

## OxfCryostream Tango Python Class

### Contents :

- [Description](#)
  - [Properties](#)
  - [Commands](#)
    - [State](#)
    - [Status](#)
    - [Restart](#)
    - [Hold](#)
    - [Pause](#)
    - [Resume](#)
    - [Stop](#)
    - [SwitchTurbo](#)
    - [Ramp](#)
    - [Plat](#)
    - [Cool](#)
    - [ShutdownCooler](#)
  - [Attributes](#)
    - [SampleTemp](#)
    - [SetTemp](#)
    - [RunMode](#)
    - [GasHeat](#)
    - [GasFlow](#)
  - [States](#)
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### OxfCryostream Class Identification :

Contact : at mail.desy.de - tnunez  
Class Family : Instrumentation  
Platform : Windows  
Bus : Not Applicable  
Manufacturer : Oxford Cryosystems  
Manufacturer ref. : Cryostream Cooler

### OxfCryostream Class Inheritance :

- [Tango::DeviceImpl](#)
  - OxfCryostream

## OxfCryostream Class Description :

Class controlling the cryostream cooler from Oxford Cryosystems using CryoConnector.

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# Oxford Cryostream Cooler Device Description

## OxfCryostream Class

**Revision: - Author:**

Class controlling the cryostream cooler from Oxford Cryosystems using CryoConnector.

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## OxfCryostream Properties :

There is no class properties

Device Properties			
Name	Description	Type	Default Value
CryoConnectorDevice	Name of the CryoConnector tango device interacting with the CryoConnector windows program.	String	none

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OxfCryostream Class Commands				
Name	Input type	Output type	Level	Description
				This command gets the device state (stored in

<a href="#">State</a>	DEV_VOID	DEV_STATE	OPERATOR	its <i>device_state</i> data member) and returns it to the caller.
<a href="#">Status</a>	DEV_VOID	CONST_DEV_STRING	OPERATOR	This command gets the device status (stored in its <i>device_status</i> data member) and returns it to the caller.
<a href="#">Restart</a>	DEV_VOID	DEV_VOID	OPERATOR	Restart a Cryostream which has shutdown
<a href="#">Hold</a>	DEV_VOID	DEV_VOID	OPERATOR	Enter programmed Hold
<a href="#">Pause</a>	DEV_VOID	DEV_VOID	OPERATOR	Enter temporary Hold
<a href="#">Resume</a>	DEV_VOID	DEV_VOID	OPERATOR	Exit temporary Hold
<a href="#">Stop</a>	DEV_VOID	DEV_VOID	OPERATOR	Stop command identifier
<a href="#">SwitchTurbo</a>	DEV_LONG	DEV_VOID	OPERATOR	Switches Turbo on (1) or off (0)
<a href="#">Ramp</a>	DEVVAR_DOUBLEARRAY	DEV_VOID	OPERATOR	Change temperature at a controlled rate.
<a href="#">Plat</a>	DEV_DOUBLE	DEV_VOID	OPERATOR	Fix temperature for a given time.
<a href="#">Cool</a>	DEV_DOUBLE	DEV_VOID	OPERATOR	Cool down
<a href="#">ShutdownCooler</a>	DEV_DOUBLE	DEV_VOID	OPERATOR	Shutdown cooler (sends END command)

## **Command State :**

This command gets the device state (stored in its *device\_state* data member) and returns it to the caller.

<b>State Definition</b>		
Input Argument	Tango::DEV_VOID	none.
Output Argument	Tango::DEV_STATE	State Code
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## **Command Status :**

This command gets the device status (stored in its *device\_status* data member) and returns it to the caller.

<b>Status Definition</b>		
Input Argument	Tango::DEV_VOID	none.
Output Argument	Tango::CONST_DEV_STRING	Status description
DisplayLevel	OPERATOR	..
Inherited	true	..
Abstract	true	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## **Command Restart :**

Restart a Cryostream which has shutdown

<b>Restart Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## **Command Hold :**

Enter programmed Hold

<b>Hold Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## **Command Pause :**

Enter temporary Hold

<b>Pause Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## **Command Resume :**

Exit temporary Hold

<b>Resume Definition</b>		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## **Command Stop :**

## Stop command identifier

Stop Definition		
Input Argument	Tango::DEV_VOID	
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## Command SwitchTurbo :

SwitchesTurbo on (1) or off (0)

SwitchTurbo Definition		
Input Argument	Tango::DEV_LONG	0 off, 1 on
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

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## Command Ramp :

Change temperature at a controlled rate.

Ramp Definition		
Input Argument	Tango::DEVVAR_DOUBLEARRAY	Ramp rate in K/hour, final temperature in centi-Kelvin
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

### **Command Plat :**

Fix temperature for a given time.

Plat Definition		
Input Argument	Tango::DEV_DOUBLE	Plateau time in minutes
Output Argument	Tango::DEV_VOID	
DisplayLevel	OPERATOR	..
Inherited	false	..
Abstract	false	..
Polling Period	Not polled	..
Command allowed for	All states	..

### **Command Cool :**

Cool down





<a href="#">SampleTemp</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	
<a href="#">SetTemp</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	
<a href="#">RunMode</a>	false	false	Scalar	READ	Tango::DEV_LONG	OPERATOR	
<a href="#">GasHeat</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	
<a href="#">GasFlow</a>	false	false	Scalar	READ	Tango::DEV_DOUBLE	OPERATOR	

**There is no dynamic attribute defined.**

**Attribute SampleTemp :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	
unit	K
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

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**Attribute SetTemp :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	
unit	K
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

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**Attribute RunMode :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_LONG
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

Attribute Properties	
label	
unit	
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

### Attribute GasHeat :

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display	

Attribute Properties	
label	
unit	%
standard unit	
display unit	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
	Not

Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read allowed for	All states

format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	
delta_val	

Absolute Change	set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set
Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

**Attribute GasFlow :**

Attribute Definition	
Attribute Type	Scalar
R/W Type	READ
Data Type	Tango::DEV_DOUBLE
Display Level	OPERATOR
Inherited	false
Abstract	false
Polling Period	Not polled
Memorized	Not set
Read	All states

Attribute Properties	
label	
unit	l/min
standard unit	
display unit	
format	
max_value	
min_value	
max_alarm	
min_alarm	
max_warning	
min_warning	
delta_time	

Attribute Event Criteria	
Periodic	Not set
Relative Change	Not set
Absolute Change	Not set
Archive Periodic	Not set
Archive Relative Change	Not set
Archive Absolute Change	Not set

allowed for

delta\_val

Push Change event by user code	false
Push Archive event by user code	false
Push DataReady event by user code	Not set

<b>OxfCryostream Class States</b>	
<b>Name</b>	<b>Description</b>
ON	
FAULT	