



50 YEARS PROTECTING LIVES AND PROPERTY



**FIRE SUPPRESSION SYSTEMS
KITCHENS PROTECTION**



- I. Kitchen protection*
- II. The product: Total K*
- III. Design*
- IV. Components*



Common applications, **When** to use?

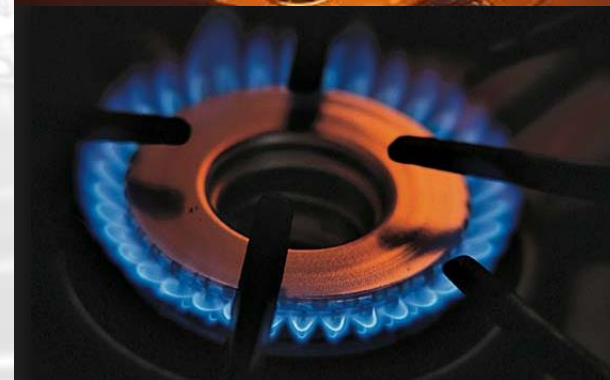
- Commercial kitchens
- Industrial fryers
- Restaurants
- Show kitchens
- Catering



Hazard characteristics

Why to use?

- Oil and fats
- High temperatures
- Hot surfaces
- High concentrations of fuels, flammable gases and products
- Gas supply
- Healthy oils: lower auto ignition temperatures



Design

Why to use **SIEX**?

- ✓ We need fast action and great effectiveness
- ✓ Easy to clean → minimum downtime
- ✓ Non-toxic, harmless
- ✓ Additional devices (safety): pneumatic gas shutdown
- ✓ Growth control: no fire spreading

-

TOTAL K

- **FLEXIBILITY**

- Range of cylinders: 6, 16 and 25 liters
- Nozzles adapted to each hazard
- Detection:
 - › electrical,
 - › thermal-mechanical,
 - › thermal-pneumatic,
 - › manual (direct / remote)
- Suitable for both new and old kitchens → Renovations

TOTAL K: Design steps

- Pre-engineering system
 - Standard: NFPA 17A
- UL listing pending (2018)

1. List the hazards and choose the nozzles

(5 types, adapted to each hazard)

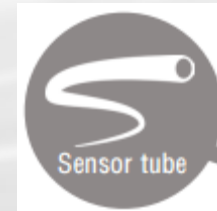
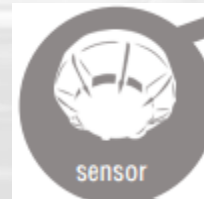
Nozzle type	Aplications	Caudal / Flow unit
TKD1C	Ducts, radiant gas	1
TKD2G	4 burners, griddles (L),	2
TKD2K	Fryer, grill, griddles (M)	2
TKD15C	Big ducts, coal broiler,	1,5
TKD1P	hood (3m), griddles (S), 2 burners, 3 burners (2No.)	1

2. Calculate total agent & choose the cylinder

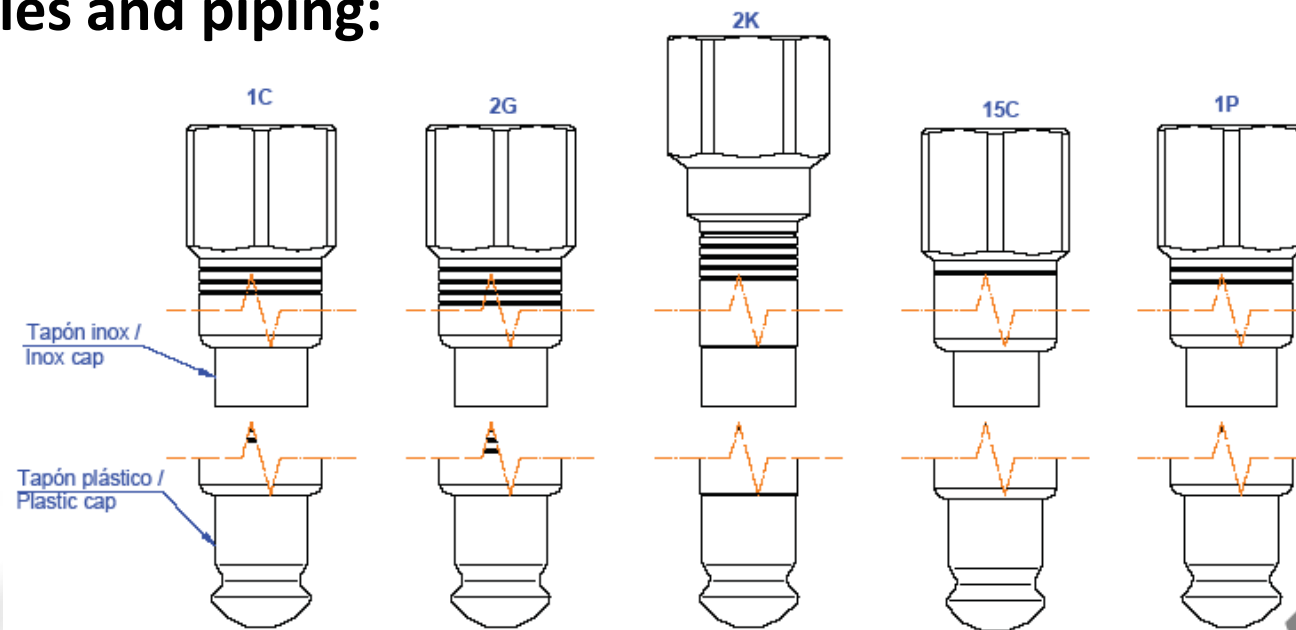
TK-6	TK-16	TK-25
5	13	20

3. Choose detection

- Fuel & energy supply must be cut down
- Gas shutdown recommended

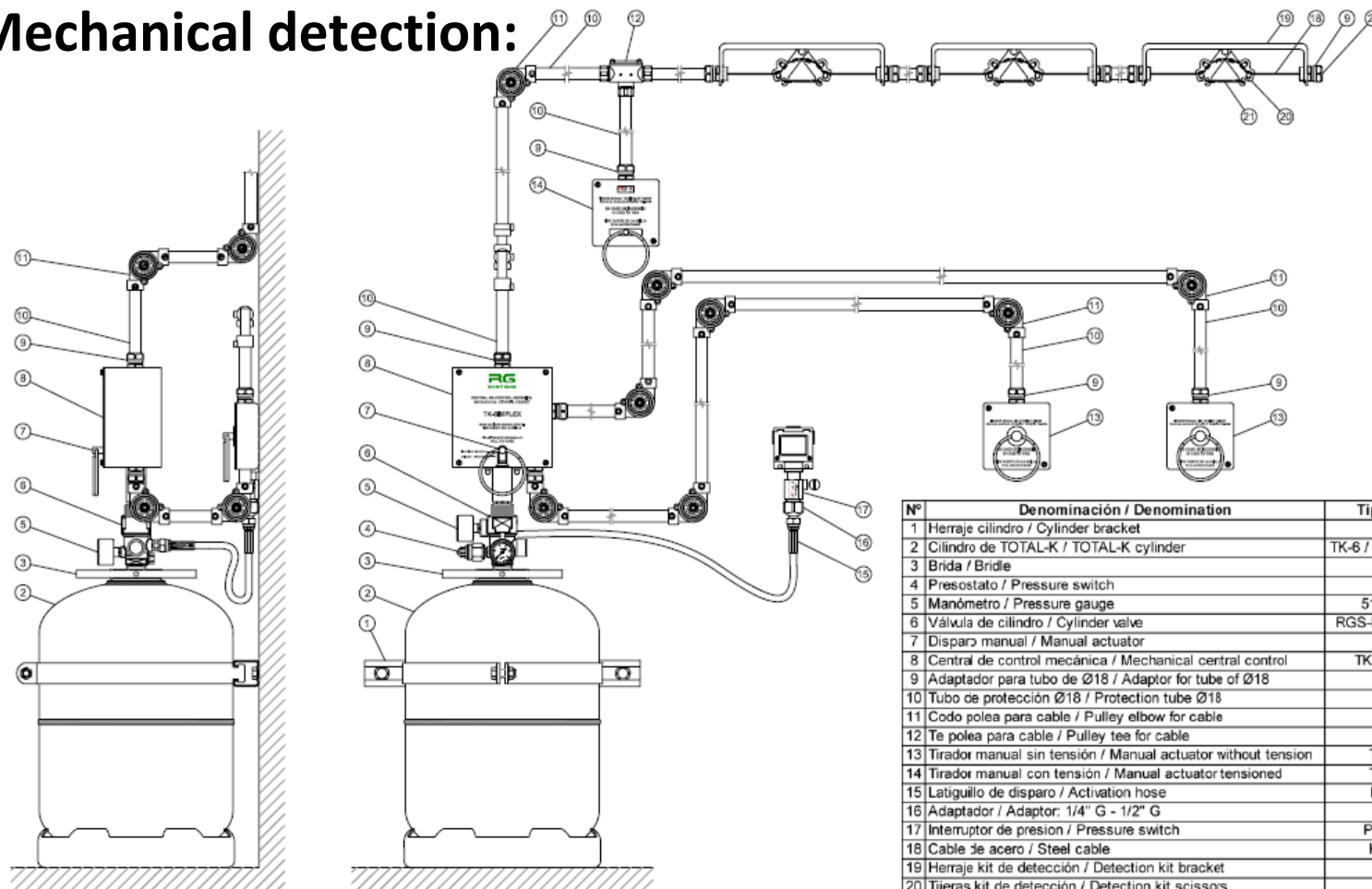


Nozzles and piping:



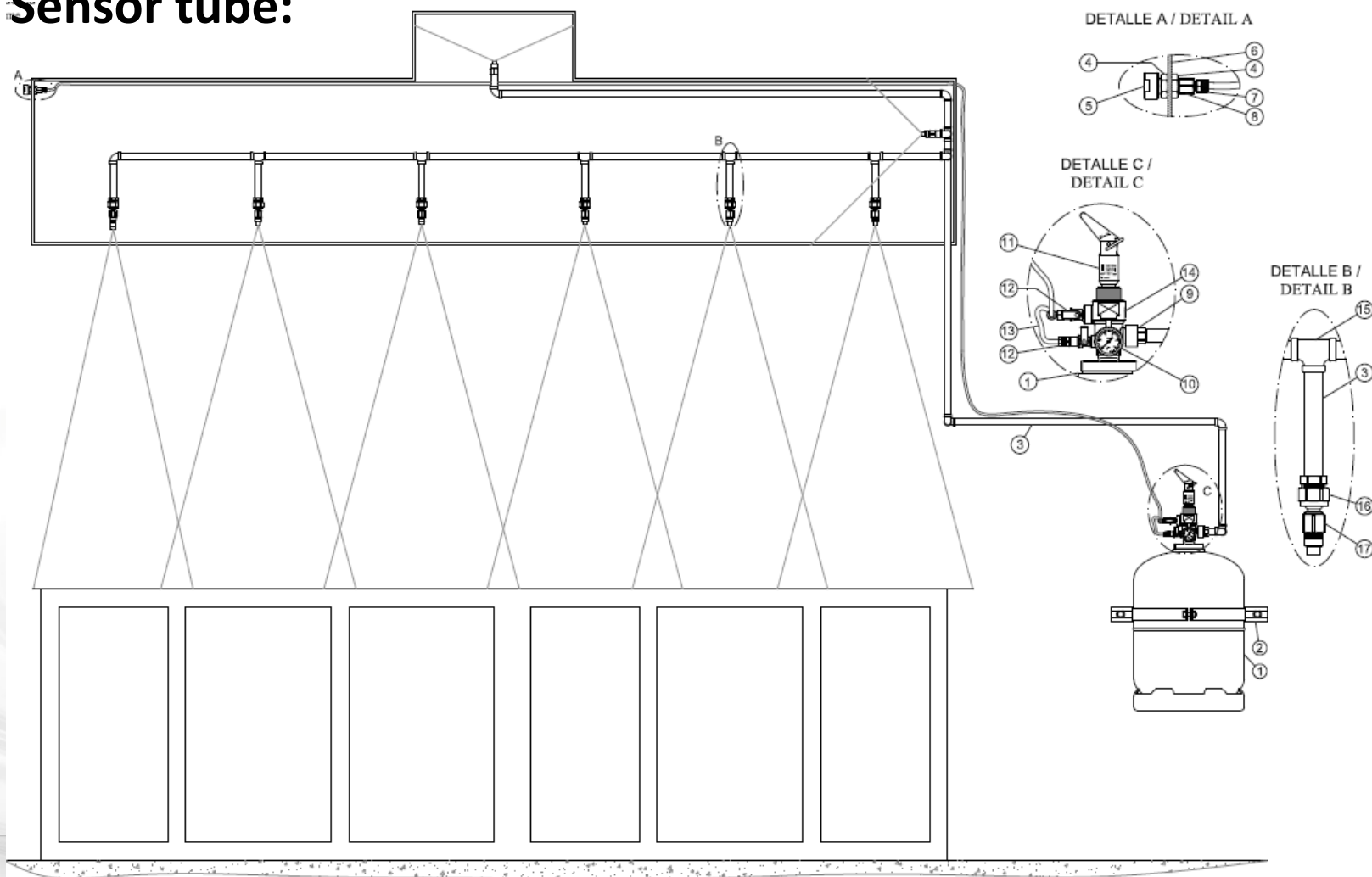
Numero de caudales / Number of caudals	Acero negro Tamaño tubería / Black steel – Pipe size	Acero inoxidable Tamaño tubería / Stainless steel – Size pipe
1 – 2	1/4"	- cm
1 – 11	3/8"	Ø ext. 15 mm
12 – 18	1/2"	Ø ext. 18 mm
18 – 30	3/4"	Ø ext. 20 mm
30 - 48	1"	Ø ext. 25 mm

Mechanical detection:

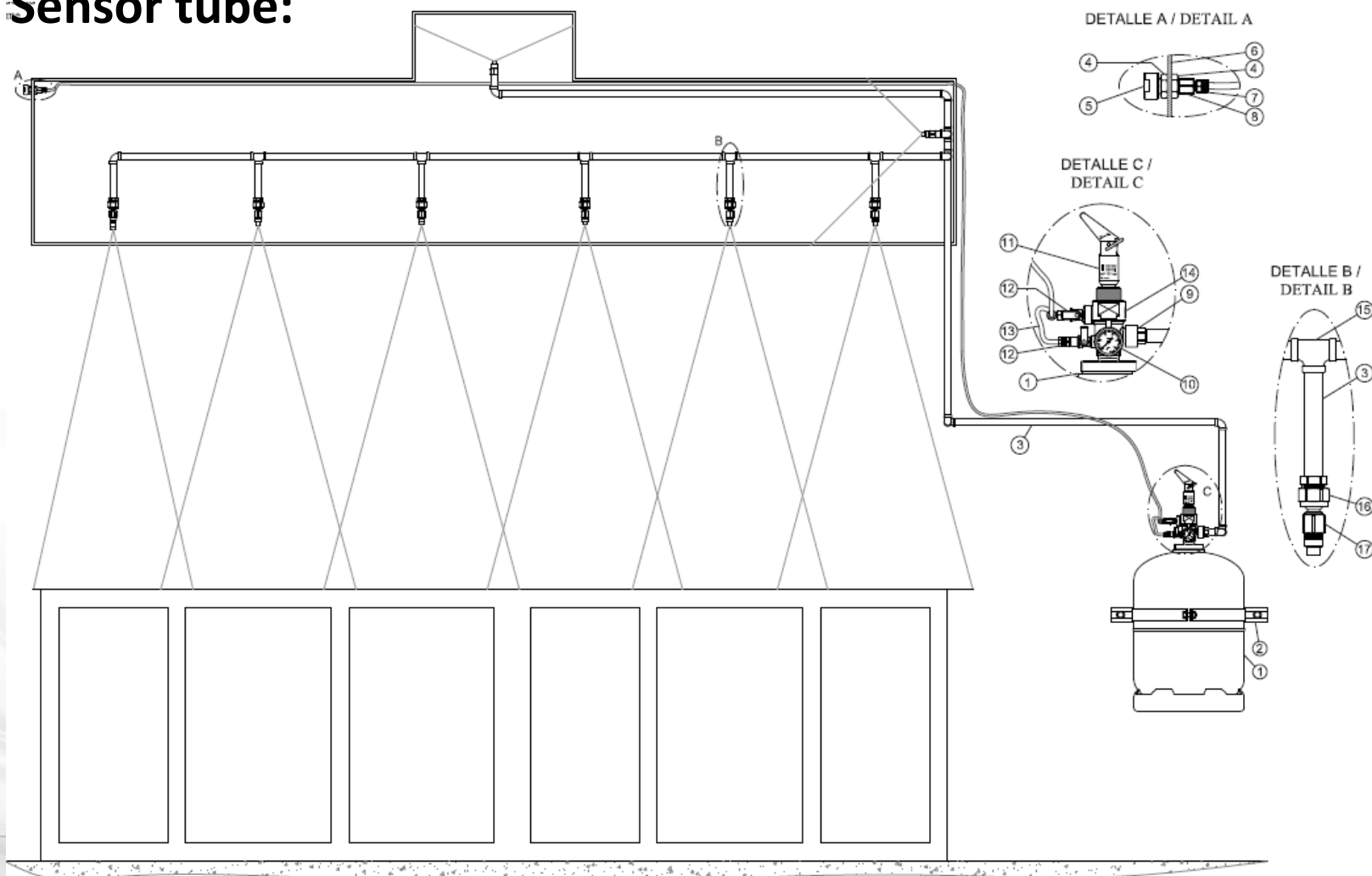


Nº	Denominación / Denomination	Tipo / Type
1	Herraje cilindro / Cylinder bracket	
2	Cilindro de TOTAL-K / TOTAL-K cylinder	TK-6 / TK-18 / TK-25
3	Brida / Bridle	
4	Presostato / Pressure switch	
5	Manómetro / Pressure gauge	5140-PXXX
6	Válvula de cilindro / Cylinder valve	RGS-MAM-12-3TK
7	Disparo manual / Manual actuator	
8	Central de control mecánica / Mechanical central control	TK-SIMPLEX
9	Adaptador para tubo de Ø18 / Adaptor for tube of Ø18	
10	Tubo de protección Ø18 / Protection tube Ø18	
11	Codo polea para cable / Pulley elbow for cable	TK-CP
12	Te polea para cable / Pulley tee for cable	TK-TE
13	Tirador manual sin tensión / Manual actuator without tension	TK-DMS
14	Tirador manual con tensión / Manual actuator tensioned	TK-DMC
15	Latiguillo de disparo / Activation hose	FH-6PO
16	Adaptador / Adaptor: 1/4" G - 1/2" G	
17	Interruptor de presión / Pressure switch	POINPRE
18	Cable de acero / Steel cable	KWR-50
19	Herraje kit de detección / Detection kit bracket	TK-KIT
20	Tijeras kit de detección / Detection kit scissors	TK-KIT
21	Fusible térmico / Fusible link	TK-KIT
22	Final de línea / End of line	TK-FL

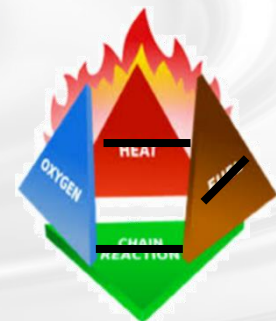
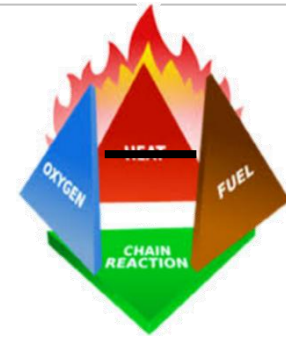
Sensor tube:



Sensor tube:



- Carbon dioxide:
 - Toxic for humans
 - Local application system
- Water mist
 - Expensive
 - Local application
- Other wet-chemicals:
 - Each manufacturer has its own salt mix: different effectiveness.
Ansul, Pyrochem, Kidde, Amerex, Minimax (foam)



THANK YOU FOR YOUR ATTENTION

