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Refleks Fire Protection Systems Inc. was established in 2007 and it has an organization which provides designing, supplying, manufacturing, installation, maintenance and training of domestic and international turnkey active and passive fire protection systems with expert staffs.

The industrial sector projects are equal to %92 of the total project while the marine sector projects are equal to %8. Refleks Fire Protection Systems Inc. continues its activities in its 4000 m² facility in Kartal. It performs manufacturing, filling and testing of gas extinguishing systems at its facility in Pendik. Çukurova Branch has given a service since 2019 and Ankara Branch has given a service since 2019.

BULGARIA TURKEY LEGAL FINANCIAL ADVISER (1) ADVISER (1) efleks fle OCCUPATIONAL PATENT NSULTANT (1) Fire Protection Systems LTD. **HEALTH AND SAFETY (1)** www.refleks-bg.com QUALITY DEPARTMENT **IT DEPARTMENT** (TEST STATION) (1) (1) WAREHOUSE ASSEMBLY SALES FINANCIAL AFFAIRS -ERP DEPARTMENT DEPARTMENT (5) (2)ADMINISTRATIVE UNI BUSINESS AND CONTRACTS (2) **DEVELOPMENT (1)** R&D -CERTIFICATION (1) ENGINEERING PURCHASING TECHNICAL AND SALES (1) AND LOGISTICS (1) MANAGER (1) INTERNATIONAL SALES INDUSTRIAL TECHNICAL MAIN GAS FILLING OPERATION MARINE TENDER **PROJECTS (1)** SUPPORT (1) PROJECTS (4) SECTOR (1) PROJECTS (1) **SERVICE (3)** NAREHOUSE (2) STATION (2) (23) _ _ MANUFACTURING LINE MECHANIC ELECTRIC WELDER BUILDER CARPENTER ANKARA **ÇUKUROVA** AND WORKSHOPS BRANCH (3) BRANCH (1)

Refleks OOD (LTD.) / Sofia-Bulgaria Company has given a service since 2018.

All the activities and efficiency of the company are maintained on the ERP platform and integrated with quality management.

The designs of Refleks Fire Protection Systems are realized by experienced engineering team with using VdS certificated softwares. The application is provided completely by our own staff.

The projects, which are related with sprinkler, foam, gas or wet/dry chemical extinguishing agents, are matched with passive systems in the sense of total risk and security of facilities and ships are integrated with active and passive solutions.

Some special measures are taken to protect and protect the rights of customers in desings.

Engineering and detail solutions are followed by updated publications from VdS and UK Chamber of Fire Engineers or international fairs and seminars that certify our company. For international projects or investors' requests, works are carried out with fire consultants originating from USA or UK

All references of our company are prepared on a sectoral basis and are included in the QR code.





THE CERTIFICATES OF INTERNATIONAL

Zertificat Certificate	Zertificate	Zertificat Certificate	Zerlrikal Certificate	J Zertifikat Certificate	Manufacturing plant for VdS-approved products
	833 oct. 				
				9453 - 2455	
Certification Authority		Certificate Subject		Certificate No	
VdS - GERMANY		HFC-227ea Gas Extinguishing System (25 Bar)			S 317010
VdS - GERMANY		HFC-227ea Gas Extinguishing System (42 Bar)			S 317010
VdS – GERMANY		Gas Extinguishing System (Hose)			G 315014

VdS – GERMANY	HFC-227ea Gas Extinguishing System (42 Bar)	S 317010
VdS – GERMANY	Gas Extinguishing System (Hose)	G 315014
VdS – GERMANY	Gas Extinguishing System (Check Valve)	G 317003
VdS - GERMANY	Gas Extinguishing System (Nozzles)	G 317010
VdS – GERMANY	Gas Extinguishing System (Production of Check Valve, Hose, Nozzle)	21.01.2019
VdS – GERMANY	Hydraulic Calculation Software (HFC-227ea, CO ₂ , FK-5-1-12, IG-541)	14.05.2019
TÜV - SUD	Cylinder Manufacturing TPED (π)	0036-009-14 Rev.1
TÜV - SUD	Gas Extinguishing System Manifold (CE 0036)	00560R1
TÜV - SUD	In-House Control (π 0036)	0036-QS-006-15 Rev.1
TÜV - AUSTRIA	Modul B (Valve DN25, DN33, DN50)	2019-TURK-402-17-IS-1068
TÜV - AUSTRIA	Modul D (Valve DN25, DN33, DN50)	ZSTS/SWZE/3149
RUSSIAN FEDERATION	GOST-R (HFC-227ea, HFC-125 Gas Extinguishing System)	C-TR.PB97.B.00061
RUSSIAN FEDERATION	GOST-R (CO ₂ Gas Extinguishing System)	C-TR.PB97.B.00062
RUSSIAN FEDERATION	GOST-R (Inert Gas Extinguishing System)	C-TR.PB97.B.00063
RUSSIAN FEDERATION	GOST-R (Actuator and Nozzle)	C-TR.PB97.B.00064
TURKISH STANDARDS INSTITUTION	TS-11827 (CO ₂ , HFC-227ea, HFC-125, HFC-36, FK-5-1-12 Refilling)	34-HYB-15734
TURKISH STANDARDS INSTITUTION	TS-13345 (Service Competence Certificate)	34-HYB-15493
TURKISH STANDARDS INSTITUTION	TS EN 1866-1 (Mobile CO ₂ Set 30x2kg)	013525-TSE-01/01
SOCOTEC - ENGLAND	ISO 9001 - 2015 (Quality Management System)	CN/11770
ISTANBUL CHAMBER OF INDUSTRY	CO ₂ Portable Fire Extinguisher Certificate	2019108344272
TURKISH PATENT INSTITUTE	REFLEKS Trademark Registration Patent	2008 23316
TURKISH PATENT INSTITUTE	RSS Trademark Registration Patent	2015 42278
TURKISH PATENT INSTITUTE	RSS MIKROREFLEKS Trademark Registration Patent	2016 01069



HFC-227ea (TRADE NAME FM-200) GAS SUPPRESSION SYSTEMS

Made in TURKEY



Sample of HFC-227ea (FM200) Application



Our HFC-227ea gas extinguishing system, which is known the trade name "FM-200[®] Gas Extinguishing System, is manufactured, designed, sold and maintained by our company. The system patented RSS[®] (**R**efleks **S**uppression **S**ystems) with VdS, GOST-R, CE (π 0036 and π 0408) certified.

The HFC-227ea (FM-200) gas, which is in our systems, FM approved and UL listed. TPED (π) (EN 13322-1) (2010/35 / EU) certified cylinders, which are manufactured in our facilities, are equipped with VdS certified valve, check-valve, connection hoses, nozzles, CE certified collectors and VdS certified manometers.

They are manufactured with under the supervision of VdS, TÜV-SUD, GOST-R in our own facilities as a "system".

The applications are done according to desings and engineering calculations which are calculated by using VdS certificated Hydraulic Calculation Software.

Our company has CE certificate for the installation of gas extinguishing systems while our filling facility is TSE certified.

The cylinders produced with TPED (π) certificate according to EN 13322-1 rules have a capacity of 26, 45, 83, 150lt (150lt U - 150lt K). Both 25 bar and 42 bar VdS certified systems are available.



HFC-227ea (TRADE NAME FM-200) GAS SUPPRESSION SYSTEMS



- It can be used at the areas which has industrial, social, military or civil (A), (B), (C), (E) class fire loads and which has human or non-human at automatic or manuel systems. It is not be used for the places, which has (D) class fire load and nitrate.
- It can be used for; UPS, server, compensation, battery rooms, panel rooms, transformers, cutters, turbines, generators, cable galleries, communication facilities, electronic equipment in all military and civil, industrial or marine vehicles and facilities used in cranes, ports and terminals used in cranes, factory roof creams, elevator machine rooms,
- Protection of paper copies and/or electronic archives, museums, exhibitions, historical buildings, antiquities, libraries,
- Natural gas gas distribution stations, chemical industry, laboratories, fume cupboards, refinery facilities, compressors, ventilation units.
- If FM approved and UL listed or LPCB certified systems are requested, they are imported and assembled from European and US companies, which we represent.









FK 5-1-12 (TRADE NAME NOVEC 1230) GAS SUPPRESSION SYSTEMS

Made in TURKEY



Our FK 5-1-12 gas extinguishing system, which is known the trade name as "NOVEC 1230", is manufactured, designed, sold and maintained by our Company as RSS[®] (**R**efleks **S**uppression **S**ystems) brand name.

If the FK 5-1-12 system is requested according to have VdS certificate, it is delivered as RSS[®] (**R**efleks **S**uppression **S**ystems). FM approved and UL listed FK 5-1-12 extinguishing agent is supplied from USA. TPED (π) (EN 13322-1) (2010/35/EU) certified cylinders, which are manufactured in our facilities, are equipped with VdS certified valve, check-valve, connection hoses, nozzles, CE certified collectors and VdS certified manometers. The all system are delivered with VdS certification.

Our filling facility is TSE certified for this system. The cylinders, which are produced in our facility as 25 bar with TPED (π) certificate, have 26, 45, 83, 150lt capacity.

TPED (π) certificated 25 bar produced cylinders; It has a capacity of 26, 45, 83, 150lt, but the ones supplied from the USA are of different capacity but the cylinders, which are come from USA, have a different capacity.









- All industrial, social, military or civilian (A), (B), (C), (E) class fire loads. It is used in automatic or manual systems in human or non-human areas and cannot extinguish only in areas where class (D) fires contain nitrate.
- UPS, server, compensation, battery rooms, panel rooms, transformers, cutters, turbines, generators, cable galleries, communications facilities, electronic equipment in all military and civil, industrial or marine vehicles and facilities in the energy fields,
- Protection of paper copies and/or electronic archives, preservation of museums, exhibitions, historical buildings, antiquities, libraries, marine sector,
- Natural gas gas distribution stations, chemical industry, laboratories, fume cupboards, refinery facilities, compressors, ventilation units,

If FM approved and UL listed or LPCB certified systems are requested, they are imported and assembled from European and US companies we represent.





DOOR-FAN / INTEGRITY tests are provided by our certified products and engineers according to NFPA 2001 rules.



INERT GAS SUPPRESSION SYSTEMS





Inert Gas Extinguishing Systems (IG-01, IG-541, IG-55) are manufactured, designed, sold, assembled and maintained by our company, with GOST-R certified as RSS® (**R**efleks **S**uppression **S**ystems) brand.

The cylinders, which are supplied from Europe with TPED (π) (EN 13322-1) (2010/35/EU), are equipped with certified valves, check-valve, connection hoses, nozzles and collectors manufactured as "system" and it is controlled in our test station.







The Applications are done according to Desings and Engineering calculations which are calculated by using VdS certificated Hydraulic Calculation Software. Our company has CE certificate for the installation of gas extinguishing systems.

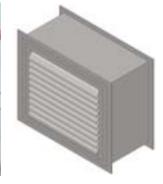
The imported TPED (π) certified cylinders have a capacity of 40, 67, 80 and 140lt at 200 bar working pressure or 80 or 140lt at 300 bar working pressure. Due to the high pressure, the required pressure relief dampers are calculated separately and supplied and assembled according to their dimensions.

- All industrial, social, military or civilian (A), (B), (C), (E) class fire loads. It is used in automatic or manual systems in human or non-human areas and cannot extinguish only in areas where class (D) fires contain nitrate.
- UPS, server, compensation, battery rooms, panel rooms, transformers, cutters, turbines, generators, cable galleries, communications facilities, electronic equipment in all military and civil industrial vehicles and facilities in the energy fields,
- Preservation of paper copies and/or electronic archives, preservation of museums, exhibitions, historical buildings, antiquities, libraries,

If FM approved and UL listed or LPCB certified systems are requested, they are imported and assembled from European and US companies we represent.







System Integrity Sample of 200 Bar Inert System Sample of Ventilation Cover





CO₂ GAS EXTINGUISHING SYSTEMS



Container CO₂ Gas Extinguishing Application

The High Pressure CO_2 Systems, which are manufactured, designed, sold, installed and maintained by our company, have GOST-R certification and they are produced as RSS[®] (**R**efleks **S**uppression **S**ystems) brand. Low pressure carbon dioxide systems are delivered between 2 - 10 tons as certified/TYPE approved system.

The cylinders, which are supplied from Europe with TPED (π) (EN 13322-1) (2010/35/EU), are equipped with VdS certified valves, GOST-R certified check-valve, connection hoses, nozzles and collectors manufactured as "system" and it is controlled in our test station.

The applications are done according to desings and engineering calculations which are calculated by using VdS certificated Hydraulic Calculation Software.



Sample of High Pressure CO₂ System





HFC-125 GAS EXTINGUISHING





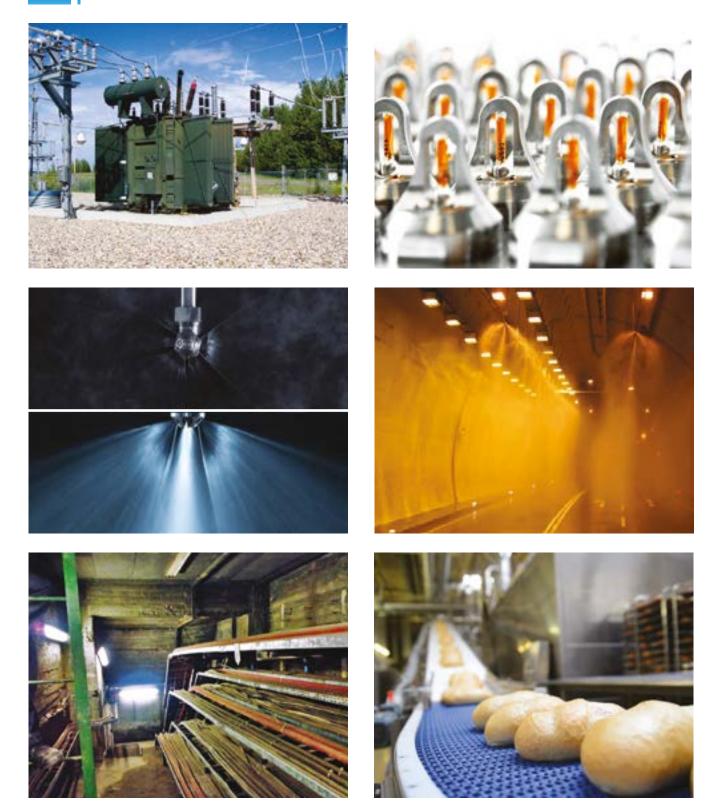
- All industrial, social, military or civilian (A), (B), (C), (E) class fire loads. It is used in automatic or • manual systems in human or non-human areas and cannot extinguish only in areas where class (D) fires contain nitrate.
- It can be used in areas where HFC-227ea (FM-200), FK 5-1-12 and INERT systems are used. There is no difference from other systems. It operates at a pressure of 25 bar and HALON 1301 systems have the advantage that it is possible to use the same pipes with the replacement of cylinders and nozzles without the need to replace the pipes, when replacement is desired.
- If FM approved and UL listed or LPCB certified systems are requested, they are imported from European and US companies that we represent and assembled.



EN 12094 Certified (CE) Valves



WATER MIST SUPPRESSION SYSTEMS



The Water Mist Extinguishing System sold, installed and maintained by our company is imported from Europe. All of our equipments and hydraulic calculation program, which used in engineering and design are certified with VdS approval. The high pressure, which is required by the "Water Mist" system is provided nitrogen cylinders instead of pumps. The design pressures range from 100 bar to 140 bar and the most important element of the design is the selection of nozzles. The height of the protected area and the fire risk class directly affect the choice of nozzle. Stainless pipes, fittings, valves and collectors are used, connections are provided with Lock Triple Lock "system and special equipment so that welded production is not required.



WATER MIST SUPPRESSION SYSTEMS



Istanbul Governorship Building



Petrochemical Refinery



Ottoman High School / Heritage



Steel Factory (Turkey)



National Printhouse (Turkmenistan)



Steel Factory (Turkey)

- Server rooms, cable galleries, turbines, generators, transformers, energy sector,
- Fuel pumps, fuel tanks, lubricating oil tanks,
- Engine test rooms, bremse rooms, machinery/equipment, hydraulic and pneumatic systems,
- Electrostatic coating, dipping, cleaning processes and all industrial areas,
- In museums, archives, libraries, historical buildings, ornamented areas with pen workmanship,
- In road and railway tunnels, railway and subway wagons, passenger platforms,
- Military facilities, ammunition,
- In the marine sector, in each compartment of the ships,
- Aircraft and helicopter hangars, air industry and facilities in air bases,
- It is used in wooden and "Bağdadi" roofs and structures.

If FM approved and UL listed or LPCB certified systems are requested, they are imported and assembled from European and US companies we represent.









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Gas Extinguishing Systems **Filling Station**

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