



BIGLEAP

FIRESAFETY CORPORATION

CLEAN AGENT

Fire Suppression Systems





CHEMICAL PROPERTIES

FK-5-1-12

Chemical Name	FK-5-1-112
Empirical Formula	CF ₃ CF ₂ C(O)CF(CF ₃) ₂
CAS Number	756-13-8
Molecular Weight	756-13-8
Boiling Point	490C
Freezing Point	1800C
Viscosity Liquid (250C)	0.524Cp
Vapor Pressure (250C)	40.4Kpa
Extinguish Concentration (Cup)	4.5%
NOAEL (v/v)	10%
LOAEL (V/V)	>10%
LC50 (V/V)	>10
Ozone Depleting Potential	0
GWP	1



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INTRODUCTION

FK-5-1-12, full chemical name perfluoro(2-methyl-3-pentanone), heptafluoroisopropyl pentafluoroethyl ketone, is a sustainable substitute for Halon 1301 with excellent fire extinguishing performance and typical safety & environment characters of:

- ✓ Clean and do not leave residue
- ✓ Electrically nonconductive
- ✓ Safe for people and animal
- ✓ Zero Ozone Depleting Potential and low GWP

FK-5-1-12 material specification is in compliance with NFPA 2001 (standard on clean agent fire extinguishing systems) and ISO 14520 (Gaseous fire extinguishing systems.)

APPLICATION

FK-5-1-12 fire suppression agent is a sustainable substitute for Halon 1301. It is particularly useful in computer rooms, data processing centers, semiconductor manufacturing facilities, industrial process control rooms, petrochemical facilities, chemical storage rooms, libraries and museums, critical military applications and so on.

Quality Control

- ✓ Four times of UL follow-up service every year.
- ✓ Four time of FM follow-up service every year.
- ✓ Our quality control program is supported by advanced analytical facilities, which help to ensure that all raw materials, in-process materials and finished products are quality controlled at all stages.





CHEMICAL PROPERTIES

HFC-227ea

Chemical Name	HFC227ea
Empirical Formula	CF ₃ -CHF-CF ₃
CAS Number	431-89-0
Molecular Weight	170.03
Boiling Point	-16.360C
Freezing Point	-1310C
Viscosity Liquid (250C)	0.226Cp
Vapor Pressure (250C)	457.7KPa
Extinguish Concentration (Cup)	6.5%
NOAEL (v/v)	9%
LOAEL (V/V)	>10.5%
LC50 (V/V)	>80%
Ozone Depleting Potential	0



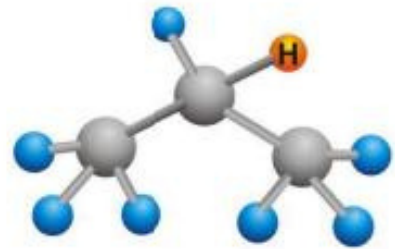
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APPLICATION

HFC-227ea fire suppression agent is an optimal substitute for Halon 1301. It is particularly useful in computer rooms, libraries, semiconductor manufacturing facilities, data processing centers, industrial process control rooms, petrochemical facilities, chemical storage rooms and so on.

Description

- ✓ An environmentally substitute for Halon 1301 with zero ODP.
- ✓ Safe for people and animal.
- ✓ Clean and do not leave residue.
- ✓ Electrically nonconductive and noncorrosive.
- ✓ UL Recognized and FM Approved.



Quality Control

- ✓ Four times of UL follow-up service every year.
- ✓ Four time of FM follow-up service every year.
- ✓ Our quality control program is supported by advanced analytical facilities, which help to ensure that all raw materials, in-process materials and finished products are quality controlled at all stages.



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PRODUCT CATALOGUE

DISCHARGE NOZZLE

360 degree - Nozzles



Product Code	SHU					
99	100	101	102	103	104	105

- Using the correct calculation software, the needed orifice diameter must be Estimated and the determined orifice size must be drilled out.



PRODUCT CATALOGUE

DISCHARGE NOZZLE

180 degree - Nozzles



Product Code	SHU					
106	107	108	109	110	111	112

- Using the correct calculation software, the needed orifice diameter must be Estimated and the determined orifice size must be drilled out.

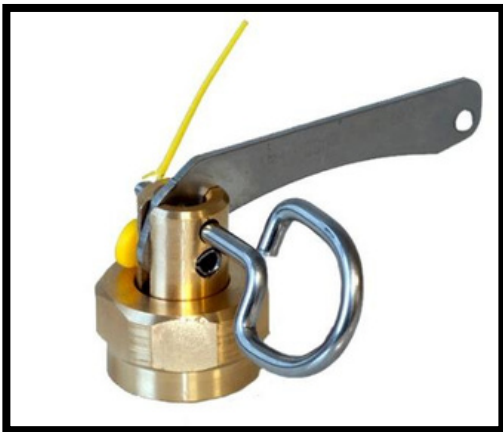


PRODUCT CATALOGUE

ACTUATORS FOR CYLINDER VALVES



Electrical Actuator



Manual Actuator

Product Code	SHU	TECHNICAL DETAILS
5	Electrical	Refer to the instruction Manual id the Electrical Actuator for all Technical Details
6	Manual	



PRODUCT CATALOGUE

DISCHARGE HOSE



Discharge Hose (DN50)

Product Code		SHU			
400mm	450mm	500mm	600mm	700mm	800mm
38	39	40	41	42	43
900mm	1000mm	1100mm	1200mm	1300mm	1400mm
44	45	46	47	48	49

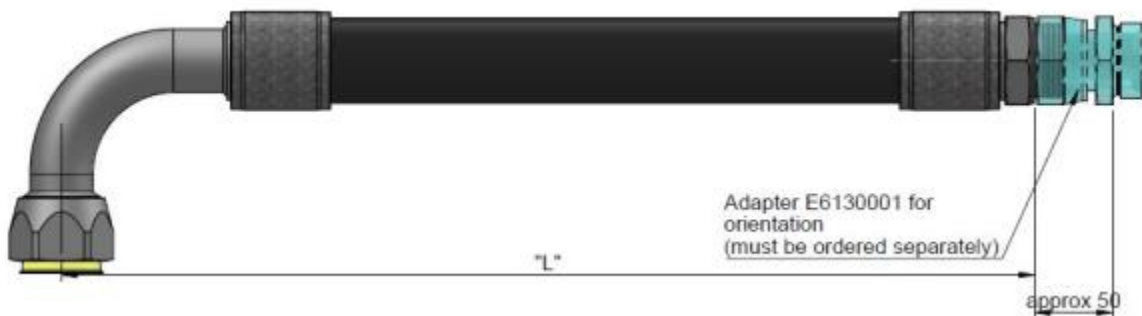


PRODUCT CATALOGUE

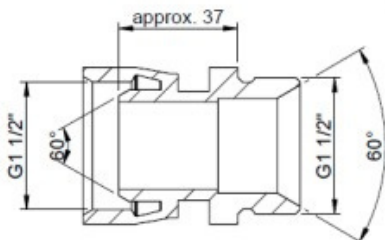
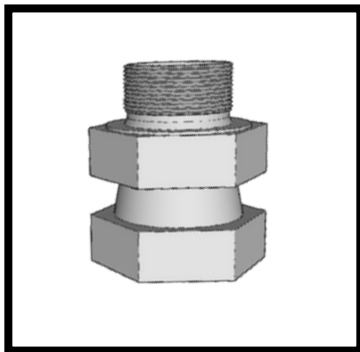
DISCHARGE HOSE

Discharge Hose (DN33)

Product Code		SHU			
400mm	450mm	500mm	600mm	700mm	800mm
62	63	64	65	66	67
900mm	1000mm	1100mm	1200mm	1300mm	1400mm
68	69	70	71	72	73



Discharge Hose Adaptor



Product Code	SHU
74	75
For Orientation of Hoses with 90° Elbow	



PRODUCT CATALOGUE

PRESSURE GAUGE WITH SWITCHING CONTACT

FK5-1-12



HFC227ea



Product Code SHU			
21		25	
Pressure Range	Set Point	Switching Type*	Remarks
0-60 Bar	22.5 Bar	Normally Closed (NC)	Only for HFC227ea
0-60 Bar	45 Bar	Normally Closed (NC)	Only for



SOFTWARE FOR HYDRAULIC FLOW CALCULATION

VdS Calculation Programs for Gas Extinguishing

- For inert Gas Systems with Orifice Plates **
- For Inert Gas Systems with Constant Pressure Regulator *
- For CO² Systems
- For Chemical Gas Systems (HFC's – Halocarbons) **

All Software Licenses must be purchased from Vds in Germany

*** Standard VdS Software for Inert Gases (with Orifice Plates), CO² and Chemical Gases**

- Flow Coefficients of Components are available on request to implement into the existing Flow Calculation Software Version

Jensen Hughes Flow Calculation Software

- For Inert Gas Systems with Constant Pressure and Orifice Plates*
- For CO² systems **
- For Chemical Gas Systems (HFC's – Halocarbons) **

*** Customized Software for Inert Gases – available end of 2021**

- Software Licenses will be sold by Valves and Regulators
- Flow Coefficients of each component are already included.
- Software will be UL/FM – tested and approved.
- Only if all components are used
- If other products shall be used, the software Approval will not be valid

***Standard Jensen Hughes Software for CO and Chemical Gases**

- Software Licenses must be purchased from Jensen Hughes
- Equivalent Length data of components will be available upon request to implement into the existing Flow Calculation Software Version.



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