

Paragon Screens in Imaging Engine

Compared with Classic screens from FlexRIP

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General information

Imaging Engine is compatible with the screens used in FlexRIP and therefore it supports all screens that were available in FlexRIP.

Imaging Engine is not compatible with the screen formats used in Nexus RIP, but screens from the Paragon screen family are converted and available in Imaging Engine.

The following Paragon screens are supported in Imaging Engine:

Paragon Elliptical35, Diamond35, Euclidean and Round.

Imaging Engine uses exactly the same screen threshold bitmaps for Paragon Elliptical35, Diamond35 and Euclidean. However for Paragon Round it has newer and improved screens tiles.

This document explains the main differences between Paragon screens, known from Nexus RIP, and the equivalent Classic screens, known from FlexRIP. The document also highlights the new Paragon Round screen version that is used in Imaging Engine.

(For more information on screens when migrating from Nexus, also see the Knowledge Base article KB93521675: <https://wiki.esko.com/display/KBA/KB93521675%3A+Imaging+Engine+-+What+are+the+changes+in+the+screening+technologies+when+migrating+from+Nexus+RIP+to+Imaging+Engine>)

Paragon Euclidean and Classic Round

Paragon Euclidean

Dot Shape

Dot Name: **Paragon Euclidean**

Mnemonic: **ParEuc**

Dots have a round shape in the highlights and holes become round shaped in the shadows.
The transition from round dots to round holes is at around 50% where the dots become square shaped.

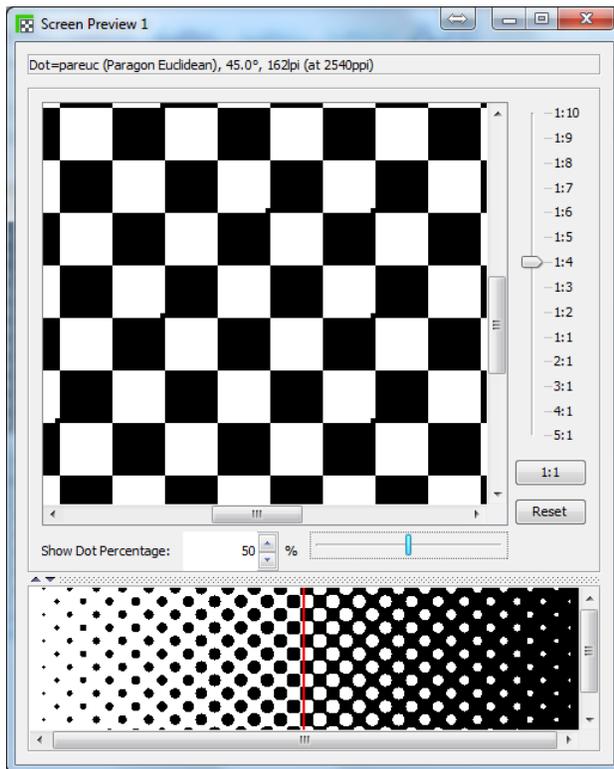


Figure 1: Preview of a Paragon Euclidean screen

Supported screen angles

The screen is modulo 90: the orientation can range from 0° to 90°.

The following screen angles are supported: 0°, 15°, 45°, and 75°.

Supported screen rulings

Paragon screens have different sets of screen tiles for different resolutions.

Commonly used resolutions support a large set of screen rulings, rarely used resolutions or extreme low/high resolutions support a smaller set.

The ruling sets are designed so that for each resolution a similar screen ruling is available.

For example you will find a nominal ruling of around 200LPI for 2000PPI, 2400PPI, 2540PPI and 4000PPI.

Note: When a user requests an output resolution for which there is no set of tiles available, the set of tiles with the closest resolution will be selected.

Ruling list for Paragon Euclidian

Resolution	Rulings (LPI) - Offset screen angles (0°, 15°, 45°, 75°) - Low range														
600 PPI	10	15	20	35	38	45	53	65	77						
900 PPI		15	20	35	40	45	53	63	75	85		98	106		
1000 PPI				35	39	44	54	64	75	83	89	101		109	
1016 PPI				34	40	45	55	65	76	85		102		111	
1200 PPI				35	40	45	56	65	76	85		100	107	113	
1219 PPI				36	40	46	54	66	75	86		102	109	115	
1270 PPI				37	41	45	56	64	75	81		100		113	
1800 PPI					40	46	55	64	74	84		98	106	111	
1828 PPI					41	45	54	65	76	86		100		108	
2000 PPI						46	59	65	75	83	88	100		109	
2400 PPI							55	63	74	85		99		113	
2438 PPI							56	64	75	86		101	107		
2540 PPI								64	75	85		99		112	
3000 PPI									76		88	101		112	
3600 PPI														111	
3657 PPI															
4000 PPI												102			

Resolution	Rulings (LPI) - Offset screen angles (0°, 15°, 45°, 75°) - High range														
600 PPI															
900 PPI		116													
1000 PPI	109	118	129												
1016 PPI	111	120	131												
1200 PPI	113	121	131		154										
1219 PPI	115	123	133		157										
1270 PPI	113	120	128	138	150	163									
1800 PPI	111	115	134		150	170	181	195	212						
1828 PPI	108	116	129		153	172		198		216					
2000 PPI	109	118	127		149		178	201		217	257				
2400 PPI	113	120	131		153	169	179	200	214	226	242	283	309		
2438 PPI		122	133		150	172		203		217	246	265	313		
2540 PPI	112	119	127	138	150	179		200		226	256	276	299	327	
3000 PPI	112	117	132		150	177	191		211	224	250	267	302	325	354
3600 PPI	111	121	135		149	169	180	196	212	222	254	284	300	321	363
3657 PPI			137		151	172		199		216	258	273	305	326	345
4000 PPI			135		150	176		201		218	255	282	298	315	356

Classic Round Fogra

Dot Shape

Dot Name: **Round Fogra**

Mnemonic: **R**

The Classic Round Fogra screen is equivalent to the Paragon Euclidean screen.

As with Paragon Euclidean, dots have a round shape in the highlights and holes become round shaped in the shadows. The main difference with the Paragon screen is that in the transition from round dots to round holes the dot shape is more eccentric.

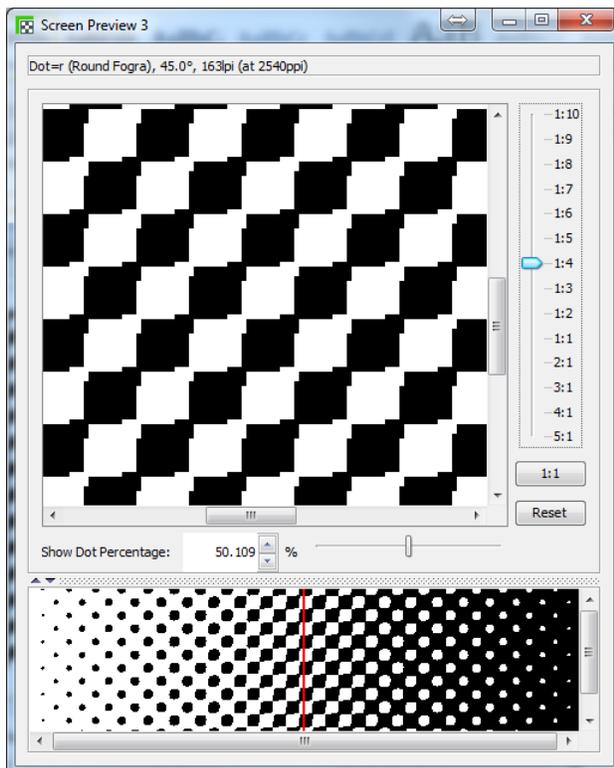


Figure 2: Preview of a Classic Round Fogra screen

Supported screen angles

The screen is modulo 90: orientations can range from 0° to 90°.

The following offset screen angles are supported: 0°, 15°, 30°, 45°, 60° and 75°.

The following flexo screen angles are supported: 7.5°, 22.5°, 37.5°, 52.5°, 67.5° and 82.5°

Note: For obtaining an optimal rosette pattern in overprints, the chain direction for screen angles 37.5°, 45° and 52.5° is rotated by 90°. So the screen angles used are respectively 127.5°, 135° and 142.5°.

Supported screen rulings

Classic screens have one set of screen tiles referenced at 4000PPI, and the same set of screen tiles is re-used for all other resolutions. So the nominal ruling supported for one specific resolution is obtained by scaling it to that resolution.

By consequence, the number of supported screen rulings for each resolution is the same.

E.g. 200LPI is supported for 4000PPI. Using the same screen tile at 2540PPI will result in a screen ruling of $200 * 2540 / 4000 = 126\text{LPI}$.

Ruling list for Classic Round Fogra, Elliptical, Circular, Double Circular and Square

Resolution	Rulings (LPI) - Offset screen angles (0°, 15°, 30°, 45°, 60°, 75°) - Low range																	
600 PPI	5	6	7	8	9	11	12	14	16	18	19	21	23	26	28	30	32	33
900 PPI	8	10	11	11	13	16	18	21	24	27	29	32	34	40	42	45	47	49
1000 PPI	9	11	12	13	15	18	21	24	26	30	32	35	38	44	47	50	53	54
1016 PPI	9	11	12	13	15	18	21	24	27	30	33	36	39	45	48	51	54	55
1200 PPI	11	13	14	15	18	21	25	28	32	36	39	42	46	53	56	60	63	65
1219 PPI	11	13	14	16	18	21	25	29	32	36	39	43	46	54	57	61	64	66
1270 PPI	11	14	15	16	19	22	26	30	33	38	41	45	48	56	60	63	67	69
1800 PPI	16	19	21	23	27	32	37	42	47	54	58	63	68	79	85	90	95	98
1828 PPI	16	20	21	23	27	32	37	43	48	54	59	64	69	80	86	91	96	99
2000 PPI	18	22	24	26	30	35	41	47	53	60	65	71	76	88	94	100	106	109
2400 PPI	21	26	28	31	35	42	49	56	63	71	77	85	91	106	113	119	127	130
2438 PPI	21	26	29	31	36	43	50	57	64	73	79	86	93	107	115	121	129	132
2540 PPI	22	27	30	32	37	44	52	60	67	76	82	90	97	112	119	126	134	138
3000 PPI	26	32	35	38	44	53	62	71	79	89	97	106	114	132	141	149	158	163
3600 PPI	32	39	42	46	53	63	74	85	95	107	116	127	137	158	169	179	190	195
3657 PPI	32	39	43	47	54	64	75	86	96	109	118	129	139	161	172	182	193	198
4000 PPI	35	43	47	51	59	70	82	94	105	119	129	141	152	176	188	199	211	217

Resolution	Rulings (LPI) - Offset screen angles (0°, 15°, 30°, 45°, 60°, 75°) - High range																	
600 PPI	33	35	37	39	40	42	45	47	50	53	56	60	65	71	77	85	94	106
900 PPI	49	53	55	58	61	63	67	71	75	79	85	91	98	106	115	127	141	159
1000 PPI	54	59	61	64	67	71	74	79	83	88	94	101	109	118	128	141	157	177
1016 PPI	55	60	62	65	68	72	75	80	84	90	96	102	110	119	130	144	159	179
1200 PPI	65	71	74	77	81	85	89	94	100	106	113	121	130	141	154	170	188	212
1219 PPI	66	72	75	78	82	86	91	96	101	108	115	123	132	143	156	172	191	215
1270 PPI	69	75	78	82	85	90	94	100	105	112	119	128	138	149	163	179	199	224
1800 PPI	98	106	110	116	121	127	134	141	149	159	169	181	195	212	231	254	282	318
1828 PPI	99	107	112	117	123	129	136	143	152	161	172	184	198	215	234	258	287	323
2000 PPI	109	118	123	129	135	141	149	157	166	177	188	202	217	235	257	283	314	353
2400 PPI	130	141	147	154	161	169	178	188	199	212	226	242	260	282	308	339	376	424
2438 PPI	132	143	149	157	164	172	181	191	202	215	229	246	265	286	313	344	382	430
2540 PPI	138	149	156	163	171	179	189	199	211	224	239	256	276	298	326	359	398	448
3000 PPI	163	176	184	193	202	212	223	236	249	265	282	302	326	353	385	424	470	530
3600 PPI	195	212	221	231	242	254	267	283	299	318	338	363	391	423	462	509	564	635
3657 PPI	198	215	224	235	246	258	272	287	304	323	344	368	397	430	469	517	573	645
4000 PPI	217	235	245	257	269	282	297	314	332	353	376	403	434	470	513	565	627	706

Resolution	Rulings (LPI) - Flexo screen angles (7.5°, 22.5°, 37.5°, 52.5°, 67.5°, 82.5°)																				
600 PPI	5	6	6	7	9	11	13	15	17	19	20	22	24	26	30	33	37	39	45	48	52
900 PPI	7	8	10	11	14	17	20	22	25	28	31	34	36	39	45	50	56	59	67	72	78
1000 PPI	8	9	11	12	16	19	22	25	28	31	34	37	40	44	50	56	62	65	75	81	87
1016 PPI	8	9	11	12	16	19	22	25	28	31	35	38	41	44	50	57	63	66	76	82	88
1200 PPI	9	11	13	15	19	22	26	30	34	37	41	45	48	52	59	67	74	78	89	97	104
1219 PPI	9	11	13	15	19	23	27	30	34	38	41	45	49	53	60	68	76	79	91	98	106
1270 PPI	10	12	14	16	20	23	28	31	36	39	43	47	51	55	63	71	79	83	95	102	110
1800 PPI	14	17	19	22	28	33	39	45	50	56	61	67	72	78	89	100	112	117	134	145	156
1828 PPI	14	17	20	22	28	34	40	45	51	57	62	68	74	80	90	102	113	119	136	147	159
2000 PPI	16	19	22	25	31	37	44	50	56	62	68	75	81	87	99	112	124	130	149	161	174
2400 PPI	19	22	26	29	37	44	52	59	67	74	82	89	97	104	119	134	149	156	179	193	208
2438 PPI	19	23	26	30	38	45	53	60	68	76	83	91	98	106	121	136	151	158	182	196	211
2540 PPI	20	23	27	31	39	47	55	63	71	79	86	95	102	110	126	142	157	165	189	204	220
3000 PPI	23	28	32	37	47	56	65	74	84	93	102	112	121	131	149	167	186	195	224	242	260
3600 PPI	28	33	39	44	56	67	78	89	101	112	122	134	145	157	178	201	223	234	268	290	312
3657 PPI	28	34	39	45	57	68	80	91	102	113	124	136	147	159	181	204	227	238	272	294	317
4000 PPI	31	37	43	49	62	74	87	99	112	124	136	149	161	174	198	223	248	260	298	322	347

Main differences between Classic Round Fogra and Paragon Euclidean

- In the midtones the dot shape of the Round Fogra is more eccentric compared to the Paragon version.
- The Round Fogra screen also supports flexo screen angles (7.5°, 22.5°, 37.5°, 52.5°, 67.5°, 82.5°).
- Both screens use a different set of supported rulings.
- Paragon screens have built-in yellow moiré prevention:
The actual screen ruling for 0° screen tiles is about 7% higher than the nominal value.

Paragon Elliptical35 and Classic Elliptical

Paragon Elliptical35

Dot Shape

Dot Name: **Paragon Elliptical35**

Mnemonic: **ParEll35**

The screen has elliptical shaped dots in the highlights and elliptical shaped holes in the shadows. The dots start to touch each other in the chain direction near 35%. Near 57% the dots connect in the other direction.

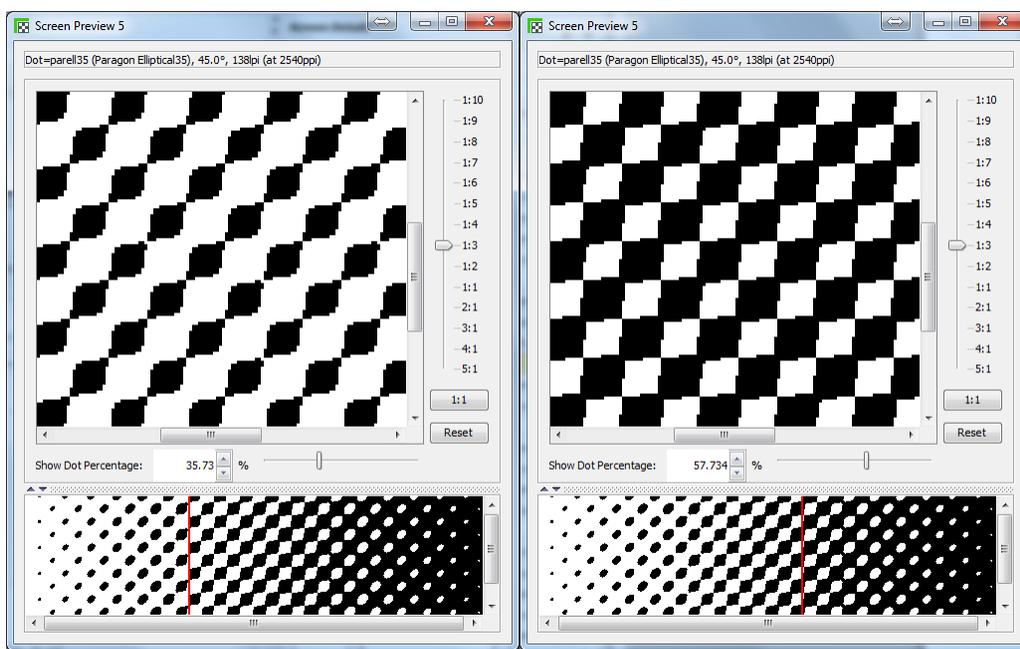


Figure 3: Preview of a Paragon Elliptical35 screen at 35% and at 57%

Supported screen angles

The screen is modulo 180: orientations can range from 0° to 180°.

The screen supports the following screen angles: 0°, 15°, 45°, 75°, 90°, 105°, 135° and 165°.

Supported screen rulings

The screen sets available for Paragon Elliptical35 are the same as Paragon Euclidean.

(see [Supported screen rulings for Paragon Euclidean](#))

Classic Elliptical

Dot Shape

Dot Name: **Elliptical**

Mnemonic: **E**

The Classic Elliptical screen is equivalent to the Paragon Elliptical35 screen: both use elliptical shaped dots.

The main difference between the two screens is in the highlights and shadows where the Classic Elliptical screen uses more rounded dots (less eccentric).

The dots start to touch each other in the chain direction near 35%, similar to the Paragon screen; in the other direction the touch point is a bit further away and around 65%.

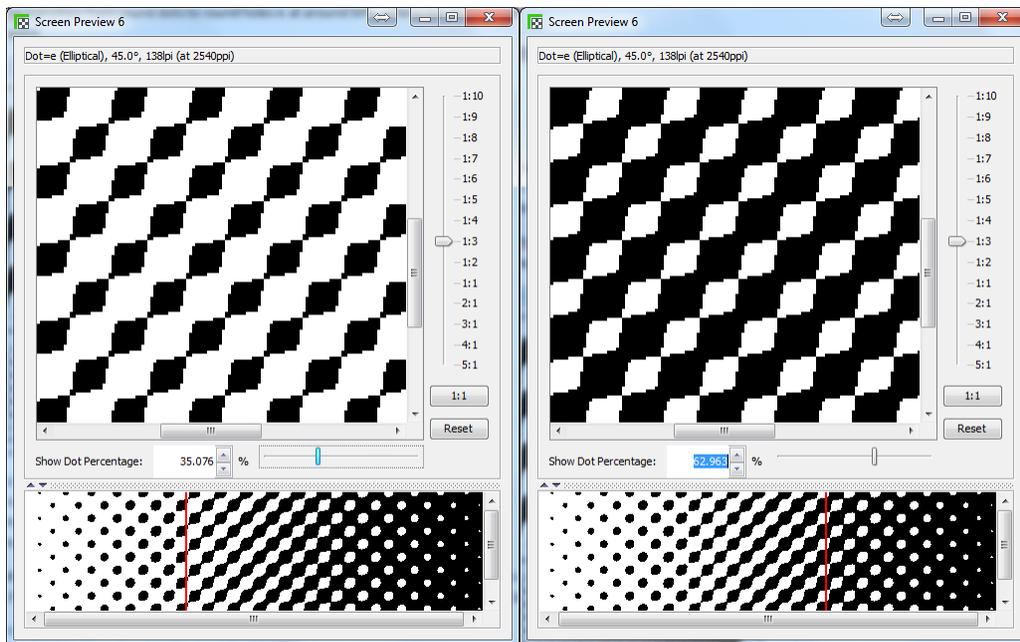


Figure 4: Preview of a Classic Elliptical screen at 35% and at 65%

Supported screen angles

Although the dot shape is asymmetrical in the vertical direction, the screen is kept modulo 90: orientations can range from 0° to 90°.

The following offset screen angles are supported: 0°, 15°, 30°, 45°, 60° and 75°.

The following flexo screen angles are supported: 7.5°, 22.5°, 37.5°, 52.5°, 67.5° and 82.5°

Note: For obtaining an optimal rosette pattern in overprints, the chain direction for screen angles 37.5°, 45° and 52.5° is rotated by 90°. So the screen angles used are respectively 127.5°, 135° and 142.5°.

Supported screen rulings

The screen sets available for Classic Elliptical are the same as for Classic Round Fogra.

(see [Supported screen rulings Classic Round Fogra screen](#))

Main differences between Classic Elliptical and Paragon Elliptical35

- The Paragon Elliptical35 dot shapes in the highlights are more eccentric compared to the Classic Elliptical dot.
- Paragon Elliptical35 are modulo 180 screens while Classic Elliptical are modulo 90 screens.
- The Classic Elliptical screen also supports flexo screen angles (7.5°, 22.5°, 37.5°, 52.5°, 67.5°, 82.5°)
- Both screens use a different set of supported rulings.
- Paragon screens have built-in yellow moiré prevention:
The actual screen ruling for 0° screen tiles is about 7% higher than the nominal value.

Paragon Diamond35 and Classic Eccentric

Paragon Diamond35

Dot Shape

Dot Name: **Paragon Diamond35**

Mnemonic: **ParEII35**

The screen has diamond shaped dots in highlights, and diamond shaped holes in the shadows. The dots start to touch each other in the chain direction near 35%. Near 57% the dots close in the other direction.

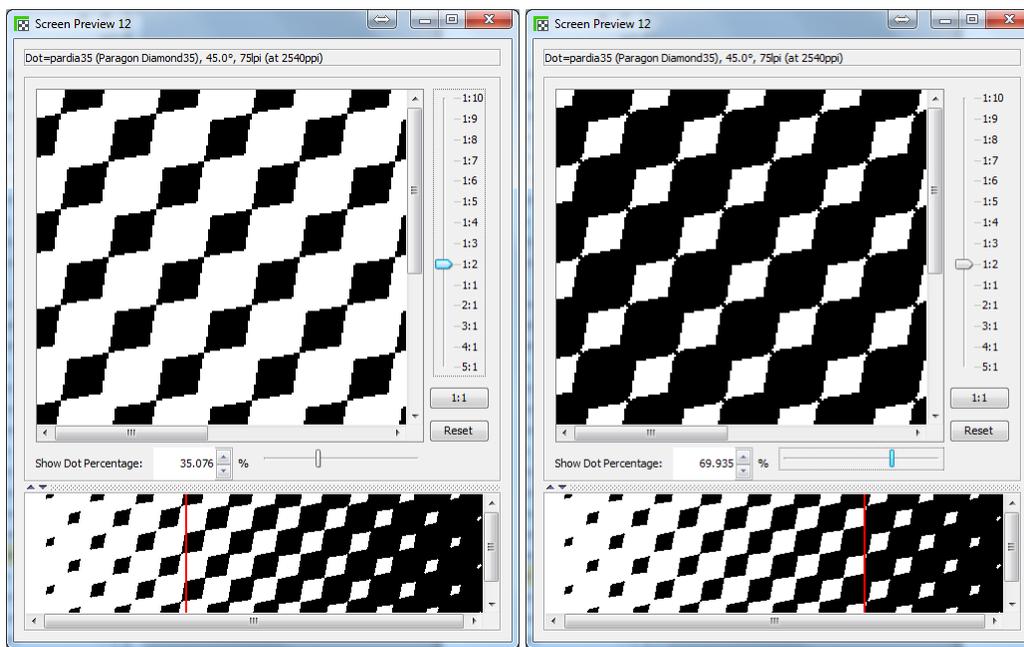


Figure 5: Preview of a Paragon Diamond35 screen at 35% and at 57%

Supported screen angles

The screen is modulo 180: orientations can range from 0° to 180°.

The screen supports the following screen angles: 0°, 15°, 45°, 75°, 90°, 105°, 135° and 165°.

Supported screen rulings

The screen sets available for Paragon Diamond35 are the same as for Paragon Euclidean and Elliptical35.

(see [Supported screen rulings for Paragon Euclidean](#))

Classic Eccentric

Dot Shape

Dot Name: **Eccentric 0 .. 4**

Mnemonic: **X1 .. X4**

The set of Classic Eccentric screens consist of 4 types of screens from X1 to X4.

The X1 screen uses diamond shaped dots, which are the most eccentric. The eccentricity of the dots decreases from X1 to X4.

The X3 screen is the closest to the Paragon Diamond35 screen.

The screen uses diamond shaped dots in the highlights and diamond shaped holes in the shadows.

The dots start to touch each other in the chain direction near 35% and end at about 70%.

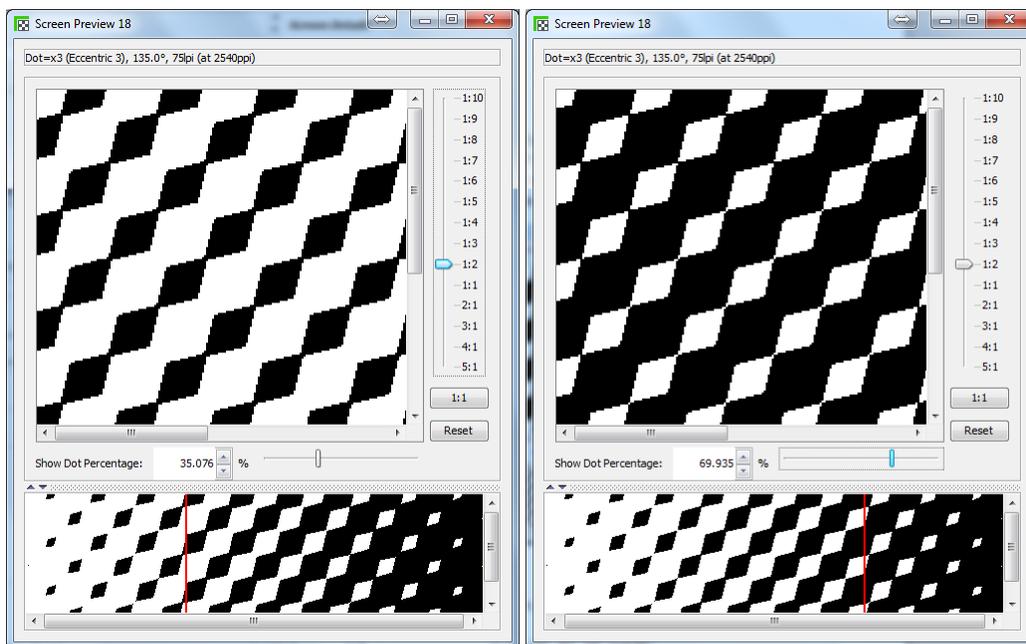


Figure 6: Preview of a Classic Eccentric 3 screen at 35% and at 70%

Supported screen angles

The screen is modulo 180: orientation can range from 0° to 180°.

The screen supports the following offset screen angles: 0°, 15°, 45°, 75°, 90°, 105°, 135° and 165°.

The screen supports the following flexo screen angles: 7.5°, 22.5°, 37.5°, 52.5°, 67.5°, 82.5°, 97.5°, 112.5°, 127.5°, 142.5°, 157.5° and 172.5°.

Supported screen rulings

The set of supported nominal rulings is considerably different compared to the other classic screens.

Ruling list for Classic Eccentric screens

Resolution	Rulings (LPI) - Offset screen angles									
600 PPI	5	6	7	8	9	11	12	14	16	18
900 PPI	8	10	11	11	13	16	18	21	24	27
1000 PPI	9	11	12	13	15	18	21	24	27	30
1016 PPI	9	11	12	13	15	18	21	24	27	30
1200 PPI	11	13	14	15	18	21	25	28	32	35
1219 PPI	11	13	14	15	18	21	25	29	32	36
1270 PPI	11	14	15	16	19	22	26	30	34	37
1800 PPI	16	19	21	23	27	32	37	42	48	53
1828 PPI	16	20	21	23	27	32	37	43	48	54
2000 PPI	18	22	24	25	30	35	41	47	53	59
2400 PPI	21	26	28	30	35	42	49	56	64	71
2438 PPI	21	26	29	30	36	43	50	57	65	72
2540 PPI	22	27	30	32	37	44	52	60	67	75
3000 PPI	26	32	35	38	44	53	62	71	80	89
3600 PPI	32	39	42	45	53	63	74	85	95	106
3657 PPI	32	39	43	46	54	64	75	86	97	108
4000 PPI	35	43	47	50	59	70	82	94	106	118

Resolution	Rulings (LPI) - Flexo screen angles														
600 PPI	5	6	6	8	9	11	13	15	17	19	20	22	24	26	30
900 PPI	7	8	10	11	14	17	20	22	25	28	31	34	36	39	45
1000 PPI	8	9	11	13	16	19	22	25	28	31	34	37	40	44	50
1016 PPI	8	9	11	13	16	19	22	25	28	31	35	38	41	44	50
1200 PPI	9	11	13	15	19	22	26	30	34	37	41	45	48	52	59
1219 PPI	9	11	13	15	19	23	27	30	34	38	41	45	49	53	60
1270 PPI	10	12	14	16	20	23	28	31	36	39	43	47	51	55	63
1800 PPI	14	17	19	23	28	33	39	45	50	56	61	67	72	78	89
1828 PPI	14	17	20	23	28	34	40	45	51	57	62	68	74	80	90
2000 PPI	16	19	22	25	31	37	44	50	56	62	68	75	81	87	99
2400 PPI	19	22	26	30	37	44	52	59	67	74	82	89	97	104	119
2438 PPI	19	23	26	30	38	45	53	60	68	76	83	91	98	106	121
2540 PPI	20	23	27	32	39	47	55	63	71	79	86	95	102	110	126
3000 PPI	23	28	32	38	47	56	65	74	84	93	102	112	121	131	149
3600 PPI	28	33	39	45	56	67	78	89	101	112	122	134	145	157	178
3657 PPI	28	34	39	46	57	68	80	91	102	113	124	136	147	159	181
4000 PPI	31	37	43	50	62	74	87	99	112	124	136	149	161	174	198

Main differences between Classic Eccentric3 and Paragon Diamond35

- The shapes of both screens are quite equal, with Paragon Diamond35 having slightly less eccentrically shaped dots.
- The Classic Eccentricity screen also supports flexo screen angles in the range from 7.5° to 172.5°.
- Both screens have a different set of supported rulings.
- Paragon screens have built-in yellow moiré prevention:
The actual screen ruling for 0° screen tiles is about 7% higher than the nominal value.

Paragon Round and Classic Circular (Euclidean)

Paragon Round

Dot Name: **Paragon Round**

Mnemonic: **ParRound**

This screen has round shaped dots in the highlights that grow over the whole tonal range. Near 78% the dots touch each other and the resulting holes have a pincushion shape.

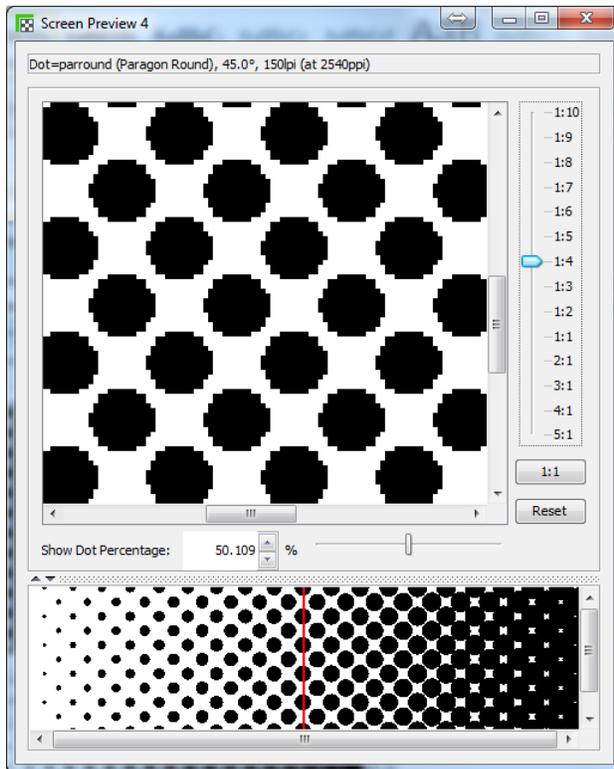


Figure 7: Preview of a Paragon Round screen

Supported screen angles

The screen is modulo 90: orientations can range from 0° to 90°.

The following screen angles are supported: 0°, 15°, 45°, and 75°.

Supported screen rulings

Paragon screens have different sets of screen tiles for different resolutions like the other Paragon screens.

Paragon Round has slightly different screen ruling sets compared to the other Paragon screens.

Ruling list for Paragon Round

Resolution	Rulings (LPI) - Offset screen angles (0°, 15°, 45°, 75°) - Low range												
600 PPI	5	10	15	20	35	38	45		53	65	77	85	
900 PPI	5	10	15	20	35	40	45		53	64	75	85	98
1000 PPI	5	10	15	20	35	39	44		54	64	75	89	101
1016 PPI	5	10	15	20	34	40	45		55	65	76	85	102
1200 PPI		10	15	20	35	40	44		56	65	76	85	100
1219 PPI		10	15	20	34	39	45		54	66	75	86	102
1270 PPI		10	15	20	34	41	45		56	64	75	81	100
1800 PPI		10	15	20	35	40	45		55	64	75	84	98
1828 PPI		10	15	20	35	40	45		54	65	76	86	100
2000 PPI		10	15	20	35	40	46		54	64	74	83	100
2400 PPI			15	20	36	41	45	50	55	65	73	85	100
2438 PPI			15	20	35	40	46		56	64	75	86	102
2540 PPI			15	20	35	40	45		55	64	75	85	99
3000 PPI			15	20	35	40	45		54	65	76	84	101
3600 PPI				20	35	40	45		56	65	75	86	101
3657 PPI				20	35	40	46		55	65	76	87	99
4000 PPI				20	35	40	45		55	65	75	86	101

Resolution	Rulings (LPI) - Offset screen angles (0°, 15°, 45°, 75°) - High range												
600 PPI		106	121										
900 PPI	98	106	116	128	160	182							
1000 PPI	101	109	118	129	157	178	202						
1016 PPI	102	111	120	131	144	180	205						
1200 PPI	100	107	121	131	154	170		213	242				
1219 PPI	102	109	123	133	157	173	192	216	246				
1270 PPI	100	113	120	128	150	180	199	225	257				
1800 PPI	98	106	117	134	150	181	196	212	255	283		320	364
1828 PPI	100	108	116	130	153	172	199	216	259	287	288	325	370
2000 PPI	100	109	118	127	149	178	201	218	257	283	312	314	355
2400 PPI	100	113	120	131	153	170	200	214	241	283	309	337	340
2438 PPI	102	108	122	133	150	173	203	217	245	265	312	313	346
2540 PPI	99	112	119	127	150	180	200	226	256	276	299	327	360
3000 PPI	101	111	117	133	150	177	191	213	250	267	302	326	354
3600 PPI	101	110	121	133	150	169	196	212	255	283	300	321	362
3657 PPI	99	108	117	135	152	172	199	216	259	273	305	326	345
4000 PPI	101	109	118	135	148	177	201	218	255	284	298	314	356

Classic Circular (Euclidean)

Dot Shape

Dot Name: **Circular (Euclidean)**

Mnemonic: **C**

The Classic Circular (Euclidean) screen is equivalent to the Paragon Round screen. This screen has round shaped dots in the highlights that grow over the whole tonal range. Near 78% the dots touch each other, and the resulting holes have a pincushion shape.

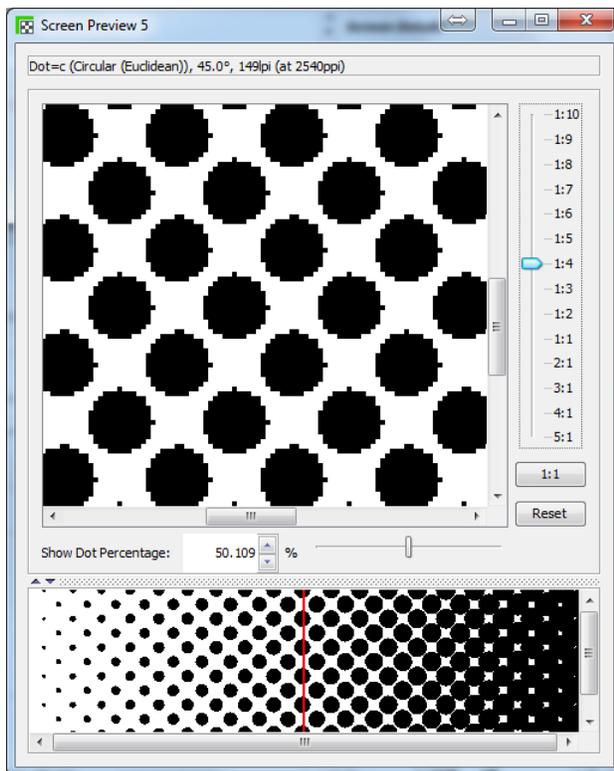


Figure 8: Preview of a Classic Circular (Euclidean) screen

Supported screen angles

The screen is modulo 90: orientations can range from 0° to 90°.

The following offset screen angles are supported: 0°, 15°, 30°, 45°, 60° and 75°.

The following flexo screen angles are supported: 7.5°, 22.5°, 37.5°, 52.5°, 67.5° and 82.5°

Supported screen rulings

The set of screen rulings for the Classic Circular screen is equal to the other basic Classic screens.

(See [Supported screen rulings](#))

Main differences between Paragon Round and Classic Circular (Euclidean):

- The spot function near 78% or at the tone where dot shapes start to touch each other is considerably different. The two screens will have a different visual appearance and a different dot gain near this zone.
- Classic Circular screens also supports flexo screen angles (7.5°, 22.5°, 37.5°, 52.5°, 67.5°, 82.5°)
- Different set of supported rulings.
- Paragon screens have built-in yellow moiré prevention:
The actual screen ruling for 0° screen tiles is about 7% higher than the nominal value.

Paragon Round on Imaging Engine versus Nexus

Imaging Engine uses a different and improved set of Paragon Round screen tiles.

- In Nexus, the Paragon Round dot use the “identical dot” feature in the highlights. As the name suggests, this means that in the highlights the screen dots are always identically shaped for any given tint value.

This feature comes at the expense of fewer gray levels and can lead to banding effects in the highlights, so the Paragon Round dot in Imaging Engine does not use this feature.

The new version uses different dot shapes in the highlights, resulting in a larger number of gray levels.

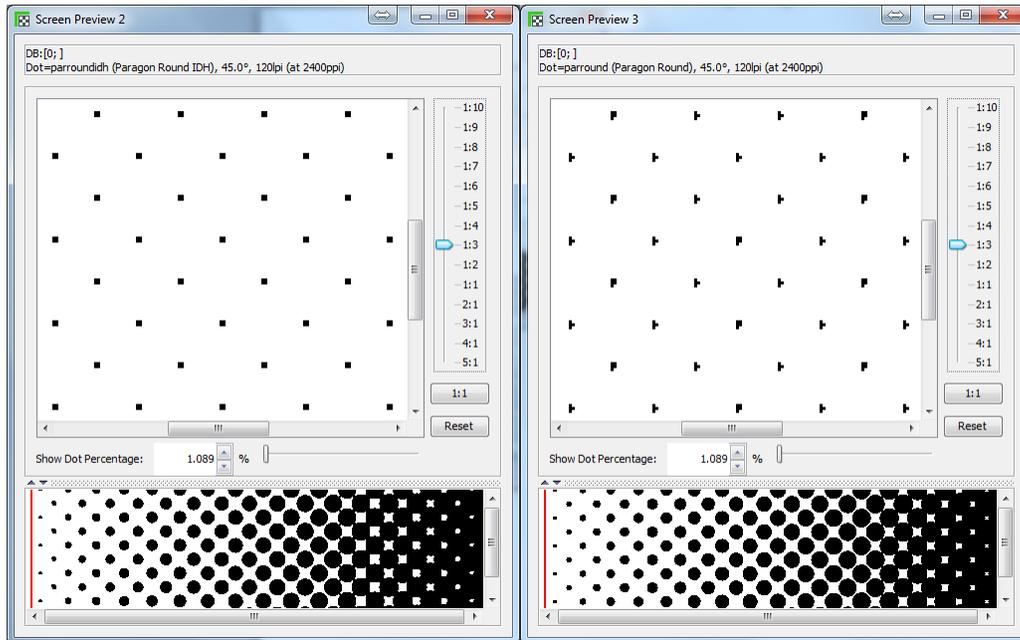


Figure 9: Left: Paragon Round from Nexus RIP, Right: new version used on Imaging Engine.

- For higher screen rulings, dot shapes in the midtones are optimised to reduce dot gain and ink bridging.

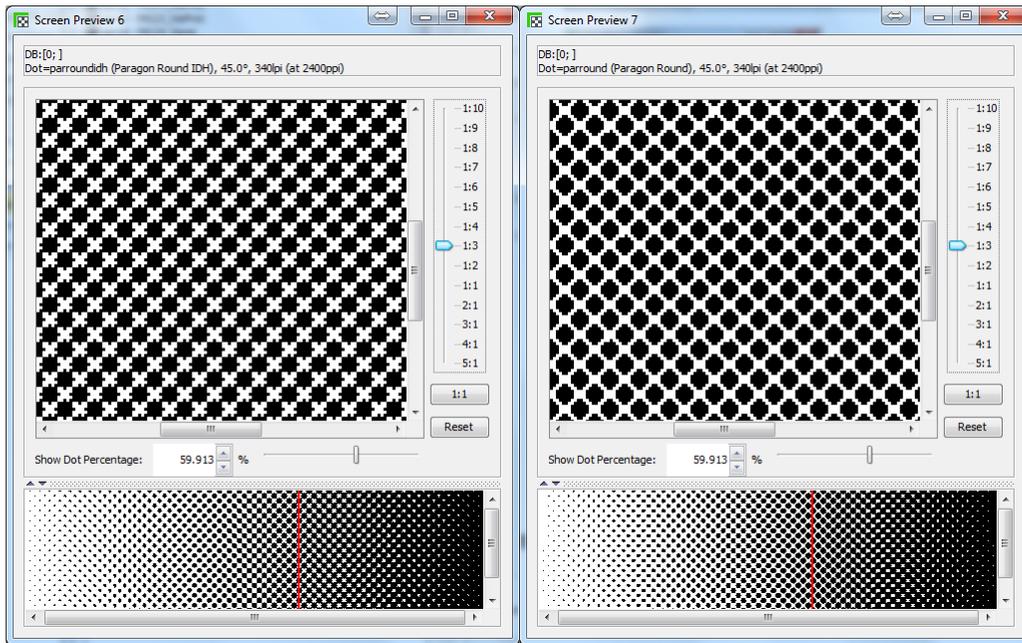


Figure 10: Left: Paragon Round from Nexus RIP, Right: new version used on Imaging Engine.