

Control Rod Drive Mechanisms

Holding pressure & controlling nuclear reactivity for Large and Small Modular Reactors

Framatome designs, customizes & qualifies CRDM models

Available for SMR/PWR designers & operators

Challenge

- Guarantee nuclear safety and integrity of PWR reactors
- Ensure both control of nuclear reactivity and pressure holding while securing long lasting reliability
- Design and manufacture according to the applicable construction codes (ASME & RCC-M)

Solution

Framatome provides control rod drive mechanisms with the highest level of safety & quality standards

ISO certified , Framatome supports international regulations: ISO 17025, ISO 19443, ASME III d1

3 models of CRDMs fixture onto the Reactor Pressure Vessel Head (RPVH) are available.

Custom design adaptation can be proposed according to reactor operating conditions

Service and maintenance ensured for decades

Robust and reliable supply chain of manufacturing capacities



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Technical information

CRDM	F-900	F-1300	F-1650
Rating	350°C & 175 bars		
Qualified	8.10 ⁶ steps		6.10 ⁶ steps
Speed	1,14 m/min		0,75 m/min
Stroke	3,6m	4,3m	4,2m
Force	>160kg	>180kg	>110kg
Length	5,5m	6,4m	5,2m
Width	Square: 275mm		Round: 280mm
Weight	680kg	690kg	456kg
Power _{max}	125V / 38A	110V / 40A	220V / 9A
Cooling	Forced		Natural

Customer benefits

- **Worldwide proven 40 years lifetime** without repair or replacement
- Spare parts available on demand
- Cold & hot pressure tests performed in house Framatome
- Numerical models to **compute drop time**

Your performance
is **our everyday commitment**

Key figures

> 7500 Control Rod Drive Mechanisms manufactured & delivered since 1970

85 nuclear power plants equipped worldwide

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