

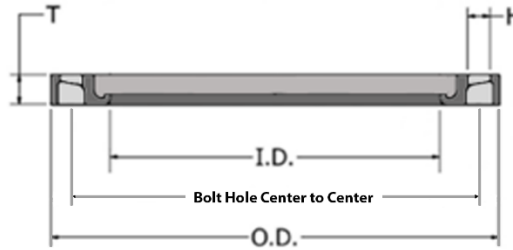
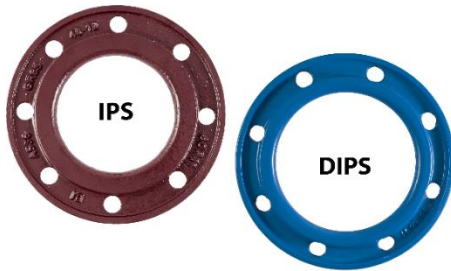
Integrity Fusion Products offers a line of **Convuluted Ductile Iron Backup Rings** manufactured from **ASTM A536 grade 65-45-12** material and are available in a variety of nominal **IPS** and **DIPS** HDPE pipe diameters and SDR ratings. Our **Convuluted Ductile Iron Backup Rings** are designed and manufactured to comply to the drilling and mating requirements in **ANSI/ASME B16.5** and **AWWA C207** for use in applications *24" and smaller*; and with **ANSI/ASME B16.47** and **AWWA C207** for use in applications *26" and larger*. Our **Fusion Bonded Epoxy Coating** offers superior long-term corrosion resistance characteristics over the industry standard Red Oxide primer, or painted epoxy coatings which tend to chip and rust shortly after installation, and as a visual convenience to our customers, our Epoxy Coated Backup Rings are **color coded** as follows: Red indicates an IPS size, and Blue indicates a DIPS size. All Integrity Fusion Ductile Iron Backup Rings, 12" and smaller, have been FM tested and approved. SDR 11 Backup Rings meet all FM 200 requirements, and SDR 7 – 9 Backup rings all meet FM 335 requirements. **Also Available in Red Oxide Primer.**

IPS

SDR 11 (Epoxy Coated Ductile Iron Backup Ring)

200 PSI Class 150# Bolt Pattern

Nominal Size	OD (in.)	ID (in.)	Thickness (in.)	# Bolt Holes	Hole Dia. (ins)	Bolt Hole Center to Center	Weight [lbs.]	Item Code	FM Class
2" IPS	6.00	2.63	0.51	4	0.75	4.79	1.80	100200	FM 200
3" IPS	7.45	3.78	0.51	4	0.75	6.00	2.80	100202	FM 200
4" IPS	9.01	4.77	0.55	8	0.83	7.54	3.80	100204	FM 200
6" IPS	11.00	6.89	0.63	8	0.88	9.52	5.60	100206	FM 200
8" IPS	13.39	8.90	0.83	8	0.86	11.71	9.80	100208	FM 200
10" IPS	16.00	10.95	0.98	12	1.00	14.25	13.30	100210	FM 200
12" IPS	19.00	13.15	1.25	12	1.00	17.00	22.30	100212	FM 200
14" IPS	21.00	14.69	1.40	12	1.18	18.75	31.00	100214	-----
16" IPS	23.60	16.89	1.63	16	1.18	21.25	42.00	100216	-----
18" IPS	25.02	18.46	1.70	16	1.30	22.75	45.00	100218	-----
20" IPS	27.50	20.20	1.81	20	1.25	25.00	58.00	100220	-----
24" IPS	32.05	24.57	2.10	20	1.42	29.50	86.00	100222	-----
28" IPS	36.50	28.25	2.50	28	1.38	34.00	113.0	100224	-----
30" IPS	38.75	30.60	2.60	28	1.38	36.00	141.0	100226	-----
32" IPS	41.75	32.60	2.75	28	1.63	38.50	161.0	100227	-----
36" IPS	46.00	36.60	3.15	32	1.63	42.75	217.0	100228	-----



IPS

SDR 7 (Epoxy Coated Ductile Iron Backup Rings)

355 PSI Class 150 # Bolt Pattern

Nominal Size	OD (in.)	ID (in.)	Thickness (in.)	# Bolt Holes	Hole Dia. (ins)	Bolt Hole Center to Center	Weight [lbs.]	Item Code	FM Class
2" IPS	6.00	2.63	0.75	4	0.75	4.79	2.50	100201	FM 335
3" IPS	7.45	3.78	0.85	4	0.75	6.00	4.00	100203	FM 335
4" IPS	9.01	4.77	0.92	8	0.83	7.54	5.70	100205	FM 335
6" IPS	11.00	6.89	1.00	8	0.88	9.52	8.30	100207	FM 335
8" IPS	13.39	8.90	1.12	8	0.86	11.71	11.40	100209	FM 335
10" IPS	16.00	10.95	1.22	12	1.00	14.25	16.20	100211	FM 335
12" IPS	19.00	13.15	1.48	12	1.00	17.00	26.50	100213	FM 335
14" IPS	21.00	14.70	1.60	12	1.18	18.75	37.00	100215	-----
16" IPS	23.50	16.40	1.82	16	1.18	21.25	50.00	100217	-----
18" IPS	25.01	18.54	1.80	16	1.30	22.75	51.00	100219	-----
20" IPS	27.50	20.50	2.00	20	1.25	25.00	37.00	100235	-----
24" IPS	32.00	24.60	2.20	20	1.42	29.50	96.00	100223	-----

For use in SDR 9 applications @ 255 PSI

For use in SDR 7 applications @ 355 PSI

DIPS

SDR 11 (Epoxy Coated Ductile Iron Backup Ring)

200 PSI Class 150# Bolt Pattern

Nominal Size	OD (in.)	ID (in.)	Thickness (in.)	# Bolt Holes	Hole Dia. (ins)	Bolt Hole Center to Center	Weight [lbs.]	Item Code	FM Class
4" DIPS	9.01	5.00	0.55	8	0.83	7.54	5.10	100260	FM 200
6" DIPS	11.00	7.10	0.63	8	0.88	9.52	7.10	100261	FM 200
8" DIPS	13.39	9.20	0.83	8	0.86	11.71	10.60	100262	FM 200
10" DIPS	16.00	11.30	0.98	12	1.00	14.25	15.70	100263	FM 200
12" DIPS	19.00	13.45	1.25	12	1.00	17.00	24.00	100264	FM 200

DIPS

SDR 7 (Epoxy Coated Ductile Iron Backup Ring)

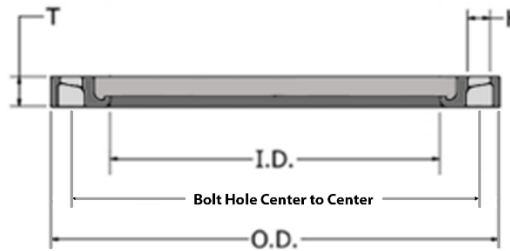
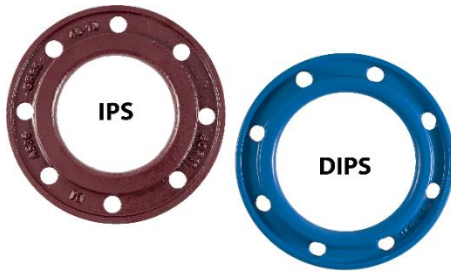
355 PSI Class 150# Bolt Pattern

Nominal Size	OD (in.)	ID (in.)	Thickness (in.)	# Bolt Holes	Hole Dia. (ins)	Bolt Hole Center to Center	Weight [lbs.]	Item Code	FM Class
4" DIPS	9.01	5.00	0.92	8	0.75	7.54	6.20	100229	FM 335
6" DIPS	11.00	7.10	1.00	8	0.88	9.52	8.40	100230	FM 335
8" DIPS	13.39	9.20	1.12	8	0.88	11.71	12.30	100231	FM 335
10" DIPS	16.00	11.30	1.22	12	1.00	14.25	17.70	100232	FM 335
12" DIPS	19.00	13.45	1.48	12	1.00	17.00	29.30	100233	FM 335

For use in SDR 9 applications @ 255 PSI

For use in SDR 7 applications @ 355 PSI

Red Oxide Primer Back-Up Rings



IPS

SDR 11 (Red Oxide Ductile Iron Backup Ring)

200 PSI Class 150# Bolt Pattern

Nominal Size	OD (in.)	ID (in.)	Thickness (in.)	# Bolt Holes	Hole Dia. (ins)	Bolt Hole Center to Center	Weight [lbs.]	Item Code	FM Class
2" IPS	6.00	2.63	0.51	4	0.75	4.79	1.80	100277	FM 200
3" IPS	7.45	3.78	0.51	4	0.75	6.00	2.80	100279	FM 200
4" IPS	9.01	4.77	0.55	8	0.83	7.54	3.80	100281	FM 200
6" IPS	11.00	6.89	0.63	8	0.88	9.52	5.60	100283	FM 200
8" IPS	13.39	8.90	0.83	8	0.86	11.71	9.80	100285	FM 200
10" IPS	16.00	10.95	0.98	12	1.00	14.25	13.30	100287	FM 200
12" IPS	19.00	13.15	1.25	12	1.00	17.00	22.30	100289	FM 200
14" IPS	21.00	14.69	1.40	12	1.18	18.75	31.00	100291	FM 200
16" IPS	23.60	16.89	1.63	16	1.18	21.25	42.00	100293	FM 200
18" IPS	25.02	18.46	1.70	16	1.30	22.75	45.00	100295	FM 200
20" IPS	27.50	20.20	1.81	20	1.25	25.00	58.00	100236	FM 200
24" IPS	32.05	24.57	2.10	20	1.42	29.50	86.00	100297	FM 200

IPS

SDR 7 (Red Oxide Ductile Iron Backup Ring)

335 PSI Class 150# Bolt Pattern

Nominal Size	OD (in.)	ID (in.)	Thickness (in.)	# Bolt Holes	Hole Dia. (ins)	Bolt Hole Center to Center	Weight [lbs.]	Item Code	FM Class
2" IPS	6.00	2.63	0.51	4	0.75	4.79	2.50	100278	FM 200
3" IPS	7.45	3.78	0.51	4	0.75	6.00	4.00	100280	FM 200
4" IPS	9.01	4.77	0.55	8	0.83	7.54	5.70	100282	FM 200
6" IPS	11.00	6.89	0.63	8	0.88	9.52	8.30	100284	FM 200
8" IPS	13.39	8.90	0.83	8	0.86	11.71	11.40	100286	FM 200
10" IPS	16.00	10.95	0.98	12	1.00	14.25	16.20	100288	FM 200
12" IPS	19.00	13.15	1.25	12	1.00	17.00	26.50	100290	FM 200
14" IPS	21.00	14.69	1.40	12	1.18	18.75	37.00	100292	-----
16" IPS	23.60	16.89	1.63	16	1.18	21.25	50.00	100294	-----
18" IPS	25.02	18.46	1.70	16	1.30	22.75	51.00	100296	-----
20" IPS	27.50	20.50	2.00	20	1.25	25.00	37.00	100237	-----
24" IPS	32.05	24.57	2.10	20	1.42	29.50	96.00	100298	-----

For use in SDR 9 applications @ 255 PSI

For use in SDR 7 applications @ 355 PSI