Features

- High Pressure Resistance
- Long-lasting performance
- Leak Prevention
- Easy Installation
- Reduced Downtime

RS PRO Bonded Seals

RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

Bonded seals, also known as Dowty washers, are metal sealing washers with a rubber insert. They provide a secure, leak proof seal for threaded connections. Bonded seals are ideal for static sealing where durability and fluid resistance are critical.

Key Benefits:

- High Pressure Resistance: Effective sealing under extreme pressure conditions.
- Durability: Long-lasting performance due to metal and rubber construction.
- Leak Prevention: Creates a tight, secure seal to prevent fluid and gas leakage.
- Easy Installation: Fits standard bolt sizes, simplifying maintenance and replacement.
- Reduced Downtime: Reliable sealing reduces the risk of equipment failure and maintenance needs.

Applications:

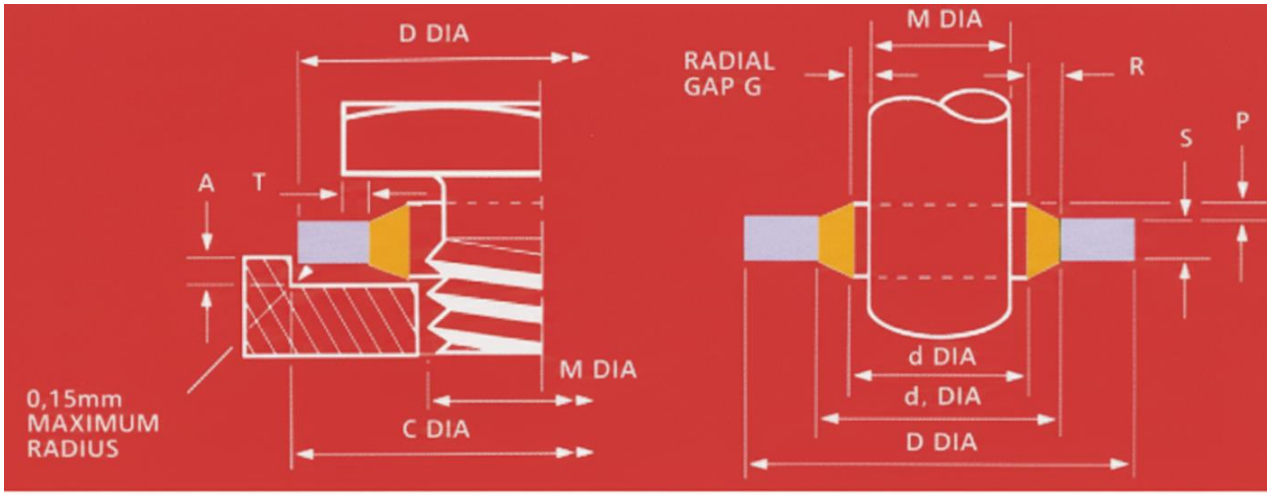
- Hydraulic systems and equipment
- Pneumatic tools and machinery
- Automotive engines, transmissions, and braking systems
- Oil and gas pipelines, refineries, and rigs
- Industrial machinery such as pumps, compressors, and gearboxes
- Marine and offshore equipment exposed to harsh environments

Bonded seals offer reliable sealing across high and low pressure and temperature conditions, while reducing bolt torque without compromising clamping force, thanks to a metal washer that prevents over-compression and distortion.

General Specifications

Type	Bonded Seal
Rubber Type	Nitrile Rubber (NBR)
Metal Type:	Mild Steel
Material:	NBR & Mild Steel
Hardness	80 ShA
Colour	Black
Operating Temperature Range	-25°C to +120°C
Minimum Operating Temperature	-25°C
Maximum Operating Temperature	+120°C
Inside Diameter	See below table for details
Outside Diameter	See below table for details
Thickness	See below table for details

BRITISH IMPERIAL STANDARD Bonded Seals Range



- Thread Type: Whitworth thread form (parallel or tapered).
- Common Standard: BS 21 or ISO 228.
- Application: Used with BSP fittings (male/female) for sealing high-pressure hydraulic systems.
- Seal ID/OD: Matches BSP thread sizes like 1/8", 1/4", 3/8", etc.
- Typical Use: Hydraulic, pneumatic, and gas fittings in the UK and Commonwealth countries.

Product Number	Size Reference		Thread Diameter (M)		Inside Diameter (mm) ±0.13 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap +0.07 (G)		Minimum Burst Pressure in Bar
	***	+	BSP	Inch					Inch	BSP	
727119	001	1		6BA	3.05	6.35	1.22		0.13		2150
727120	002	2		4BA	4.12	7.26	1.22		0.26		1570
727122	003	3		2BA	5.21	8.38	1.22		0.26		1360
727123	004	4		1/4	6.86	13.21	1.22	+0.15 - 0.00	0.26		2430
727124	005	5		1/4	6.99	13.34	1.22		0.32		1680
727125	006	6		5/16	8.31	13.34	1.22		0.19		1680
727126	007	7		5/16	8.64	14.22	1.22		0.35		1750
727127	020	A	1/8	3/8	10.37	15.88	2		0.42	0.32	1480
727128	008	8		0.4	11.26	18.36	2		0.55		1950
727129	009	9		7/16	11.69	19.05	2		0.29		1890
727130	021	B	1/4	1/2	13.74	20.57	2	±0.1	052	0.29	1540
727131	010	10		9/16	14.86	22.23	2		0.29		1560
727132	022	BB		0.6	15.83	22.23	2		0.30		1290
727133	011	11		5/8	16.51	25.4	2		0.32		1560

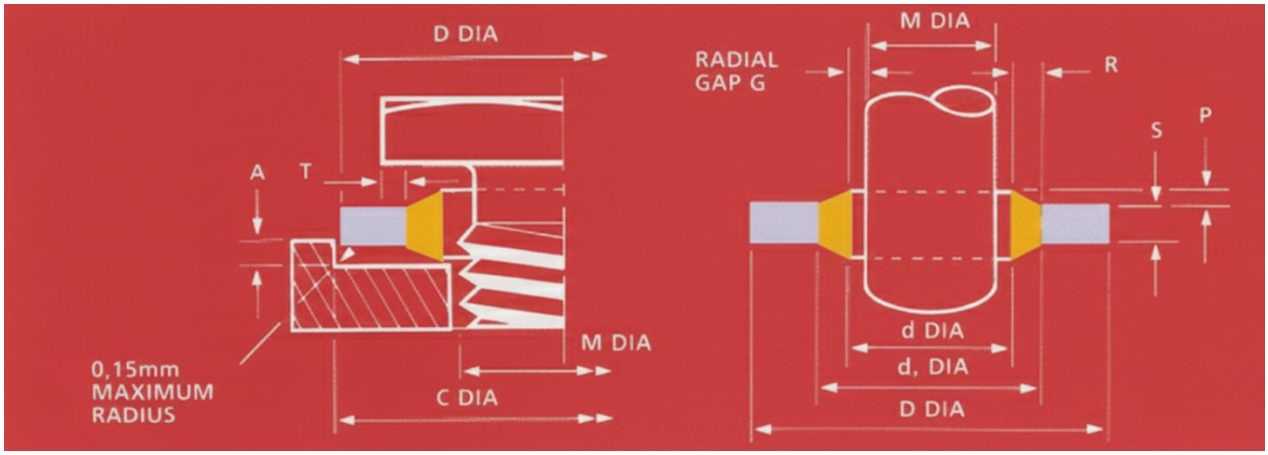
Bonded Seals

Product Number	Size Reference		Thread Diameter (M)		Inside Diameter (mm) ±0.13 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap +0.07 (G)		Minimum Burst Pressure in Bar
	***	+	BSP	Inch					Inch	BSP	
727134	023	C	3/8		17.28	23.8	2	±0.1		0.31	1230
727135	012	12		11/16	18.16	25.4	2.34		0.35		1310
727136	024	CC		3/4	19.69	26.92	2.34		0.32		1230
727138	025	D	1/2	13/16	21.54	28.58	2.47		0.45	0.29	1120
727139	026	E	5/8	7/8	23.49	31.75	2.47		0.63	0.29	1240
727140	013	13		15/16	24.26	33.27	2.34		0.23		1275
727141	027	F	3/4	1	27.05	34.93	2.47		0.82	0.30	1050
727142	028	FF		1 1/16	27.82	38.61	2.34		0.41		1210
727144	014	14		1 1/8	29.33	36.58	2.34		0.38		880
727145	029	G	7/8	1 3/16	30.81	38.1	2.47		0.33	0.30	860
727146	015	15		1 1/4	32.64	41.4	3.25		0.45		775
727147	030	H	1	1 5/16	33.89	42.8	2.34	+0.26 -0.00	0.28	0.40	780
727148	016	HH		1 3/8	35.94	44.45	3.25		0.28	0.40	780
727149	017	16		1 1/2	38.96	47.75	3.25		0.51		680
727150	032	17	1 1/4	1 5/8	42.93	52.38	2.5		0.43		660
727151	018	J		1 3/4	45.34	57.15	3.38		0.82	0.51	690
727152	033	18	1 1/2	1 7/8	48.44	58.6	2.5		0.45		870
727052	019	K		2	51.69	63.5	3.25		0.40	0.32	690
727053	034	19	1 3/4	2 1/8	54.89	69.85	3.25		0.45		780
727054	035	L		2 1/4	58.04	70.36	3.25		0.45	0.57	950
727055	036	LL	2		60.58	73.03	3.25		0.45		740
727056	037	M		2 1/2	64.39	77.72	3.25			0.48	720
727057	038	MM	2 1/4		66.68	79.5	3.25		0.45		750
727059	039	N	2 1/2		76.08	90.17	3.25			0.59	670
727060	079	P	3		89.08	101.47	3.25			0.45	680

*Note: *** size reference fourth, fifth, sixth digits. Previous mark numbers for PP45 (industrial) and AGS1186 are shown by symbol +*

Burst pressures were calculated using 540MN/m² (35 ton f/in) UTS steel.

GERMAN STANDARD Bonded Seals Range



- Thread Type: Usually UNC, UNF, or BSW.
- Application: Designed for imperial bolts and screws, often in older or legacy systems.
- Seal ID/OD: Matches inch-size fasteners.
- Typical Use: Machinery and equipment built to British imperial standards.

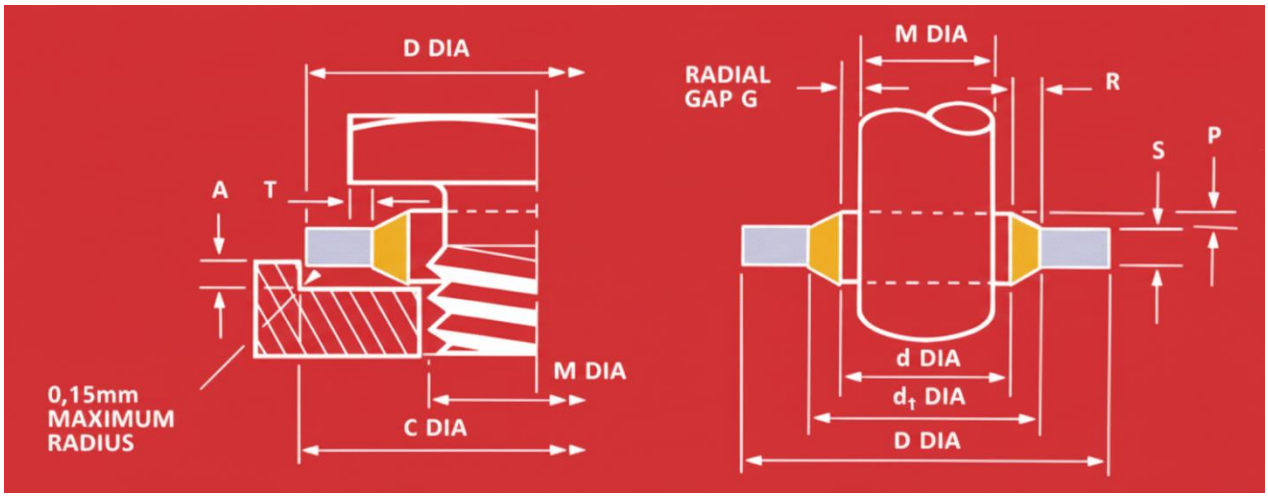
Burst pressures were calculated using 540MN/m² (35 ton f/in) UTS steel

Product Number	Size Reference	Thread Size	Inside Diameter (mm) ±0.10 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap ±0.05 (G)	Minimum Burst Pressure in Bar
727061	201	3.5	4.1	7.2	1	±0.1	0.30	1600
727062	202	4	4.5	7	1		0.25	1270
727063	203	5	5.7	9	1		0.35	1400
727065	204	5	5.7	10	1		0.35	1510
727066	205	5.5	6.2	9.2	1		0.35	1220
727067	206	6	6.7	10	1		0.35	1120
727068	207	6	6.7	11	2.5		0.35	1480
727069	208	6	6.7	11	1		0.35	1480
727071	209	6.5	7.1	12	1		0.30	1560
727072	210	6.7	7.3	10.2	1		0.30	850
727073	211	8	8.5	13.4	1		0.25	1780
727074	212	8	8.7	13	1		0.35	1330
727075	213	8	8.7	14	1		0.35	1510
727076	214	8	8.7	16	1		0.35	2150
727077	215	8.5	9.3	13.3	1		0.40	1200
727078	216	10	10.35	16	2		0.17	1470
727079	217	10	10.7	16	1.5		0.35	1300

Bonded Seals

Product Number	Size Reference	Thread Size	Inside Diameter (mm) ±0.10 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap ±0.05 (G)	Minimum Burst Pressure Bar
727080	218	10	10.7	18	1.5		0.35	1880
727081	219	11	11.4	16.3	1.5		0.20	1280
727082	220	11	11.8	18.5	1.5	±0.1	0.40	1540
727083	221	11	11.8	19.1	1.5		0.40	1760
727084	222	12	12.7	18	1.5		0.35	1150
727153	223	12	12.7	20	1.5		0.35	1680
727154	224	13	13.7	20	1.5		0.35	1340
727155	225	13	13.7	22	1.5		0.35	1810
727156	226	13.5	14.0	18.7	1.5		0.25	900
727157	227	14	14.7	22	1.5		0.35	1510
727158	228	15	16	22.7	1.5		0.50	1260
727160	229	16	16.7	24	1.5		0.35	1370
727161	230	17	17.4	24	1.5		0.20	1150
727162	231	17.5	18	24.7	1.5		0.25	1070
727163	232	18	18.7	26	1.5		0.35	1260
727164	233	20	20.7	28	1.5		0.35	1140
727166	234	21	21.5	28.7	2.5	±0.15	0.25	1080
727167	235	22	22.5	28	1.5		0.25	760
727168	236	22	22.7	30	2		0.35	1080
727169	237	22	22.7	30	3		0.35	1080
727170	238	24	24.7	32	3		0.35	1000
727172	240	27	27.2	36	3	±0.1	0.10	1130
727173	242	30	31	39	2		0.50	870
727174	243	33	33.7	42	2		0.35	840
727175	244	33	34.3	43	2		0.65	870
727176	245	36	36.7	46	2		0.35	890
727177	246	39	40	51	2.5		0.50	1030
727178	247	42	42.7	53	2.5		0.35	930
727179	248	48	48.7	59	2.5		0.35	790
727180	249	51	52	60	3		0.50	540
727181	251	60	60.7	73	3	±0.15	0.35	780
727182	252	68	68.6	79.5	3.5		0.30	510
727183	253	75	76.08	90.3	3.38		0.54	700
727085	254	88	89.09	101.48	3.25		0.54	510

FRENCH STANDARD Bonded Seals Range



- Thread Type: Usually UNC, UNF, or BSW.
- Application: Designed for imperial bolts and screws, often in older or legacy systems.
- Seal ID/OD: Matches inch-size fasteners.
- Typical Use: Machinery and equipment built to British imperial standards.

Product Number	Size Reference	Thread Size	Inside Diameter (mm) ±0.10 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap ±0.05 (G)	Minimum Burst Pressure in Bar
727087	301	3	3.6	7.5	1	±0.1	0.3	1980
727088	302	4	4.6	9	1		0.3	2000
727089	303	5	5.6	10	1		0.3	1780
727090	304	6	6.6	11	1		0.3	1680
727091	305	6	6.85	13.27	1.3		0.42	1970
727093	306	6	7	11.4	1		0.5	1540
727094	307	8	8.6	13	1		0.3	1330
727095	310	10	10.7	17	1.5		0.35	1730
727096	312	11	11.8	18.1	1.5		0.4	1610
727097	313	12	12.7	19	1.5		0.4	1530
727098	315	13	13.8	20.1	1.5		0.4	1430
727099	316	14	14.7	21	1.5		0.35	1370
727100	317	16	16.7	23	1.5		0.35	1240

Bonded Seals

Product Number	Size Reference	Thread Size	Inside Diameter (mm) ±0.10 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)		Radial Gap ±0.05 (G)	Minimum Burst Pressure in Bar
727101	319	16.5	17.2	23.9	2.1		0.35	1020
727102	320	18	18.7	27	2		0.35	1450
727103	321	20	20.7	29	2		0.35	1340
727104	323	21	21.7	30	2		0.35	1290
727105	324	22	22.7	31	2		0.35	1240
727106	325	23	23.7	32	2	±0.1	0.35	965
727107	326	24	24.7	33	2		0.35	1160
727108	327	26	27	35.3	2		0.5	860
727110	328	27	27.7	36	2		0.35	1060
727111	329	28	28.6	36	2		0.3	720
727112	330	28.5	29.2	37.5	2		0.35	810
727113	331	30	30.7	39	2		0.35	970
727174	332	33	33.7	42	2		0.35	900
727114	333	36	37	48	2.5	±0.15	0.5	1010
727177	334	39	40	51	2.5		0.5	950
727116	335	42	43	54	2.5		.5	890
727117	336	45	46	57	2.5		0.5	860
727118	337	48	49	60	2.5		0.5	790

Burst pressures were calculated using 540MN/m² (35 ton f/in²) UTS steel