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Кемерово (3842)65-04-62
Киров (8332)68-02-04
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Кострома (4942)77-07-48
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Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
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Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
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Омск (3812)21-46-40
Орел (4862)44-53-42
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Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47

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Тверь (4822)63-31-35

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Череповец (8202)49-02-64
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Optical encoders scale range

Linear scales
Partial arc scales
Rotary scales

Linear scales

RTL (stainless steel tape)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion at 20 °C	Supplied length	Readhead compatibility
RTLF 	20 µm: ±5 µm/m 40 µm (high accuracy): ±5 µm/m 40 µm: ±15 µm/m	20 µm/40 µm	10.1 ±0.2 µm/m/°C	Up to 10 m (> 10 m on request)	ATOM, ATOM DX

RTL **FASTRACK**TM (stainless steel tape with track option)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion at 20 °C	Supplied length	Readhead compatibility
RTLC with optional FASTRACK 	20 µm: ±5 µm/m 40 µm (high accuracy): ±5 µm/m 40 µm: ±15 µm/m	20 µm/40 µm	10.1 ±0.2 µm/m/°C	Up to 10 m (> 10 m on request)	VIONiC, QUANTiC, TONiC, TONiC UHV, TONiC FS
RTLA with optional FASTRACK 	30 µm: ±5 µm/m 50 µm: ±10 µm/m	30 µm/50 µm	10.1 ±0.2 µm/m/°C	RESOLUTE: up to 21 m EVOLUTE: up to 10.02 m	RESOLUTE, RESOLUTE UHV, RESOLUTE FS, EVOLUTE

RKL (narrow stainless steel tape)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion	Supplied length	Readhead compatibility

			n		
RKLC-S, RKLR-S 	20 µm: ±5 µm/m 40 µm (high accuracy): ±5 µm/m 40 µm: ±15 µm/m	20 µm/40 µm	Matched to substrate material when scale ends are fixed with end clamps	Up to 20 m (> 20 m on request)	VIONiC, TONiC, TONiC UHV, QUANTIC
RKLF-S 	20 µm: ±5 µm/m 40 µm (high accuracy): ±5 µm/m 40 µm: ±15 µm/m	20 µm/40 µm	Matched to substrate material when scale ends are fixed with end clamps	Up to 10 m (> 10 m on request)	ATOM, ATOM DX
RKLA-S 	±5 µm/m	30 µm	Matched to substrate material when scale ends are fixed with end clamps	Up to 21 m	RESOLUTE

REL (ZeroMet™ spar)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion at 20 °C	Supplied length	Readhead compatibility
RELM20/RELE20 	±1 µm for up to 1 m, then ±1 µm/m	20 µm	0.75 ±0.35 µm/m/°C	Up to 1.5 m	VIONiC, TONiC, TONiC UHV, TONiC FS
RELA30 	±1 µm for up to 1 m, then ±1 µm/m	30 µm	0.75 ±0.35 µm/m/°C	Up to 1.5 m	RESOLUTE, RESOLUTE UHV, RESOLUTE FS

RSL (stainless steel spar)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion at 20 °C	Supplied length	Readhead compatibility
RSLM20/RSLE20/RSLC20	±1.5 µm up to 1 m, ±2.25 µm up to 2 m, ±3 µm up to	20 µm	10.1 ±0.2 µm/m/°C	Up to 5 m	VIONiC, TONiC, TONiC UHV, TONiC FS

	3 m, $\pm 4 \mu\text{m}$ up to 5 m				
RSLA30 	$\pm 1.5 \mu\text{m}$ up to 1 m, $\pm 2.25 \mu\text{m}$ up to 2 m, $\pm 3 \mu\text{m}$ up to 3 m, $\pm 4 \mu\text{m}$ up to 5 m	30 μm	$10.1 \pm 0.2 \mu\text{m}/\text{m}/^\circ\text{C}$	Up to 5 m	RESOLUTE, RESOLUTE UHV, RESOLUTE FS

RCL (glass spar)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion	Supplied length	Readhead compatibility
RCLC 	$\pm 3 \mu\text{m}$	20 $\mu\text{m}/40 \mu\text{m}$	$\sim 8 \mu\text{m}/\text{m}/^\circ\text{C}$	Up to 130 mm	ATOM, ATOM DX

Partial arc scales

RKL (narrow stainless steel partial arc tape)

Scale name	Accuracy	Scale pitch	Coefficient of thermal expansion	Supplied length	Readhead compatibility
RKLC-S 	20 μm : $\pm 5 \mu\text{m}/\text{m}$ 40 μm : $\pm 15 \mu\text{m}/\text{m}$	20 $\mu\text{m}/40 \mu\text{m}$	Matched to substrate material when scale ends are fixed with end clamps	Up to 20 m (> 20 m on request)	VIONiC, TONiC, QUANTiC
RKLF-S 	$\pm 15 \mu\text{m}/\text{m}$	40 μm	Matched to substrate material when scale ends are fixed with end clamps	Up to 10 m (> 10 m on request)	ATOM, ATOM DX
RKLA-S	$\pm 5 \mu\text{m}/\text{m}$	30 μm	Matched to substrate material when scale ends are fixed with	Up to 21 m	RESOLUTE

			end clamps		
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Rotary scales

RES (stainless steel ring)

Scale name	Graduation accuracy (depending on ring diameter)	Scale pitch	Coefficient of thermal expansion at 20 °C	Ring diameter	Readhead compatibility
RESM 	±3.97 to ±0.38 arc seconds	20 µm/40 µm	15.5 ±0.5 µm/m/°C	52 to 550 mm	VIONiC, TONiC, TONiC UHV, TONiC FS, QUANTiC
RESA30 	±3.97 to ±0.38 arc seconds	30 µm	15.5 ±0.5 µm/m/°C	52 to 550 mm	RESOLUTE, RESOLUTE UHV, RESOLUTE ETR, RESOLUTE FS

REX (ultra-high accuracy stainless steel ring)

Scale name	Installed accuracy (depending on ring diameter)	Scale pitch	Coefficient of thermal expansion at 20 °C	Ring diameter	Readhead compatibility
REXM20/REXT20 	(≥ 100 mm diameter) ±1 arc second (75 mm diameter) ±1.5 arc seconds (≤ 57 mm diameter) ±2 arc seconds	20 µm	15.5 ±0.5 µm/m/°C	52 to 417 mm	VIONiC, TONiC, TONiC UHV
REXA30	(≥ 100 mm diameter) ±1 arc second (75 mm diameter) ±1.5 arc	30 µm	15.5 ±0.5 µm/m/°C	52 to 417 mm	RESOLUTE, RESOLUTE UHV, RESOLUTE ETR, RESOLUTE FS

	seconds (≤ 57 mm diameter) ±2 arc seconds				
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RCDM (glass disc)

Scale name	Graduation accuracy (depending on ring diameter)	Scale pitch	Coefficient of thermal expansion at 20 °C	Ring diameter	Readhead compatibility
RCDM 	±0.5 µm	20 µm/40 µm	~8 µm/m/°C	17 to 108 mm	ATOM, ATOM DX

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