

INDUSTRIAL GASKETS PRODUCTS & SERVICES



**SEALING
SOLUTIONS**



SPIRAL WOUND GASKETS

Spiral Wound Gaskets are suitable for a wide range of operating conditions and can be adapted to suit almost all applications. The Gaskets can seal fluid pressures up to 250 bar and temperature range of -200°C to in excess of 450°C.

3 TYPES AVAILABLE

THICKNESS

All RS and RSI gaskets for standard flanges have a 4.5mm thick sealing section of windings and filler material, with 3.2mm thick solid metal guide rings.

STYLE RS



The standard gasket choice for RF and FF flanges, with the guide ring and sealing element made to ASME B16.20/DIn standards.

STYLE RSI



The standard RSI style with an extra inner ring fitted, providing an additional compression stop that protects the sealing element from heat and corrosion.

Inner rings are standard on all gaskets NPS24" class 900 #, NPS12" and above in 1500 #, and NPS4" and above in 2500 #. All spiral wound gaskets with PTFE filler material have inner rings fitted.

STYLE S



Style S gaskets are a sealing element only with a few additional layers of winding strip for use in tongue and groove and male/female flanges. These gaskets are also available in oval, obround and diamond shape for valve bonnet and handhole applications.

COLOR CODING AND ABBREVIATIONS FOR GASKET MATERIALS

MATERIAL	ABBREVIATION	COLOR CODE	MATERIAL	ABBREVIATION	COLOR CODE
METALLIC WINDING MATERIALS			METALLIC WINDING MATERIALS		
Carbon Steel	CRS	Silver	Inconel 600	INC 600	Gold
304 SS	304	Yellow	Inconel 625	INC 625	Gold
304 L SS	304L	No Color	Incoloy 800	IN 800	White
309 SS	309	No Color	Incoloy 825	IN 825	White
316 L SS	316L	Green			
347 SS	347	Blue	MATERIAL	ABBREVIATION	COLOR CODE
321 SS	321	Turquoise	NON-METALLIC FILLER MATERIALS		
Monel 400	MON	Orange	Poly tetra fluoro ethylene	PTFE	White stripe
Nickel 200	NI	Red	Mica-graphite	Manufacturer's designation	Pink stripe
Titanium	TI	Purple	Flexible graphite	F.G.	Gray stripe
Hastelloy B	HAST B	Brown	Ceramic	CER	Light green stripe
Hastelloy C	HAST C	Beige			

SPIRAL WOUND GASKETS

SEATING STRESS RANGE				To ensure leak-proof connection		
FILTER	SINGLE-SIDED ENCLOSED			DOUBLE-SIDED ENCLOSED		
	SEATING STRESS (20° C)			SEATING STRESS (20° C)		
	MIN [N/mm ²]	OPT. [N/mm ²]	MAX. [N/mm ²]	MIN [N/mm ²]	OPT. [N/mm ²]	MAX. [N/mm ²]
Graphite	50	95	180	50	122	300
PTFE	50	80	130	50	110	250

GUIDE RING: Guide Rings are normally carbon steel ASTM A-285-82 GR-C or stainless steel 316. Inner ring material usually matches the winding metal

FILLER MATERIAL SELECTION

MATERIAL	TEMPERATURE [°C]		MAX. OPERATING PRESSURE [BAR]	GAS TIGHTNESS	APPLICATION
	MIN	MAX			
Graphite	-200	500	250	Good	Aggressive media
PTFE	-200	240	100	Good	Aggressive media

MATERIAL CHART

MATERIAL CHART					*10mm steel ball indenter with 3000kg load			
MATERIAL	DIN	DIN	AISI	B.S	HARDNESS	TEMP. [°C]		VOLUMETRIC
(TRADE NAME)	SPECIFICATION	MATERIAL NR.	UNS	ASTM	HV 10*	MIN.	MAX	MASS [G/CM ³]
Soft Iron (Armco)	-	1.1003	-	-	90 - 100	-60	500	7.85
Steel (LCS)	RSt.37.2	1.0038	-	-	100 - 130	-40	500	7.85
Stainless Steel 304	X5CrNi 18	1.4301	304	304S15/16/31	130 - 180	-250	550	7.9
Stainless Steel 304L	X2CrNi 189	1.4306	304L	304S11	130 - 190	-250	550	7.9
Stainless Steel 309	X15CrNiMo 2012	1.4828	309	309S24	130 - 190	-100	1000	7.9
Stainless Steel 316	X5CrNiMo 1810	1.4401	316	316S31/33	130 - 180	-100	550	7.9
Stainless Steel 316L	X2CrNiMo 1810	1.4404	316L	316S11/13	130 - 190	-100	550	7.9
Stainless Steel 316Ti	X10CrNiMoTi 1810	1.4571	316Ti	320S31	130 - 190	-100	550	7.8
Stainless Steel 321	X10CrNiTi 189	1.4541	321	321S12/49/87	130 - 190	-250	550	7.9
Stainless Steel 347	X10CrNiNb 189	1.455	347	347S31	130 - 190	-250	550	7.9
Nickel 200	Ni 99.2	2.4066	N02200	3072-76 NA11	90 - 120	-250	600	8.9
Monel 400	NiCu 30 Fe	2.436	N04400	3072-76 NA13	110 - 150	-125	600	8.8
Inconel 600	NiCr 15 Fe	2.4816	N06600	3072-76 NA14	120 - 180	-100	950	8.4
Inconel 800	X10NiCrAlTi 3220	1.4876	N08800	3072-76 NA15	140 - 220	-100	850	8.4
Incoloy 825	NiCr 21 Mo	2.4858	N08825	3072-76 NA16	120 - 180	-100	450	8.14
Hastelloy B2	Nmo 28	2.4617	N10665	-	170 - 230	-200	450	9.2
Hastelloy C276	NiMo 16Cr15W	2.4819	N10276	-	170 - 230	-200	450	8.9
Titanium	Ti 99.8	3.7025	-	-	110 - 140	-250	500	4.5

STYLE RS & RSI FOR ASME/ANSI B16.5/BS1560 FLANGES

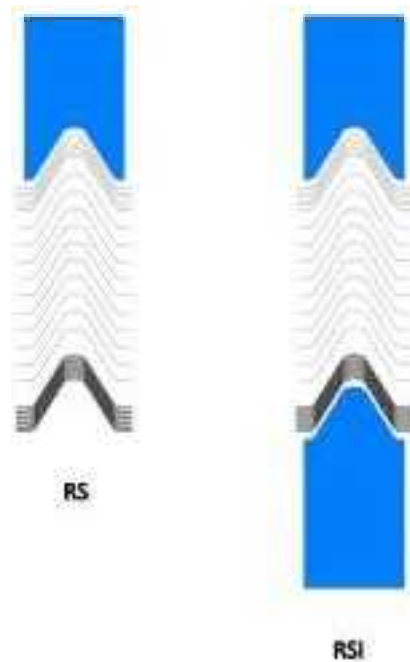


STYLE RS & RSI FOR ASME/ANSI B16.5/BS1560 FLANGES

SIZE	DN	INNER RING ID					ELEMENT ID					ELEMENT OD		OUTER RING OD							
		CLASS					CLASS					CLASS		CLASS							
		150	400	900	1500	2500	150	400	900	1500	2500	150	900	150	300	400	600	900	1500	2500	
		300	600		300	600	600	2500													
1/2"	15	14.2	14.2	-	14.2	14.2	19.1	19.1	-	19.1	19.1	31.8	31.8	47.8	54.1	-	54.1	-	63.5	69.9	
3/4"	20	20.6	20.6	-	20.6	20.6	25.4	25.4	-	25.4	25.4	39.6	39.6	57.2	66.8		66.8		69.9	76.2	
1"	25	26.9	26.9	-	26.9	26.9	31.8	31.8	-	31.8	31.8	47.8	47.8	66.8	73.2		73.2		79.5	85.9	
1-1/4"	32	38.1	38.1	-	33.3	33.3	47.8	47.8	-	39.6	39.6	60.5	60.5	76.2	82.6		82.6		88.9	104.9	
1-1/2"	40	44.5	44.5	-	41.4	41.4	54.1	54.1	-	47.8	47.8	69.9	69.9	85.9	95.3		95.3		98.6	117.6	
2"	50	55.6	55.6	-	52.3	52.3	69.9	69.9	-	58.7	58.7	85.9	85.9	104.9	111.3		111.3		143.0	146.1	
2-1/2"	65	66.5	66.5	-	63.5	63.5	82.6	82.6	-	69.9	69.9	98.6	98.6	124	130.3		130.3		165.1	168.4	
3"	80	81.0	81.0	78.7	78.7	78.7	101.6	101.6	95.3	92.2	92.2	120.7	120.7	136.7	149.4		149.4	168.4	174.8	196.9	
4"	100	106.4	102.6	102.6	97.8	97.8	127	120.7	120.7	117.6	117.6	149.4	149.4	174.8	181.1	177.8	193.8	206.5	209.5	235	
5"	125	131.8	128.3	128.3	124.5	124.5	155.7	147.6	147.6	143	143	177.8	177.8	196.9	215.9	212.9	241.3	247.7	254	279.4	
6"	150	157.2	154.9	154.9	147.3	147.3	174.8	174.8	171.5	171.5	209.6	209.6	222.3	222.3	251	247.7	266.7	289.1	282.7	317.5	
8"	200	215.9	205.7	196.9	196.9	196.9	233.4	225.6	222.3	215.9	215.9	263.7	257.3	279.4	308.1	304.8	320.8	358.9	352.6	387.4	
10"	250	268.2	255.3	246.1	246.1	246.1	287.3	274.6	276.4	266.7	270	317.5	311.2	339.9	362	358.9	400.1	435.1	435.1	476.3	
12"	300	317.5	307.3	292.1	292.1	292.1	339.9	327.2	323.9	323.9	317.5	374.7	368.3	409.7	422.4	419.1	457.2	498.6	520.7	549.4	
14"	350	349.3	342.9	320.8	320.8	-	371.6	362	355.6	362	-	406.4	400.1	450.9	485.9	482.6	492.3	520.7	577.9	-	
16"	400	400.1	389.9	374.7	368.3	-	422.4	412.8	412.8	406.6	-	463.6	457.2	514.4	539.8	536.7	565.2	574.8	641.4	-	
18"	450	449.3	438.2	425.5	425.5	-	474.4	469	463.6	463.6	-	527.1	520.7	549.4	596.9	593.9	612.9	638.3	704.9	-	
20"	500	500.1	489	482.6	476.3	-	525.5	520.7	520.7	514.4	-	577.9	571.5	606.6	654.1	647.7	682.8	698.5	755.7	-	
24"	600	603.3	590.6	590.6	577.9	-	628.7	628.7	528.7	616	-	685.8	679.5	717.6	774.7	758.4	790.7	838.2	901.7	-	

GASKET THICKNESS

Sealing Element : .175"/4.5mm
 Guide in Inner Ring : .125" (1/8) / 3.2mm



SPIRAL WOUND GASKETS

STYLE RS & RSI FOR ASME/ANSI B16.47 SERIES A FLANGES (MSS SP-44)



STYLE RS & RSI FOR ASME/ANSI B16.47 SERIES A FLANGES (MSS SP-44)

SIZE	DN	INNER RING ID					ELEMENT ID					ELEMENT OD					OUTER RING OD				
		CLASS					CLASS					CLASS					CLASS				
		#150	#300	#400	#600	#900	#150	#300	#400	#600	#900	#150	#300	#400	#600	#900	#150	#300	#400	#600	#900
22"	550	552.5	552.5	552.5	552.5	-	577.9	577.9	577.9	577.9	616	609.6	628.7	577.9	577.9	616	660.4	704.8	701.7	733.4	838.2
26"	650	654.1	654.1	660.4	647.7	660.4	673.1	685.8	685.8	685.8	685.8	704.9	736.6	685.8	685.8	685.8	774.7	835.2	831.9	866.9	882.7
28"	700	704.9	704.9	711.2	698.5	711.2	723.9	736.6	736.6	736.6	736.6	755.7	787.4	736.6	736.6	736.6	831.9	898.7	892.3	914.4	945.2
30"	750	755.7	755.7	755.7	755.7	774.7	774.7	793.8	793.8	793.8	793.8	806.5	844.5	793.8	793.8	793.8	882.7	952.5	945.2	971.5	1009.7
32"	800	806.5	806.5	812.8	812.8	812.8	825.5	850.9	850.9	850.9	850.9	860.6	901.7	850.9	850.9	850.9	939.8	1006.6	1003.3	1022.4	1073.2
34"	850	857.3	857.3	863.6	863.6	863.6	876.3	901.7	901.7	901.7	901.7	911.4	952.5	901.7	901.7	901.7	990.6	1057.4	1054.1	1073.2	1136.7
36"	900	908.1	908.1	917.7	917.7	920.8	927.1	955.8	955.8	955.8	955.8	968.5	1006.6	955.8	958.9	958.9	1047.8	1117.6	1117.6	1130.3	1200.2
38"	950	958.9	952.5	952.5	952.5	1009.7	977.9	977.9	971.6	990.6	1035.1	1019.3	1016	971.6	990.6	1035.1	1111.3	1054.1	1073.2	1104.9	1200.2
40"	1000	1009.7	1003.3	1000.3	1009.7	1060.5	1028.7	1022.4	1025.7	1047.8	1098.6	1070.1	1070.1	1025.7	1047.8	1098.6	1162.1	1114.6	1127.3	1155.7	1251
42"	1050	1060.5	1054.1	1051.1	1066.8	1111.3	1079.5	1073.2	1076.5	1104.9	1149.4	1124	1120.9	1076.5	1104.9	1149.4	1219.2	1165.4	1178.1	1219.2	1301.8
44"	1100	1111.3	1104.9	1104.9	111.3	1155.7	1130.3	1130.3	1130.3	1162.1	1206.5	1178.1	1181.1	1130.3	1162.1	1206.5	1276.4	1219.2	1231.9	1270	1368.6
46"	1150	1162.1	1152.7	1168.4	1162.1	1219.2	1181.1	1178.1	1193.8	1212.9	1270	1228.9	1228.9	1193.8	1212.9	1270	1327.2	1273.3	1289.1	1327.3	1435.1
48"	1200	1212.9	1209.8	1206.5	1219.2	1270	1231.9	1235.2	1244.6	1270	1320.8	1279.7	1285	1244.6	1270	1320.8	1384.3	1324.1	1346.2	1390.7	1485.9
50"	1250	1263.7	1244.6	1257.3	1270	-	1282.7	1295.4	1295.4	1320.8	-	1333.5	1345.2	1295.4	1320.8	-	1435.1	1378	1403.4	1447.8	-
52"	1300	1314.5	1320.8	1308.1	1320.8	-	1333.5	1346.2	1346.2	1371.6	-	1384.3	1397	1345.2	1371.6	-	1492.3	1428.8	1454.2	1498.6	-
54"	1350	1358.9	1352.6	1352.6	1378	-	1384.3	1403.4	1403.4	1428.8	-	1435.1	1454.2	1403.4	1428.8	-	1549.4	1492.3	1517.7	1555.8	-
56"	1400	1409.7	1403.4	1403.4	1428.8	-	1435.1	1454.2	1454.2	1479.6	-	1485.9	1505	1454.2	1479.6	-	1606.6	1543.1	1568.5	1612.9	-
58"	1450	1460.5	1447.8	1454.2	1473.2	-	1485.9	1511.3	1505	1536.7	-	1536.7	1562.1	1505	1536.7	-	1663.7	1593.9	1619.3	1663.7	-
60"	1500	1511.3	1524	1517.7	1530.4	-	1536.7	1562.1	1568.5	1593.9	-	1587.5	1612.9	1568.5	1593.9	-	1714.5	1644.7	1682.8	1733.6	-

STYLE RS & RSI FOR ASME/ANSI B16.47 SERIES B FLANGES (API-605)

SIZE	DN	INNER RING ID					ELEMENT ID					ELEMENT OD					OUTER RING OD				
		CLASS					CLASS					CLASS					CLASS				
		#150	#300	#400	#600	#900	#150	#300	#400	#600	#900	#150	#300	#400	#600	#900	#150	#300	#400	#600	#900
26"	650	654.1	654.1	654.1	644.7	666.8	673.1	673.1	666.8	663.7	692.2	698.5	711.2	698.5	714.5	749.3	725.4	771.7	746.3	765.3	838.2
28"	700	704.9	704.9	701.8	692.2	717.6	723.9	723.9	714.5	704.9	743	749.3	762	749.3	755.7	800.1	776.2	825.5	800.1	819.2	901.7
30"	750	755.7	755.7	752.6	752.6	781.1	774.7	774.7	765.3	778	806.5	800.1	812.8	806.5	828.8	857.3	827	886	857.3	879.6	958.9
32"	800	806.5	806.5	800.1	793.8	838.2	825.5	825.5	812.8	831.9	863.6	850.9	863.8	860.6	882.7	914.4	881.1	939.8	911.4	933.5	1016
34"	850	857.3	857.3	850.9	850.9	895.4	876.3	876.3	866.9	889	920.8	908.1	914.4	911.4	939.8	971.6	935	993.9	962.2	997	1073.2
36"	900	908.1	908.1	898.7	901.7	920.8	927.1	927.1	917.7	939.8	946.2	958.9	965.2	965.2	990.6	997	987.6	1047.8	1022.4	1047.8	1124
38"	950	958.9	971.6	952.5	952.5	1009.7	974.6	1009.7	971.6	990.6	1035.1	1009.7	1947.8	1022.4	1041.4	1085.9	1044.7	1098.6	1073.2	1104.9	1200.2
40"	1000	1009.7	1022.4	1000.3	1009.7	1060.5	1022.4	1060.5	1025.7	1047.8	1098.6	1063.8	1098.6	1075.5	1098.6	1149.4	1095.5	1149.4	1127.3	1155.7	1251
42"	1050	1060.6	1085.9	1051.1	1066.8	1111.3	1079.5	1111.3	1076.5	1104.9	1149.4	1114.6	1149.4	1127.3	1155.7	1200.2	1146.3	1200.2	1178.1	1219.2	1301.8
44"	1100	1111.3	1124	1104.9	1111.3	1155.7	1124	1162.1	1130.3	1162.1	1206.6	1165.4	1200.2	1181.1	1212.9	1257.3	1197.1	1251	1231.9	1270	1368.5
46"	1150	1162.1	1178.1	1168.4	1162.1	1219.2	1181.1	1216.2	1193.8	1212.9	1270	1224	1254.3	1244.6	1263.7	1320.8	1255.8	1317.8	1289.1	1327.2	1435.1
48"	1200	1212.9	1231.9	1206.5	1219.2	1270	1231.9	1263.7	1244.6	1270	1320.8	1270	1311.4	1295.4	1320.8	137106	1306.6	1368.6	1346.2	1390.7	1435.9
50"	1250	1263.7	1267	1257.3	1270	-	1282.7	1317.8	1295.4	1320.8	-	1325.6	1355.9	1346.2	1371.6	-	1357.4	1419.4	1403.4	1447.8	-
52"	1300	1314.5	1317.8	1308.1	1320.8	-	1333.5	1368.6	1346.2	1371.6	-	1376.4	1406.7	1397	1422.4	-	1408.2	1470.2	1454.2	1498.6	-
54"	1350	1365.3	1365.3	1352.6	1378	-	1384.3	1403.4	1403.4	1428.8	-	1422.4	1454.2	1454.2	1479.6	-	1463.8	1530.4	1517.7	1555.8	-
56"	1400	1422.4	1428.8	1403.4	1428.8	-	1444.8	1479.6	1454.2	1479.6	-	1477.8	1524	1505	1530.4	-	1514.6	1593.9	1568.5	1612.9	-
58"	1450	1478	1484.4	1454.2	1473.2	-	1500.4	1535.2	1505	1536.7	-	1528.8	1573.3	1555.8	1587.5	-	1579.6	1655.8	1619.3	1663.7	-
60"	1500	1535.2	1557.3	1517.7	1530.4	-	1557.3	1589	1563.5	1593.9	-	1586	1630.4	1519.3	1644.7	-	1630.4	1705.6	1682.8	1733.6	-

SPIRAL WOUND GASKETS

SPIRAL WOUND GASKETS FOR JIS B 2220 & JIS B 2238 - 2240 FLANGES

SIZE	PRESSURE RATING 10KGF/CM ²				PRESSURE RATING 16 TO 20 CKGF/CM ²				PRESSURE RATING 30 KGF/CM ²				PRESSURE RATING 40 KGF/CM ²				PRESSURE RATING 63 KGF/CM ²			
	INSIDE DIA	ELEMENT ID	ELEMENT OD	CR OD	INSIDE DIA	ELEMENT ID	ELEMENT OD	CR OD	INSIDE DIA	ELEMENT ID	ELEMENT OD	CR OD	INSIDE DIA	ELEMENT ID	ELEMENT OD	CR OD	INSIDE DIA	ELEMENT ID	ELEMENT OD	CR OD
10	18	24	37	52	18	24	37	52	18	24	37	59	15	21	34	59	15	21	34	64
15	22	28	41	57	22	28	41	57	22	28	41	64	18	24	37	64	18	24	37	69
20	28	34	47	62	28	34	47	62	28	34	47	69	23	29	42	69	23	29	42	75
25	34	40	53	74	34	40	53	74	34	40	53	79	29	35	48	79	29	35	48	80
32	43	51	67	84	43	51	67	84	43	51	67	89	38	44	60	89	38	44	60	90
40	49	57	73	89	49	57	73	89	49	57	73	100	43	51	67	100	43	51	67	107
50	61	69	89	104	61	69	89	104	61	69	89	114	55	66	79	114	55	63	79	125
65	77	87	107	124	77	87	107	124	68	78	98	140	68	78	98	140	68	78	98	152
80	89	98	118	134	89	99	119	140	80	90	110	150	80	90	110	150	80	90	110	162
90	102	110	130	144	102	114	139	150	92	102	127	162	92	102	127	162	92	102	127	179
100	115	123	143	159	115	127	152	165	104	116	141	172	104	116	141	182	104	116	141	194
125	140	148	173	190	140	152	177	202	128	140	165	207	128	140	165	224	128	140	165	235
150	166	174	199	220	166	182	214	237	153	165	197	249	153	165	197	265	153	165	197	275
175	-	201	226	245	-	-	-	-	202	218	250	294	202	218	250	315	202	218	250	328
200	217	227	252	270	217	223	265	282	251	271	311	360	251	271	311	378	251	271	311	394
225	-	252	277	290	-	-	-	-	300	320	360	418	300	320	360	434	300	320	360	446
250	268	278	310	332	268	288	328	354	336	356	396	463	336	356	396	479	336	356	396	488
300	319	329	361	377	319	339	379	404	383	403	453	524	383	403	453	531	383	403	453	545
350	356	366	406	422	366	376	416	450	-	-	-	-								
400	407	417	457	484	407	432	482	508	-	-	-	-								
450	458	468	518	539	458	483	533	573	-	-	-	-								
500	508	518	568	594	508	533	583	628	-	-	-	-								
550	559	569	619	650	559	584	634	684	-	-	-	-								
600	610	620	670	700	610	635	685	734	-	-	-	-								



SPIRAL WOUND GASKETS

SPIRAL WOUND GASKET DIMENSIONS TO SUIT DIN FLANGES

SIZE	INNER RING INSIDE DIA	ELEMENT INSIDE DIA	ELEMENT OD PN10 - PN40	ELEMENT OD PN64 - PN250	CENTREING OD							
					PN10	PN16	PN25	PN40	PN64	PN100	PN160	PN250
10	18	24	35	36	46	46	46	46	56	56	56	67
15	24	30	42	42	51	51	51	51	61	61	61	72
20	27	33	47	47	61	61	61	61	72	72	-	-
25	34	40	54	54	71	71	71	71	82	82	82	83
32	44	50	66	66	82	82	82	82	87	87	-	-
40	51	57	73	73	92	92	92	92	103	103	103	109
50	59	69	87	87	107	107	107	107	113	119	119	124
65	73	83	103	105	127	127	127	127	138	144	144	154
80	87	97	117	121	142	142	142	142	148	154	154	170
100	114	124	144	148	162	162	168	164	174	180	180	202
125	140	150	172	176	192	192	194	194	210	217	217	242
150	168	178	200	204	217	217	224	224	247	257	257	284
175	189	199	225	231	247	247	254	254	277	287	284	316
200	220	230	256	262	272	272	284	265	309	324	324	358
250	269	279	307	315	328	328	340	290	364	391	388	442
300	319	329	357	365	383	383	400	352	424	458	458	538
350	365	375	405	413	443	443	457	417	486	512	-	-
400	416	426	458	466	495	495	514	474	543	572	-	-
500	520	530	566	574	617	617	624	546	657	704	-	-
600	615	630	656	674	734	734	731	628	764	813	-	-
700	715	730	770	778	804	804	804	852	879	-	-	-
800	815	830	874	882	911	911	911	974	988	-	-	-
900	915	930	974	982	1011	1011	1011	1084	1108	-	-	-
1000	1015	1030	1078	1086	1128	1128	1128	1194	1220	-	-	-

