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THE ISOLATOR

As we embark on a new month and the dawn of a new year, let us embrace the prospect of fresh beginnings, resolutions, and the deliberate setting of meaningful goals. May it unfold with renewed intentions, the discovery of love, an illuminating light, and the promise of auspicious new chapters.

Greetings and welcome to the January 2024 edition of 'The Isolator,' proudly brought to you by Kinetics Middle East LLC. In this monthly newsletter, we are delighted to curate exclusive insights, share pertinent updates, and showcase notable achievements from our dynamic realm of innovation and excellence

As usual, do continue to support and please have a look on our YouTube channel to know more about Seismic Restraints and why contractors should use it in their projects. And while at it, we request you to subscribe, like and hit the notification bell to stay updated on our latest releases!

NEW KHAZNA DATA CENTER-MASDAR, ABU DHABI



Khazna Data Centers, the largest network of hyperscale data centers in the Middle East and North Africa region. The project involves the construction of a data center with ground floor and an additional floor located in Masdar, Abu Dhabi.

Kinetics Middle East LLC played pivotal role in the project by providing comprehensive support to M/s. James L Williams, serving as the primary supplier of a diverse range of Vibration Isolators and Seismic supports for the project.

KING FAISAL AIR FORCE ACADEMY



The project involves the construction of an air force academy located at Majmaah, Riyadh, Saudi Arabia. It will include:

- Educational facilities
- Residential facilities (family & family accommodation)
- Infrastructure and roads
- Security facilities

Kinetics Middle East LLC played a crucial role in addressing vibration and noise challenges for the project by offering a comprehensive solution. The provided solution included a diverse range of products such as Vibration Isolators and Flexible Connectors. These high-quality products were sourced through our longstanding partner in the Kingdom of Saudi Arabia M/s. Arwada, contributing to the overall success and efficiency of the project.

Source: https://air.bncnetwork.net/project_detail/King_Faisal_Air_Force_Academy/MTcyNjQ4

TECHNICAL DISCUSSION:

VARIABLE REFRIGERANT FLOW SYSTEMS AND TECHNOLOGY

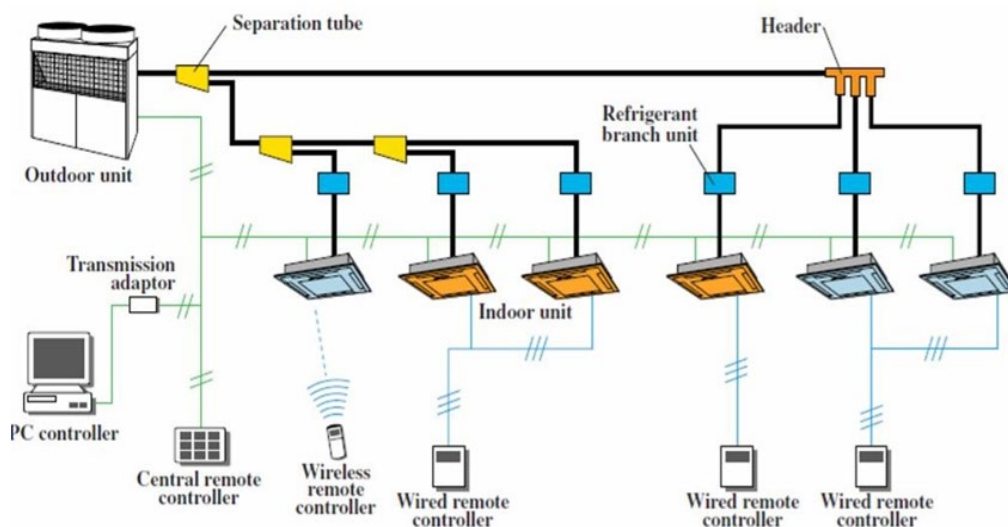
Variable refrigerant flow (VRF) is an air-condition system configuration where there is one outdoor condensing unit and multiple indoor units. The term variable refrigerant flow refers to the ability of the system to control the amount of refrigerant flowing to the multiple evaporators (indoor units), enabling the use of many evaporators of differing capacities and configurations connected to a single condensing unit. The arrangement provides an individualized comfort control, and simultaneous heating and cooling in different zones.

With a higher efficiency and increased controllability, the VRF system can help achieve a sustainable design. The control is achieved by continually varying the flow of refrigerant through a pulse modulating valve (PMV) whose opening is determined by the microprocessor receiving information from the thermistor sensors in each indoor unit. The indoor units are linked by a control wire to the outdoor unit which responds to the demand from the indoor units by varying its compressor speed to match the total cooling and/or heating requirements.

➤ ADVANTAGES OF VRF SYSTEM

- The fact that one large condenser can be connected to multiple evaporators within the building reduces and/or eliminates the need for ductwork installation completely.
- Multi-splits are suitable for single thermal zone (defined below) applications with very similar heat gains/losses.
- Improved Energy Efficiency.

➤ SCHEMATIC VRF ARRANGEMENT



Source: [https://www.cedengineering.com/userfiles/M03-014%20-%20HVAC%20Variable%20Refrigerant%20Flow%20\(VRF\)%20Systems%20-%20US.pdf](https://www.cedengineering.com/userfiles/M03-014%20-%20HVAC%20Variable%20Refrigerant%20Flow%20(VRF)%20Systems%20-%20US.pdf)

KINETICS – KINFLEX FLEXIBLE CONNECTORS

KINFLEX Flexible Connectors prevent stresses due to expansion and contraction, isolate against the transfer of noise and vibration, and compensate for misalignment.

KINFLEX connectors absorb the continuing movement experienced in piping systems because of varying ambient temperatures, differences in temperature of materials being handled, and differences in composition. The danger of buckling or pulling apart and resulting maintenance costs are eliminated.

KINFLEX connectors reduce objectionable noise and vibration in piping systems connected to pumps, compressors, and similar pulsating equipment. The transmission of noise and vibration tends to reduce the efficiency of adjacent equipment as well as impairing the working conditions in offices and factories.



APPLICATIONS

Air Conditioning, Heating, and Ventilating Systems: KINFLEX Flexible Connectors eliminate stresses caused by changes in temperature and piping misalignment, as well as reduce the transmission of noise and vibration. They are used on both hot and chilled water circulation lines, suction and discharge sides of pumps, and header connections.

Industrial: One of the most significant uses for KINFLEX connectors is in industrial piping installations to compensate for the thermal expansion and contraction of the pipe.

Power Plants: Because of the ability of the KINFLEX connectors to adjust to pipe misalignment, they can be used in power plants for condenser connections, auxiliary exhaust lines, and connections to air ejectors.

Marine Systems: KINFLEX connectors isolate marine systems against the transmission of noise and vibration and eliminate the destructive action of electrolysis. They are used on suction and discharge sides of circulating water-cooling systems and air intake lines on diesel engines.

Sewage Treatment Plants and Pollution Control: KINFLEX connectors are used extensively in sewage water treatment-plants and pollution-control systems.

Source: www.kinticsgroup.ae



Kinetics YouTube –

Kinetics Middle East LLC: KINETICS – Seismic Restraints

Why contractors should use KINETICS® Seismic Restraints.

Earthquakes pose a significant threat to buildings, particularly concerning the damage they can inflict on mechanical and electrical systems. Inadequately restrained equipment can suffer extensive damage during seismic events. This video addresses these concerns by presenting restraint systems designed to limit equipment movement during earthquakes to mitigate risks and minimize long-term costs associated with seismic damage.

<https://youtu.be/yTPeyZ--ILk>



#knowmore

info@kineticsgroup.ae

sales@kineticsgroup.ae

<https://www.kineticsgroup.com/>

