INAF
ISTITUTO NAZIONALE DI ASTROFISICA
NATIONAL INSTITUTE FOR ASTROPHYSICS

D'Andrea, Matteo <matteo.dandrea@inaf.it>

Info about cryogenic positioners

D'Andrea, Matteo <matteo.dandrea@inaf.it> 28 maggio 2024 alle ore 12:50
A: Stefan Bauroth <Bauroth@smaract.com>

Dear Stefan,

Please let me know by answering this mail also if you are not able to produce a quotation for us.

Thanks,
Matteo

Il Gio 16 Mag 2024, 15:00 D'Andrea, Matteo <matteo.dandrea@inaf.it> ha scritto:

> Dear Stefan,
>
> please let me know about the quotation.
>
> Thanks,
> Matteo
>
> Il giorno gio 2 mag 2024 alle ore 16:42 D'Andrea, Matteo <matteo.dandrea@inaf.it> ha scritto:
>
> > Dear Stefan,
> >
> > thank you for the recap.
> > Please find attached a summary picture of the cold setup.
> >
> > Thanks and talk you soon,
> > Matteo
> >
> > Il giorno gio 2 mag 2024 alle ore 16:35 Stefan Bauroth <Bauroth@smaract.com> ha scritto:
> >
> > > Dear Matteo,
> > >
> > > thank you for the interesting talk.

Temperature	<50 mK
Moving mass	50-100g including the mount - potentially less if we manage to optimize the mounting
XYZ-system	>10 mm travel, 100µm motion accuracy
application	development TES detector XRAY Spectroscopy - ESA Space mission Athena
	dilution refrigerator (50mK)
	move radioactive sources for detector calibration
setup space, pictures	about 50x50x50 mm
cryostat	
duty cycle	1-2 cooldown per month,

	movement at 50mk whole travel range
mounted on flange?	no, but flange is required
sample	30x30 mm thin Plate
scanning / steps	about scanning 1mm spacing 10 steps
	SmarAct shall provide the wiring in cryostat, flange and all cables/controller parts on the ambient side.
closed loop / open loop	preferably closed loop solution, but quote should include open loop option as well

I kindly ask you to provide the picture of the sample as well as the picture of the cold-plate / mounting area.

As mentioned I will take your information and discuss a possible solution in out team - based on this I will be able to give you a coarse price estimate within next week.

Thank you and please do not hesitate to contact me in case of questions or comments.

Best,
Stefan

Stefan Bauroth | Sales Engineer
SmarAct GmbH | **Department for High Energy Research Facilities**
Phone: +49 441 800879-996 | Email: bauroth@smaract.com | Web: www.smaract.com
Managing Director: Axel Kortschack | Amtsgericht Oldenburg HRB 200036

Von: D'Andrea, Matteo <matteo.dandrea@inaf.it>
Gesendet: Donnerstag, 2. Mai 2024 09:06
An: Stefan Bauroth <Bauroth@smaract.com>
Betreff: [EXT:]Re: [EXT:]Re: [EXT:]Re: Info about cryogenic positioners

[EXTERNAL SENDER]

Dear Stefan,

ok no problem.
Let's meet today at 4pm.

See you later,
Matteo

Il Gio 2 Mag 2024, 08:56 Stefan Bauroth <Bauroth@smaract.com> ha scritto:

> Dear Matteo,
>
> thank you for the swift response. I've realized that shortly before our meeting today I have a doctors appointment. I am afraid that I wont make it in time.
>
> I would kindly ask if the previously mentioned time slot, Friday at 3pm, is still possible. If so, it would be great to shift our meeting to tomorrow.
>
> If this is not possible I could offer to shift the meeting to 4pm today - this should give me enough time to be back.
>
> Please let me know what you prefer and I reschedule the meeting.

My apologies for the inconvenience.
Stefan

Stefan Bauroth | Sales Engineer
SmarAct GmbH | Department for High Energy Research Facilities
Phone: +49 441 800879-996 | Email: bauroth@smaract.com | Web: www.smaract.com
Managing Director: Axel Kortschack | Amtsgericht Oldenburg HRB 200036

Von: D'Andrea, Matteo <matteo.dandrea@inaf.it>
Gesendet: Dienstag, 30. April 2024 15:28
An: Stefan Bauroth <Bauroth@smaract.com>
Betreff: [EXT:]Re: [EXT:]Re: Info about cryogenic positioners

[EXTERNAL SENDER]

Perfect thanks,
see you on Thursday on Team.

Regards,
Matteo

Il giorno mar 30 apr 2024 alle ore 14:20 Stefan Bauroth <Bauroth@smaract.com> ha scritto:

> Hi Matteo,
>
> thank you for the proposed meeting. We can meet Thursday at 3 pm. If you prefer zoom, you can send the link - otherwise I've attached an MS teams meeting link below.
>
> All the best and see you thursday.
> Stefan
>
> ---
>
> Stefan Bauroth | Sales Engineer
> **SmarAct GmbH | Department for High Energy Research Facilities**
> Phone: +49 441 800879-996 | Email: bauroth@smaract.com | Web: www.smaract.com
> Managing Director: Axel Kortschack | Amtsgericht Oldenburg HRB 200036
>
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> ---
>
> # Microsoft Teams Benötigen Sie Hilfe?
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> ## Jetzt an der Besprechung teilnehmen
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> Kennung: SUfwSb
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>
> SmarAct

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Von: D'Andrea, Matteo <matteo.dandrea@inaf.it>
Gesendet: Dienstag, 30. April 2024 10:19
An: Stefan Bauroth <Bauroth@smaract.com>
Betreff: [EXT:]Re: Info about cryogenic positioners

[EXTERNAL SENDER]

Dear Stefan,

sorry for the late reply.
I think it could be indeed useful to have a quick telecon to discuss our application.
Are you available on 2 May (around 15:00) or 3 May (around 11:00 or 15:00)?
If so, I will send you a zoom link.

Thank you,
Matteo

Il giorno gio 18 apr 2024 alle ore 10:08 Stefan Bauroth <Bauroth@smaract.com> ha scritto:

> Dear Matteo D'Andrea,
>
> thank you for reaching out and your interest in our products and solutions. Indeed, we offer a variety of stages that are potential candidates for your application.
>
> Our cryo-compatible actuators based on the SLC-17xx series would be the most compact version I recommend for the given load scenario. They are open loop controlled, meaning they do not offer position feedback. If the position feedback is necessary, we could opt to design the system based on the wider SLC-24xx-F series. Those can incorporate position feedback with an interferometer measurement.
>
> - Do you require **closed loop** operation, or is open loop control a possible option?
> - What is the available **setup space**?
> - What is the planned **orientation** of the system (standing, hanging)?
> - Do you have a **cooling system / thermal management system** (braids etc.) designed?
> - Do you have information on the expected **duty cycle**? (amount of cooing/heating cycles, temperature ranges / bakeout conditions, measurement time, etc.)
>
> Please do not hesitate to contact me in case of questions or comments. If you prefer we can schedule a meeting for next week.
>
> Best,
> Stefan Bauroth
>
> ---
>
> Stefan Bauroth | Sales Engineer
>
> **SmarAct GmbH** | **Department for High Energy Research Facilities**
>
> Phone: +49 441 800879-996 | Email: bauroth@smaract.com | Web: www.smaract.com

Temperature	<50 mK
Moving mass	50-100g
XYZ-system	>10 mm travel, 100µm motion accuracy

Von: D'Andrea, Matteo <matteo.dandrea@inaf.it>
Gesendet: Freitag, 12. April 2024 15:18
An: info-de <info@smaract.com>
Betreff: [EXT:]Info about cryogenic positioners

Dear Smaract,

I am a researcher at the Italian National Institute for Astrophysics in Rome (INAF/IAPS Roma). I work on the development of cryogenic TES detectors for X-ray spectroscopy, currently mainly in the context of the ESA space mission ATHENA.

I am interested in purchasing a 3D cryogenic positioning system to be integrated into our dilution refrigerator (at the 50 mK stage) and aimed at moving the radioactive sources we use to calibrate our detectors.

I am looking for a system with 3-axis (x-y-z) motion, at least 1 cm of travel range per direction, motion accuracy better than 100um, capable of moving 50g-100g mass and with an operating temperature < 50 mK.

Do you have a product solution that meets our needs?
If so, could you send me the relevant datasheets and an "all-inclusive" quote (i.e. including positioners, sensors, control electronics, wiring, interfaces, ...).

Thanks and best regards,
Matteo D'Andrea

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Matteo D'Andrea

INAF/IAPS Roma

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00133 Roma, Italy

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[Vorsicht:] Es handelt sich um eine **externe** E-Mail. Bitte klicke **nicht** auf Links oder Anhänge, solange Du nicht von der Echtheit der Nachricht überzeugt bist.

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