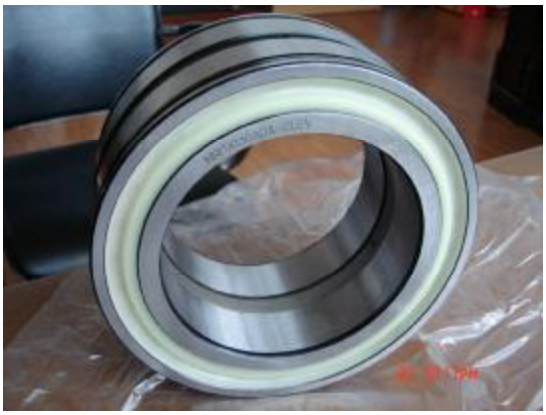
满装圆柱滚子轴承

Full complement cylindrical roller bearings

1. 单列满滚子圆柱滚子轴承

1.Single row full complement cylindrical roller bearings

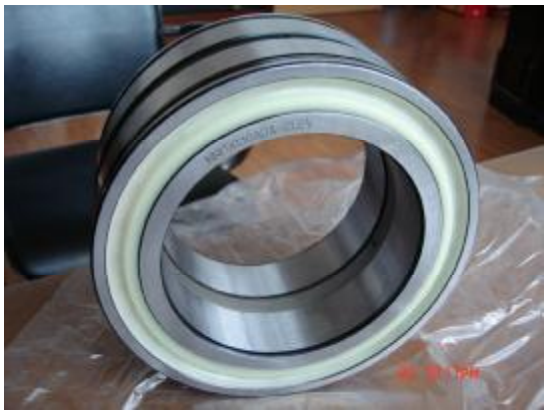


2. 双列满滚子圆柱滚子轴承

2. Double row full complement cylindrical roller bearings

满滚子圆柱滚子轴承包含有最大数量的滚子，因此适用于很重的径向载荷。但是，这些轴承不能以同带保持架型圆柱滚子轴承同样的高速运行。

Full complement cylindrical roller bearings incorporate a maximum number of rollers and are therefore suitable for very heavy radial loads. However, they cannot operate at the same high speeds as caged design cylindrical roller bearings.



双列满装圆柱滚子轴承

双列满滚子圆柱滚子轴承，它们含有最大数量的滚子，因此适合非常重的径向载荷。但是，这些轴承不能以同带保持架型圆柱滚子轴承同样的高速运行。标准生产的 HYJG®双列满滚子圆柱滚子轴承有四种设计，包括三种开放式设计和一种密封式设计。所有的轴承都是非分离式的，外圈带一个环形槽和三个润滑孔，方便有效的润滑。

NNCL 设计

NNCL 设计的轴承有一个带三个整体式法兰的内圈和一个不带法兰的外圈。插入外圈，位于两列滚子之间的止动环，以固定所有轴承零部件。在两个方向上，轴相对于轴承座的轴向位移可在轴承内调节。因此，这些轴承适用于非定位端轴承位置。

NNCF 设计

NNCF 设计的轴承内圈上有三个整体式法兰，外圈上有一个整体式法兰，使轴承可为轴提供在一个方向上的轴向定位。一个止动环插入外圈整体式法兰的相反一侧，从而起到固定轴承零件的作用。

NNC 设计

NNC 设计的轴承装备同 NNCL 和 NNCF 设计的轴承相同的内圈。外圈为拼合式，使用定位部件固定，不应有轴向载荷。外圈的两部分完全一样，带一个整体式法兰，使轴承能够在两个方向上对轴进行轴向定位。

NNF 设计

NNF 设计的轴承 NNF 50 和 3194(00)系列的轴承总是两侧密封并填充油脂。双组件内圈有三个整体式法兰，用止动环固定。外圈有一个整体式中心法兰。这些轴承可用于轴在两个方向上的轴向定位。由于两排滚子之间的距离大，这些轴承还能承受倾斜力矩。NNF 轴承的外圈比内圈窄 1 毫米，外径上有两个止动环槽。因此，可省去内圈同紧邻部件如钢缆绞轮之间的间隔圈。这些轴承两侧带聚氨酯（AU）接触密封件。密封件保持在内圈肩上，在该位置提供有效的密封。外密封唇对外圈滚道施加轻压力。这些轴承填充含锂增稠剂和双脂基油的油脂，有良好的防锈特性。基油粘度在摄氏 40 度时为 15 毫米^2/秒，在摄氏 100 度时为 3,7 毫米^2/秒。油脂适合摄氏零下 55 度至零上 110 度的运行温度。但是，密封材料将允许运行温度范围限制在摄氏零下 40 度至零上 80 度。在一定条件下，密封 NNF 设计的轴承是无需维护的，但如果在潮湿或污染环境下运行或速度为中速到高速，这些轴承必须再润滑。可通过内圈及外圈再润滑。如果需要带一个密封件或不带密封件的轴承，可使用螺丝刀轻易地移除密封件。在使用油润滑的应用中，如果达到一定数量的经济规模，轴承可不带密封件和油脂供应。否则，应在使用前除去密封件并清洗轴承。如果使用油润滑，产品表中列出的限速可增加大约 30%。

Double row full complement cylindrical roller bearings

Double row full complement cylindrical roller bearings incorporate a maximum number of rollers and are therefore suitable for very heavy radial loads. However, they cannot operate at the same high speeds as caged cylindrical roller bearings. HYJG® double row full complement cylindrical roller bearings are produced as standard in four designs, three open designs and one sealed. All the bearings are non-separable and have an annular groove and three lubrication holes in the outer ring to facilitate efficient lubrication.

NNCL design

NNCL design bearings have an inner ring with three integral flanges and a flangeless outer ring. A retaining ring, inserted in the outer ring between the roller rows, keeps all bearing components together. Axial displacement of the shaft relative to the housing in both directions can be accommodated within the bearing. The bearings are therefore suitable for non-locating bearing positions.

NNCF design

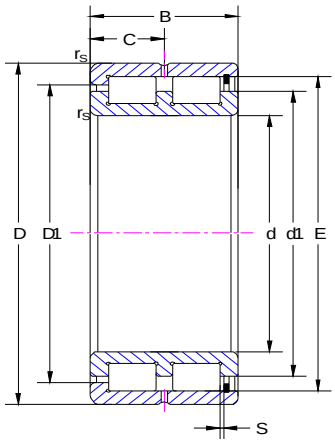
NNCF design bearings have three integral flanges on the inner ring and one integral flange on the outer ring enabling the bearing to provide axial location for a shaft in one direction. A retaining ring is inserted in the outer ring at the side opposite the integral flange and serves to hold the bearing together.

NNC design

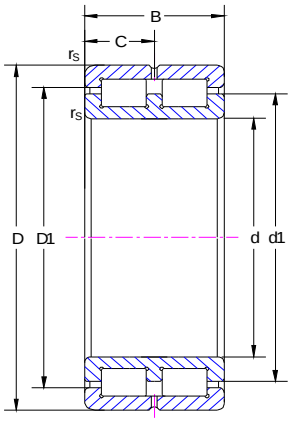
NNC design bearings are equipped with the same inner ring as bearings of the NNCL and NNCF design. The outer ring is split and held together by retaining elements, which should not be loaded axially. Both parts of the outer ring are identical and carry one integral flange, enabling the bearing to locate the shaft axially in both directions.

NNF design

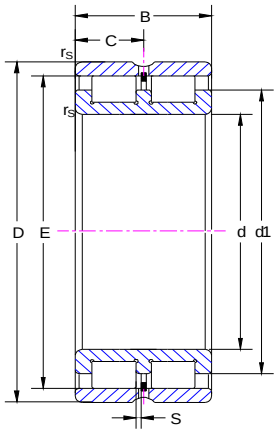
NNF design bearings in the NNF 50 and 3194(00) series are always sealed on both sides and filled with grease. The two-piece inner ring has three integral flanges and is held together by a retaining ring. The outer ring has an integral central flange. The bearings can be used to locate a shaft axially in both directions. Because of the large distance between the two rows of rollers, the bearings are also able to accommodate tilting moments.The outer ring of an NNF bearing is 1 mm narrower than the inner ring and has two snap ring grooves in the outside diameter. Therefore it is possible to eliminate the need for spacer rings between the inner ring and adjacent components, for example, in rope sheaves .The bearings have contact seals made of polyurethane (AU) on both sides. The seals are retained on the inner ring shoulders, to provide efficient sealing at this position. The outer sealing lip exerts a slight pressure on the outer ring raceway.The bearings are filled with grease with a lithium thickener with diester base oil, which has good rust inhibiting properties. The base oil viscosity is 15 mm^2/s at 40 °C and 3,7 mm^2/s at 100 °C. The grease is suitable for temperatures between −55 and +110 °C. However, the permissible temperature range is limited by the seal material, from −40 to +80 °C.Under certain conditions, sealed NNF design bearings are maintenance-free, but if they operate in a moist or contaminated environment, or if speeds are moderate to high, they must be relubricated. This can be done through the inner as well as the outer ring.If bearings with one or no seals are required, the seals may be removed easily with a screwdriver. For applications where oil lubrication is to be used, the bearings can be delivered without seals and grease if economic quantities are involved. Otherwise the seals should be removed and the bearings washed before use. If oil lubrication is used, the limiting speed quoted in the product tables can be increased by approximately 30 %.



NNCF--系列（SL18 49/50 系列）
NNCF--Type(SL18 49/50Type)



NNC--系列（SL01 48/49 系列）
NNC--Type（SL01 48/49Type）



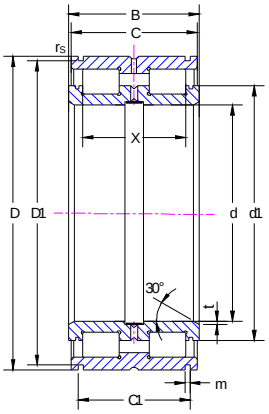
NNCL—系列（SL02 48/49 系列）
NNCL—Type（SL02 48/49Type）

Shaft diameter	Single direction guide bearing type	Guide bearing type	Free bearing type	SKF type	Mass kg	Size			Install dimension						Basic load ratings		Limiting speed
						d	D	B	r_s	s	C	d1	D1	E	dynamic	static	
						min			min.						C	Co	n_l oil≈
															N	N	min^{-1}
20	**SL18 5004**			NNCF5004V	0.2	20	42	30	0.6	1	15	29	33	36.5	47 500	53 000	10 000
25	**SL18 5005**			NNCF5005V	0.23	25	47	30	0.6	1	15	34.5	38.5	42.5	54 000	65 000	9 000
30	**SL18 5006**			NNCF5006V	0.35	30	55	34	1	1.5	17	40	45.5	49.5	70 000	86 000	7 500
35	**SL18 5007**			NNCF5007V	0.46	35	62	36	1	1.5	18	45	51.5	55.5	85 000	109 000	6 500
40	**SL18 5008**			NNCF5008V	0.56	40	68	38	1	1.5	19	50.5	57.5	61.5	101 000	136 000	6 000
45	**SL18 5009**			NNCF5009V	0.71	45	75	40	1	1.5	20	55.5	62.5	66.5	108 000	151 000	5 500
50	**SL18 5010**			NNCF5010V	0.76	50	80	40	1	1.5	20	59	67.5	72	135 000	191 000	5 000
55	**SL18 5011**			NNCF5011V	1.16	55	90	46	1.1	1.5	23	68.5	78.5	83.5	184 000	275 000	4 500
60		**SL01 4912**		NNC4912V	0.49	60	85	25	1		12.5	70.5	73.5		71 000	125 000	4 500
			SL02 4912	NNCL4912V	0.47	60	85	25	1	1	12.5	70.5		77	71 000	125 000	4 500
	SL18 5012			NNCF5012V	1.24	60	95	46	1.1	1.5	23	71.5	82	86.5	189 000	290 000	4 200
65	**SL18 5013**			NNCF5013V	1.32	65	100	46	1.1	1.5	23	78	88	93	199 000	320 000	3 900
70		**SL01 4914**		NNC4914V	0.78	70	100	30	1		15	83	87		108 000	189 000	3 800
			SL02 4914	NNCL4914V	0.75	70	100	30	1	1	15	83		91	108 000	189 000	3 800
	SL18 5014			NNCF5014V	1.85	70	110	54	1.1	3	27	81.5	95	100	235 000	355 000	3 600
75	**SL18 5015**			NNCF5015V	1.93	75	115	54	1.1	3	27	89	103	107.5	248 000	390 000	3 400
80	**SL18 4916**			NNCF4916V	0.88	80	110	30	1	0.7	15	92	96	100	109 000	199 000	2 900
		SL014916		NNC4916V	0.88	80	110	30	1	—	15	92	96	—	109 000	199 000	2 900
			SL024916	NNCL4916V	0.85	80	110	30	1	1	15	92	96	100	109 000	199 000	2 900
	SL18 5016			NNCF5016V	2.59	80	125	60	1.1	3.5	30	95	111	117	295 000	450 000	2 600
85	**SL18 5017**			NNCF5017V	2.72	85	130	60	1.1	3.5	30	99.5	115.5	121	305 000	470 000	2 500
90	**SL18 4918**			NNCF4918V	1.35	90	125	35	1.1	0.7	17.5	103	110	115	149 000	280 000	2 500
		SL01 4918		NNC4918V	1.35	90	125	35	1.1		17.5	103	110		149 000	280 000	2 500
			SL02 4918	NNCL4918V	1.3	90	125	35	1.1	1.5	17.5	103		115	149 000	280 000	2 500
	SL18 5018			NNCF5018V	3.62	90	140	67	1.5	4	33.5	106.5	124	130	355 000	560 000	2 300
100	**SL18 4920**			NNCF4920V	1.95	100	140	40	1.1	0.7	20	116.5	124.5	129	191 000	370 000	2 200
		SL01 4920		NNC4920V	1.95	100	140	40	1.1		20	116.5	124.5		191 000	370 000	2 200
			SL02 4920	NNCL4920V	1.9	100	140	40	1.1	2	20	116.5	124.5		191 000	370 000	2 200

	SL18 5020			NNCF5020V	3.94	100	150	67	1.5	4	33.5	116	133.5	139	375 000	610 000	2 200
110	**SL18 4922**			NNCF4922V	2.15	110	150	40	1.1	0.7	20	125	133.5	138	198 000	400 000	2 100
		SL01 4922		NNC4922V	2.15	110	150	40	1.1		20	125	133.5		198 000	400 000	2 100
			SL02 4922	NNCL4922V	2.1	110	150	40	1.1	2	20	125		138	198 000	400 000	2 100
	SL18 5022			NNCF5022V	6.32	110	170	80	2	5	40	127.5	148.5	156	490 000	790 000	2 000
120	**SL18 4924**			NNCF4924V	2.95	120	165	45	1.1	2	22.5	139	148	153	222 000	440 000	1 900
		SL014924		NNC4924V	2.95	120	165	45	1.1		22.5	139	148		222 000	440 000	1 900
			SL024924	NNCL4924V	2.85	120	165	45	1.1	3	22.5	139		153	222 000	440 000	1 900
	SL18 5024			NNCF5024V	6.77	120	180	80	2	5	40	139	160	167	520 000	870 000	1 800
130	**SL18 4926**			NNCF4926V	3.95	130	180	50	1.5	2	25	149.5	159.5	165	260 000	510 000	1 700
		SL01 4926		NNC4926V	3.95	130	180	50	1.5		25	149.5	159.5		260 000	510 000	1 700
			SL02 4926	NNCL4926V	3.8	130	180	50	1.5	4	25	149.5		165	260 000	510 000	1 700
	SL18 5026			NNCF5026V	10.2	130	200	95	2	5	47.5	149	174.5	183	740 000	1 220 000	1 700
140	**SL18 4928**			NNCF4928V	4.2	140	190	50	1.5	2	25	160	170	176	270 000	550 000	1 600
		SL01 4928		NNC4928V	4.2	140	190	50	1.5		25	160	170		270 000	550 000	1 600
			SL02 4928	NNCL4928V	4.1	140	190	50	1.5	4	25	149.5		176	270 000	550 000	1 600
	SL18 5028			NNCF5028V	11.1	140	210	95	2	5	47.5	163	188.5	197	780 000	1 340 000	1 500
150	**SL01 4830**			NNC4830V	2.9	150	190	40	1.1		20	166	173		231 000	530 000	1 600
		SL02 4830		NNCL4830V	2.8	150	190	40	2	2	20	166		178	231 000	530 000	1 600
			SL18 4930	NNCF4930V	6.65	150	210	60	2	2	30	171.5	186.5	192	410 000	820 000	1 500
	SL01 4930			NNC4930V	6.65	150	210	60	2		30	171.5	186.5		410 000	820 000	1 500
		SL02 4930		NNCL4930V	6.45	150	210	60	2	4	30	171.5		192	410 000	820 000	1 500
	SL18 5030			NNCF5030V	13.3	150	225	100	2.1	6	50	170.5	197.5	206	810 000	1 400 000	1 500
160		**SL01 4832**		NNC4832V	3.1	160	200	40	1.1		20	174	182		237 000	560 000	1 500
	-	-	**SL02 4832**	NNCL 4832 V	3	160	200	40	1.1	2	20	174	-	186	237 000	560 000	1 500
	SL18 4932	-	-	NNCF 4932 V	7	160	220	60	2	2	30	185	199.5	206	425 000	880 000	1 400
	-	**SL01 4932**	-	NNC4932 V	7	160	220	60	2	-	30	185	199.5	-	425 000	880 000	1 400
	-	-	**SL02 4932*)**	NNCL 4932 V	6.8	160	220	60	2	4	30	185	-	206	425 000	880 000	1 400
170	-	**SL01 4834**	-	NNC4834 V	4.1	170	215	45	1.1	-	23	187	196	-	260 000	600 000	1 400
	-	-	**SL02 4834**	NNCL 4834 V	3.95	170	215	45	1.1	3	23	187	-	201	260 000	600 000	1 400
	SL18 4934	-	-	NNCF 4934 V	7.35	170	230	60	2	2	30	194	208.5	215	435 000	930 000	1 300
	-	**SL01 4934**	-	NNC4934 V	7.35	170	230	60	2	-	30	194	208.5	-	435 000	930 000	1 300
	-	-	**SL02 4934**	NNCL 4934 V	7.1	170	230	60	2	4	30	194	-	215	435 000	930 000	1 300
180	-	**SL01 4836*)**	-	NNC4836 V	4.3	180	225	45	1.1	-	23	200	208.5	-	270 000	640 000	1 300
	-	-	**SL02 4836**	NNCL 4836 V	4.15	180	225	45	1.1	3	23	200	-	214	270 000	640 000	1 300
	SL18 4936	-	-	NNCF 4936 V	10.8	180	250	69	2	3	35	206	223.5	230	570 000	1 200 000	1 300
	-	**SL01 4936**	-	NNC4936 V	10.8	180	250	69	2	-	35	206	223.5	-	570 000	1 200 000	1 300
	-	-	**SL02 4936**	NNCL 4936 V	10.5	180	250	69	2	4	35	206	-	230	570 000	1 200 000	1 300
190	-	**SL01 4838**	-	NNC4838 V	5.65	190	240	50	1.5	-	25	209	219	-	310 000	730 000	1 300
	-	-	**SL02 4838**	NNCL 4838 V	5.45	190	240	50	1.5	4	25	209	-	225	310 000	730 000	1 300
	SL18 4938	-	-	NNCF 4938 V	11.2	190	260	69	2	3	35	216	233	240	580 000	1 270 000	1 200
	-	**SL01 4938**	-	NNC4938 V	11.2	190	260	69	2	-	35	216	233	-	580 000	1 270 000	1 200
	-	-	**SL02 4938**	NNCL 4938 V	10.9	190	260	69	2	4	35	216	-	240	580 000	1 270 000	1 200
200	-	**SL01 4840*)**	-	NNC4840 V	5.9	200	250	50	1.5	-	25	220	229.5	-	320 000	770 000	1 200
	-	-	**SL02 4840**	NNCL 4840 V	5.7	200	250	50	1.5	4	25	220	-	235	320 000	770 000	1 200

	SL18 4940	-	-	NNCF 4940 V	15.8	200	280	80	2.1	4	40	231	251.5	259	690 000	1 480 000	1 100
	-	**SL01 4940**	-	NNC4940 V	15.8	200	280	80	2.1	-	40	231	251.5	-	690 000	1 480 000	1 100
	-	-	**SL02 4940**	NNCL 4940 V	15.3	200	280	80	2.1	5	40	231	-	259	690 000	1 480 000	1 100
	-	**SL01 4844*）**	-	NNC4844 V	6.4	220	270	50	1.5	-	25	241	250.5	-	335 000	840 000	1 100
	-	-	**SL02 4844**	NNCL 4844 V	6.2	220	270	50	1.5	4	25	241	-	256	335 000	840 000	1 100
220	**SL18 4944**	-	-	NNCF 4944 V	17.2	220	300	80	2.1	4	40	248	268.5	276	720 000	1 590 000	1 000
	-	**SL01 4944**	-	NNC4944 V	17.2	220	300	80	2.1	-	40	248	268.5	-	720 000	1 590 000	1 000
	-	-	**SL02 4944**	NNCL 4944 V	16.7	220	300	80	2.1	5	40	248	-	276	720 000	1 590 000	1 000
	-	**SL01 4848*）**	-	NNC4848 V	10	240	300	60	2	-	30	261	275	-	500 000	1 230 000	1 000
	-	-	**SL02 4848**	NNCL 4848 V	9.9	240	300	60	2	4	30	261	-	281	500 000	1 230 000	1 000
240	**SL18 4948**	-	-	NNCF 4948 V	18.5	240	320	80	2.1	4	40	271	291	299	740 000	1 710 000	950
	-	**SL01 4948**	-	NNC4948 V	18.5	240	320	80	2.1	-	40	271	291	-	740 000	1 710 000	950
	-	-	**SL02 4948**	NNCL 4948 V	17.9	240	320	80	2.1	5	40	271	-	299	740 000	1 710 000	950
	-	**SL01 4852**	-	NNC4852 V	11	260	320	60	2	-	30	284	297	-	530 000	1 340 000	950
	-	-	**SL02 4852**	NNCL 4852 V	10.6	260	320	60	2	4	30	284	-	304	530 000	1 340 000	950
260	**SL18 4952**	-	-	NNCF 4952 V	32	260	360	100	2.1	4	50	295	321	331	1 110 000	2 490 000	900
	-	**SL01 4952**	-	NNC4952 V	32	260	360	100	2.1	-	50	295	321	-	1 110 000	2 490 000	900
	-	-	**SL02 4952**	NNCL 4952 V	31.2	260	360	100	2.1	6	50	295	-	331	1 110 000	2 490 000	900
		SL01 4856		NNC4856V	16	280	350	69	2		34.5	308	326		690 000	1 790 000	850
			SL02 4856	NNCL4856V	15.6	280	350	69	2	4	34.5	308		332	690 000	1 790 000	850
280	**SL18 4956**			NNCF4956V	34	280	380	100	2.1	4	50	317	343	353	1 150 000	2 700 000	800
		SL01 4956		NNC4956V	34	280	380	100	2.1		50	317	343		1 150 000	2 700 000	800
			SL02 4956	NNCL4956V	33.1	280	380	100	2.1	6	50	317		355	1 150 000	2 700 000	800
		SL01 4860		NNC4860V	23	300	380	80	2.1		40	329	349		820 000	2 090 000	800
			SL02 4860	NNCL4860V	22	300	380	80	2.1	6	40	329		356	820 000	2 090 000	800
300	**SL184960**			NNCF4960V	53	300	420	118	3	4	40	341.5	374	385	1 650 000	3 800 000	750
		SL01 4960		NNC4960V	53	300	420	118	3		40	341.5	374		1 650 000	3 800 000	750
			SL02 4960	NNCL4960V	51.9	300	420	118	3	6	40	341.5		385	1 650 000	3 800 000	750
		SL01 4864		NNC4864V	24	320	400	80	2.1		40	352	372		850 000	2 240 000	750
			SL02 4864	NNCL4864V	23.5	320	400	80	2.1	6	40	352		379	850 000	2 240 000	750
320	**SL18 4964**			NNCF4964V	56	320	440	118	3	4	59	368	400	412	1 720 000	4 100 000	700
		SL014964		NNC4964V	56	320	440	118	3		59	368	400		1 720 000	4 100 000	700
			SL02 4964V	NNCL4964V	54.9	320	440	118	3	6	59	368		412	1 720 000	4 100 000	700
		SL01 4868		NNC4868V	25.5	340	420	80	2.1		40	369	389		870 000	2 350 000	700
			SL02 4868	NNCL4868V	25	340	420	80	2.1	6	40	369		396	870 000	2 350 000	700
340	**SL18 4968**			NNCF4968V	59	340	460	118	3	4	59	386	418	430	1 770 000	4 300 000	650
		SL01 4968		NNC4968V	59	340	460	118	3		59	386	418		1 770 000	4 300 000	650
			SL02 4968	NNCL4968V	57.8	340	460	118	3	6	59	386		430	1 770 000	4 300 000	650
		SL01 4872		NNC4872V	27	360	440	80	2.1		40	392	412		900 000	2 500 000	650
			SL02 4872V	NNCL4872V	26	360	440	80	2.1	6	40	392		419	900 000	2 500 000	650
360	**SL18 4972**			NNCF4972V	62.1	360	480	118	3	4	59	404	436	448	1 810 000	4 500 000	650
		SL01 4972		NNC4972V	62.1	360	480	118	3		59	404	436		1 810 000	4 500 000	650
			SL02 4972	NNCL4972V	60.8	360	480	118	3	6	59	404		448	1 810 000	4 500 000	650
380		**SL01 4876**		NNC4876V	45.5	380	480	100	2.1		50	421	446		1 310 000	3 450 000	600
			SL02 4876	NNCL4876V	44	380	480	100	2.1	6	50	421		455	1 310 000	3 450 000	600

	SL 18 4976			NNCF4976V	92.4	380	520	140	4	5	70	431	467.5	481	2 270 000	5 600 000	600
		SL01 4976		NNC4976V	92.4	380	520	140	4		70	431	467.5		2 270 000	5 600 000	600
			SL02 4976V	NNCL4976V	90.5	380	520	140	4	7	70	431		481	2 270 000	5 600 000	600
		SL01 4880		NNC4880V	46.5	400	500	100	2.1		50	435	461		1 330 000	3 600 000	600
			SL02 4880	NNCL4880V	45.8	400	500	100	2.1	6	50	435		470	1 330 000	3 600 000	600
400	**SL18 4980**			NNCF4980V	96.5	400	540	140	4	5	70	451	488	501	2 330 000	5 900 000	550
		SL01 4980		NNC4980V	96.5	400	540	140	4		70	451	488		2 330 000	5 900 000	550
			SL02 4980	NNCL4980V	94.6	400	540	140	4	7	70	451		501	2 330 000	5 900 000	550
	SL18 4884			NNCF4884V	49.5	420	520	100	2.1	6		458	482	492.6	1 340 000	4 000 000	480
		SL01 4884		NNC4884V	49.5	420	520	100	2.1			458	482	492.6	1 340 000	4 000 000	480
			SL02 4884	NNCL4884V	49.5	420	520	100	2.1	6		458		492.6	1 340 000	4 000 000	480
420	**SL18 4984**			NNCF4984V	99.5	420	560	140	4	7		470	512	522.5	2 200 000	6 000 000	450
		SL01 4984		NNC4984V	99.5	420	560	140	4			470	512	522.5	2 200 000	6 000 000	450
			SL02 4984	NNCL4984V	99.5	420	560	140	4	7		470		522.5	2 200 000	6 000 000	450
	SL18 4888			NNCF4888V	52.0	440	540	100	2.1	6		480	504	514.6	1 400 000	4 150 000	450
		SL01 4888		NNC4888V	52.0	440	540	100	2.1			480	504	514.6	1 400 000	4 150 000	450
			SL02 4888	NNCL4888V	52.0	440	540	100	2.1	6		480		514.6	1 400 000	4 150 000	450
440	**SL18 4988**			NNCF4988V	137	440	600	160	4	7		503	544	563.5	2 970 000	7 500 000	436
		SL01 4988		NNC4988V	137	440	600	160	4			503	544	563.5	2 970 000	7 500 000	436
			SL02 4988	NNCL4988V	137	440	600	160	4	7		503		563.5	2 970 000	7 500 000	436
	SL18 4892			NNCF4892V	76.0	460	580	118	3	7		505	531	543.3	1 540 000	4 500 000	430
		SL01 4892		NNC4892V	76.0	460	580	118	3			505	531	543.3	1 540 000	4 500 000	430
			SL02 4892	NNCL4892V	76.0	460	580	118	3	7		505		543.3	1 540 000	4 500 000	430
460	**SL18 4992**			NNCF4992V	140	460	620	160	4	7		512	564	577	3 030 000	7 650 000	400
		SL01 4992		NNC4992V	140	460	620	160	4			512	564	577	3 030 000	7 650 000	400
			SL02 4992	NNCL4992V	140	460	620	160	4	7		512		577	3 030 000	7 650 000	400
	SL18 4896			NNCF4896V	78.5	480	600	118	3	7		529	555	567.3	1 570 000	4 750 000	400
		SL01 4896		NNC4896V	78.5	480	600	118	3			529	555	567.3	1 570 000	4 750 000	400
			SL02 4896	NNCL4896V	78.5	480	600	118	3	7		529		567.3	1 570 000	4 750 000	400
480	**SL18 4996**			NNCF4996V	165	480	650	170	5	8		537	592	605.5	3 300 000	8 300 000	380
		SL01 4996		NNC4996V	165	480	650	170	5			537	592	605.5	3 300 000	8 300 000	380
			SL02 4996	NNCL4996V	165	480	650	170	5	8		537		605.5	3 300 000	8 300 000	380
	SL18 48/500			NNCF48/500V	81.5	500	620	118	3	7		546	571	583.5	1 610 000	4 900 000	400
		SL01 48/500		NNC48/500V	81.5	500	620	118	3			546	571	583.5	1 610 000	4 900 000	400
500			**SL02 48/500**	NNCL48/500V	81.5	500	620	118	3	7		546		583.5	1 610 000	4 900 000	400
	SL18 49/500			NNCF49/500V	175	500	670	170	5	8		568	611	631.5	3 360 000	8 800 000	360
500		**SL01 49/500**		NNC49/500V	175	500	670	170	5			568	611	631.5	3 360 000	8 800 000	360
			SL02 49/500	NNCL49/500V	175	500	670	170	5	8		568		631.5	3 360 000	8 800 000	360
	SL18 48/530			NNCF48/530V	85.0	530	650	118	3	7		577	603	615	1 680 000	5 400 000	360
		SL01 48/530		NNC48/530V	86.0	530	650	118	3	7		577	603	615	1 680 000	5 400 000	360
			SL02 48/530	NNCL48/530V	84	530	650	118	3	7		577	603	615	1 680 000	5 400 000	360
530	**SL18 49/530**			NNCF49/530V	200	530	710	180	5	8		588	648	663	3 910 000	10 200 000	340
		SL01 49/530		NNC49/530V	200	530	710	180	5			588	648	663	3 910 000	10 200 000	340
			SL02 49/530	NNCL49/530V	200	530	710	180	5	8		588		663	3 910 000	10 200 000	340



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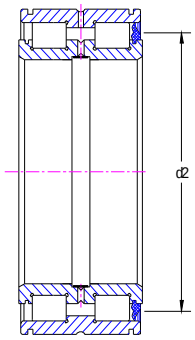

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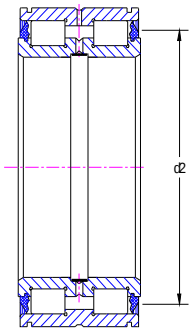

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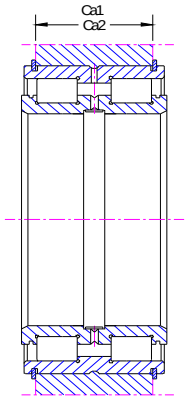
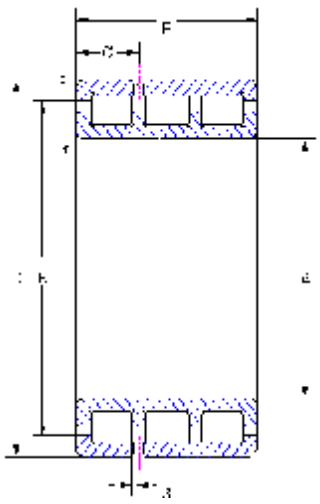


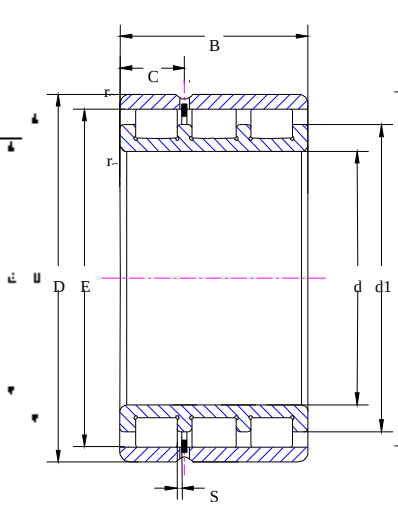
SKF:(NNF…ADA.2LS). INA:(SL0450…PPX). NACHI:(E50…NRNT)

Shaft Diameter	Type	Mass kg	Size							Install dimension							Basic load ratings		Limiting speed
			d	D	B	C	C1	D1	m	r_s	t	x	Ca1	Ca2	d1	d2	dynamic	static	
							+0.2			min.			-0	-0			C	Co	$n_{l\ oil} \approx$
																	kN	kN	min^{-1}
80	**SL04 5016 X*)**	2.71	80	125	60	59	54.2	122	4.2	0.6	1.5	48	49	46	97.5	105	206	335	2 600
85	**SL045017 X**	2.83	85	130	60	59	54.2	127	4.2	0.6	1.5	48	49	46	104.5	112	215	360	2 500
90	**SL04 5018 X*)**	3.71	90	140	67	66	59.2	137	4.2	0.6	1.5	54	54	51	109.5	118	310	520	2 300
95	**SL04 5019 X**	3.88	95	145	67	66	59.2	142	4.2	0.6	1.5	54	54	51	113.5	123	315	540	2 200
100	**SL04 5020 X*)**	3.95	100	150	67	66	59.2	147	4.2	0.6	1.5	54	54	51	118	128	330	550	2 200
110	**SL04 5022 X*)**	6.57	110	170	80	79	70.2	167	4.2	0.6	1.8	64	65	62	132	143	395	680	1 900
120	**SL04 5024 X*)**	7.04	120	180	80	79	71.2	176	4.2	0.6	1.8	64	65	63	141.5	153	410	740	1 800
130	**SL04 5026 X*)**	10.5	130	200	95	94	83.2	196	4.2	0.6	1.8	77	77	75	157	171	550	980	1 600
	SL04 130 X	7.5	130	190	80	79	71.2	186	4.2	0.6	1.8	64	65	63	151	160	425	790	1 700
140	**SL04 5028 X*)**	11.1	140	210	95	94	83.2	206	5.2	0.6	1.8	77	77	73	165.5	181	630	1 120	1 500
	SL04 140 X	8	140	200	80	79	71.2	196	4.2	0.6	1.8	64	65	63	160.5	170	445	840	1 600
150	**SL04 5030 X*)**	13.3	150	225	100	99	87.2	221	5.2	0.6	2	80	81	77	176	192	710	1 270	1 400
	SL04 150 X	8.4	150	210	80	79	71.2	206	5.2	0.6	1.8	64	65	61	175	186	465	920	1 500
160	**SL04 5032 X*)**	16.6	160	240	109	108	95.2	236	5.2	0.6	2	89	89	85	189.5	206	740	1 370	1 300
	SL04 160 X	8.8	160	220	80	79	71.2	216	5.2	0.6	1.8	64	65	61	184.5	196	480	970	1 400
170	**SL04 5034 X*)**	22.6	170	260	122	121	107.2	254	5.2	0.6	2	100	99	97	201	220	960	1 760	1 300
	SL04 170 X	9.3	170	230	80	79	71.2	226	5.2	0.6	1.8	64	65	61	194	206	490	1 030	1 300
180	**SL04 5036 X*)**	30.1	180	280	136	135	118.2	274	5.2	0.6	2	112	110	108	218	239	1 140	2 140	1 200
	SL04 180 X	9.8	180	240	80	79	71.2	236	5.2	0.6	1.8	64	65	61	203.5	216	500	1 080	1 300
190	**SL04 5038 X*)**	31.5	190	290	136	135	118.2	284	5.2	0.6	2	112	110	108	226.5	248	1 170	2 230	1 100
	SL04 190 X	12.7	190	260	80	79	73.2	254	5.2	0.6	1.8	64	65	63	218	231	520	1 160	1 200
200	**SL04 5040 X*)**	40.8	200	310	150	149	128.2	304	6.3	0.6	2	126	120	116	243.5	267	1 370	2 650	1 000
	SL04 200 X	13.2	200	270	80	79	73.2	264	5.2	0.6	1.8	64	65	63	227.5	241	540	1 210	1 200
220	**SL04 5044 X**	52.5	220	340	160	159	138.2	334	6.3	1	2	132	130	126	260.5	288	1 580	3 100	950
	SL04 220 X	19.5	220	300	95	94	83.2	294	5.2	1	2	72	75	73	249	264	720	1 590	1 000
240	**SL04 5048 X**	56	240	360	160	159	138.2	354	6.3	1	2	132	130	126	279.5	308	1 650	3 350	900

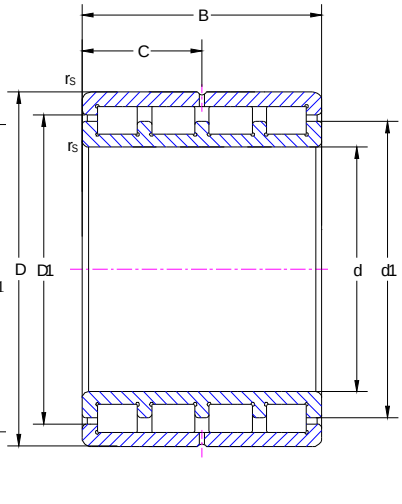
	SL04 240 X	21	240	320	95	94	83.2	314	6.3	1	2	72	75	71	272	287	740	1 710	950
260	**SL04 5052 X**	84.5	260	400	190	189	162.2	394	6.3	1.1	3	150	154	150	305.5	338	2 380	4 700	800
	SL04 260 X	22.5	260	340	95	94	83.2	334	6.3	1	3	75	75	71	293	310	850	2 010	900
280	**SL04 5056 X**	90	280	420	190	189	163.2	413	7.3	1.1	3	150	154	149	321.5	357	2 600	5 200	800
	SL04 280 X	24	280	360	95	94	83.2	354	6.3	1	3	75	75	71	310.5	327	870	2 130	850
300	**SL04 5060 X**	126	300	460	218	216	185.2	453	7.3	1.1	3	170	176	171	347.5	380	3 000	5 900	700
	SL04 300 X	25.5	300	380	95	94	83.2	374	6.3	1	3	75	75	71	328.5	346	900	2 260	800



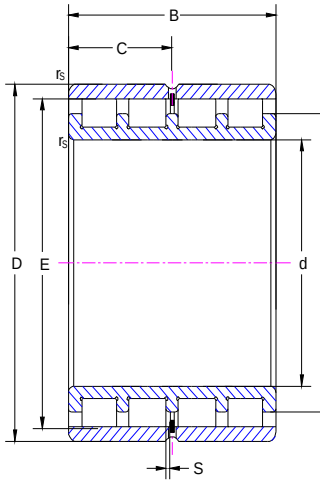
SL11 9（定位轴承）



SL14 9(游动端轴承)



SL12 9(定位轴承)



SL15 9(游动端轴承)

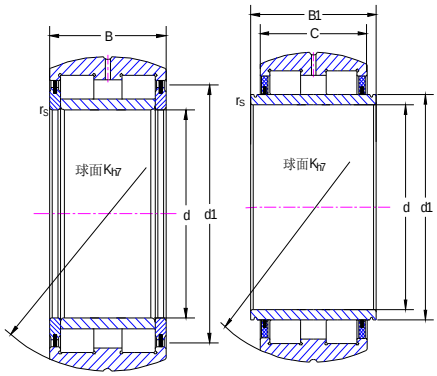
密装、多列

定位轴承：系列 SL11 9、SL12 9

游动轴承：系列 SL14 9、SL15 9

Shaft diameter	Single direction guide bearing type	Guide bearing type	Mass kg	Principal dimensions			Install dimension						Basic load ratings		Limiting speed
				d	D	B	r_s	s	C	d1	D1	E	dynamic C N	static Co N	n_l oil≈ min^{-1}
					min.		min.								
80	SL11 916	-	1.29	80	110	44	1	-	15	92	96	-	150 000	300 000	2 900
	-	SL14 916	1.25	80	110	44	1	1	15	92	-	100	150 000	300 000	2 900
	SL12 916	-	1.65	80	110	57	1	-	28.5	92	96	-	188 000	395 000	2 900
	-	SL15 916	1.6	80	110	57	1	1	28.5	92	-	100	188 000	395 000	2 900
90	SL11 918	-	2	90	125	52	1.1	-	17.5	103	110	-	205 000	425 000	2 500
	-	SL14 918	1.95	90	125	52	1.1	1.5	17.5	103	-	115	205 000	425 000	2 500
	SL12 918	-	2.65	90	125	68	1.1	-	34	103	110	-	255 000	560 000	2 500
	-	SL15 918	2.6	90	125	68	1.1	1.5	34	103	-	115	255 000	560 000	2 500
100	SL11 920	-	2.9	100	140	59	1.1	-	20	116.5	125	-	260 000	550 000	2 200
	-	SL14 920	2.85	100	140	59	1.1	2	20	116.5	-	129	260 000	550 000	2 200
	SL12 920	-	3.85	100	140	78	1.1	-	39	116.5	125	-	325 000	740 000	2 200
	-	SL15 920	3.8	100	140	78	1.1	2	39	116.5	-	129	325 000	740 000	2 200
110	SL11 922	-	3.15	110	150	59	1.1	-	20	125	134	-	270 000	600 000	2 100
	-	SL14 922	3.1	110	150	59	1.1	2	20	125	-	138	270 000	600 000	2 100
	SL12 922	-	4.2	110	150	78	1.1	-	39	125	134	-	340 000	800 000	2 100
	-	SL15 922	4.15	110	150	78	1.1	2	39	125	-	138	340 000	800 000	2 100
120	SL11 924	-	4.3	120	165	66	1.1	-	22.5	139	148	-	305 000	660 000	1 900
	-	SL14 924	4.2	120	165	66	1.1	3	22.5	139	-	153	305 000	660 000	1 900
	SL12 924	-	5.65	120	165	87	1.1	-	43.5	139	148	-	380 000	880 000	1 900
	-	SL15 924	5.55	120	165	87	1.1	3	43.5	139	-	153	380 000	880 000	1 900
130	SL11 926	-	5.75	130	180	73	1.5	-	25	149.5	160	-	355 000	770 000	1 700
	-	SL14 926	5.6	130	180	73	1.5	4	25	149.5	-	165	355 000	770 000	1 700
	SL12 926	-	7.55	130	180	96	1.5	-	48	149.5	160	-	445 000	1 030 000	1 700
	-	SL15 926	7.4	130	180	96	1.5	4	48	149.5	-	165	445 000	1 030 000	1 700

140	**SL11 928**	**-**	6.1	140	190	73	1.5	-	25	160	170	-	370 000	830 000	1 600
	-	**SL14 928**	6	140	190	73	1.5	4	25	160	-	176	370 000	830 000	1 600
	SL12 928	**-**	8.05	140	190	96	1.5	-	48	160	170	-	460 000	1 100 000	1 600
	-	**SL15 928**	7.9	140	190	96	1.5	4	48	160	-	176	460 000	1 100 000	1 600
150	**SL11 930**	**-**	9.7	150	210	88	2	-	30	171.5	187	-	560 000	1 230 000	1 500
	-	**SL14 930**	9.5	150	210	88	2	4	30	171.5	-	192	560 000	1 230 000	1 500
	SL12 930	**-**	12.8	150	210	116	2	-	58	171.5	187	-	700 000	1 640 000	1 500
	-	**SL15 930**	12.6	150	210	116	2	4	58	171.5	-	192	700 000	1 640 000	1 500
160	**SL11 932**	**-**	10.2	160	220	88	2	-	30	185	200	-	580 000	1 330 000	1 400
	-	**SL14 932**	10	160	220	88	2	4	30	185	-	206	580 000	1 330 000	1 400
	SL12 932	**-**	13.5	160	220	116	2	-	58	185	200	-	730 000	1 770 000	1 400
	-	**SL15 932**	13.3	160	220	116	2	4	58	185	-	206	730 000	1 770 000	1 400
170	**SL11 934**	**-**	10.8	170	230	88	2	-	30	194	209	-	600 000	1 390 000	1 300
	-	**SL14 934**	10.5	170	230	88	2	4	30	194	-	215	600 000	1 390 000	1 300
	SL12 934	**-**	14.2	170	230	116	2	-	58	194	209	-	750 000	1 860 000	1 300
	-	**SL15 934**	13.9	170	230	116	2	4	58	194	-	215	750 000	1 860 000	1 300
180	**SL11 936**	**-**	15.7	180	250	101	2	-	34.5	206	224	-	780 000	1810 000	1 300
	-	**SL14 936**	15.5	180	250	101	2	4	34.5	206	-	230	780 000	1810 000	1 300
	SL12 936	**-**	20.7	180	250	133	2	-	66.5	206	224	-	970 000	2 410 000	1 300
	-	**SL15 936**	20.4	180	250	133	2	4	66.5	206	-	230	970 000	2 410 000	1 300
190	**SL11 938**	**-**	16.4	190	260	101	2	-	34.5	216	233	-	800 000	1 900 000	1 200
	-	**SL14 938**	16.2	190	260	101	2	4	34.5	216	-	240	800 000	1 900 000	1 200
	SL12 938	**-**	21.6	190	260	133	2	-	66.5	216	233	-	1 000 000	2 550 000	1 200
	-	**SL15 938**	21.4	190	260	133	2	4	66.5	216	-	240	1 000 000	2 550 000	1 200
200	**SL11 940**	**-**	22.8	200	280	116	2.1	-	40	231	252	-	940 000	2 220 000	1 100
	-	**SL14 940**	22.4	200	280	116	2.1	5	40	231	-	259	940 000	2 220 000	1 100
	SL12 940	**-**	29.9	200	280	152	2.1	-	76	231	252	-	1 180 000	2 950 000	1 100
	-	**SL15 940**	29.4	200	280	152	2.1	5	76	231	-	259	1 180 000	2 950 000	1 100



Shaft diameter	Single direction guide bearing type	Guide bearing type	Mass kg	Size d	K ball	B C	B1	r_s	$S^{1)}$	Install dimension d1	Basic load ratings dynamic N	Basic load ratings static N	Limiting speed n_l grease≈ min^{-1}
80	**SL05 016 E**	-	1.7	80	120	45	-	1.1	-	94	1 72 000	300 000	1 300
	-	**SL06 016 E**	1.8	80	120	45	55	1.1	2.5	88	1 72 000	300 000	1 300
90	**SL05 018 E**	-	2.8	90	140	50	-	1.5	-	106	2 19 000	370 000	1 200
	-	**SL06 018 E**	2.95	90	140	50	60	1.5	2.5	100	2 19 000	370 000	1 200
100	**SL05 020 E**	-	3.3	100	150	55	-	1.5	-	116	280 000	490 000	1 100
	-	**SL06 020 E**	3.45	100	150	55	65	1.5	2.5	110	280 000	490 000	1 100
110	**SL05 022 E**	-	4.9	110	170	60	-	2	-	130	340 000	620 000	950
	-	**SL06 022 E**	5.2	110	170	60	75	2	5	124	340 000	620 000	950
120	**SL05 024 E**	-	5.2	120	180	60	-	2	-	138	350 000	660 000	850
	-	**SL06 024 E**	5.5	120	180	60	75	2	5	132	350 000	660 000	850
130	**SL05 026 E**	-	7.4	130	200	65	-	2	-	154	435 000	810 000	800
	-	**SL06 026 E**	7.8	130	200	65	80	2	5	146	435 000	810 000	800
140	**SL05 028 E**	-	8.2	140	210	70	-	2	-	160	495 000	930 000	750
	-	**SL06 028 E**	8.55	140	210	70	85	2	5	152	495 000	930 000	750
150	**SL05 030 E**	-	10	150	225	75	-	2.1	-	175	540 000	1 020 000	700
	-	**SL06 030 E**	10.5	150	225	75	90	2.1	5	166	540 000	1 020 000	700
160	**SL05 032 E**	-	13.7	160	240	90	-	2.1	-	184	660 000	1 260 000	650
	-	**SL06 032 E**	14.3	160	240	90	110	2.1	7.5	175	660 000	1 260 000	650
170	**SL05 034 E**	-	17.4	170	260	95	-	2.1	-	196	760 000	1 420 000	600
	-	**SL06 034 E**	18.1	170	260	95	115	2.1	7.5	186	760 000	1 420 000	600
180	**SL05 036 E**	-	22.1	180	280	100	-	2.1	-	210	790 000	1 520 000	550
	-	**SL06 036 E**	23	180	280	100	120	2.1	7.5	200	790 000	1 520 000	550
190	**SL05 038 E**	-	25.1	190	290	110	-	2.1	-	222	950 000	1 850 000	550
	-	**SL06 038 E**	26.5	190	290	110	135	2.1	10	212	950 000	1 850 000	550
200	**SL05 040 E**	-	30.5	200	310	115	-	2.1	-	234	1 070 000	2 060 000	500
	-	**SL06 040 E**	32	200	310	115	140	2.1	10	222	1 070 000	2 060 000	500
220	**SL05 044 E**	-	40	220	340	125	-	3	-	262	1 260 000	2 440 000	460
	-	**SL06 044 E**	42	220	340	125	150	3	10	248	1 260 000	2 440 000	460
240	**SL05 048 E**	-	44	240	360	130	-	3	-	278	1 310 000	2 600 000	430
	-	**SL06 048 E**	46	240	360	130	155	3	10	266	1 310 000	2 600 000	430