = 50 cm
 -R3- H = 20 cm
 -R4- H = 90 cm
 -R3- H = 30 cm
 -R6- H = 35 cm
 -R7- H = 10 cm
 -R8- H = 55 cm
 -R9- H = 45 cm
 -R10- H = 32 cm
 -R11- H = 108 cm

FOSSE ASCENSEUR

Radier ep 25 cm HA + TS = 15 kg/m²

Murs TS = 6 kg/m² + HA liaison de murs

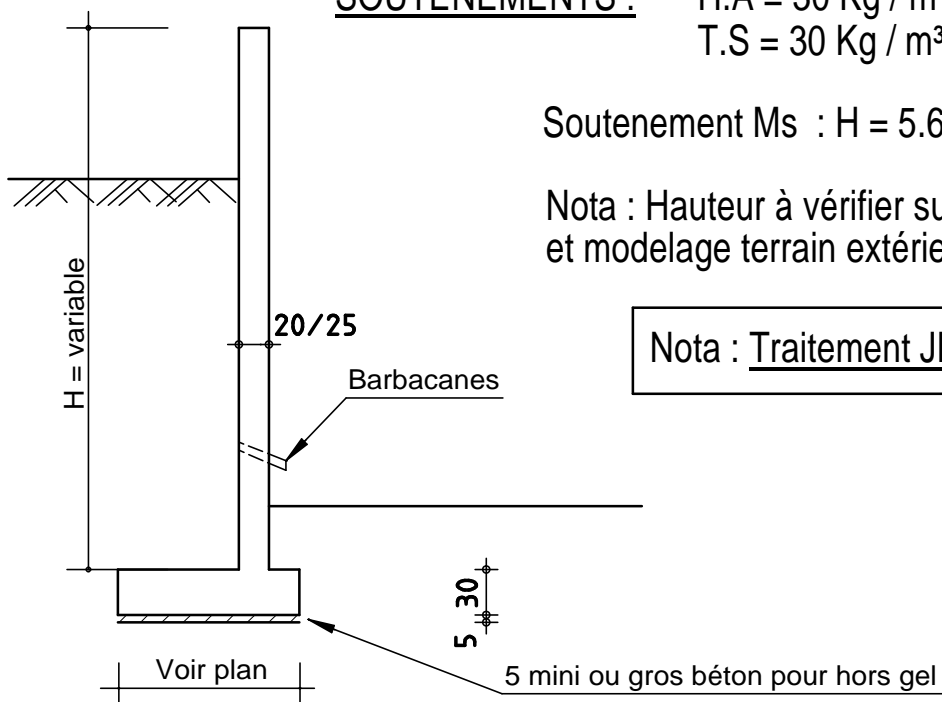
Cuvelage + protection ep 15 cm



SOUTENEMENTS : H.A = 30 Kg / m³
 T.S = 30 Kg / m³

Soutènement Ms : H = 5.65 à 5.05

Nota : Hauteur à vérifier suivant plans de l'architecte et modelage terrain extérieur futur .



Nota : Traitement JD avec Waterstop.

3 - ELEMENTS VERTICAUX

3.1 - MURS ARMES : Murs béton armé

3.1.1 - MURS DU SOUS SOL :

Murs extérieurs enterrés de 20cm d'ép. : $H \leq 2.70\text{m}$ - T.S. = 7.5 Kg/m^2

$H > 2.70\text{m}$ - T.S. = 9.0 Kg/m^2

Murs intérieurs : T.S. = 5.6 Kg/m^2

3.1.2 - MURS DU REZ ET DES ETAGES :

Murs extérieurs : T.S. = 2.8 Kg/m^2

Murs intérieurs : T.S. = 5.6 Kg/m^2

3.2 - POUTRE VOILE V :

H.A. = 8 Kg/m^2

T.S. = 8 Kg/m^2

NOTA : Dv=Départ de Voile (compté dans voile)

3.3 - PILIERS B.A. : (Noircis sur les plans)

Isolés : H.A. = 180 Kg/m^3

Incorporés dans les murs : H.A. = 140 Kg/m^3

En about de mur : H.A. = 180 Kg/m^3

3.4 - RENFORTS D'ANGLES & ABOUTS DE MURS SANS PILIERS :

voir schéma {

①	Sous-Sol / Rez / Attique : H.A. = 8 Kg/ml	} y compris attentes industrielles
②	Etages courants : H.A. = 6 Kg/ml	

3.5 - RENFORTS D'OUVERTURES TOUS NIVEAUX : (Portes, portes fenêtres et fenêtres)

H.A. = 5.8 Kg/ml

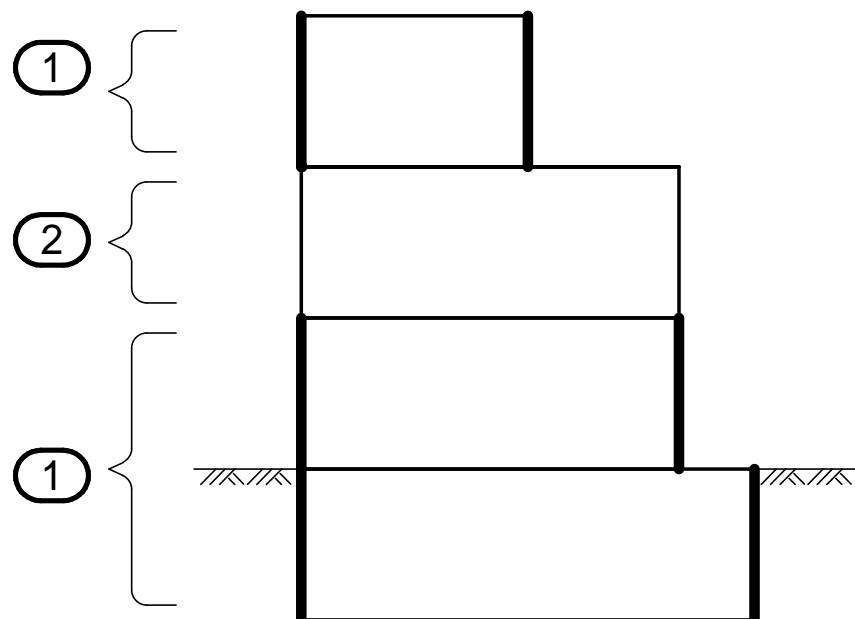
3.6 - CHAINAGES HORIZONTAUX :

3.6.1 - CHAINAGES TOUS NIVEAUX : (Liaison dalle / mur, sous pannes)

H.A. = $4,5 \text{ Kg/ml}$

3.6.2 - CHAINAGES EN RIVE DE BALCON : H.A. = 3 Kg/ml

3.4 - LOCALISATION RATIO RENFORTS D'ANGLE ET ABOUTS DE MURS SANS PILIERS :



4 - ELEMENTS HORIZONTAUX

QUANTITES T.S. ET H.A. INDIQUEES DANS OEUVRE .

DALLES PORTEES SUR 2 ou 4 APPUIS (voir sur plan d'ensemble)

PAS DE PREDALLES POSSIBLES POUR ZONES SUR 4 APPUIS.

NOTA : ratio moyen donné pour la totalité de la surface de la dalle dans oeuvre, toutes épaisseurs confondues, non applicable à des zones isolées, y compris balcons et terrasses.

SUITE DEMANDE DU BUREAU DE CONTROLE

Dalle ép. 25cm : H.A. = 1.0 Kg/m²
T.S. = 16.20 Kg/m²

4.1 - PLANCHER HAUT DU SOUS SOL -1 (20 / 23cm): H.A. = 0.4 Kg/m²
T.S. = 9.80 Kg/m²

4.2 - PLANCHER HAUT DU REZ (20 cm): H.A. = 0.3 Kg/m² (AB)
T.S. = 10.8 Kg/m²

H.A. = 0.3 Kg/m² (CD)
T.S. = 11.3 Kg/m²

4.3 - PLANCHER HAUT DU NIVEAU 1 (23 cm): H.A. = 0.4 Kg/m² (A)
T.S. = 13.6 Kg/m²

H.A. = 0.6 Kg/m² (B)
T.S. = 15.9 Kg/m²

H.A. = 0.6 Kg/m² (CD)
T.S. = 15.5 Kg/m²

4.5 - PLANCHER HAUT DE L'ATTIQUE (20 cm): H.A. = 0.3 Kg/m² (A)
T.S. = 10.6 Kg/m²

H.A. = 0.3 Kg/m² (B)
T.S. = 13.0 Kg/m²

H.A. = 0.3 Kg/m² (CD)
T.S. = 10.2 Kg/m²

4.6 - DALLE HAUTE DE LA GAINES ASCENSEUR : H.A. = 6 Kg/m²
T.S. = 6 Kg/m²

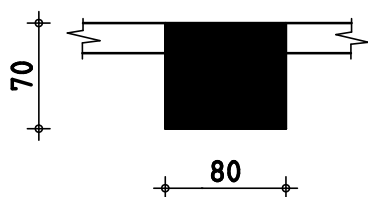
4.7 - ESCALIERS :

Préfabriqués du commerce ou coulés en place.

Si coulés en place paillasse ép 16cm .T.S + H.A. = 12 Kg/m²

- S101 -

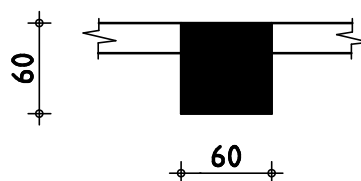
80x70h



H.A. = 150 Kg/m³

- S102 -

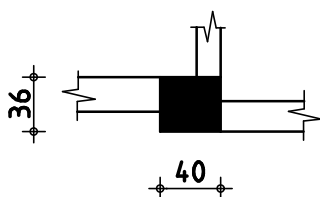
60x60h



H.A. = 200 Kg/m³

- S103 -

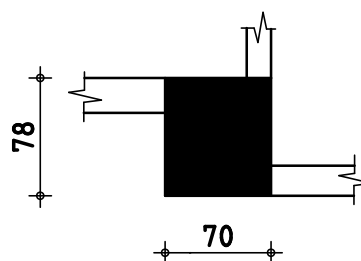
40x36h



H.A. = 160 Kg/m³

- S104 -

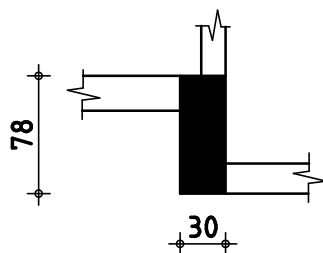
70x78h



H.A. = 100 Kg/m³

- S105 -

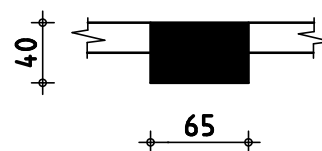
30x78h



H.A. = 120 Kg/m³

- S106 -

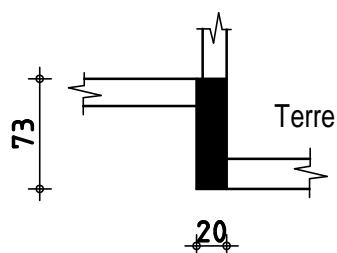
65x40h



H.A. = 200 Kg/m³

- S107 -

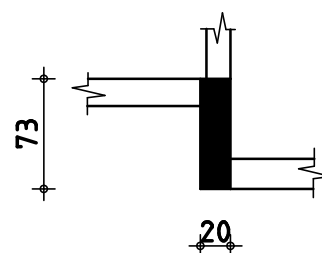
20x73h



H.A. = 160 Kg/m³

- S108 -

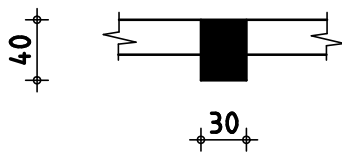
20x73h



H.A. = 160 Kg/m³

- S150 -

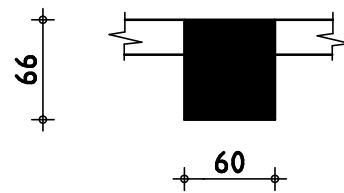
30x40h



H.A. = 150 Kg/m³

- S151 -

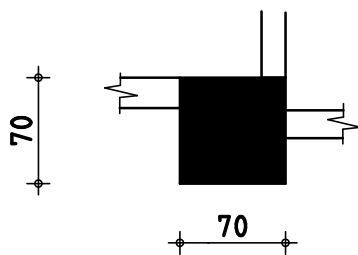
60x66h



H.A. = 150 Kg/m³

- S152 -

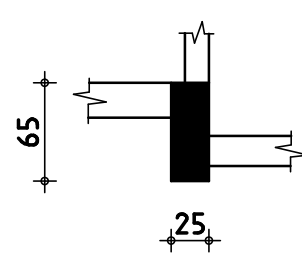
70x70h



H.A. = 150 Kg/m³

- S153 -

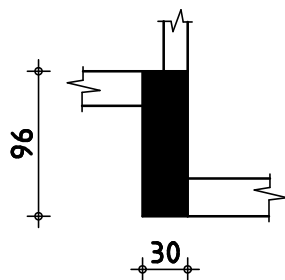
25x65h



H.A. = 100 Kg/m³

- S154 -

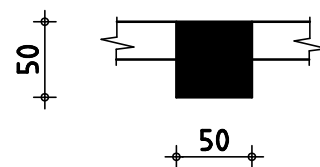
30x96h



H.A. = 100 Kg/m³

- S155 -

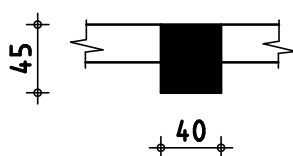
50x50h



H.A. = 120 Kg/m³

- S156 -

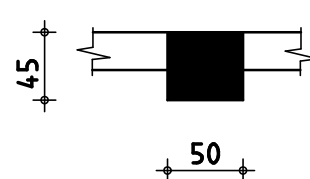
40x45h



H.A. = 120 Kg/m³

- S157 -

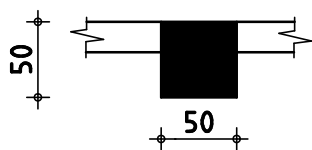
50x45h



H.A. = 150 Kg/m³

- S158 -

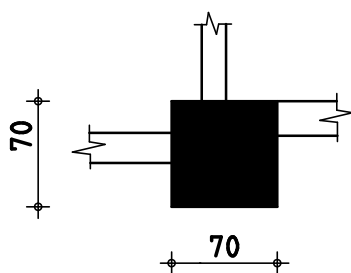
50x50h



H.A. = 180 Kg/m³

- S200 -

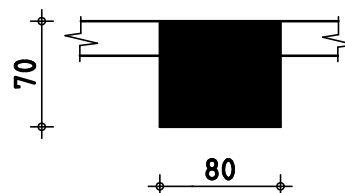
70x70h



H.A. = 190 Kg/m³

- S201 -

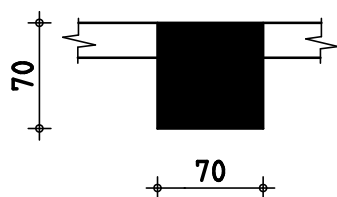
80x70h



H.A. = 130 Kg/m³

- S202 -

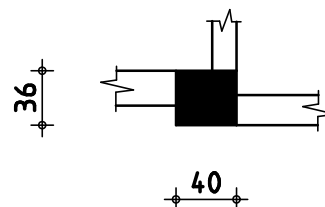
70x70h



H.A. = 190 Kg/m³

- S203 -

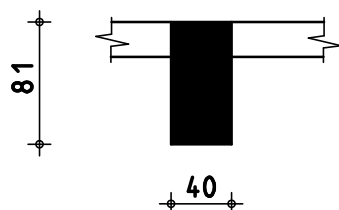
40x36h



H.A. = 160 Kg/m³

- S204 -

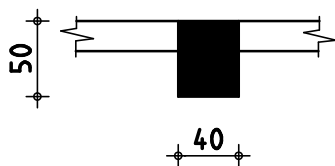
40x81h



H.A. = 130 Kg/m³

- S250 -

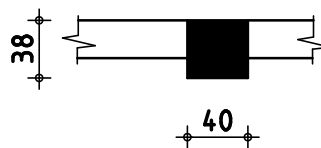
40x50h



H.A. = 130 Kg/m³

- S251 -

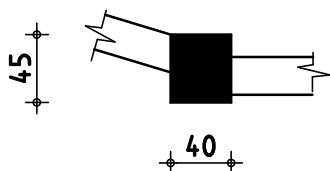
40x38h



H.A. = 130 Kg/m³

- S252 -

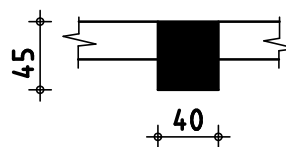
40x45h



H.A. = 160 Kg/m³

- S253 -

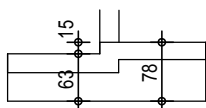
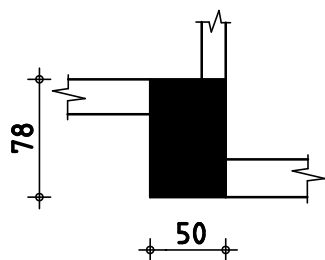
40x45h



H.A. = 160 Kg/m³

- S254 -

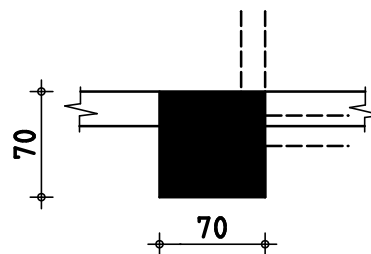
50x78h



H.A. = 110 Kg/m³

- S255 -

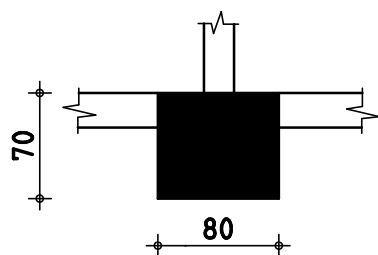
70x70h



H.A. = 120 Kg/m³

- S256 -

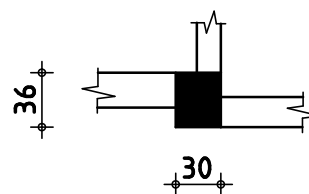
80x70h



H.A. = 100 Kg/m³

- S257 -

30x36h

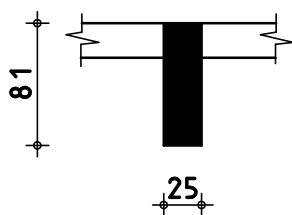


H.A. = 180 Kg/m³

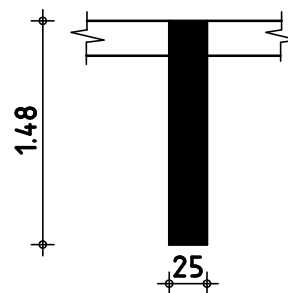
- L101 -

25x81h

25x81h (AC)
 25x85h (D)
 25x91h (A)
 25x156h (A)

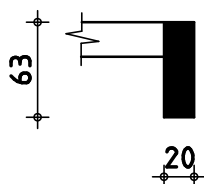
H.A. = 200 Kg/m³**- L102 -**

25x148h

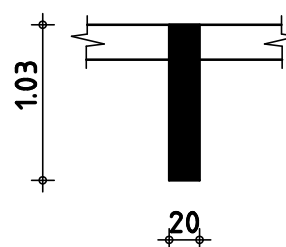
H.A. = 80 Kg/m³**- L103 -**

20x63h

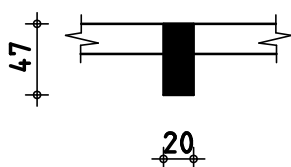
20x73h (A)
 20x68h (B)
 20x63h (C)
 20x83h (D)

H.A. = 60 Kg/m³**- L104 -**

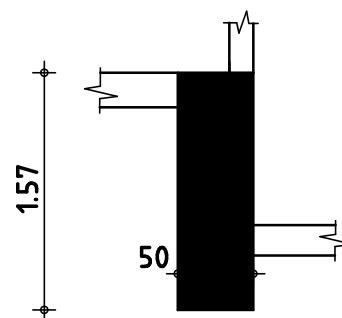
20x103h

H.A. = 60 Kg/m³**- L105 -**

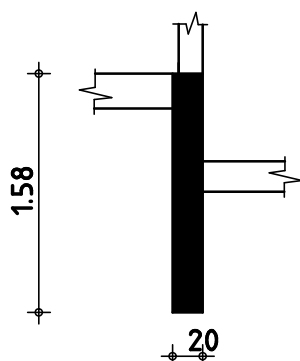
20x47h

H.A. = 60 Kg/m³**- L106 -**

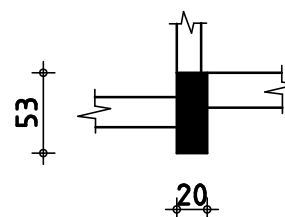
50x157h

H.A. = 140 Kg/m³**- L107 -**

20x158h

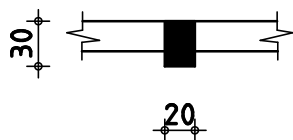
H.A. = 80 Kg/m³**- L108 -**

20x53h

H.A. = 80 Kg/m³

- L109 -

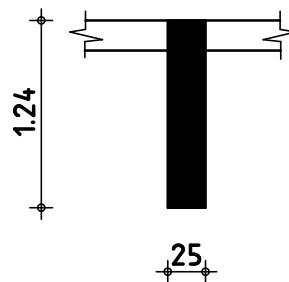
20x30h



H.A. = 80 Kg/m³

- L110 -

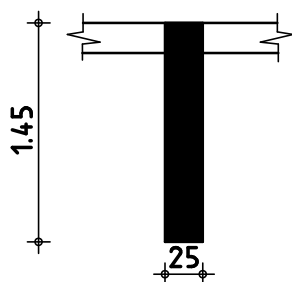
25x124h



H.A. = 80 Kg/m³

- L111 -

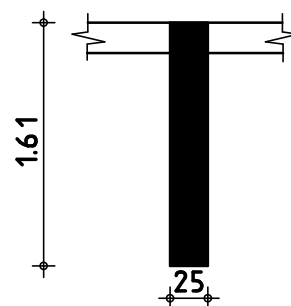
25x145h



H.A. = 80 Kg/m³

- L112 -

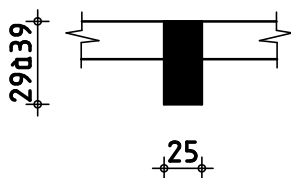
25x161h



H.A. = 80 Kg/m³

- L113 -

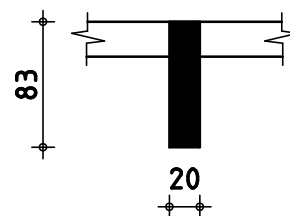
25x29h à 39h



H.A. = 120 Kg/m³

- L114 -

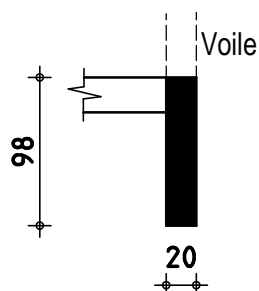
20x83h



H.A. = 60 Kg/m³

- L200 - (Dv.)

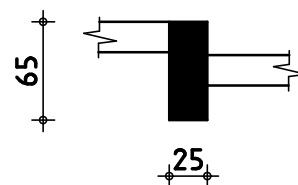
20x98h



H.A. = 60 Kg/m³

- L250 -

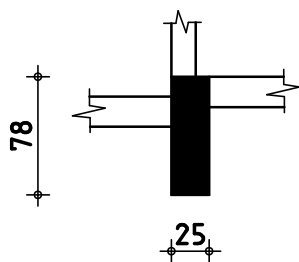
25x65h



H.A. = 100 Kg/m³

- L251 -

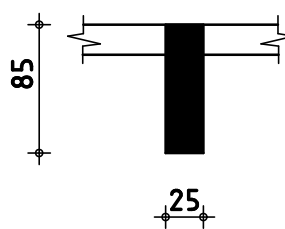
25x78h



H.A. = 200 Kg/m³

- L252 -

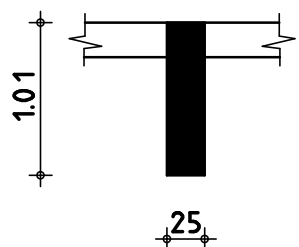
25x85h



H.A. = 80 Kg/m³

- L253 -

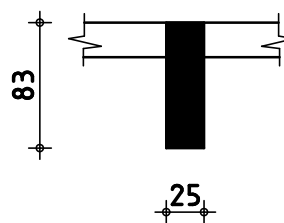
25x101h



H.A. = 180 Kg/m³

- L254 -

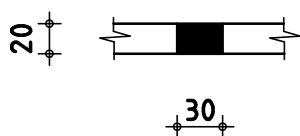
25x81h



H.A. = 80 Kg/m³

- Bn101 -

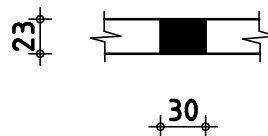
30x20h



H.A. = 140 Kg/m³

- Bn102 -

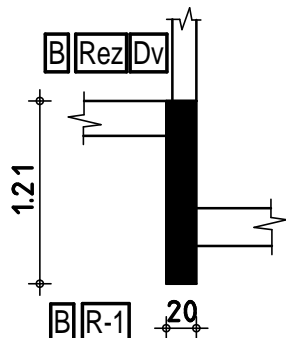
3h0x23h



H.A. = 120 Kg/m³

Console C5

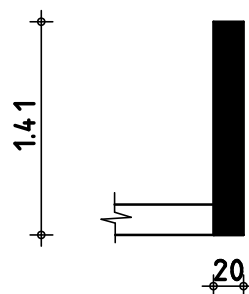
20x121h



H.A. = 200 Kg/m³

- Gc2 -

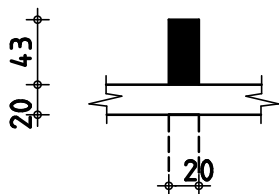
20x141h



H.A. = 60 Kg/m³

- Re10 -

20x43h

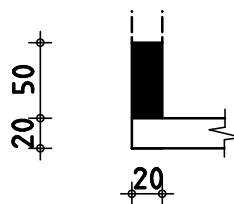


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re11 -

20x50h

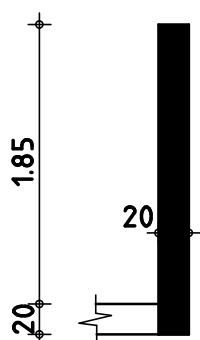


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re12 -

20x205h

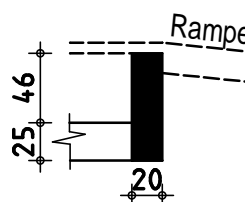


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re13 -

20x71h

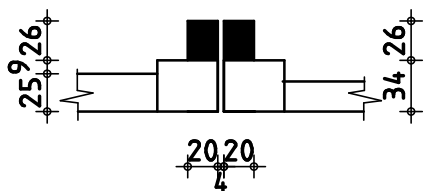


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re14 -

20x26h

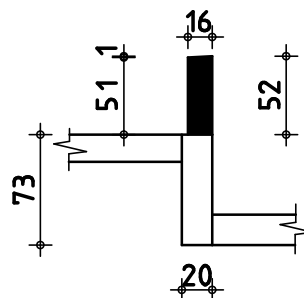


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re15 -

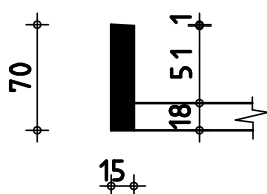
20x52h



H.A. = 60 Kg/m³

- Re16 -

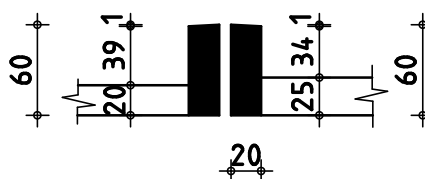
15x70h



H.A. = 60 Kg/m³

- Re17 -

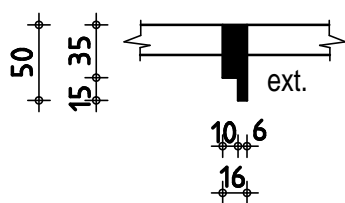
20x60h



H.A. = 60 Kg/m³

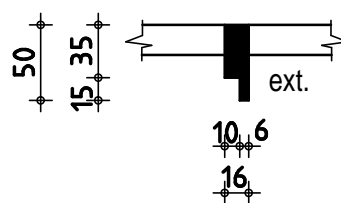
AUTRES NIVEAUX

- L1 -



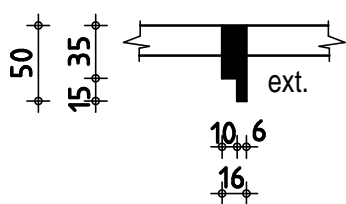
H.A. = 100 Kg/m³

- L1A -



H.A. = 130 Kg/m³

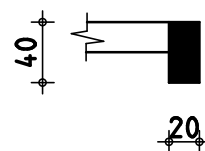
- L2 -



H.A. = 80 Kg/m³

- L3 -

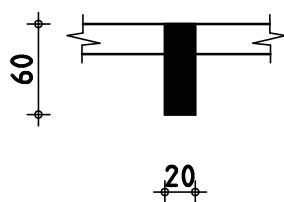
20x40h



H.A. = 60 Kg/m³

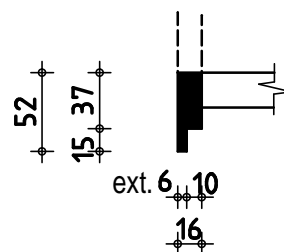
- L4 -

20x60h



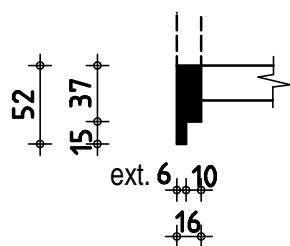
H.A. = 60 Kg/m³

- L5 -



H.A. = 160 Kg/m³

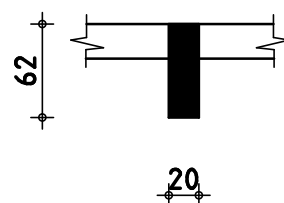
- L6 -



H.A. = 110 Kg/m³

- L7 -

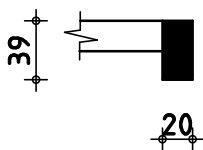
20x62h



H.A. = 60 Kg/m³

- L8 -

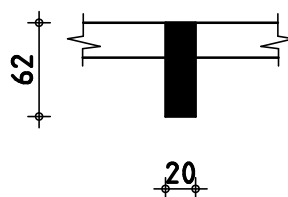
20x39h



H.A. = 60 Kg/m³

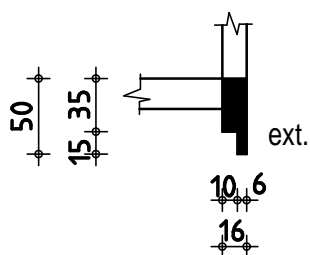
- L9 -

20x62h



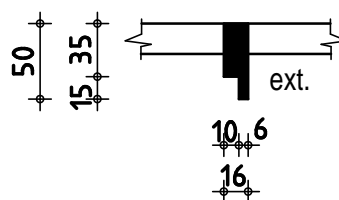
H.A. = 180 Kg/m³

- L10 -



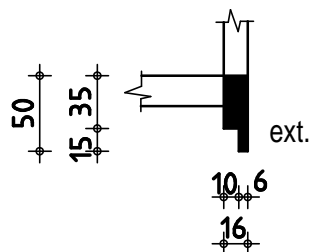
H.A. = 110 Kg/m³

- L10A -



H.A. = 150 Kg/m³

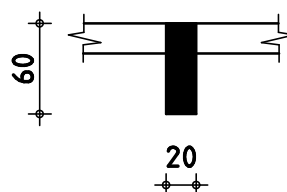
- L11 -



H.A. = 130 Kg/m³

- L12 -

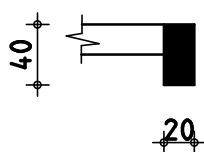
20x60h



H.A. = 60 Kg/m³

- L13 -

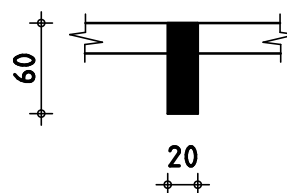
20x40h



H.A. = 60 Kg/m³

- L14 -

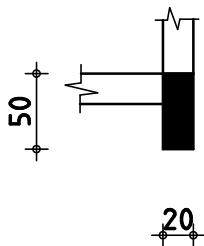
20x60h



H.A. = 110 Kg/m³

- L15 -

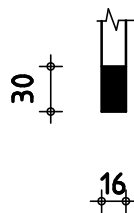
20x50h



H.A. = 100 Kg/m³

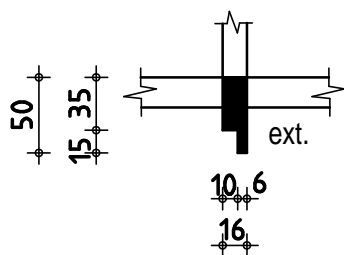
- L16 -

16x30h



H.A. = 90 Kg/m³

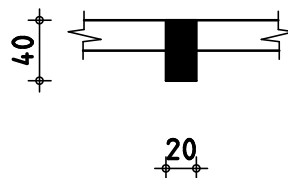
- L17 -



H.A. = 100 Kg/m³

- L18 -

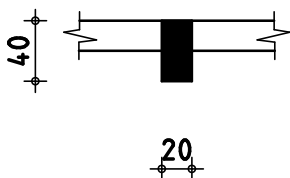
20x40h



H.A. = 150 Kg/m³

- L19 -

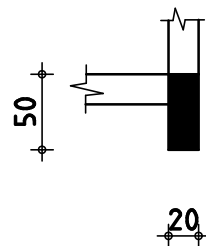
20x40h



H.A. = 170 Kg/m³

- L20 -

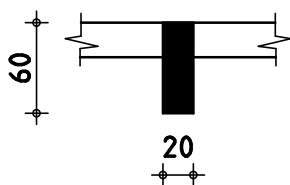
20x50h



H.A. = 120 Kg/m³

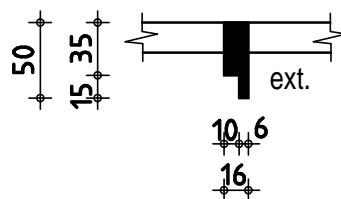
- L21 -

20x60h



H.A. = 200 Kg/m³

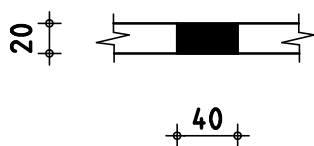
- L22 -



H.A. = 90 Kg/m³

- Bn1 -

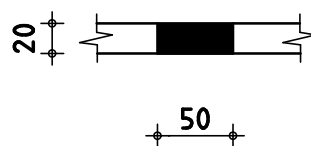
40x20h



H.A. = 190 Kg/m³

- Bn2 -

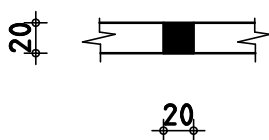
50x20h



H.A. = 190 Kg/m³

- Bn3 -

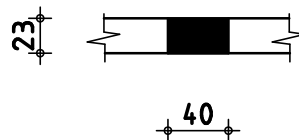
20x20h



H.A. = 120 Kg/m³

- Bn4 -

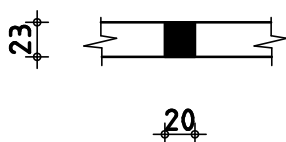
40x23h



H.A. = 180 Kg/m³

- Bn5 -

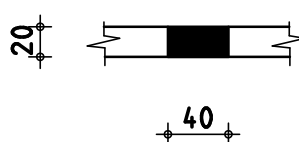
20x23h



H.A. = 120 Kg/m³

- Bn6 -

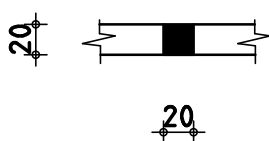
40x20h



H.A. = 200 Kg/m³

- Bn7 -

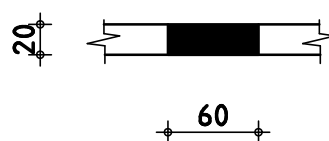
20x20h



H.A. = 100 Kg/m³

- Bn8 -

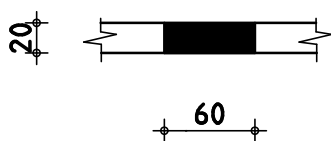
60x20h



H.A. = 200 Kg/m³

- Bn9 -

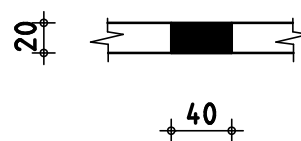
60x20h



H.A. = 150 Kg/m³

- Bn10 -

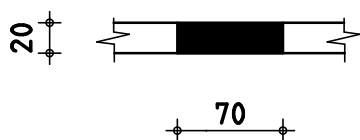
40x20h



H.A. = 130 Kg/m³

- Bn11 -

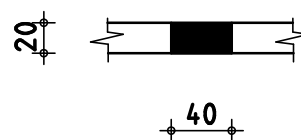
70x20h



H.A. = 220 Kg/m³

- Bn12 -

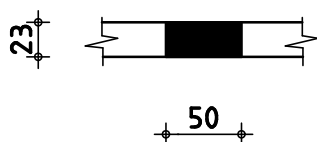
40x20h



H.A. = 180 Kg/m³

- Bn13 -

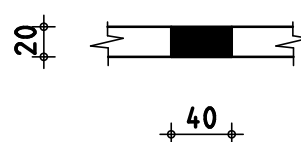
50x23h



H.A. = 180 Kg/m³

- Bn14 -

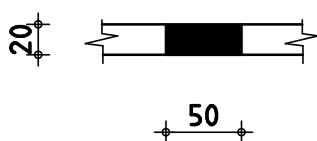
40x20h



H.A. = 150 Kg/m³

- Bn15 -

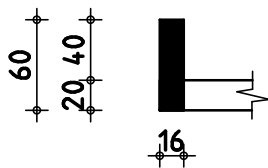
50x20h



H.A. = 200 Kg/m³

- Re1 -

16x60h

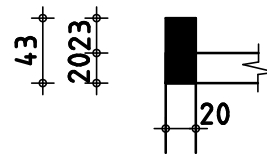


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re2 -

20x43h

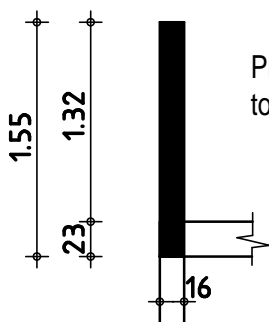


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re3 -

16x155h

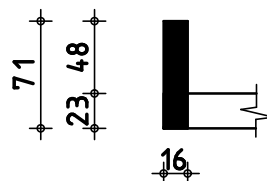


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re4 -

16x71h

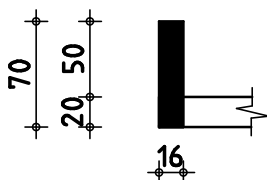


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re5 -

16x70h

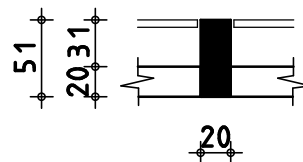


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Re6 -

20x51h

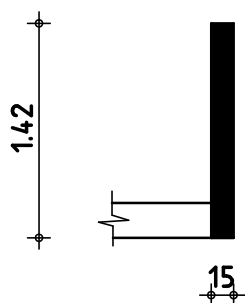


Prévoir joints de Fractionnement
tous les 6.00 ml maxi .

H.A. = 60 Kg/m³

- Gc1 -

20x142h



H.A. = 60 Kg/m³