

NIEDAX GROUP

Welcome



Consultant:

FIRE PROTECTION SYSTEM

The background of the slide is a close-up, high-contrast image of fire. The flames are bright yellow and orange, with darker, smoky areas in between, creating a sense of intense heat and movement. The text is overlaid on this background.

Fire Protection Systems
according to
DIN 4102 Teil 12

FIRE PROTECTION SYSTEM

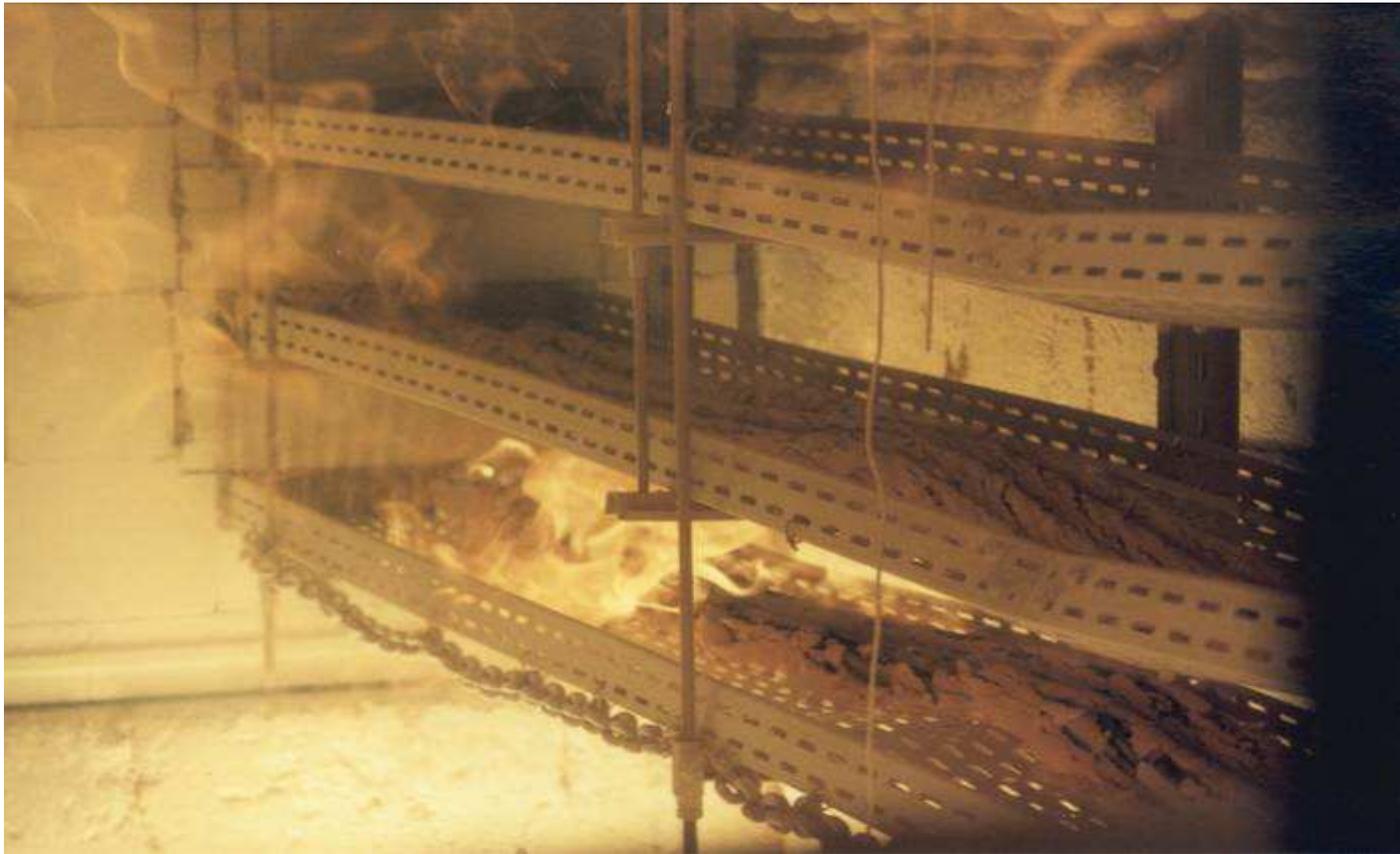
Before



E 90 Cable Weight 20 kg/m Support Span 1,5m

FIRE PROTECTION SYSTEM

During



E 90 Cable Weight 20 kg/m Support Span 1,5m

FIRE PROTECTION SYSTEM

Afterwards



E 90 Cable Weight 20 kg/m Support Span 1,5m

FIRE PROTECTION SYSTEM

General Information

Historical tragedies such as Dusseldorf Airport and Kings Cross underground railway station in London has taught, that safety in public and commercial buildings is paramount and that the use of fire safety cables and fire safety cable support systems will help minimise future loss of life and damage to property by fire.

The power cables NHXH, NHXCH, control cables JE-H(St)H and JE-H(St)HRH as well as the NIEDAX Cable Tray/Ladder Systems, Yoke Clamps with and without sleeves and cable cleats have been designed in accordance to the high standards specified in DIN 4102 part 12 (Circuit integrity in case of fire).

The complete system (cables, cable trays or cable ladder systems, etc.) are rated for different survival times in fire conditions within a furnace. Cables which meet the standard are marked E30 and E90, dependant on the survival time and temperature.

FIRE PROTECTION SYSTEM



The Laying System of the Future

KFO

FIRE PROTECTION SYSTEM

Laying System without threaded rods

FIRE PROTECTION SYSTEM

Cable Management System E 30/E90 with integrated fire-protected wiring according DIN 4102T12



**System Overhead Hanger HU 5050/... +
System Overhead Hanger HU 6040/... +
System Wall Bracket KTAS... without
additional thead rod.**

Description:

- Support spacing 1,5 m
- Load 20 kg/m
- Width of cable trays 100 – 400 mm

Material:

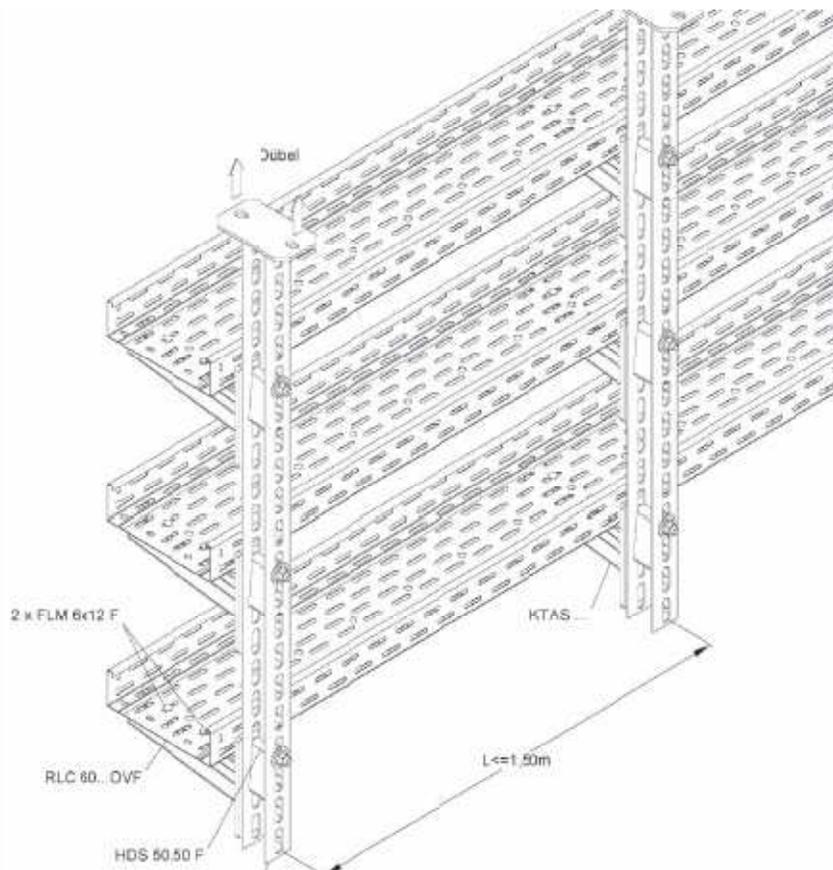
- Pre-galvanised steel according EN10327
- Hot dipped gal. steel according EN ISO1461

Advantages:

- Cost saving due to less material and installation expenses
- Faster installation due to less material input
- No laborious laying of cables
- Up to 4 layers on one side
- Additional safety at a subsequent installation
- Usable of standard products
- Easy laying of cable due to side access

FIRE PROTECTION SYSTEM

System Overhead Hanger HU 5050/.. Ceiling Installation



One sided layout for up to three layers

Cable trays

max. support spacing 1,5 m

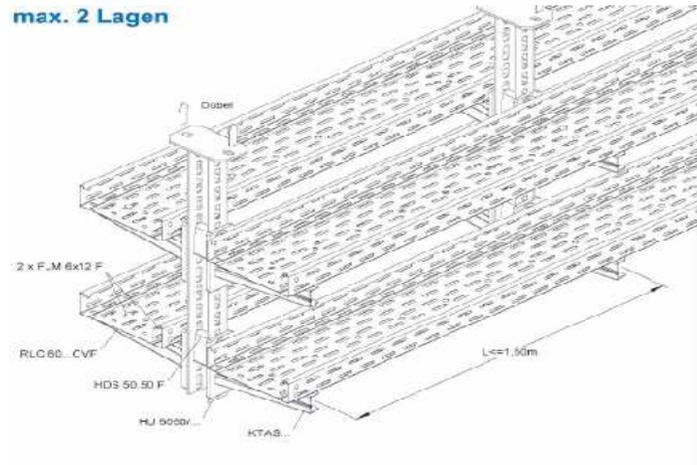
max. load 20 kg/m

max. width of trays 400mm

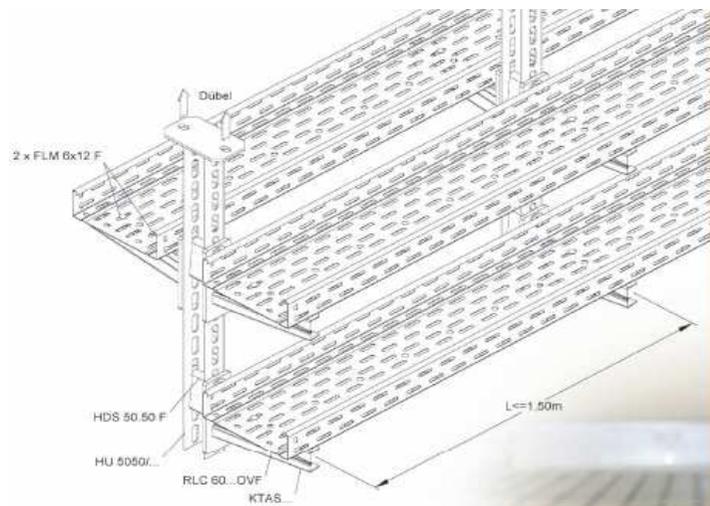
Support length = width of trays

FIRE PROTECTION SYSTEM

System Overhead Hanger HU 5050/.. Ceiling Installation



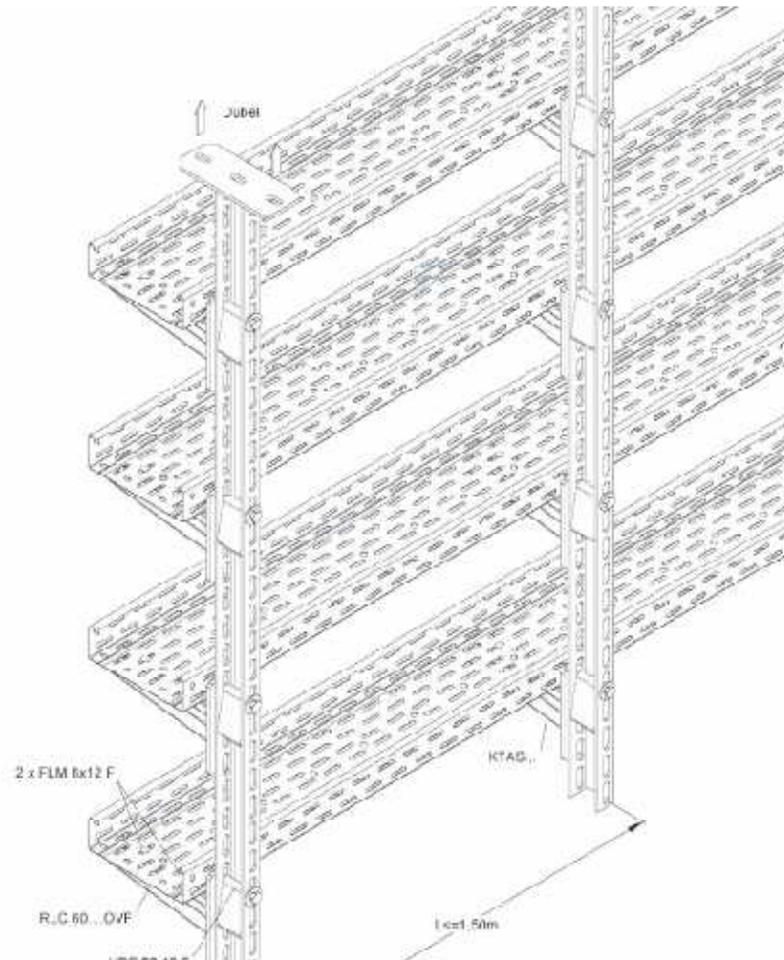
Two sided balanced layout for up to two layers



Two sided balanced layout with additional one sided layout

FIRE PROTECTION SYSTEM

System Overhead Hanger HU 6040/.. Ceiling Installation



One sided layout for up to four layers

Cable trays

max. support spacing 1,5 m

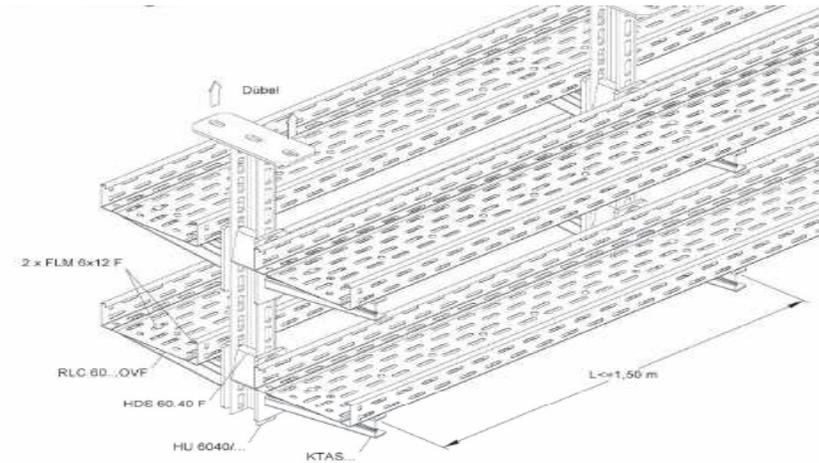
max. load 20 kg/m

max. width of trays 400mm

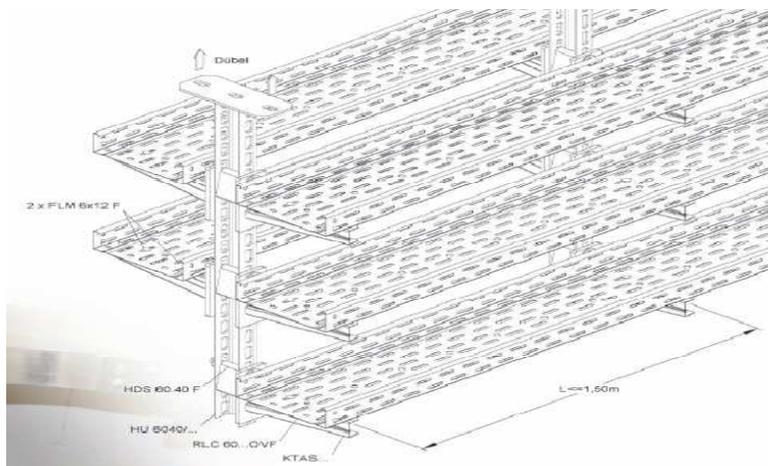
Support length = width of trays

FIRE PROTECTION SYSTEM

System Overhead Hanger HU 6040/.. Ceiling Installation



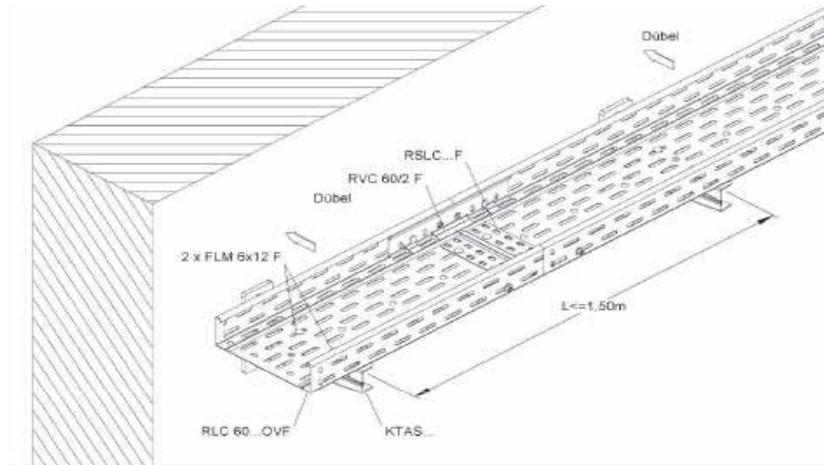
Two sided balanced layout for up to two layers



Two sided balanced layout with additional one sided layout

FIRE PROTECTION SYSTEM

System Wall Bracket KTAS 100 -400 Wall Installation



Wall Installation

Cable trays

max. support spacing 1,5 m

max. load 20 kg/m

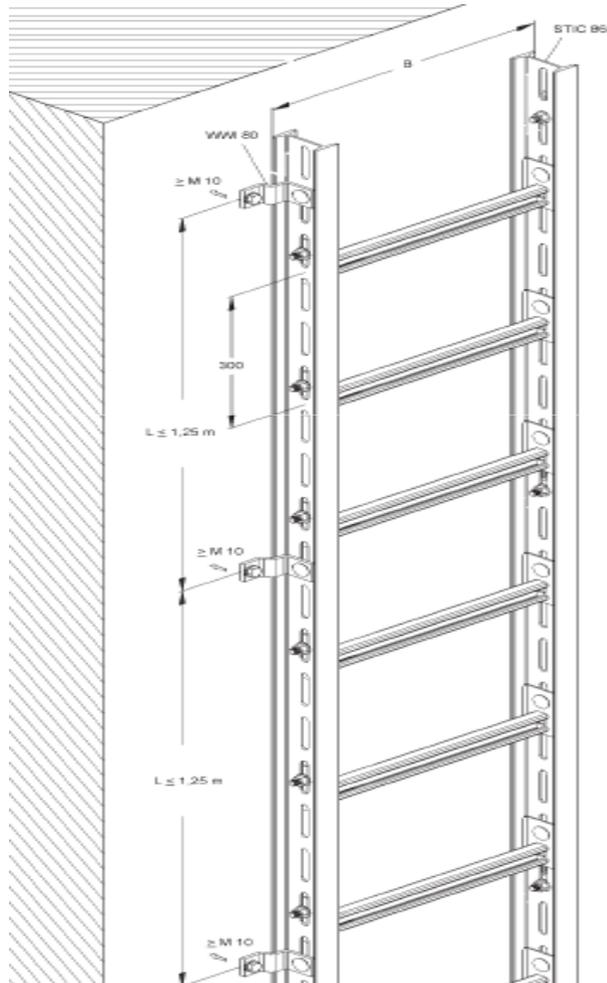
max. width of trays 400mm

Support length = width of trays



FIRE PROTECTION SYSTEM

Laying System Vertical Cable Ladder



Fixing distance at fire rating
(bolted on the concrete) in
general $L < 1,25 \text{ m}$

Distance of yoke-clamps = distance of
rungs in general $a = 300 \text{ mm}$

Load $< 20 \text{ kg/m}$

Maximum 3 cables of each 25 mm
diameter on one yoke-clamp

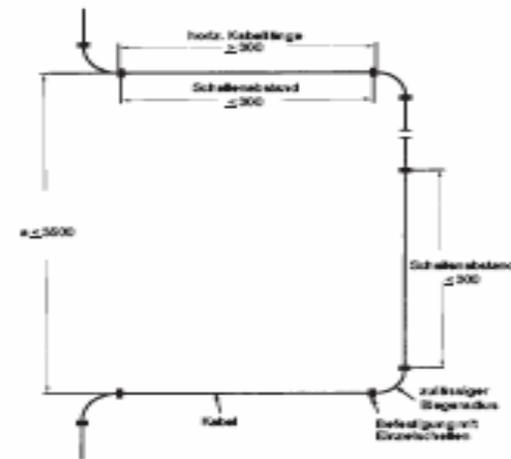
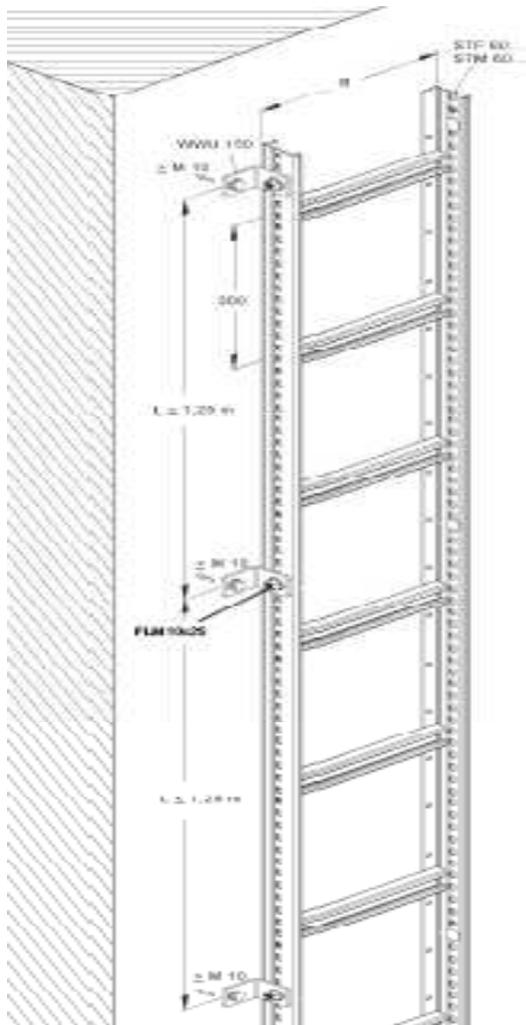


Bild 5 aus DIN 4102 Teil 12:1999-11

FIRE PROTECTION SYSTEM

Laying System Vertical Cable Ladder



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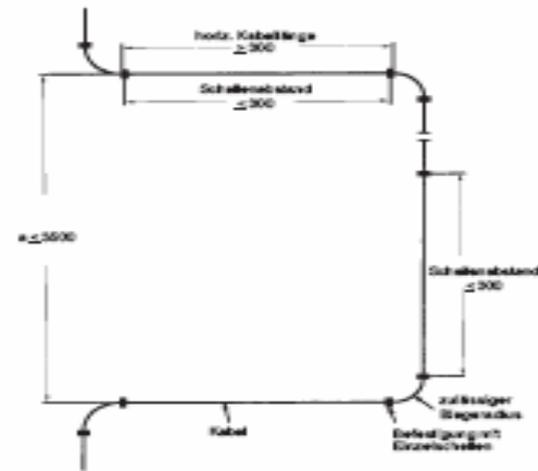
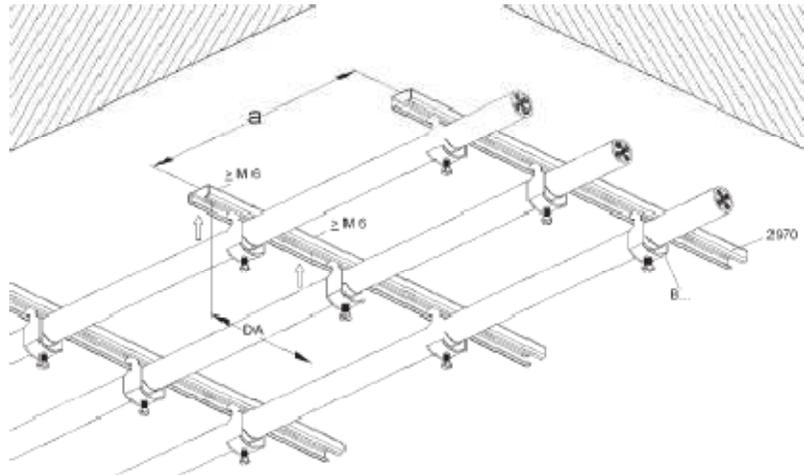


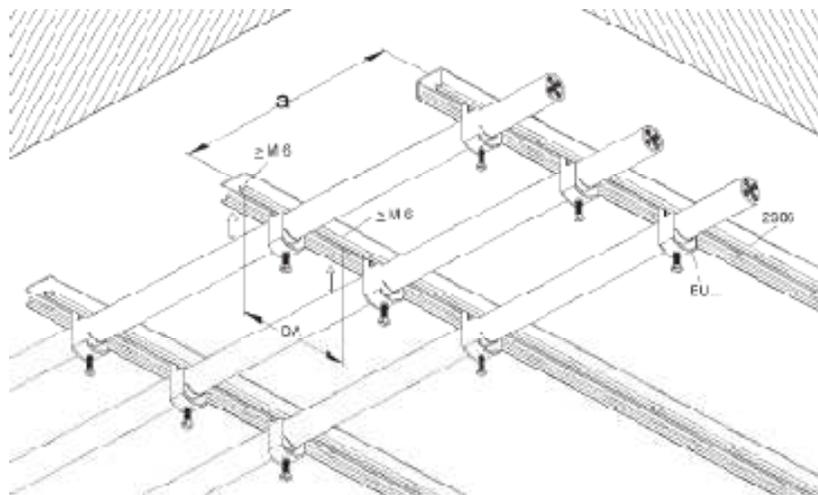
Bild 5 aus DIN 4102 Teil 12:1999-11

FIRE PROTECTION SYSTEM

Laying System Light Clamp



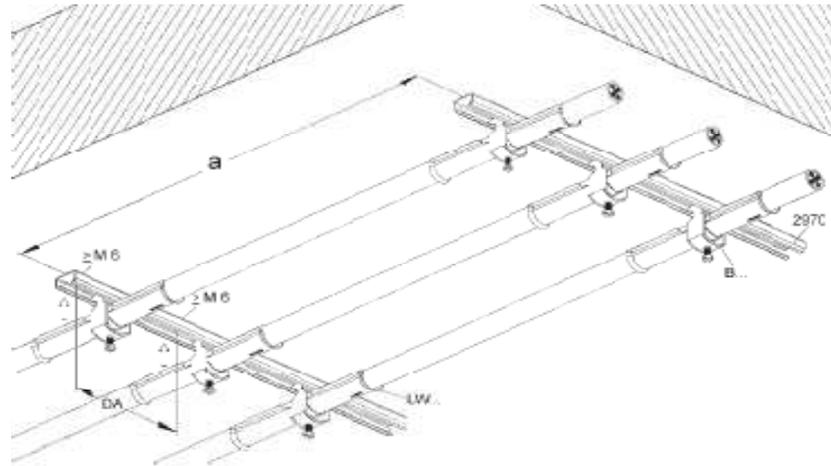
Yoke-Clamp B... without all-purpose trough
maximum fixing distance see list at the catalogue KF



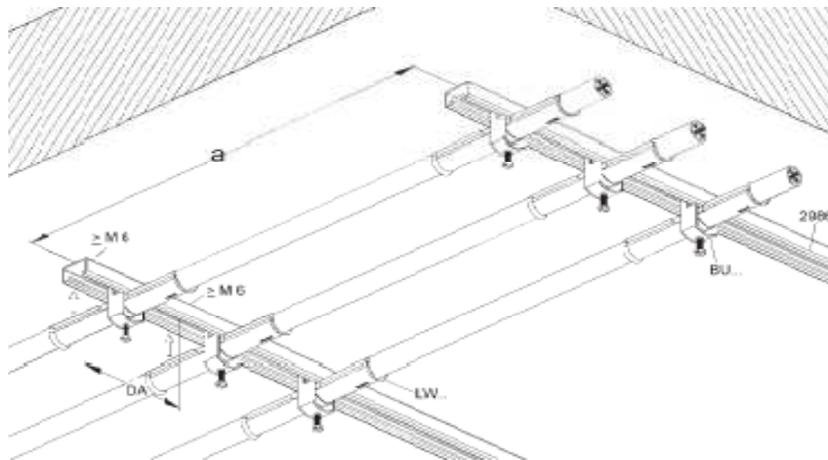
Yoke-Clamp BU... without all-purpose trough
maximum fixing distance see list at the catalogue KF

FIRE PROTECTION SYSTEM

Laying System Light Clamp



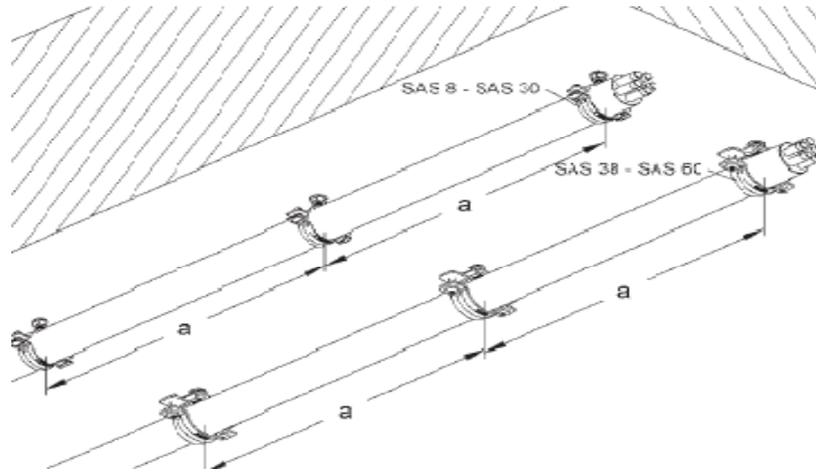
Yoke-Clamp B... with all-purpose trough
maximum fixing distance see list
at the catalogue KF



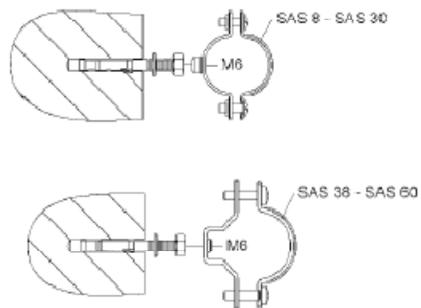
Yoke-Clamp BU. with all-purpose trough
maximum fixing distance see list
at the catalogue KF

FIRE PROTECTION SYSTEM

Laying System Light Clamp

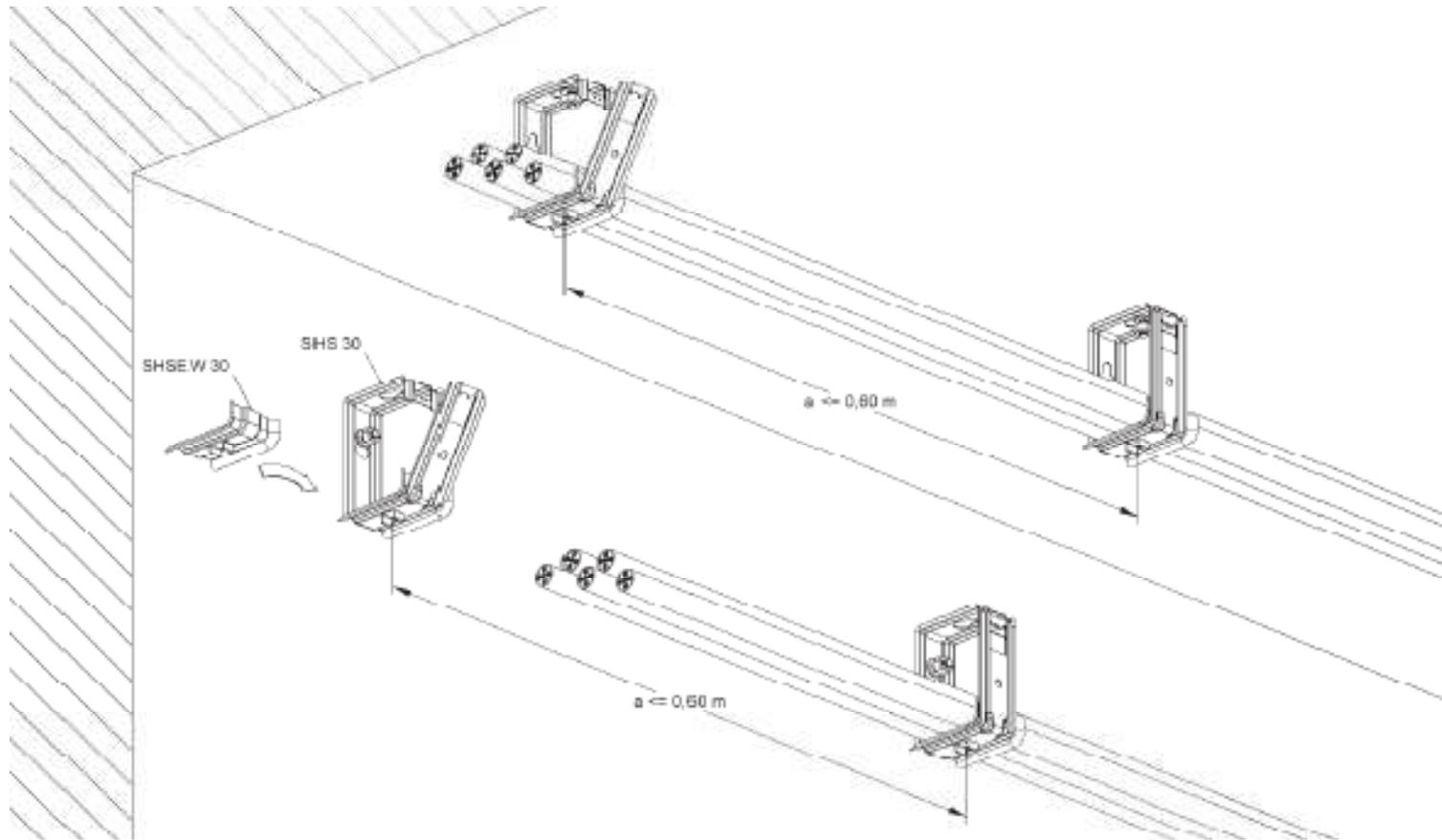


Spacing clamp with connection
internal thread M6



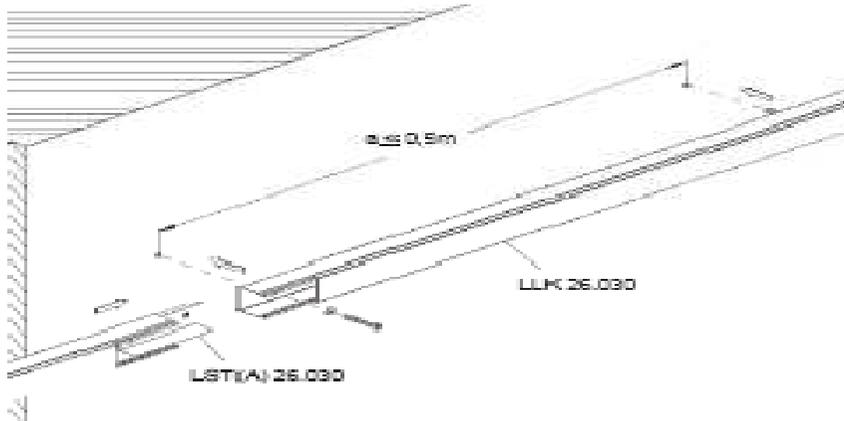
FIRE PROTECTION SYSTEM

Laying System Bundle Holder with trough



FIRE PROTECTION SYSTEM

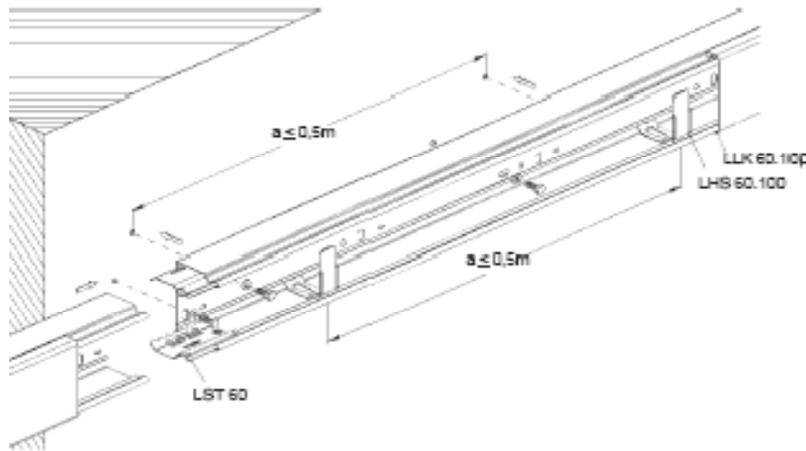
Laying System Surface Metal Raceway – horizontal on wall and ceiling



Wall Installation

Fixing distance: $< 0,50$ m

Cable net weight: $< 0,3$ kg/m



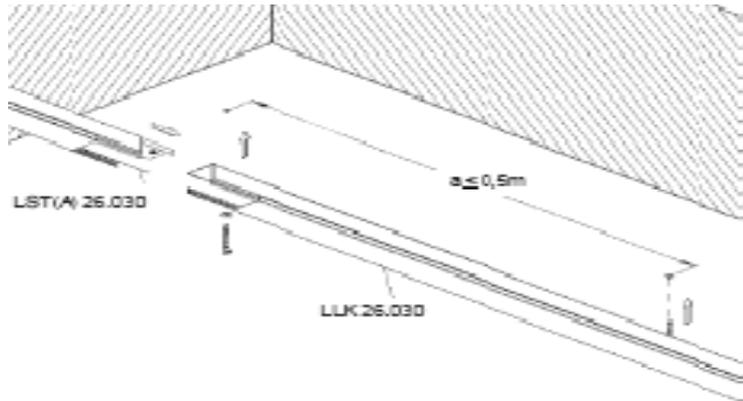
Fixing distance: $< 0,50$ m

Cable net weight: $< 3,0$ kg/m

Cable clip: 1 piece per $< 0,50$ m
as per figure

FIRE PROTECTION SYSTEM

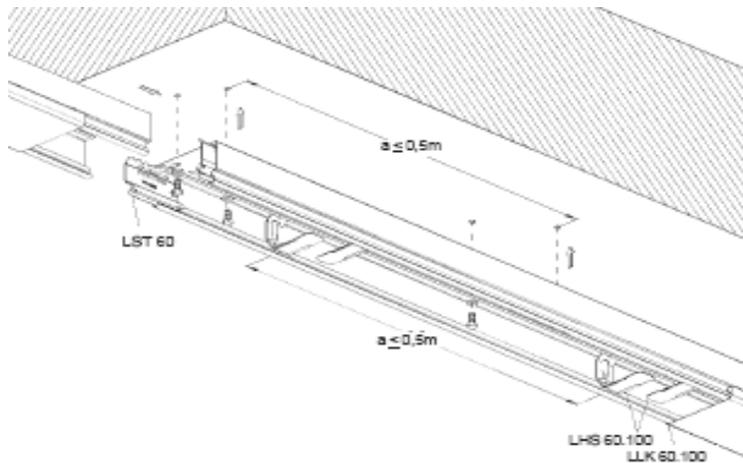
Laying System Surface Metal Raceway – horizontal on wall and ceiling



Ceiling Installation

Fixing distance: $< 0,50 m$

Cable net weight: $< 0,3 kg/m$



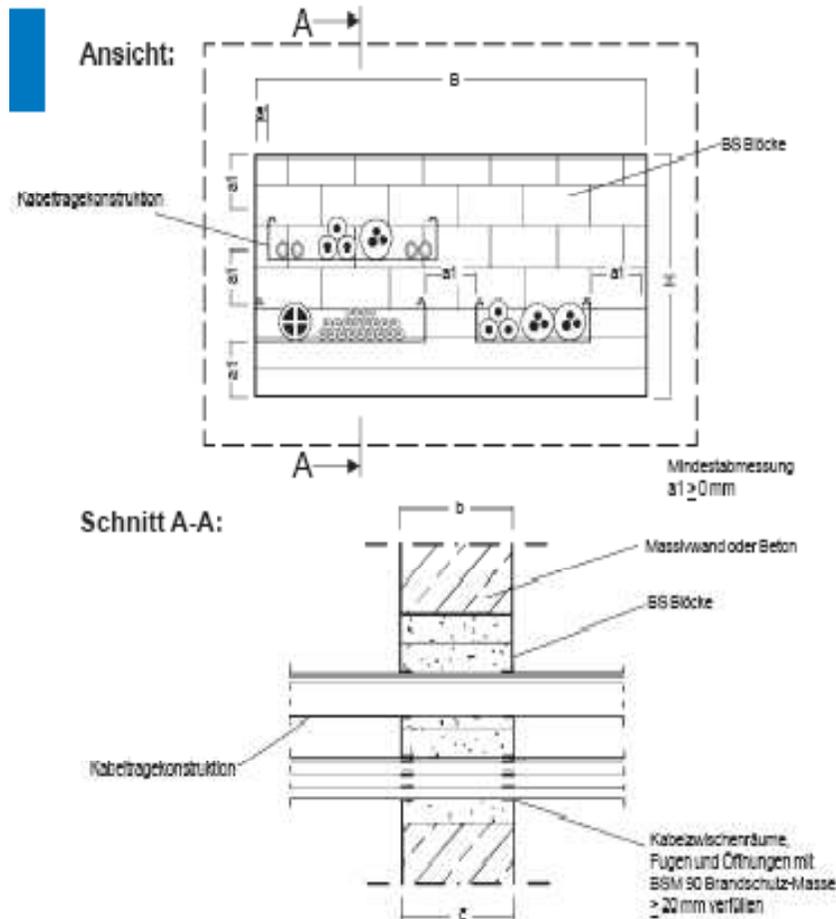
Fixing distance: $< 0,50 m$

Cable net weight: $< 3,0 kg/m$

Cable clip: 2 pieces per $< 0,50 m$
pairwise in order

FIRE PROTECTION SYSTEM

Fire Protection – Blocks according fire rating S 90, Z-19.15-1182



Wall Installation

Minimum dimension in mm:

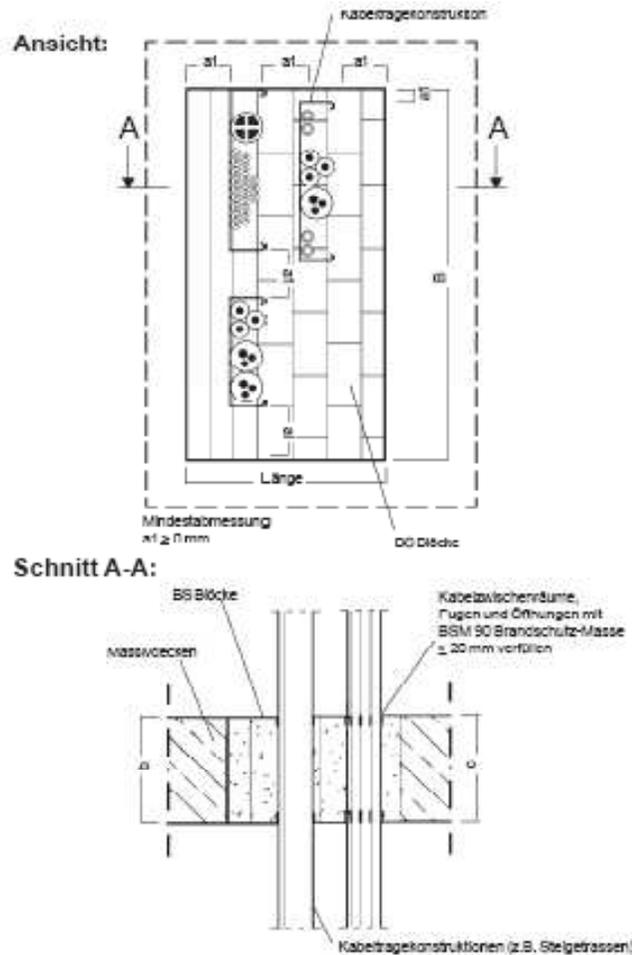
- Compartment dimension
 $H < 1000$
 $B < 1000$
- Compartment thickness:
 $b > 200$
- Wall thickness:
 $c > 200$

Allocation of cables:

Maximum 60% of each opening

FIRE PROTECTION SYSTEM

Fire Protection – Blocks according fire rating S 90, Z-19.15-1182



Ceiling Installation

Minimum dimension in mm:

- Compartment dimension

$B < 700$

- Length

Unlimited

- Compartment thickness:

$b > 200$

- Wall thickness:

$c > 200$

Allocation of cables:

Maximum 60% of each opening

FIRE PROTECTION SYSTEM

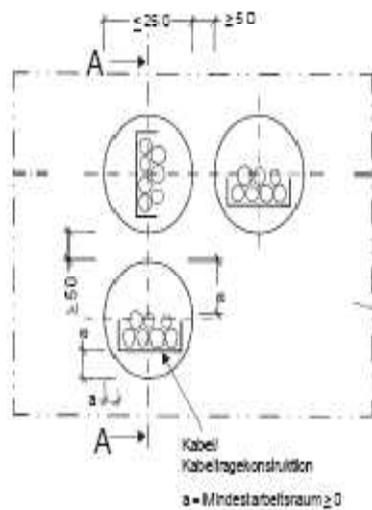
Fire Protection – Stopper according fire rating S 90, Z-19.1316

Wall Installation

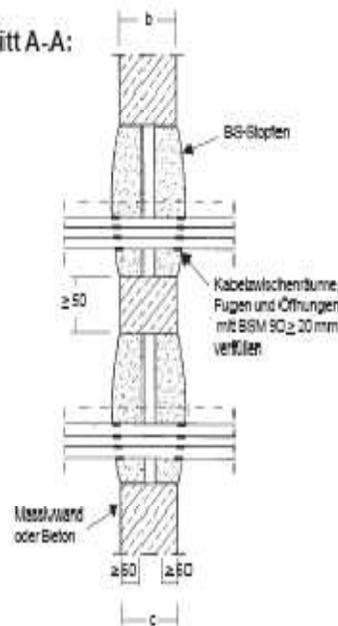
Minimum dimension in mm:

- Compartment dimension diameter < 250
- Compartment thickness: $b > 150$
- Wall thickness: $c > 150$

Ansicht:



Schnitt A-A:



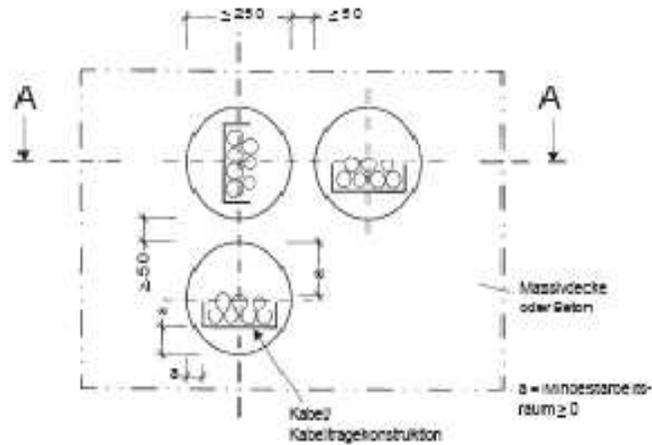
Allocation of cables:

Maximum 60% of each opening

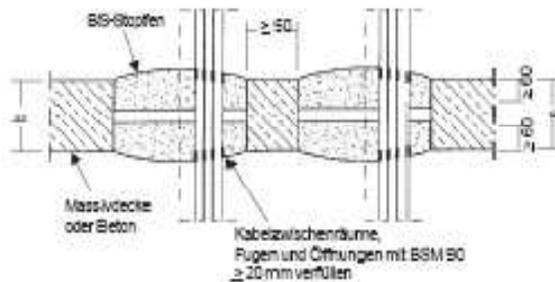
FIRE PROTECTION SYSTEM

Fire Protection – Stopper according fire rating S 90, Z-19.15-1316

Ansicht:



Schnitt A - A:



Ceiling Installation

Minimum dimension in mm:

- Compartment dimension diameter < 250
- Compartment thickness: $b > 150$
- Wall thickness: $c > 150$

Allocation of cables:

Maximum 60% of each opening

FIRE PROTECTION SYSTEM

Dowel allocation for the different Laying Systems

System Overhead Hanger
HU 5050/....

| Cable Tray System, type mill galvanised | | | |
|---|-----------|-----------|-----------|
| KR width | 1-layer | 2-layer | 3-layer |
| 100 | DAZ 10x10 | DAZ 10x10 | DAZ 10x10 |
| 200 | DAZ 10x10 | DAZ 10x10 | DAZ 10x10 |
| 300 | DAZ 10x10 | DAZ 10x10 | DAZ 12x10 |
| 400 | DAZ 10x10 | DAZ 12x10 | |

System Overhead Hanger
HU 6040/....

| Cable Tray System, type mill galvanised | | | | |
|---|-----------|-----------|-----------|-----------|
| KR width | 1-layer | 2-layer | 3-layer | 4-layer |
| 100 | DAZ 10x10 | DAZ 10x10 | DAZ 10x10 | DAZ 12x10 |
| 200 | DAZ 10x10 | DAZ 10x10 | DAZ 12x10 | DAZ 12x10 |
| 300 | DAZ 10x10 | DAZ 10x10 | DAZ 12x10 | DAZ 12x10 |
| 400 | DAZ 10x10 | DAZ 12x10 | DAZ 12x10 | DAZ 12x10 |

System Wall Bracket
KTAS 100-400

| Cable Tray System, type mill galvanised | | | |
|---|--|-----------|--|
| KR width | | | |
| 100 | | DAZ 10x10 | |
| 200 | | DAZ 10x10 | |
| 300 | | DAZ 10x10 | |
| 400 | | DAZ 10x10 | |



Thank you for your kind attention