

# Simmerring Radiamatic® R 35

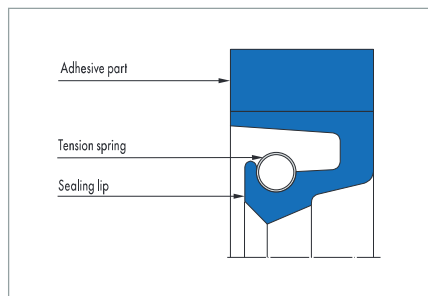


Fig. 1 Simmerring Radiamatic® R 35

## Product description

Simmerring with a fabric reinforced static part that is securely joined to the elastomer sealing lip. The sealing lip is also pre-loaded with a garter spring.

## Product advantages

Sealing ring is used, in case of adequate lubrication by the medium to be sealed, preferably where shafts pass through walls in mills and large gearboxes in heavy machinery manufacture.

- Particularly robust static part
- Lasting radial contact pressure
- Highly wear-resistant.

## Application

Mills, ship building, steel hydraulics engineering, wind power plants.

## Material

Sealing lip	Static part	Tension spring
80 NBR B241	Impregnated cotton fabric B4 B248	ST 1.4571
80 FKM K670	Impregnated aramide fabric C2 K670	ST 1.4571
75 HNBR U467	Impregnated aramide fabric C2 U464	ST 1.4571

## Operating conditions

Material	80 NBR B241	80 FKM K670	75 HNBR U467
	<b>Temperature range in °C</b>		
Mineral oils	-30 ... +100	-10 ... +180	-20 ... +140
Water	+5 ... +100	+5 ... +80	+5 ... +100
Lubricating greases	-30 ... +100	-10 ... +180	-20 ... +140
Rolling oil emulsion	on enquiry		
Pressure p in MPa	0,05		
Running speed v in m/s	20	25	25

Other media on enquiry. Application parameters are recommended values, do not utilise all parameters simultaneously.

## Surface quality

Peak-to-valley heights	R <sub>a</sub>	R <sub>max</sub>
Running surface	≤0,6 µm	≤2,5 µm
Housing	≤4 µm	≤15 µm

The contact area is machined by plunge grinding, i.e. without feed. The surface hardness must be approx. 60 HRC (depth of hardening min. 0,5 mm). With increasing circumferential speed the contact area should be manufactured with increasing peak-to-valley heights R<sub>a</sub>. The surface should not be too smooth so that an adequate film of lubricant can form. Recommended value: R<sub>a min</sub> = 0,1 µm. Percentage contact area M<sub>r</sub> >50% to max. 90% at cutting depth c = Rz/2 and reference line C ref = 0%. Abrasive surfaces, ridges, scratches and blow-holes are to be avoided.

**Design notes**

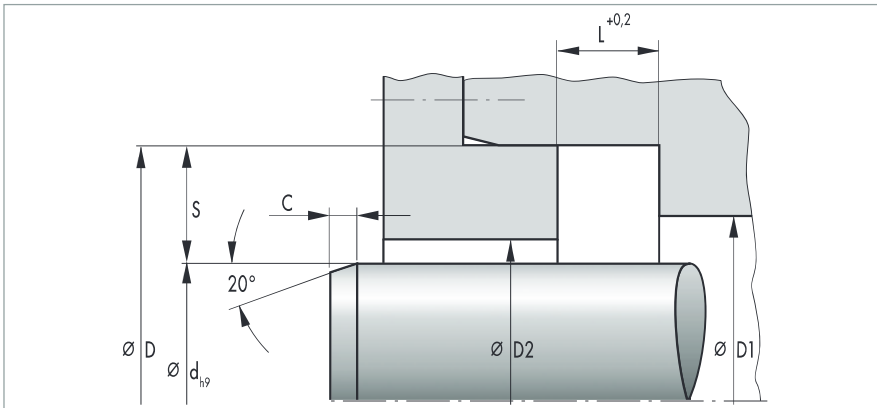


Fig. 2

Please observe our general design notes in → Technical Manual.

**Lead-in chamfers**

See dimension "C" in the article list.

**Tolerances**

D	Tolerance
<500	H8
>500	+0,0004 x D

**Overall eccentricity**

The permissible overall eccentricity (static and dynamic eccentricity) between shaft and housing is dependent on the seal profile and circumferential speed. If necessary, we will provide recommended values.

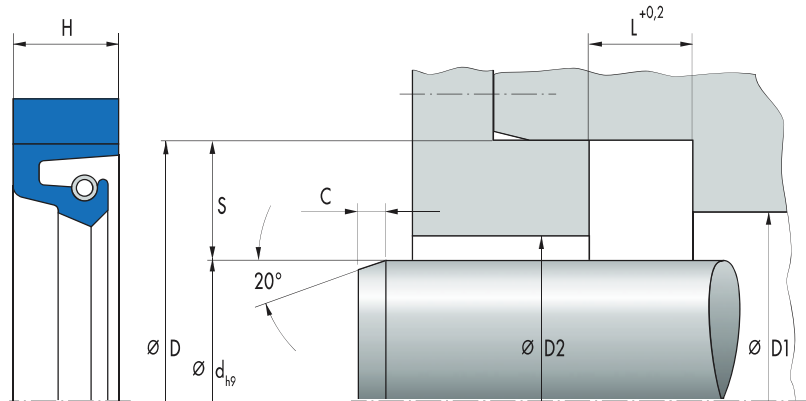
**Housing recommendations for new designs**

d	S (Profile)	L
>100	20	16
>250	22	20
<450	25	22
>750	32	25

**Fitting & installation**

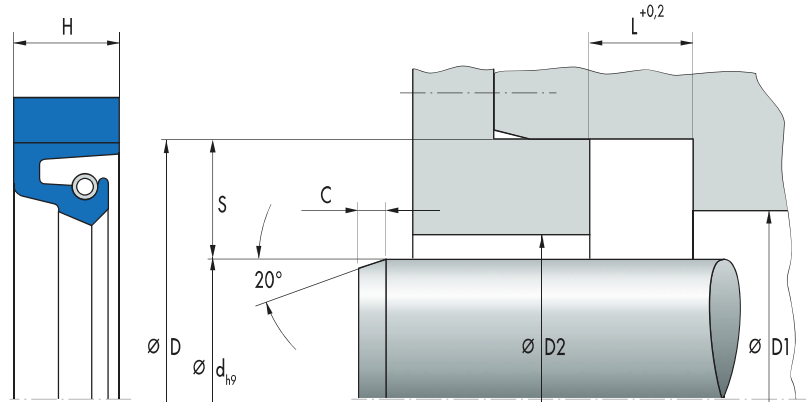
For Simmerring Radiamatic R 35 an axially accessible housing is necessary, as the rings must have low inclination. The Radiamatic R 35 rings are supplied with oversize seal width. For reliable function the Radiamatic R rings must be axially compressed to the dimension "L". An open housing with cover plate and tightening screws is necessary. Specific deformation forces are necessary for the compression. The cover plate and the tightening screws are to be designed appropriately. Please request recommended values.

Article list



Width	D	L	D <sub>1</sub>	D <sub>2</sub>	C	Material	Article No.	
100	125	10	112,5	104	8	80 NBR B241	24019355	D
100	125	12,5	112,5	104	8	80 NBR B241	24019354	D
100	130	16	115	105	8	80 NBR B241	24084477	D
100	132	12,5	116	105	8	80 NBR B241	24019356	D
100	140	16	120	107	8	80 NBR B241	24199219	D
105	145	16	125	112	8	80 NBR B241	24091749	D
110	135	10	122,5	114	8	80 NBR B241	24019358	D
110	135	12,5	122,5	114	8	80 NBR B241	24019357	D
110	140	13	125	115	8	80 NBR B241	24019359	D
110	140	13	125	115	8	80 FKM K670	24294262	D
110	140	16	125	115	8	80 NBR B241	24084489	D
110	140	16	125	115	8	80 NBR B241	24375934	D
110	150	16	130	117	8	80 NBR B241	24029888	D
120	150	16	135	125	8	80 NBR B241	24084491	D
120	160	16	140	127	8	80 NBR B241	24019360	D
125	155	12	140	130	8	80 NBR B241	24019361	D
125	155	12	140	130	8	80 FKM K670	24197677	D
125	165	15,8	145	132	8	80 NBR B241	24127755	D
130	160	15	145	135	8	80 NBR B241	24019362	D
130	170	16	150	137	8	80 NBR B241	24019363	D
140	170	16	155	145	8	80 NBR B241	24111679	D
140	180	16	160	147	8	80 NBR B241	24019364	D
146	177,8	15,9	161,9	151	8	80 NBR B241	24019365	D
150	180	12,7	165	155	8	80 NBR B241	24099375	D
150	180	13	165	155	8	80 FKM K670	24296764	D
150	180	16	165	155	8	80 NBR B241	24084493	D
150	190	16	170	157	8	80 NBR B241	24019366	D
160	190	16	175	165	8	80 NBR B241	24111683	D
160	200	16	180	167	8	80 NBR B241	24019367	D
170	200	16	185	175	8	80 NBR B241	24119486	D
170	200	16	185	175	8	80 FKM K670	24235848	D
170	210	16	190	177	8	80 FKM K670	24224263	D
170	210	16	190	177	8	80 NBR B241	24019368	D
177,8	215,9	15,9	196,85	182,8	8	80 NBR B241	24099675	D
180	215	18	197,5	185	8	80 FKM K670	24301711	D

B Available from stock D On request: Tool is available, delivery at short notice

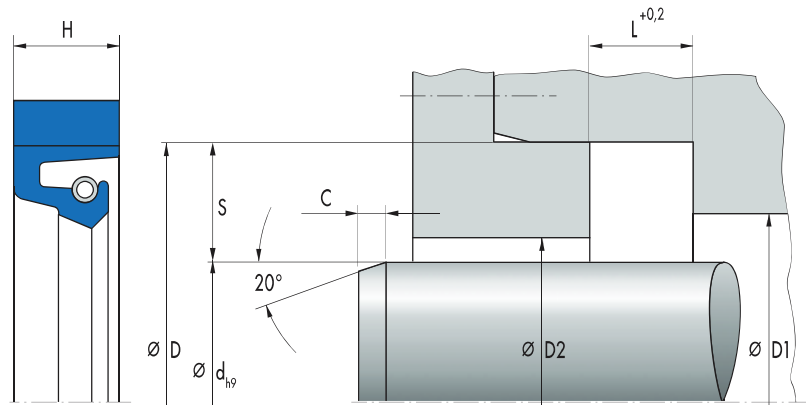


Width	D	L	D <sub>1</sub>	D <sub>2</sub>	C	Material	Article No.	
180	215	18	197,5	185	8	80 NBR B241	24111687	D
180	220	16	200	187	8	80 NBR B241	24080078	D
184,2	215,9	16	200,05	189,2	8	80 NBR B241	24089569	D
185	225	16	205	192	8	80 NBR B241	24019369	D
190	225	18	207,5	195	8	80 NBR B241	24084495	D
190	230	16	210	197	8	80 NBR B241	24093226	D
190	234	20	212	197	8	80 FKM K670	24343975	D
190,5	215,9	15,9	203,2	194,5	8	80 FKM K670	24193482	D
195	235	16	215	202	8	80 NBR B241	24019370	D
200	235	18	217,5	205	8	80 NBR B241	24111691	D
200	240	16	220	207	8	80 FKM K670	24332515	D
200	240	16	220	207	8	80 NBR B241	24019371	D
205	245	16	225	212	10	80 NBR B241	24075437	D
210	245	18	227,5	215	10	80 NBR B241	24111695	D
210	250	16	230	217	10	80 NBR B241	24056190	D
220	255	18	237,5	225	10	80 NBR B241	24109573	D
220	260	16	240	227	10	80 NBR B241	24019373	D
220	260	16	240	227	10	80 FKM K670	24180731	D
225	265	16	245	232	10	80 NBR B241	24076590	D
230	260	15,7	245	235	10	80 NBR B241	24107871	D
230	270	16	250	237	10	80 FKM K670	24260047	D
230	270	16	250	237	10	80 NBR B241	24019374	D
230	280	20	255	238	10	80 NBR B241	24019375	D
235	265	15	250	240	10	80 NBR B241	24082534	D
235	275	16	255	242	10	80 NBR B241	24055526	D
240	275	18	257,5	245	10	80 NBR B241	24084497	D
240	280	16	260	247	10	80 NBR B241	24019376	D
240	290	25	265	248	10	80 FKM K670	24343976	D
245	285	16	265	252	10	80 NBR B241	24019377	D
250	290	16	270	257	10	80 NBR B241	24019378	D
250	294	20	272	257	10	80 NBR B241	24019379	D
260	290	16	275	265	10	80 NBR B241	24019380	D
260	300	18	280	267	10	80 NBR B241	24111702	D
260	304	20	282	267	10	80 NBR B241	24029887	D
270	310	20	290	277	10	80 NBR B241	24084499	D
270	314	20	292	277	10	80 NBR B241	24019381	D

B Available from stock D On request: Tool is available, delivery at short notice

Width	D	L	D <sub>1</sub>	D <sub>2</sub>	C	Material	Article No.	
272	304	15,8	288	277	10	80 NBR B241	24107874	D
273,1	317,5	19,1	295,32	280,1	10	80 FKM K670	24088545	D
280	320	16	300	287	10	80 FKM K670	24330886	D
280	320	16	300	287	10	80 NBR B241	24030348	D
280	320	18	300	287	10	80 NBR B241	24084515	D
280	320	20	300	287	10	80 NBR B241	24084500	D
280	324	20	302	287	10	80 FKM K670	24343977	D
280	324	20	302	287	10	80 NBR B241	24019383	D
290	330	20	310	297	10	80 NBR B241	24111392	D
295	339	20	317	302	10	80 NBR B241	24030425	D
298,5	336,5	22	317,5	305,5	10	80 NBR B241	24183955	D
300	340	16	320	307	10	80 NBR B241	24019386	D
300	340	20	320	307	10	80 NBR B241	24019385	D
300	340	20	320	307	10	80 FKM K670	24172753	D
300	344	20	322	307	10	80 NBR B241	24019387	D
305	355	22,5	330	313	10	80 NBR B241	24019389	D
310	354	20	332	317	10	80 NBR B241	24019390	D
311	345	18	328	316	10	80 NBR B241	24019391	D
315	343	14	329	320	10	80 NBR B241	24019392	D
315	355	16	335	322	10	80 NBR B241	24019395	D
317,5	355,6	15,9	336,55	322,5	10	80 NBR B241	24019396	D
320	350	15	335	325	10	80 NBR B241	24056225	D
320	360	18	340	327	10	80 NBR B241	24019397	D
320	360	20	340	327	10	80 NBR B241	24111395	D
320	364	20	342	327	10	80 NBR B241	24019398	D
325	369	20	347	332	10	80 NBR B241	24019399	D
330	374	20	352	337	10	80 NBR B241	24019401	D
340	372	20	356	345	10	80 NBR B241	24224500	D
340	380	20	360	347	10	80 NBR B241	24084501	D
340	384	20	362	347	10	80 NBR B241	24019402	D
350	380	20	365	355	10	80 NBR B241	24093956	D
350	390	20	370	357	10	80 NBR B241	24109577	D
350	394	20	372	357	10	80 NBR B241	24019403	D
355	399	20	377	362	10	80 NBR B241	24107203	D
360	400	20	380	367	10	80 NBR B241	24119489	D
360	404	20	382	367	10	80 NBR B241	24019407	D
362	406	19,5	384	369	10	80 NBR B241	24019408	D
362	406	19,5	384	369	10	80 FKM K670	24230599	D
370	414	20	392	377	10	80 NBR B241	24019409	D
370	420	20	395	378	10	80 NBR B241	24019410	D
374,6	419,1	21,8	396,83	381,6	10	80 NBR B241	24019411	D
380	420	20	400	387	10	80 NBR B241	24197026	D
380	424	20	402	387	10	80 NBR B241	24019413	D
385	429	20	407	392	10	80 NBR B241	24083793	D
385	435	22	410	393	10	80 NBR B241	526464	D
385	435	22	410	393	10	80 NBR B241	24076585	D
390	434	20	412	397	10	80 NBR B241	24019416	D
395	439	20	417	402	10	80 NBR B241	24019417	D
400	440	20	420	407	10	80 NBR B241	24136765	D
400	444	20	422	407	10	80 NBR B241	24056607	D

B Available from stock D On request: Tool is available, delivery at short notice

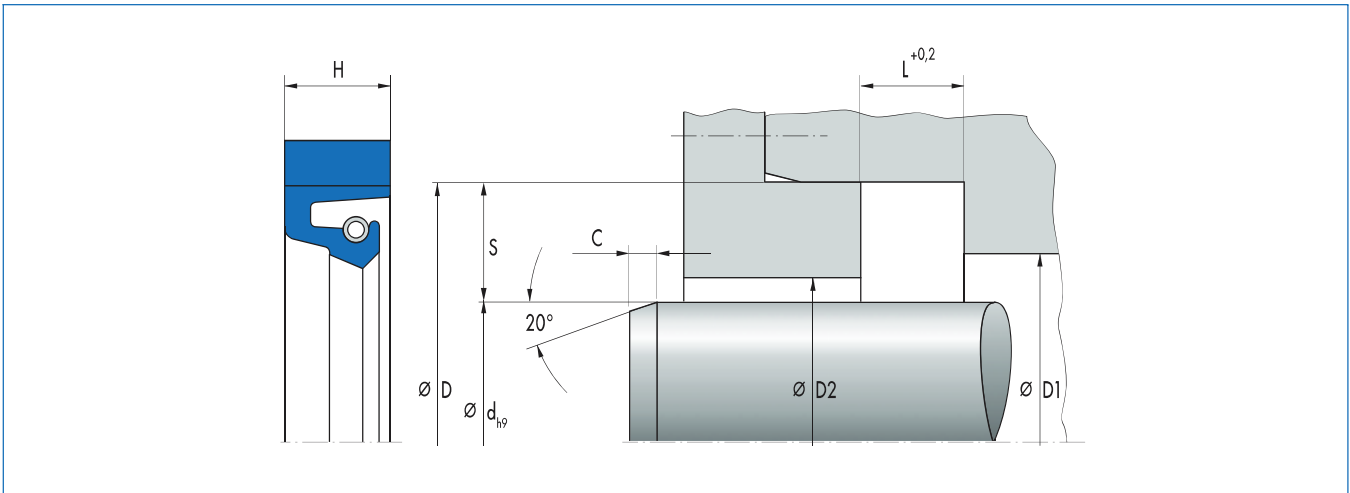


Width	D	L	D <sub>1</sub>	D <sub>2</sub>	C	Material	Article No.	
400	450	20	425	408	10	80 NBR B241	24019418	D
406,4	457,2	20,5	431,8	414,4	10	80 NBR B241	24069922	D
406,4	457,2	20,6	431,8	414,4	10	80 NBR B241	24019419	D
406,4	457,2	23	431,8	414,4	10	80 NBR B241	24019420	D
410	454	20	432	417	10	80 NBR B241	24078041	D
410	460	22	435	418	10	80 NBR B241	24029878	D
415	465	22	440	423	10	80 NBR B241	24019422	D
416	466	21,5	441	424	10	80 NBR B241	24019423	D
420	460	20	440	427	10	80 NBR B241	24074999	D
420	464	20	442	427	10	80 NBR B241	24027234	D
420	470	22	445	428	10	80 NBR B241	24019424	D
430	480	22	455	438	10	80 FKM K670	24335749	D
430	480	22	455	438	10	80 NBR B241	24019425	D
432	470	21,5	451	437	10	80 NBR B241	24096514	D
435	485	22	460	443	10	80 NBR B241	24019427	D
440	480	26	460	447	10	80 NBR B241	24019428	D
440	490	22	465	448	10	80 NBR B241	24019429	D
445	485	18	465	452	10	80 NBR B241	24019430	D
450	500	22	475	458	10	80 NBR B241	24019431	D
450	500	25	475	458	10	80 NBR B241	24084467	D
454	500	18	477	461	10	80 NBR B241	24030097	D
467	510	25	488,5	474	10	80 NBR B241	24019432	D
469,9	520,7	23	495,3	477,9	10	80 NBR B241	24019433	D
480	524	20	502	487	10	80 NBR B241	24027235	D
480	530	22	505	488	10	80 FKM K670	24335750	D
480	530	22	505	488	10	80 NBR B241	24084513	D
485	535	22	510	493	10	80 NBR B241	24019435	D
493	543	26	518	501	10	80 NBR B241	24056443	D
500	544	20	522	507	10	80 NBR B241	24073973	D
500	550	22	525	508	10	80 NBR B241	24019436	D
510	554	19,5	532	517	13	80 NBR B241	24019437	D
510	560	22	535	518	13	80 NBR B241	24237637	D
520	570	22	545	528	13	80 FKM K670	24335752	D
520	570	22	545	528	13	80 FKM K670	24375846	D
520	570	22	545	528	13	80 NBR B241	24019438	D
525	575	22	550	533	13	80 NBR B241	24023845	D

B Available from stock D On request: Tool is available, delivery at short notice

Width	D	L	D <sub>1</sub>	D <sub>2</sub>	C	Material	Article No.	
530	580	22	555	538	13	80 NBR B241	24019439	D
535	585	22	560	543	13	80 NBR B241	24056753	D
540	585	18	562,5	547	13	80 NBR B241	24030244	D
540	590	22	565	548	13	80 NBR B241	24224493	D
550	600	23,5	575	558	13	80 NBR B241	24019440	D
560	610	22	585	568	13	80 NBR B241	24019441	D
565	615	22	590	573	13	80 NBR B241	24083897	D
570	620	22	595	578	13	80 NBR B241	24019442	D
580	630	22	605	588	13	80 NBR B241	24019443	D
585	635	22	610	593	13	80 NBR B241	24074892	D
590	640	22	615	598	13	80 NBR B241	24098918	D
600	650	22	625	608	13	80 NBR B241	24083894	D
600	650	22	625	608	13	80 NBR B241	24377650	D
600	660	30	630	610	13	80 NBR B241	24209235	D
610	674	25	642	620	13	80 NBR B241	24019445	D
620	684	25	652	630	13	80 NBR B241	24019446	D
625	655	20	640	630	13	80 NBR B241	24069422	D
636	692	30,5	664	646	13	80 NBR B241	24019447	D
640	684	20	662	647	13	80 NBR B241	24019448	D
640	704	25	672	650	13	80 NBR B241	24079885	D
660	704	20	682	667	13	80 NBR B241	24079888	D
660,4	711,2	25,4	685,8	668,4	13	80 NBR B241	24019449	D
670	734	25	702	680	13	80 NBR B241	24019450	D
680	730	20	705	688	13	80 FKM K670	24335413	D
680	730	20	705	688	13	80 NBR B241	24056485	D
685	737	22	711	693	13	80 NBR B241	24288861	D
690	740	22	715	698	13	80 NBR B241	24109964	D
690	754	25	722	700	13	80 NBR B241	24060652	D
698,5	749,3	22,2	723,9	706,5	13	80 NBR B241	24019451	D
700	764	25	732	710	13	80 NBR B241	24086435	D
710	760	20	735	718	13	80 NBR B241	24080021	D
730	770	20	750	737	13	80 NBR B241	24214616	D
730	794	25	762	740	13	80 NBR B241	24019452	D
735	799	25	767	745	13	80 NBR B241	24019453	D
750	810	25	780	760	13	80 NBR B241	24058322	D
760	800	20	780	767	13	80 NBR B241	24114592	D
760	804	20	782	767	13	80 NBR B241	24027238	D
760	820	25	790	770	13	80 NBR B241	24257072	D
770	834	25	802	780	13	80 NBR B241	24019454	D
776	820	20	798	783	13	80 FKM K670	24335414	D
780	844	25	812	790	13	80 NBR B241	24030498	D
799	860	26	829,5	809	13	80 NBR B241	24023846	D
800	864	25	832	810	13	80 NBR B241	24019456	D
805	869	25	837	815	16	80 NBR B241	24019457	D
830	894	25	862	840	16	80 NBR B241	24130473	D
835	899	25	867	845	16	80 NBR B241	24019458	D
840	904	25	872	850	16	80 NBR B241	24078229	D
860	920	25	890	870	16	80 NBR B241	24130477	D
860	924	25	892	870	16	80 NBR B241	24063681	D
880	940	30	910	890	16	80 NBR B241	24209239	D

B Available from stock D On request: Tool is available, delivery at short notice



Width	D	L	D <sub>1</sub>	D <sub>2</sub>	C	Material	Article No.	
880	944	25	912	890	16	80 NBR B241	24019459	D
890	954	25	922	900	16	80 NBR B241	24023847	D
900	960	27	930	910	16	80 NBR B241	24177298	D
910	974	25	942	920	16	80 NBR B241	24019460	D
930	994	25	962	940	16	80 NBR B241	24027236	D
950	1014	25	982	960	16	80 NBR B241	24266520	D
955	1019	25	987	965	16	80 NBR B241	24300376	D
970	1034	25	1002	980	16	80 NBR B241	24019462	D
1000	1060	30	1030	1010	16	80 NBR B241	24209243	D
1000	1064	25	1032	1010	16	80 NBR B241	24109960	D
1020	1084	25	1052	1030	16	80 NBR B241	24019464	D
1060	1124	25	1092	1070	16	80 NBR B241	24121892	D
1110	1174	25	1142	1120	16	80 NBR B241	24060654	D
1130	1194	25	1162	1140	16	80 NBR B241	24065116	D
1175	1239	25	1207	1185	16	80 NBR B241	524751	D
1200	1264	25	1232	1210	16	80 NBR B241	24027475	D
1435	1499	25	1467	1445	20	80 NBR B241	24121165	D
1480	1544	25	1512	1490	20	80 NBR B241	24052248	D

B Available from stock D On request: Tool is available, delivery at short notice



