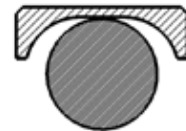




ECLIPSE CHANNEL SEAL



EDS PISTON SERIES

**FULL SERVICE SEAL & BEARING ENGINEERING,
MANUFACTURING AND DISTRIBUTION.**

Address

2540 S Main St., Erie, CO 80516
p: 303-460-1540 / f: 303-635-3005

Contact

sales@eclipseseal.com
www.eclipseseal.com



TABLE OF CONTENTS

Full service seal & bearing engineering, manufacturing and distribution.

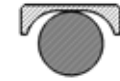
03 | Channel Seal introduction

04 | Ordering overview

05 | Standard materials

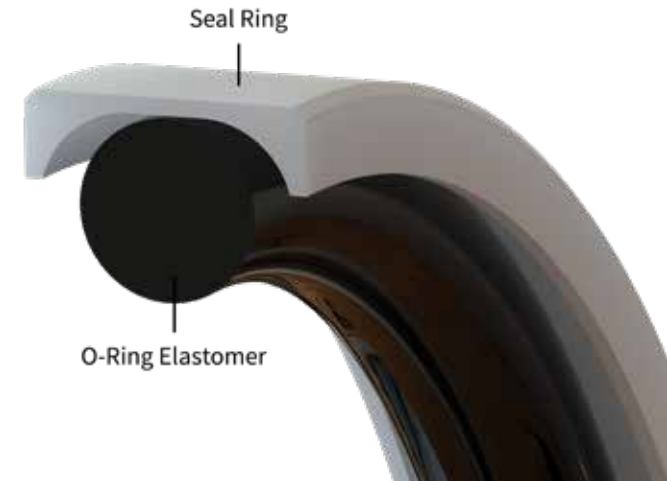
06 | Standard part numbers





ECLIPSE EDS - PISTON CHANNEL SEAL

EDS Piston Channel Seals are linear, bi-directional, elastomer energized seals typically used in light duty reciprocating assemblies but available for a wide variety of industries and applications. EDS profiles are designed to work in standard O-Ring grooves without modification. Advantages include extrusion resistance, low friction, and compact groove design. The EDS profile will retrofit non-Eclipse seals designed for similar hardware.

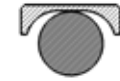


TYPICAL RANGE OF APPLICATION

Pressure	Temperature*	Velocity	Media
5,000 psi [350 bar] MAX	-30°F to 250°F [-34°C to 121°C]	16 fps [5 m/s]	Hydraulic Oil, Mineral Oil, Gases

*Limited by O-Ring compound

Values and ratings in this catalog are based on industry standard applications operating under ideal conditions. The customer should assume responsibility for validation testing of performance and suitability of Eclipse Engineering products. Eclipse Engineering accepts no liability for the accuracy and applicability of provided information.

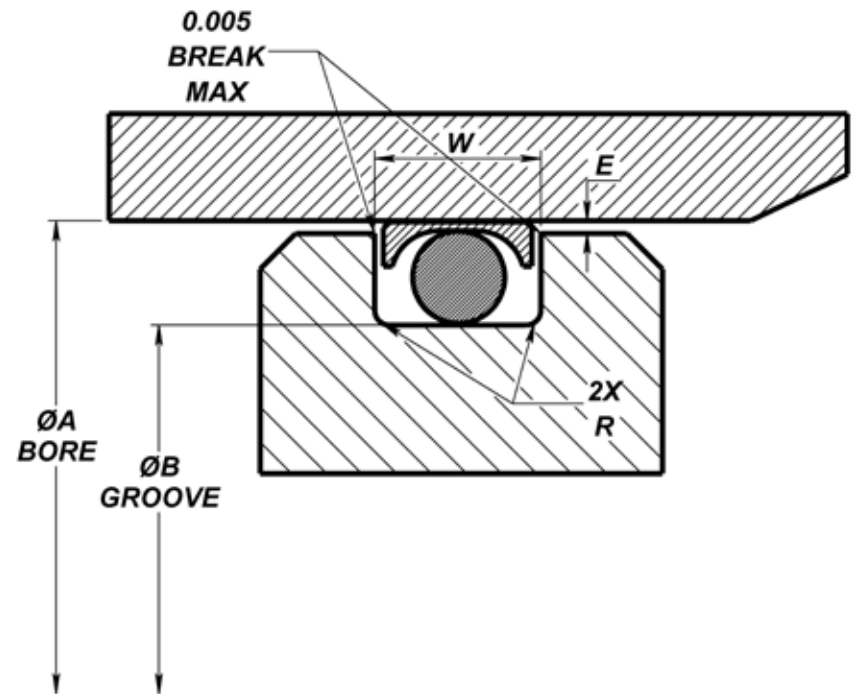


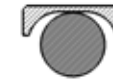
ORDERING EXAMPLE:

EDS-P-210-ET000-N

- EDS** = Seal Ring Series
- P** = Piston
- 210** = Dash Number
- ET000** = Material Code
- N** = O-Ring Material Code

DASH SIZES	ØA BORE H9	ØB GROOVE h9	GROOVE WIDTH +0.005/-0.000	R Radius (MAX)	E CLEARANCE (MAX)		
					1500 PSI	3000 PSI	5000 PSI
006 - 028	0.250 - 1.500	ØA - 0.110	0.093	0.005	0.004	0.003	0.002
104 - 149	0.312 - 3.000	ØA - 0.176	0.140	0.005	0.006	0.004	0.003
201 - 248	0.437 - 5.000	ØA - 0.242	0.187	0.010	0.008	0.006	0.003
309 - 350	0.812 - 5.000	ØA - 0.370	0.281	0.020	0.010	0.008	0.004
425 - 460	5.000 - 16.000	ØA - 0.474	0.375	0.020	0.012	0.010	0.006





EDS STANDARD SEAL MATERIALS

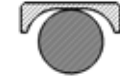
ECLIPSE MATERIAL CODE	DESCRIPTION	COLOR	APPLICATIONS
ET000	Virgin PTFE	White	Standard light duty, high sealability
ET002	MoS ₂ filled PTFE	Black	Light duty, low friction
ET014	Polyimide filled PTFE	Orange/Brown	Medium duty, improved wear resistance

See [Eclipse Material Guide](#) for complete list of available materials.

O-RING MATERIALS

ECLIPSE MATERIAL CODE	DESCRIPTION	HARDNESS SHORE A	TEMPERATURE RANGE
0 OR BLANK	Seal provided without O-Ring	-	-
N	Nitrile (NBR)	70	-30°F to 250°F [-34°C to 121°C]
F	Fluorocarbon (FKM)	75	-15°F to 400°F [-26°C to 205°C]
E	Ethylene Propylene (EPDM)	70	-70°F to 250°F [-57°C to 121°C]

Full range of elastomer compounds available for specialty applications.



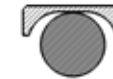
STANDARD PART NUMBERS

000 SERIES:

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
006	0.250	0.140	0.093/0.098	2-006
007	0.281	0.171		2-007
008	0.312	0.202		2-008
009	0.344	0.234		2-009
010	0.375	0.265		2-010
011	0.437	0.327		2-011
012	0.500	0.390		2-012
013	0.562	0.452		2-013
014	0.625	0.515		2-014
015	0.687	0.577		2-015
016	0.750	0.640		2-016
017	0.812	0.702		2-017

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
018	0.875	0.765	0.093/0.098	2-018
019	0.937	0.827		2-019
020	1.000	0.890		2-020
021	1.062	0.952		2-021
022	1.125	1.015		2-022
023	1.187	1.077		2-023
024	1.250	1.140		2-024
025	1.312	1.202		2-025
026	1.375	1.265		2-026
027	1.437	1.327		2-027
028	1.500	1.390		2-028

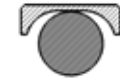
Consult Eclipse Engineering for all custom or unlisted sizes.

**100 SERIES:**

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
104	0.312	0.136	0.140/0.145	2-104
105	0.343	0.167		2-105
106	0.375	0.199		2-106
107	0.406	0.230		2-107
108	0.437	0.261		2-108
109	0.500	0.324		2-109
110	0.562	0.386		2-110
111	0.625	0.449		2-111
112	0.687	0.511		2-112
113	0.750	0.574		2-113
114	0.812	0.636		2-114
115	0.875	0.699		2-115
116	0.937	0.761		2-116
117	1.000	0.824		2-117
118	1.062	0.886		2-118

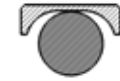
DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
119	1.125	0.949	0.140/0.145	2-119
120	1.187	1.011		2-120
121	1.250	1.074		2-121
122	1.312	1.136		2-122
123	1.375	1.199		2-123
124	1.437	1.261		2-124
125	1.500	1.324		2-125
126	1.562	1.386		2-126
127	1.625	1.449		2-127
128	1.687	1.511		2-128
129	1.750	1.574		2-129
130	1.812	1.636		2-130
131	1.875	1.699		2-131
132	1.937	1.761		2-132
133	2.000	1.824		2-133

Consult Eclipse Engineering for all custom or unlisted sizes.

**100 SERIES CONTINUED:**

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
134	2.062	1.886	0.140/0.145	2-134
135	2.125	1.949		2-135
136	2.187	2.011		2-136
137	2.250	2.074		2-137
138	2.312	2.136		2-138
139	2.375	2.199		2-139
140	2.437	2.261		2-140
141	2.500	2.324		2-141
142	2.562	2.386		2-142
143	2.625	2.449		2-143
144	2.687	2.511		2-144
145	2.750	2.574		2-145
146	2.812	2.636		2-146
147	2.875	2.699		2-147
148	2.937	2.761		2-148
149	3.000	2.824		2-149

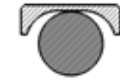
Consult Eclipse Engineering for all custom or unlisted sizes.

**200 SERIES:**

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
201	0.437	0.195	0.187/0.192	2-201
202	0.500	0.258		2-202
203	0.562	0.320		2-203
204	0.625	0.383		2-204
205	0.687	0.445		2-205
206	0.750	0.508		2-206
207	0.812	0.570		2-207
208	0.875	0.633		2-208
209	0.937	0.695		2-209
210	1.000	0.758		2-210
211	1.062	0.820		2-211
212	1.125	0.883		2-212
213	1.187	0.945		2-213
214	1.250	1.008		2-214
215	1.312	1.070		2-215

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
216	1.375	1.133	0.187/0.192	2-216
217	1.437	1.195		2-217
218	1.500	1.258		2-218
219	1.562	1.320		2-219
220	1.625	1.383		2-220
221	1.687	1.445		2-221
222	1.750	1.508		2-222
223	1.875	1.633		2-223
224	2.000	1.758		2-224
225	2.125	1.883		2-225
226	2.250	2.008		2-226
227	2.375	2.133		2-227
228	2.500	2.258		2-228
229	2.625	2.383		2-229
230	2.750	2.508		2-230

Consult Eclipse Engineering for all custom or unlisted sizes.

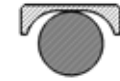


200 SERIES CONTINUED:

DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
231	2.875	2.633	0.187/0.192	2-231
232	3.000	2.758		2-232
233	3.125	2.883		2-233
234	3.250	3.008		2-234
235	3.375	3.133		2-235
236	3.500	3.258		2-236
237	3.625	3.383		2-237
238	3.750	3.508		2-238
239	3.875	3.633		2-239
240	4.000	3.758		2-240
241	4.125	3.883		2-241
242	4.250	4.008		2-242
243	4.375	4.133		2-243
244	4.500	4.258		2-244
245	4.625	4.383		2-245

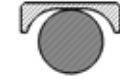
DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
246	4.750	4.508	0.187/0.192	2-246
247	4.875	4.633		2-247
248	5.000	4.758		2-248

Consult Eclipse Engineering for all custom or unlisted sizes.

**300 SERIES:**

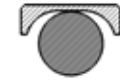
DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE	DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
309	0.812	0.442	0.281/0.286	2-309	324	1.750	1.380	0.281/0.286	2-324
310	0.875	0.505		2-310	325	1.875	1.505		2-325
311	0.937	0.567		2-311	326	2.000	1.630		2-326
312	1.000	0.630		2-312	327	2.125	1.755		2-327
313	1.062	0.692		2-313	328	2.250	1.880		2-328
314	1.125	0.755		2-314	329	2.375	2.005		2-329
315	1.187	0.817		2-315	330	2.500	2.130		2-330
316	1.250	0.880		2-316	331	2.625	2.255		2-331
317	1.312	0.942		2-317	332	2.750	2.380		2-332
318	1.375	1.005		2-318	333	2.875	2.505		2-333
319	1.437	1.067		2-319	334	3.000	2.630		2-334
320	1.500	1.130		2-320	335	3.125	2.755		2-335
321	1.562	1.192		2-321	336	3.250	2.880		2-336
322	1.625	1.255		2-322	337	3.375	3.005		2-337
323	1.687	1.317		2-323	338	3.500	3.130		2-338

Consult Eclipse Engineering for all custom or unlisted sizes.

**300 SERIES CONTINUED:**

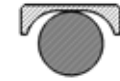
DASH NUMBER	BORE Ø +0.002/-0.000	GROOVE Ø +0.000/-0.002	GROOVE WIDTH	O-RING DASH SIZE
339	3.625	3.255	0.281/0.286	2-339
340	3.750	3.380		2-340
341	3.875	3.505		2-341
342	4.000	3.630		2-342
343	4.125	3.755		2-343
344	4.250	3.880		2-344
345	4.375	4.005		2-345
346	4.500	4.130		2-346
347	4.625	4.255		2-347
348	4.750	4.380		2-348
349	4.875	4.505		2-349
350	5.000	4.630		2-350

Consult Eclipse Engineering for all custom or unlisted sizes.

**400 SERIES:**

DASH NUMBER	BORE Ø +0.003/-0.000	GROOVE Ø +0.000/-0.003	GROOVE WIDTH	O-RING DASH SIZE	DASH NUMBER	BORE Ø +0.003/-0.000	GROOVE Ø +0.000/-0.003	GROOVE WIDTH	O-RING DASH SIZE
425	5.000	4.526	0.375/0.380	2-425	440	7.250	6.776	0.375/0.380	2-440
426	5.125	4.651		2-426	441	7.500	7.026		2-441
427	5.250	4.776		2-427	442	7.750	7.276		2-442
428	5.375	4.901		2-428	443	8.000	7.526		2-443
429	5.500	5.026		2-429	444	8.250	7.776		2-444
430	5.625	5.151		2-430	445	8.500	8.026		2-445
431	5.750	5.276		2-431	446	9.000	8.526		2-446
432	5.875	5.401		2-432	447	9.500	9.026		2-447
433	6.000	5.526		2-433	448	10.000	9.526		2-448
434	6.125	5.651		2-434	449	10.500	10.026		2-449
435	6.250	5.776		2-435	450	11.000	10.526		2-450
436	6.375	5.901		2-436	451	11.500	11.026		2-451
437	6.500	6.026		2-437	452	12.000	11.526		2-452
438	6.750	6.276		2-438	453	12.500	12.026		2-453
439	7.000	6.526		2-439	454	13.000	12.526		2-454


Consult Eclipse Engineering for all custom or unlisted sizes.



400 SERIES CONTINUED:

DASH NUMBER	BORE Ø +0.003/-0.000	GROOVE Ø +0.000/-0.003	GROOVE WIDTH	O-RING DASH SIZE
455	13.500	13.026	0.375/0.380	2-455
456	14.000	13.526		2-456
457	14.500	14.026		2-457
458	15.000	14.526		2-458
459	15.500	15.026		2-459
460	16.000	15.526		2-460

Consult Eclipse Engineering for all custom or unlisted sizes.




We started Eclipse with the premise that if we could solve enough of our customers problems they would continue to come back to us for solutions regardless of the type of products we offered.

Eclipse has evolved to produce standard product offerings for a wide range of industries including Hydraulics, Pneumatics, Energy Production, Aerospace as well as Pharmaceutical and Food Handling. Instituting ISO9001/AS9100 quality system in 2015 allowed Eclipse to become a top tier supplier.

Today, Eclipse can support our smaller customers that require only a few seals a year to those needing in the 100's of thousands. We continue to retain a quality product and are able to deliver consistently on time. Our customers continue to bring us challenging projects that allow our team to do what we do best, problem solving.



 **eclipse** | engineering inc.



Address

2540 S Main St., Erie, CO 80516
p: 303-460-1540 / f: 303-635-3005

Contact

sales@eclipseseal.com
www.eclipseseal.com

Eclipse Engineering

Full service seal & bearing engineering,
manufacturing and distribution.