



STEEL FLANGE RINGS

STEEL RING TRAVELLERS

FOR SHORT STAPLE SPINNINGS



Kanai Juyo Kogyo Co.,Ltd.

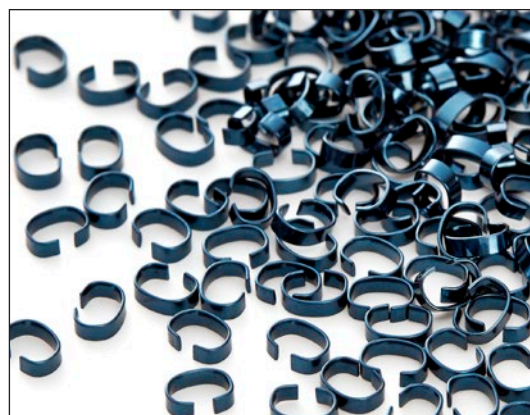
Surface Treatment of Travellers

New Falcon (NFC)

Special heat treatment and surface treatment which has been improved in life, especially on the high speed spinning condition and compact yarn.

The service life is to be greatly prolonged from that of conventional treatment at high speed spinning.

特殊な熱処理と表面処理の適用により、寿命延長と高速性を実現したトラベラで、特に高速紡出及びコンパクト系の紡出において従来品より大幅な寿命延長が得られます。



New Mega (NMG)

Special compound layer which has excellent lubricating function given to the surface by special surface treatment and this is very effective for quick break-in, reducing yarn-breakage and extending service life even in high speed spinning.

特殊表面処理方法により潤滑性に富む化合物層を表面に掲載させたことによりリングとのなじみが向上し、高速紡出の条件でも糸切れの減少とトラベラ寿命の延長が得られます。



Toughmat (TM) / Hi-Ni

Wear resistance has been improved due to the additional special alloy element to high carbon steel and also because of the material used in uniform in quality.

Provided with special nickel plating which decreases traveller burn and will improve break-in of traveller.

高炭素鋼に特殊合金元素を添加した高純度の新素材を用い、独自の熱処理により耐摩耗性を更に向上させ、特殊なニッケルメッキをほどこしたトラベラです。





































Kanai's Traveller Recommendation























		Application Traveller	Flange Size(mm)			Performance			High Quality Yarn	
			2.5	3,2	4.0	Break-age	High Speed	Dura-bility	Yarn fluff	Fiber fusing
Cotton 100%	~ Ne10	TM BZ/hf		▲	●			○	◎	
	Ne10 ~ 20	TM Z/hf		▲	●			○	◎	
		NFC ZS/hf		●			○	◎	◎	
	Ne20 ~ 40	NFC ZS/hf		●			○	◎	◎	
		NFC MSR/hf		●		◎	◎	◎	○	
	Ne40 ~ 100	NFC OSY/hf		●		◎		○	◎	
		NFC ESY/h f		●		○	◎	◎	○	
		NFC MSR/hf		●		◎	◎	◎	○	
	Ne80 ~	TM OSS/hf	●			◎		○	◎	
		NFC ESS/hf	●			○	◎	◎	○	
Compact	Ne30 ~	NFC ESZ/hf		●		◎	◎	○	◎	
		NFC ESR/hf		●		○	◎	◎	◎	
Polyester/Cotton	~ Ne20	TM Z/hf		▲	●			○	◎	◎
		TM BZ/hf		▲	●			○	◎	◎
	Ne20 ~ 60	NFC ZS/hf		●			○	◎	◎	◎
		NFC MSR/hf		●		◎	◎	◎	○	○
	Ne60 ~	NFC MSR/hf		●		◎	◎	◎	○	○
Polyester/Rayon	~ Ne30	TM OY/hf-N		●		◎			◎	◎
		NFC MSR/hf		●		◎	◎	◎	○	○
	Ne30 ~	NFC ZS/hf		●			○	◎	◎	◎
		NFC MSR/hf		●		◎	◎	◎	○	○
Polyester 100%	~ Ne20	TM Z/hf		▲	●			◎	◎	◎
		TM BZ/hf		▲	●			◎	◎	◎
	Ne20 ~	NFC MSR/hf		●		◎	◎	◎	○	○
Acrylic 100%	~ Ne20	Hi-Ni OH		▲	●	◎			◎	◎
	Ne20 ~	Ni-Ni OYH		●		◎			◎	◎
Rayon 100%	~ Ne30	Hi-Ni O/hf		▲	●	◎			◎	
		TM O/hf-N		▲	●	◎		○	◎	
		NFC MSR/hf		●		◎	◎	◎	○	
	Ne30 ~	Hi-Ni OY/h f		●		◎			◎	
		NFC MSR/hf		●		◎	◎	◎	○	
Core Yarn (Lycra)	Ne30 ~	NFC MSR/hf		●		◎	○	◎	○	
Dyed Synthetics	Ne30 ~	NFC MSR/hf		●		◎	◎	◎	○	

Remarks ◎ = Splendid, ○ = Good NFC (or TM) MS/hf is applicable in place of NFC MSR/hf.
▲ is mainly used on No.2 Flange rings.

Kanai C-shaped Travellers

Flange Size	Traveller Type	Shape	Cross Section		Number		Grade	Remarks
					Min	Max		
No.1 (3.2mm)	ESY/hf		hf		24/0	No.5	NFC	
	ESZ/hf		hf		26/0	No.2	NFC	
	ESR/hf		hf		26/0	5/0	NFC	
	MS/hf		hf		20/0	No.15	NFC	*
	MS/hf-W		hf-W		8/0	No.5		*
	MSR/hf		hf		20/0	No.15	NFC	
	OS		F		25/0	No.20	Hi-Ni	
	OSY		F		15/0	No.5	TM/NFC	*
			R		24/0	16/0		
	OSY/hf		hf		18/0	No.2	TM/NFC	*
	OYH		H		5/0	No.10	Hi-Ni	
	OY		F		7/0	No.10	Hi-Ni	
	OY/hf-N		hf-N		7/0	No.8	TM	
	Super OS		Super		10/0	No.8	Hi-Ni	
	YS-2		F		18/0	No.5	TM	
	YS-2/hf		hf		18/0	No.5	TM/NFC	*
	YS-2/hf-W		hf-W		6/0	No.5	NFC	
	ZS/hf		hf		14/0	No.12	TM/NFC	
	ZSB/hf		hf		14/0	No.3	TM	
	ZSC/hf		hf		14/0	No.10	TM/NFC	*

Rmarkes : "*" marked traveller available with NMG grade.

Flange Size	Traveller Type	Shape	Cross Section	Number		Grade	Remarks	
				Min	Max			
No.1/2 (2.5mm)	ESS/hf		hf		30/0	11/0	NFC	
	OSS		F		15/0	No.2	Hi-Ni	
			R		30/0	16/0		
	OSS/hf		hf		30/0	1/0	TM/NFC	
No.2 (4.0mm)	BZ/hf		hf		No.3	No.30	TM	
	PK/hf		hf		5/0	No.15	TM	
	Z/hf		hf		5/0	No.14	TM	
	O		F		8/0	40	Hi-Ni	
	OH		H		8/0	No.20	Hi-Ni	
	Super O		Super		5/0	No.15	Hi-Ni	
	YZ/hf		hf		No.5	No.30	TM	
Above (4.4mm)	GR		N		No.1	No.40	Hi-Ni	

Remarks : "*" marked traveller available with NMG grade.

Comparative Chart of Traveller Weights

Traveller Number	KANAI "TM"	KANAI "NFC"	Braecker	R+F	A.B.Carter
15	276	272	265	250	265
14	260	253	250	236	250
13	240	233	224	224	224
12	220	214	200	200	200
11	199	194	180	180	180
10	175	169	160	160	160
9	154	149	140	140	140
8	136	130	125	125	125
7	122	117	112	112	112
6	109	104	100	106	100
5	95	91	95	95	95
4.5	91	88	-	-	-
4	88	84	90	85	90
3.5	85	81	-	-	-
3	81	78	80	80	80
2.5	78	75	-	-	-
2	74	71	71	71	71
1.5	68	65	-	63	-
1	62	58	63	60	63
0.5	58	55	-	-	-

* Weight = mg

Traveller Number	KANAI "TM"	KANAI "NFC"	Braecker	R+F	A.B.Carter
1/0	55	52	56	50	56
1.5/0	51	49	-	-	-
2/0	48	45	50	45	50
2.5/0	45	42	-	-	-
3/0	42	39	45	40	45
3.5/0	39.8	37.3	-	-	-
4/0	38.3	35.6	40	35.5	40
4.5/0	36.5	34.0	-	-	-
5/0	35.1	32.4	35.5	31.5	35.5
5.5/0	33.2	30.8	-	-	-
6/0	32.2	29.2	31.5	30	31.5
6.5/0	30.7	28.4	-	-	-
7/0	30.2	27.5	28	26.5	28
7.5/0	28.8	26.7	0	-	-
8/0	28.5	25.9	25	23.6	25
9/0	26.8	24.3	23.5	22.4	23.6
10/0	25.0	22.7	22.4	20	22.4
11/0	23.2	21.1	20	19	20
12/0	21.6	19.4	18	18	18
13/0	20.0	17.8	17	16	17
14/0	17.8	16.2	16	15	16
15/0	16.9	14.9	15	14	15
16/0	15.7	13.9	14	13.2	14
17/0	14.8	13.0	13.2	11.8	13.2
18/0	13.9	12.3	12.5	11.2	12.5
19/0	13.2	11.7	11.2	10	11.2
20/0	12.4	11.0	10	9	10
21/0	11.8	10.4	-	8.5	-
22/0	11.0	9.7	9	8	9
23/0	10.4	9.1	-	7.5	-
24/0	9.6	8.4	8	7.1	8

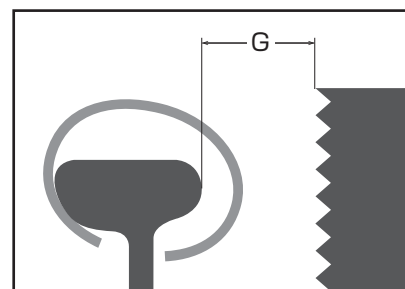
* Weight = mg

Traveller Clearer Gauges

Flange Size	No.1													
	Traveller Type	MS/hf	MSR/hf	ESY/hf	ESZ/hf	ESR/hf	OSY/hf	OSY	YS-2/hf	YS-2	OS	ZS/hf	ZSB/hf	ZSC/hf
11~20	2.6	-	-	-	-	-	-	-	-	-	2.9	2.8	-	-
6~10	2.6	-	-	-	-	-	-	-	-	-	2.5	2.6	-	2.6
1~5	2.3	2.1	2.1	-	-	1.9	2.0	2.1	2.4	2.4	2.2	2.1	2.2	
1/0~5/0	1.9	1.9	1.8	1.8	1.6	1.4	1.6	1.8	1.8	2.1	1.6	1.6	1.7	
6/0~10/0	1.7	1.8	1.7	1.7	1.5	1.3	1.5	1.7	1.7	1.9	1.5	1.5	1.5	
11/0~15/0	1.4	1.6	1.7	1.7	1.4	1.2	1.4	1.5	1.5	1.7	1.4	1.3	1.4	
16/0~20/0	1.4	-	1.7	1.7	1.3	1.2	1.4	1.3	1.3	1.5	-	-	-	
21/0~25/0	-	-	-	1.7	1.3	-	1.3	-	-	1.3	-	-	-	
26/0~30/0	-	-	-	1.7	-	-	-	-	-	1.1	-	-	-	

Flange Size	No.1				No.1/2			No.2						
	Traveller Type	OY	OYH	OY/hf-N	PK/hf	ESS/hf	OSS/hf	OSS	BZ/hf	PK/hf	Z/hf	O	OH	YZ/hf
21~30	-	-	-	-	-	-	-	-	3.8	-	-	4.1	-	3.5
16~20	-	-	-	-	-	-	-	-	3.5	-	-	3.8	5.0	3.4
11~15	-	-	-	3.8	-	-	-	-	3.2	2.5	-	3.3	4.7	3.2
6~10	3.0	3.7	3.2	3.4	-	-	-	-	3.0	2.3	-	3.0	4.0	2.8
1~5	2.8	3.3	2.8	2.8	-	-	2.2	-	2.7	2.1	1.8	2.5	3.2	2.3
1/0~5/0	2.7	3.0	2.6	2.7	-	1.9	2.0	-	2.0	1.6	2.0	2.5	-	
6/0~10/0	2.6	-	2.5	2.6	-	1.7	1.8	-	1.9	-	1.8	2.2	-	
11/0~15/0	2.5	-	-	-	1.6	1.5	1.7	-	-	-	-	-	-	
16/0~20/0	-	-	-	-	1.6	1.4	1.6	-	-	-	-	-	-	
21/0~25/0	-	-	-	-	1.6	1.3	1.6	-	-	-	-	-	-	
26/0~30/0	-	-	-	-	1.6	1.3	1.5	-	-	-	-	-	-	

■ Sticking of fly waste is the more as in spinning of coarse yarn and short fibre, and causes the yarn breakage to increase. Adjustment shall be performed carefully with the gauge.



G=Gauge (mm)

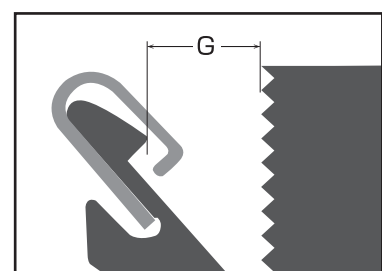
Riora Traveller

Manufacturing Range

kanai No.	ISO No.	TR-S/hf	TR-M/hf	TR-M/R	TR-LN/hf	TR-L/R	Equivalent Number of	
							MS/hf	SBA
10	10	○					22/0	
12	12.5	○					19/0	
14	14	○					16/0	
16	16	○		○			14/0	
18	18	○	○	○			13/0	36
20	20	○	○	○			12/0	35.5
22	22.4	○	○	○			10/0	35
25	25	○	○	○			8.5/0	34
28	28	○	○	○			7/0	33.5
30	30	○	○	○			6/0	
32	31.5	○	○	○			5/0	33
34	34	○	○	○			4.5/0	32
36	35.5	○	○	○			4/0	31.5
38	38	○	○	○				
40	40	○	○	○		○	3/0	30.5
45	45	○	○	○		○	2/0	30
50	50		○	○		○	1/0	29
56	56		○	○		○	0.5	28
60	60		○	○		○		
63	63		○	○	○	○	1.5	27
67	67		○	○	○	○		
71	71		○	○	○	○	2	26
75.5	75.5		○	○	○	○		
80	80		○	○	○	○	3.5	25.5
85	85		○	○	○	○		
90	90		○	○	○	○	5	24.5
100	100		○	○	○	○	6	24
112	112		○	○	○	○	6.5	23
125	125		○		○	○	8	22.5
133	133		○		○			
140	140		○		○		9	21.5
160	160		○		○		10	20.5
180	180		○		○		11	20
200	200				○		12	19
224	224				○		13	18.5
250	250				○		14	18
280	280				○		16	17
315	315				○		18	16
355	355				○		21	15

Clearer Gauges

Flange Type	RR-S	RR-M		RR-L	
Traveller Type	TR-S/hf	TR-M/hf	TR-M/R	TR-LN/hf	TR-L/R
10~22	1.5	1.6	1.8		
25~50	1.6	1.8	1.8		2.3
56~133		2.0	2.0	2.5	2.5
140~180		2.2		2.8	2.8
200~280				3.0	3.0
315~355				3.5	3.5



G=Gauge (mm)

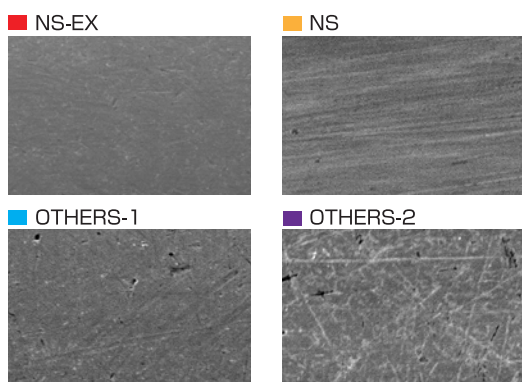
NANOSPIN-EX Progress with the "EX" Quality



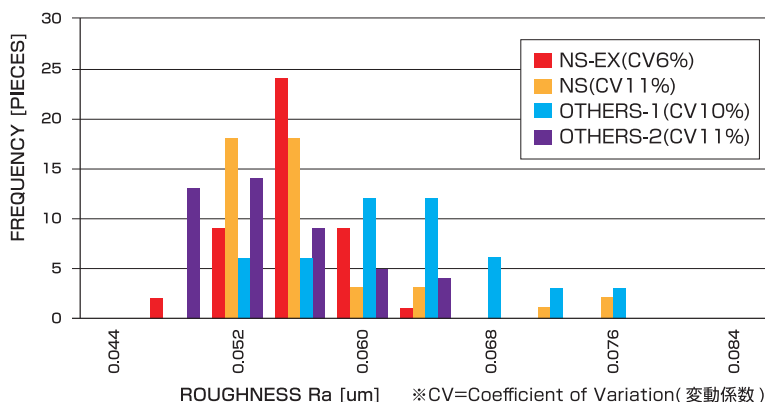
Features

- From the result of a long term research on coating technologies as well as realization of manufacturing processes here in Japan, "NANOSPIN" has been reborn as "NANOSPIN-EX" which enables premium quality.
- "NANOSPIN-EX" shows uniform surface condition maintaining High Wear Resistance which is the feature of Coated Rings compared with conventional rings.
- The surface structure "EX"-tremely enhanced for uniformity by "NANO"-meter size level enables vastly improvement on Coefficient of Variation (CV%) in ring surface Ra value compared with conventional rings and it enables a stable machine operation from the period of Running-In stage.
- コーティングリングに関する長年の研究結果と、高品質を実現する生産体制によりナノスピニングはナノスピニング-EXリングへと生まれ変わりました。
- ナノスピニング-EXリングはコーティングリングの特徴である高い耐摩耗性を維持しつつ、従来品より均一な表面状態に仕上げました。
- 進化したナノメートル(1/100,000mm)サイズの均一なリング表面構造により、リング表面粗さの変動は従来品から大幅に減少し、慣らし運転時期から安定した紡出性能が期待できます。

SURFACE CONDITION By Electron Microscope(×500)



SURFACE ROUGHNESS



Type&Selection

Flange Type	Flange Size	Application Process	Application of Yarn Count (Ne)							
			0	20	40	60	80	100		
KM	No.1/2 (2.5mm)	Fine Count								
KS2	No.1 (3.2mm)	Medium & Coarse Count								
KW	No.2 (4.0mm)	Coarse Count								

RIORA RING Take RIORA, Get High Productivity.



Special Flange Shape

■ ANGLE OF INCLINATION & CURVATURE / 傾斜フランジ

- By applying the best angle of inclination and curvature to the ring flange, better flexibility and stability of traveller can be obtained.
- 特殊な傾斜フランジの採用により、トラベラ走行のより良い自在性と安定をもたらします。

Features

■ Excellent high speed and starting-up / 優れた高速性となじみ性

- Approx. 20% increase of production can be attained compared with normal T-shape flange. Especially for the spinning speed of over 20,000 rpm and synthetics (Acrylic, Polyester), its performance is evaluated.
- T型フランジリングと比較し、最大 20%の増産が可能です。
特に 20,000rpm 以上や、合繊紡（アクリル、ポリエステル）において高い評価が得られています。

■ Improvement of yarn quality / 糸品質の向上

- Max. 50% (F-INDEX, Shikibo), 10%(USTER) of decrease of yarn fluff have been confirmed.
- 最大 50% (F-INDEX, Shikibo), 10%(USTER) の糸毛羽（特に長い毛羽）の減少が確認されています。

■ Extension of life for Ring and Traveller / トラベラ・リングの寿命延長

- Approx. 1.5 times longer life can be expected.
- 1.5 倍以上の寿命延長が期待できます。コアヤーン等の過酷な条件においても高い評価が得られています。

Type&Selection

Flange Type	Flange Shape	Traveller Type	Application Process	Application of Yarn Count (Ne)						
				0	20	40	60	80	100	
RR-S		TR-S/hf 	Fine Count							
RR-M		TR-M/R TR-M/hf 	Medium & Coarse Count							
RR-L		TR-L/R TR-L/hf 	Coarse Count							



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