

***Text for invitation to tender  
FIRE- and/or SMOKE PROTECTION-CONSTRUCTION***

**single- and double leaf revolving door EI<sub>2</sub> 30 or EI<sub>2</sub> 60  
with or without fixed upper- and/or side panel(s)**

**Fire protection door EI<sub>2</sub> 30-C5- S<sub>m</sub> or EI<sub>2</sub> 60-C5- S<sub>m</sub>**  
*Fire protection EI<sub>2</sub> 30 or EI<sub>2</sub> 60  
with resistance to repeated opening and closing C5 (200.000 Cycles)  
and smoke control S<sub>m</sub>  
acc. to EN1634, EN1363 and EN1191*

**Fire protection door EI<sub>2</sub> 30-C5 or EI<sub>2</sub> 60-C5**  
*Fire protection EI<sub>2</sub> 30 or EI<sub>2</sub> 60  
with resistance to repeated opening and closing C5 (200.000 Cycles)  
acc. to EN1634, EN1363 and EN1191*

**Partition wall EI 30 or EI 60**  
*Fire protection EI 30 or EI 60 acc. EN1364 and EN1363*

### Tender description

#### Text for invitation to tender

*This text for invitation to tender has been compiled to the best of our knowledge and before application it should be checked for its suitability.*

*We do not assume any liability for the contents of this text.*

*This text is supposed to serve as a guideline to the applicant and should define the scope of services rendered fairly accurate to avoid severe offer differences from the outset.*

*The following information can be used for fire and smoke controlled constructions. Accessories for standard constructions may be changed arbitrarily.*

#### General remarks:

*If not defined differently in the tender position the following basic equipment is valid. If several options are available, the requirements of the tender position are valid. Production has to comply with the relevant STANDARDS, the test reports as well as the manufacture recommendations of the system supplier.*

**Manufacture, supply and assembly of single- and double leaf fire protection and/or smoke controlled revolving doors with or without fixed upper- and/or side panel(s)** has to be carried out according to EN1634, EN1363 and EN1191 from pre-galvanised or pickled steel profiles of series vrame fire. Surface treatment depends on the requirement of the principal.

- Class EI<sub>2</sub> 30 for revolving doors
- Class EI 30 for partition walls
- Class EI<sub>2</sub> 60 for revolving doors
- Class EI 60 for partition walls

*The profile manufacturer is voestalpine KREMS GmbH.*

**Building depth**

- revolving door with or without fixed upper- and/or side panel(s) 60mm
- partition walls 60mm

**View width:**

- door frame profile 72mm
- leaf profile 92mm
- mullion/transom 90mm
- wall connecting profile 70mm
- base profile 70
- frame expansion or narrow profile according to system drawing

#### **Fire protection, resistance to repeated opening and closing, smoke control**

*Only constructions which are classified according to EN 13501-2 are allowed to be supplied.*

*The requirements regarding fire protection, resistance to repeated opening and closing as well as smoke control are mentioned in the tender position.*

*The following design options are possible:*

- EI<sub>2</sub> 30-C5- S<sub>m</sub> fire protection door EI<sub>2</sub> 30 with resistance to repeated opening and closing C5 (200.000 cycles) and smoke control S<sub>m</sub> (cold - and hot smoke 200K)
- EI<sub>2</sub> 30-C5 fire protection door EI<sub>2</sub> 30 with resistance to repeated opening and closing C5 (200.000 cycles)
- EI<sub>2</sub> 60-C5- S<sub>m</sub> fire protection door EI<sub>2</sub> 60 with resistance to repeated opening and closing C5 (200.000 cycles) and smoke control S<sub>m</sub> (cold - and hot smoke 200K)
- EI<sub>2</sub> 60-C5 fire protection door EI<sub>2</sub> 60 with resistance to repeated opening and closing C5 (200.000 cycles)

*Fabrication of fire or smoke protection constructions has to be executed by licensed fabricators according to the guideline of the system supplier. Doors or partition walls have to be marked according to the guidelines.*

#### Sound reduction

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## EI 30, EI 60

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### *Tender description*

Constructions with requirements to sound reduction according to EN ISO 140 are described in the tender positions. The requested values  $R_w$  are test values.

### **Panic function**

Doors with panic function requirements are described in the tender positions. In emergency cases it must be possible to open locked doors from the emergency side without any key. A carry bar must be mounted at double leaf doors with full panic function. Doors with panic function according to EN 1125 (intense knots of people) must be executed with push bar or touch bar.

### **Execution:**

Three-sided overlapping, internal and external flush with the adjacent areas with three-sided circular gasket in the door frame and the door leaf (double gasket).

Corner and joint formations have to be welded and professionally grinded according to further surface treatment.

- No door sills are allowed in the floor area
- Door sills have to be fitted from a rectangular hollow section 50/20/2 (60/20/2) in the floor area.  
Manufacture: - min. 3 cm under floor level  
- align with floor level  
- mounted on floor level

Given measurements are standard gauges; before manufacture real (actual) measurements have to be applied.

### **Frame expansions**

Frame or base profile expansions made of square or rectangular profiles or bended steel sheets, plate thickness 2mm.

### **Drop down gasket**

- No drop down gasket
- A base profile is destined for later fitting of the drop down gasket
- Drop down gasket type "Stadi" or equivalent

### **Glass**

The glass must be EI 30 or EI 60 tested and comply with the appropriate safety regulations as well as the specifications of the system supplier. Installation and chocking have to be carried out according to the regulations of the glass supplier and the appropriate standards respectively. The glass has to be installed between the profile stop and the glazing bead. The glazing bead has to be mounted on the inside.

The glazing has to be carried out with:

- Rubber gasket in standard quality (for interior zone)
- Sealing strip in connection with silicon.

The steel glazing beads type "voestalpine GL" are cut blunt.

The fastening of the glazing beads has to be made by buried studs "BN 65 or retaining spring".

### **Panel**

The used panel filling has to be EI 30 or EI 60 tested. Installation and chocking have to be done analogous to the glass design. The panel has to be installed between the profile stop and the glazing bead.

The panel has to be installed by means of:

- Rubber gasket in standard quality (for interior zone)
- Sealing strip in connection with silicon.

The steel glazing beads type "voestalpine GL" are cut blunt.

The fastening of the glazing beads has to be made by buried studs "BN 65 or retaining spring".

## EI 30, EI 60

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### Tender description

#### Panel composition EI 30:

- Fire protection plate (e.g. "Fermacell" 2x10 mm, "Rigips GKF" 2x12.5mm, "Knauf GKF" 2x12.5mm, "Rigidur" 2x10mm, "Promatect H" 4x6 mm or "Promatect H" 2x12 mm or "Promatect H" 1x25 mm) with double-sided steel sheet galvanised, stainless steel, brass or copper 0.8 to 1.5 mm.
- Fire protection plate "Supalux S" 20 mm thick with/without double-sided steel sheet galvanised, stainless steel, brass or copper 0.8 to 1.5 mm.

#### Panel composition EI 60:

- Fire protection plate (e.g. "Fermacell" 3x10 mm or "Fermacell" 2x15 mm, "Rigips GKF" 2x12.5mm, "Knauf GKF" 2x12.5mm, "Rigidur" 3x10mm, "Promatect H" 4x8 mm or "Promatect H" 2x15 mm or "Promatect H" 3x10 mm) with double-sided steel sheet galvanised, stainless steel, brass or copper 0.8 to 1.5 mm.

Surface treatment for steel sheet as for door frames.

### Gaskets

In case of EI 30 or EI 60 -fire resistance requirements all gaskets have to be executed in standard quality. Mounting of gaskets shall be done after painting / coating.

### Filler pieces

In case of Sm -smoke protection requirements, gaskets "D45" extend with filler piece.

### covering strip / expanding strip

- EI 30 In the chamber area is each chamber an expanding strip and a covering strip opposite affix.
- EI 60 - In the chamber area is in each chamber two expanding strip, opposite affix.  
- In the glazing rebate area is a expanding strip to affix.

### Fittings

Fittings such as hinges, locks, handles, door closer etc. are to be installed according to the classification report and the recommendation of the system supplier respectively. Fastening material has to be taken into account.

### Hinges

Up to 2400mm height of door, 2 hinges and one safety bolt or 3 hinges have to be installed.

Over 2400mm height of door, 3 hinges have to be installed.

Unless the middle hinge is positioned in the centre, a fourth hinge or a safety bolt has to be used.

- Two-dimensional adjustable screw-on hinges are to be installed.
- Weld-on hinges are to be built-in.
- Three-dimensional adjustable weld-on hinges are to be built-in.

### Lock

Lock "BKS" or according to the instructions of the system supplier.

Single mortise dead lock with striking plate in stainless steel made for profile cylinder. All lock designs have to be self dropping and self bolting (automatic) relating to latch lever and shoot bolt.

The upper locking is done by a shoot bolt.

#### Single leaf door construction

- Single mortise dead lock
- Single mortise dead lock with top locking
  
- with panic function
- without panic function

### Tender description

#### Double leaf door construction

- Inactive leaf: unlocked  
Active leaf: Single mortise dead lock with top locking
- Inactive leaf: Rebate lock with top locking, automatic locking  
Active leaf: Single mortise dead lock
- Inactive leaf: Drive bolt lock with top locking, automatic locking  
Active leaf: Single mortise dead lock
- Inactive leaf: Rebate lock with top locking and bottom locking, automatic locking  
Active leaf: single mortise dead lock
- Inactive leaf: Drive bolt lock with top locking and bottom locking, automatic locking  
Active leaf: Single mortise dead lock
  
- If required with additional top locking on the active leaf
  
- **with** panic function
- **without** panic function

#### Locking function:

- switch function B
- alternate function E
  
- Switch function B:  
unlocked door → to open from inside any time, from outside after switch with key to open any time  
locked door → to open from inside any time, from outside to open only with the key (even after panic activity)
  
- Alternate function E:  
unlocked door → to open from inside any time, from outside only to open with the key  
locked door → to open from inside any time, from outside only to open with the key (even after panic activity).

### Door furniture

Door furniture with cover according to tender position.

Surface treatment: .....

- Make "BKS" - type "Rondo"  
- type "Belcanto"
- Make according to the system supplier or according to the choice of the principal.
  
- Door furniture handle/handle
- Door furniture handle/crossbar
- Push bar or touch bar/handle
- Push bar or touch bar/crossbar

Regarding double leaf doors the push bar/ touch bar

- has to be mounted on both leaves
- has to be mounted on the active leaf only

Execution with

- long back plate (fitted with through bolt)
- oval roses

### Profile cylinder

- without profile cylinder
- Model with single profile cylinder
- Model with profile cylinder subject to locking plan

### *Tender description*

#### **Door closer**

##### Single leaf door construction

- a top-mounted door closer with sliding rail has to be used
- an integrated door closer ("ITS 96", "Boxer") which is integrated in the profile has to be used
- a floor spring door closer has to be used
- with electro mechanical hold-open
- with electro mechanical hold-open and integrated smoke alarm

##### Double leaf door construction

- top-mounted door closers with sliding rail have to be used.
- Integrated door closers ("ITS 96", "Boxer") with integral door co-ordinator which are integrated in the profiles have to be used
- floor spring door closers with integrated integral door co-ordinator have to be used
- with electromechanical hold-open in the inactive leaf
- with electro mechanical hold-open in the active leaf
- with electro mechanical hold-open in both leaves
- with electro mechanical hold-open in the active leaf and an integrated smoke alarm
- with electro mechanical hold-open in both leaves and an integrated smoke alarm

#### **Carry bar**

Double leaf fire and smoke controlled doors respectively with panic function must always be fitted with a carry bar.

#### **Surface treatment**

The pre-galvanised / pickled construction has to be supplied in painted / coated condition to the building site.

Planned surface treatment:

- air drying paint
- thermo-hardening paint
- powder coating

Shade: RAL .....

The pre-treatment has to be carried out according to the recommendations of the paint / powder supplier.

#### **Compartment for penetrations**

For cable or pipe penetrations in the ceiling zone compartments are fitted from the applicant. A sub-construction has to be supplied according to the enclosed drawing.

#### **Field joints**

In case of oversize constructions a field joint has to be considered. The execution must to be verified with the architect.

#### **Assembly**

- A „fixed“ wall connection has to be done. The construction has to be fixed to the construction body with frame dowels. The gap between the construction body and the steel profile is to be stuffed with mineral wool (melting point >1000°C) and to be sealed with silicon.  
Design according to enclosed drawing.....
- A „sliding“ wall connection according to the enclosed drawing ..... has to be carried out.

#### **Function test**

After assembly all necessary adjustment works and a function test have to be carried out.

EI 30, EI 60

## Tender description

### Tender position single-leaf revolving doors

Manufacture, supply and assembly of

- single-leaf fire protection revolving door EI<sub>2</sub> 30-C5- S<sub>m</sub> or EI<sub>2</sub> 60-C5- S<sub>m</sub>
- single-leaf fire protection revolving door EI<sub>2</sub> 30-C5 or EI<sub>2</sub> 60-C5

from steel profiles vrame fire. Manufacturer voestalpine KREMS GmbH.

- inwards / outwards opening
- with fixed top panel
- with 1 fixed side panel left / right
- with 1 fixed side panel left / right and top panel
- with both-sided fixed side panels
- with both-sided fixed side panels and top panel
- with mullion / transom
- ... area glazing EI 30 or EI 60 Type .....
- ... area panel filling EI 30 or EI 60
  
- Glass and panel fitting respectively with rubber gasket Type .....
- Glass and panel fitting respectively with sealing strip and silicon Type .....
  
- Screw-on hinge (two-dimensional adjustable) Type .....
- Weld-on hinge Type .....
- Weld-on hinge (three-dimensional adjustable) Type .....
  
- Single mortise dead lock Type .....
- Single mortise dead lock with top shoot bolt Type .....
- without panic function Type .....
- with panic function Type .....
- Locking function: switch function B
- Locking function: alternate function E
  
- Handle with long back plate Type .....
- Handle with roses Type .....
- Push bar or touch bar / handle Type .....
- Push bar or touch bar / crossbar Type .....
  
- without / with profile cylinder Type .....
  
- top-mounted door closer with sliding rail
- integrated door closer
- floor spring door closer Type .....
- with electromechanical hold-open
- with electromechanical hold-open and integrated smoke alarm
  
- Wall connection "fixed" according to drawing.....
- Wall connection "sliding" according to drawing.....

#### Surface treatment

- air drying paint
- thermo-hardening paint
- powder coating

Shade RAL.....

Execution according to drawing 21-..

External measurement W x H ..... x ..... mm

Clearance passage CPW X CPH ..... x ..... mm

..... Piece

€/piece.....

€.....

### Tender description

### Tender position double-leaf revolving doors

Manufacture, supply and assembly of

- double-leaf fire protection revolving door EI<sub>2</sub> 30-C5- S<sub>m</sub> or EI<sub>2</sub> 60-C5- S<sub>m</sub>
- double-leaf fire protection revolving door EI<sub>2</sub> 30-C5 or EI<sub>2</sub> 60-C5

from steel profiles vrame fire. Manufacturer voestalpine KREMS GmbH

- inwards / outwards opening
- with fixed top panel
- with 1 fixed side panel left / right
- with 1 fixed side panel left / right and top panel
- with both-sided fixed side panels
- with both sides fixed side panels and top panel
- with mullion / transom
- ... area glazing EI 30 or EI 60 Type .....
- ... area panel filling EI 30 or EI 60
- Glass and panel fitting respectively with rubber gasket Type .....
- Glass and panel fitting respectively with sealing strip and silicon Type .....
- Screw-on hinge (two-dimensional adjustable) Type .....
- Weld-on hinge Type .....
- Weld-on hinge (three-dimensional adjustable) Type .....

### Lock design

- Inactive leaf: unlocked  
Active leaf: single mortise dead lock with top locking
- Inactive leaf: Rebate lock with top locking, automatic locking  
Active leaf: Single mortise dead lock
- Inactive leaf: Drive bolt lock with top locking, automatic locking  
Active leaf: Single mortise dead lock
- Inactive leaf: Rebate lock with top locking and bottom locking, automatic locking  
Active leaf: Single mortise dead lock
- Inactive leaf: Drive bolt lock with top locking and bottom locking, automatic locking  
Active leaf: Single mortise dead lock
- Active leaf with additional top locking on the active leaf
- with panic function
- without panic function
- Locking function: switch function B
- Locking function: alternate function E
- Handle with long back plate Type .....
- Handle with roses Type .....
- Push bar or touch bar / handle
- Push bar or touch bar / crossbar
- without / with profile cylinder Type .....



EI 30, EI 60

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## Tender description

### Door closer

- top-mounted door closer with integrated sliding rail and integral door co-ordinator.
- Integrated door closers ("ITS 96", "Boxer") with integral door co-ordinator.
- Floor spring door closers with integrated integral door co-ordinator. Type .....
  
- with electromechanical hold-open in inactive leaf
- with electromechanical hold-open in active leaf
- with electromechanical hold-open in both leaves
- with electromechanical hold-open in active leaf and integrated smoke alarm
- with electromechanical hold-open in both leaves and integrated smoke alarm
  
- Wall connection "fixed" according to drawing .....
- Wall connection "sliding" according to drawing .....

### Surface treatment

- air drying paint
- thermo-hardening paint
- powder coating

Shade RAL .....

Execution according to drawing

External measurement W x H ..... x ..... mm

Clearance passage CPW X CPH ..... x ..... mm

.....Piece

€/piece.....

€.....

EI 30, EI 60

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## Tender description

### Tender position partition walls

Manufacture, supply and assembly of a partition wall EI 30 or EI 60 from steel profiles vrame fire.  
Manufacturer: voestalpine KREMS GmbH

- ... area glazing EI 30 or EI 60 Type .....
- ... area panel filling EI 30 or EI 60
- mullion and/or transom according to drawing
  
- Glass and panel fitting respectively with rubber gasket in standard quality
- Glass and panel fitting respectively with sealing strip and silicon
  
- Wall connection "fixed" according to drawing .....
- Wall connection "sliding" according to drawing .....

### Surface treatment

- air drying paint
- thermo-hardening paint
- powder coating

Shade RAL .....

Execution according to drawing .....

External measurement W x H ..... x ..... mm

..... Piece      €/piece.....      €.....