

**50 YEARS** PROTECTING LIVES AND PROPERTY

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**CONTROL DEVICES**

## I. Weighing devices

## II. Other devices

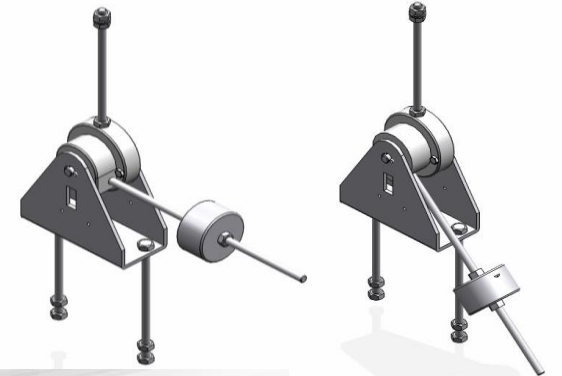
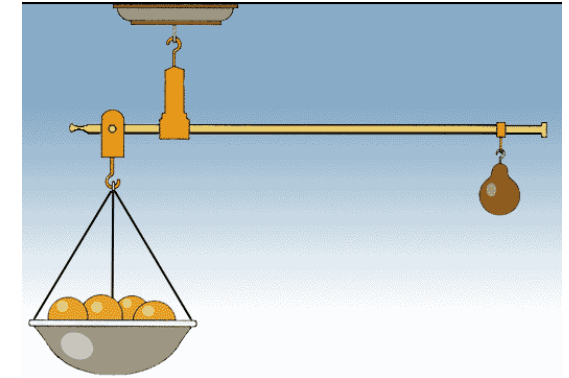
## III. Pressure control

- Low pressures switches
- Gauges with electric contact

## IV. Comparative

- Advantages
- Uses

- Direct weight measurement
  - Working principle: steelyard or Roman balance
    - Regardless of agent
    - Guaranteed behavior in adverse conditions
    - Finished system, ready to use
- ✓ 100% reliability
- ✓ extremely precise system



“ON” POSITION =  
FILLED CYLINDER

“OFF” POSITION =  
EMPTY CYLINDER

- Ready-to-use
- Features
  - Cylinder hangs from a steel structure
  - Electric signal to fire control panel (optional, highly recommended)
  - Extremely precise system: 0% to 5%. Re-adjustable
  - Weight limit: up to 567kg (~265L)
- Use (stock)
  - All agents
  - THE ONLY effective control device for HFC-23 and CO2 systems (self-pressurized agents)



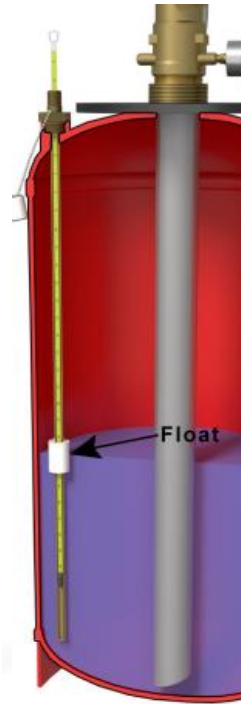
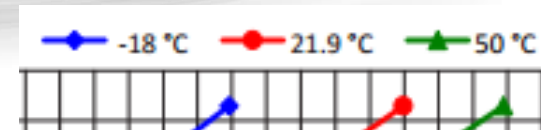
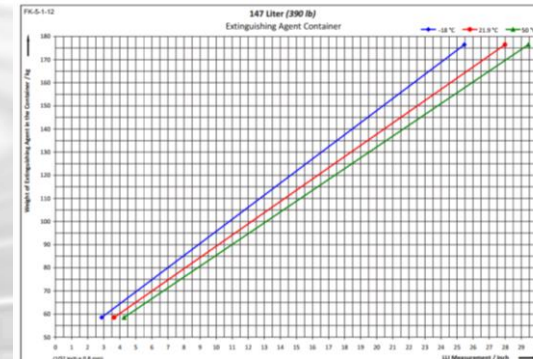
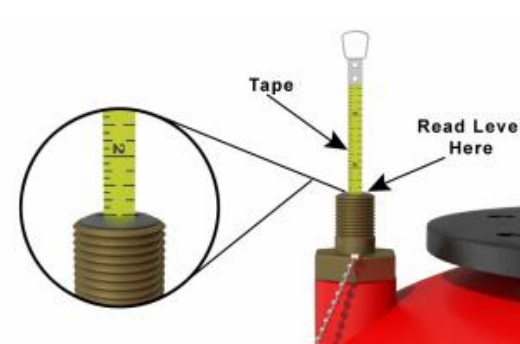
- Liquid level indicator
  - In contact with the agent → Leakages
  - Installed when cyl is empty
  - No signal to fire panel
  - Weight determination by graph

## Minimax

- » Novec 1230 at 25 bar only
- » VdS approved
- » 280 / 390 / 500 lbs only

## Fike

- » HFC-227ea and HFC-125
- » FM / UL / ULC approved
- » 44, 61, 88, 153, 267 and 423 L (100, 150, 215, 375, 650 and 1.000 lbs.)



- Agent measurement comparison

## MECHANICAL WEIGHING DEVICE

Indirect measurement, contactless

- ✓ **No leakages**
- ✓ Cyl. can be charged or empty (new systems or adaptations of existing ones, regardless of type)
- ✓ Customized answer: 0% to 5%
- ✓ Signal to fire panel (optional)
- ✓ SIEX-WD: **full approvals:** VdS, UL, FM
- ✗ Weigh limit: up to 567,9 Kg (gross weight, 415 Kg of agent)

## LIQUID LEVEL INDICATOR (LLI)

Direct measurement, in contact with agent

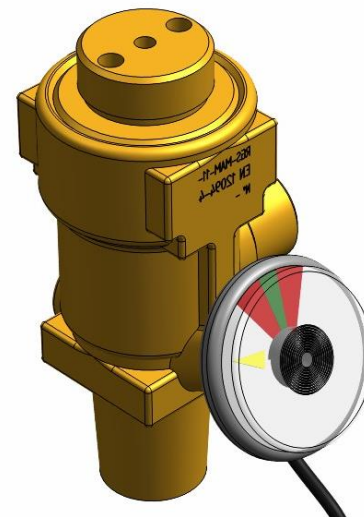
- ✗ Possible leakages
- ✗ Installed with cyl. empty only
- ✗ Cyl must include **specific port**
- ✗ **Visual check only**
- ✗ Chart required: pressure, temperature
- ✗ Measurement is **not precise**

- Approvals: VdS, UL, FM
- Use (stock)
  - HFCs agents + VdS or UL / FM approval
  - Inert gases + UL / FM approval
  - Do NOT use: Novec, HFC-23, CO<sub>2</sub>,
- Features
  - Assembled on the cylinder valve
  - Re-adjustable, even with charged cyl.
  - Options: NC / NO / Commutable
  - Classified atmospheres: Standard / Explosion proof





- Approvals: VdS, UL, FM
- Use (stock)
  - Inert gases + Vds
  - Do NOT use: (Novec), HFC-23, CO<sub>2</sub>,
- Features
  - Assembled on the cylinder valve
  - Non-adjustable
  - Classified atmospheres: Standard / Explosion proof





# COMPARATIVE: SIEX APPROVALS

- Weighing device
  - The only reliable system, 24/365 (electric shutdown)
  - Regardless of the agent
  - Weight limit

- Low pressure switch
  - Indirect measure: pressure
  - Re-adjustable in-place
  - Electric signal to fire panel

- Gauge w/ contacts
  - Indirect measure: pressure
  - Provides visual check
  - Electric signal to fire panel

	WEIGHING DEVICE		LOW PRESSURE SWITCH		PRESSURE GAUGE W/ CONTACTS	
	VdS	UL / FM	VdS	UL / FM	VdS	UL / FM
FM-200	✓	✓	✓	✓		
HFC-125	✓	/	✓	/		/
HFC-23	✓	/	⊘	/	⊘	/
Novec	✓	/		/	✓	/
IG-541	✓	✓		✓		✓
IG-55	✓	✓		✓		✓
IG-100	✓	✓		✓		✓
IG-01	✓	✓		✓		✓
CO2	✓	✓	⊘	⊘	⊘	⊘
Kitchens	✓	/	✓	/		/
"propellent" (N <sub>2</sub> cyl)	✓	✓		✓	✓	

# COMPARATIVE: COMPETITORS

	WEIGHING DEVICE		LOW PRESSURE SWITCH		PRESSURE GAUGE with CONTACTS		LIQUID LEVEL INDICATOR
	VdS	UL / FM	VdS	UL / FM	VdS	UL / FM	
<b>Siex</b>	✓	✓	✓	✓	✓	✓	
<b>Minimax</b>	✓	no					✓ (VdS)
<b>Siemens</b>	✓	no					
<b>Fike</b>		no					✓ (FM / UL / ULC)
<b>Pyro-chem</b>		no					✓
<b>G &amp; S Brandschutz</b>	CO <sub>2</sub> low pressure	no					
<b>Gottschalk</b>	CO <sub>2</sub> high pressure	no					
<b>Feuerschutzanlagen</b>							



QUESTIONS?

Thank you for your time