ECO Design: Energy Efficiency Indicator – CDM Compliance to IEC 61800-9-2: 2017

Manufacturer:	Parker Hannifin Manufacturing Germany GmbH & Co KG: Electric Motion & Pneumatic Division
Address:	Robert-Bosch-Str. 22 - 77656 Offenburg (Germany)
Product Series:	**AC890PX-M Series Variable Speed Drives**
Rated Supply Voltage:	3x 380 – 480Vac +/-10%
Rated Supply Frequency:	45 – 65 Hz
Duty:	Heavy Duty / Normal Duty
Temperature Rating:	0 – 40°C / 0 – 40°C

Product Code	P_r (kW)	$I_{r,\ OUT}$ (A)	$S_{r,equ}$ (VA)	$P_{L,\ CDM\ (0,25)}$ (W)	$p_{L,\ CDM\ (0,25)}$ (%)	$P_{L,\ CDM\ (50,25)}$ (W)	$p_{L,\ CDM\ (50,25)}$ (%)	$P_{L,\ CDM\ (0,50)}$ (W)	$p_{L,\ CDM\ (0,50)}$ (%)	$P_{L,\ CDM\ (50,50)}$ (W)	$p_{L,\ CDM\ (50,50)}$ (%)	$P_{L,\ CDM\ (90,50)}$ (W)	$p_{L,\ CDM\ (90,50)}$ (%)	$P_{L,\ CDM\ (0,100)}$ (W)	$p_{L,\ CDM\ (0,100)}$ (%)	$P_{L,\ CDM\ (50,100)}$ (W)	$p_{L,\ CDM\ (50,100)}$ (%)	$P_{L,\ CDM\ (90,100)}$ (W)	$p_{L,\ CDM\ (90,100)}$ (%)	IE2 Compliant	P_r (kW)	$I_{r,\ OUT}$ (A)	$S_{r,equ}$ (VA)	$P_{L,\ CDM\ (0,25)}$ (W)	$p_{L,\ CDM\ (0,25)}$ (%)	$P_{L,\ CDM\ (50,25)}$ (W)	$p_{L,\ CDM\ (50,25)}$ (%)	$P_{L,\ CDM\ (0,50)}$ (W)	$p_{L,\ CDM\ (0,50)}$ (%)	$P_{L,\ CDM\ (50,50)}$ (W)	$p_{L,\ CDM\ (50,50)}$ (%)	$P_{L,\ CDM\ (90,50)}$ (W)	$p_{L,\ CDM\ (90,50)}$ (%)	$P_{L,\ CDM\ (0,100)}$ (W)	$p_{L,\ CDM\ (0,100)}$ (%)	$P_{L,\ CDM\ (50,100)}$ (W)	$p_{L,\ CDM\ (50,100)}$ (%)	$P_{L,\ CDM\ (90,100)}$ (W)	$p_{L,\ CDM\ (90,100)}$ (%)	IE2 Compliant	$P_{L,\ control\ standby}$ (W)
890PXSA-43420M-xxx-xxxxx	**200**	**420**	**290985**	1234	0.42	1349.5	0.46	1682.7	0.58	1927	0.66	2164.6	0.74	3085.2	1.06	3644.6	1.25	**4259.6**	**1.46**	✓	**250**	**480**	**332554**	1341.6	0.40	1476.6	0.44	1862.2	0.56	2151.3	0.65	2440.0	0.73	3516.0	1.06	4193.5	1.26	**4963.0**	**1.49**	✓	**36.2**
890PXSA-43480M-xxx-xxxxx	**250**	**480**	**332554**	1341.6	0.40	1476.6	0.44	1862.2	0.56	2151.3	0.65	2440.0	0.73	3516.0	1.06	4193.5	1.26	**4963.0**	**1.49**	✓	**315**	**600**	**415692**	1582.8	0.38	1755.2	0.42	2259.5	0.54	2634.3	0.63	3021.6	0.73	4456.9	1.07	5355.5	1.26	**6421.6**	**1.54**	✓	**36.2**
890PXSA-43580M-xxx-xxxxx	**315**	**580**	**401836**	1555.1	0.39	1712.9	0.43	2163.2	0.54	2502.8	0.62	2847.1	0.71	4065.6	1.01	4865.8	1.21	**5793.7**	**1.44**	✓	**400**	**720**	**498831**	1819.2	0.36	2022.1	0.41	2599.4	0.52	3044.6	0.61	3512.9	0.70	5102	1.02	6185.3	1.24	**7496.7**	**1.50**	✓	**36.2**

Table Abbreviations:

- P_r = Rated drive power (expressed in **k**ilo**W**atts)
- $I_{r,\ OUT}$ = Rated drive output current (expressed in **A**mps)
- $S_{r,equ}$ = Rated apparent drive output power (expressed in **V**olt-**A**mperes)
- $P_{L,\ CDM\ (X,Y)}$ = absolute power losses, CDM associated, in operating condition (X, Y), where X = Motor stator frequency (%) and Y = Torque producing current (%), (expressed in **W**atts)
- $p_{L,\ CDM\ (X,Y)}$ = relative power losses, CDM associated, in operating condition (X, Y), where X = Motor stator frequency (%) and Y = Torque producing current (%), (expressed as a Percentage)
- $P_{L,\ control\ standby}$ = Power losses, control board associated, when CDM is in standby mode (expressed in **W**atts)

Notes:

- All calculations performed at nominal 400V, 50Hz supply, using the default switching frequency of the drive rating. See Product Manual HA501299U001 for values.

ECO Design: Energy Efficiency Indicator – CDM Compliance to IEC 61800-9-2: 2017

Rated Supply Voltage:	3x 500 – 575Vac +/-10%																																											
Rated Supply Frequency:	45 – 65 Hz																																												
Duty:	Heavy Duty																					Normal Duty																						
Temperature Rating:	0 – 40°C																					0 – 40°C																						
Product Code	P_r **(HP)**	$I_{r,\ OUT}$ **(A)**	$S_{r,equ}$ **(VA)**	$P_{L,\ CDM\ (0,25)}$ **(W)**	$p_{L,\ CDM\ (0,25)}$ **(%)**	$P_{L,\ CDM\ (50,25)}$ **(W)**	$p_{L,\ CDM\ (50,25)}$ **(%)**	$P_{L,\ CDM\ (0,50)}$ **(W)**	$p_{L,\ CDM\ (0,50)}$ **(%)**	$P_{L,\ CDM\ (50,50)}$ **(W)**	$p_{L,\ CDM\ (50,50)}$ **(%)**	$P_{L,\ CDM\ (90,50)}$ **(W)**	$p_{L,\ CDM\ (90,50)}$ **(%)**	$P_{L,\ CDM\ (0,100)}$ **(W)**	$p_{L,\ CDM\ (0,100)}$ **(%)**	$P_{L,\ CDM\ (50,100)}$ **(W)**	$p_{L,\ CDM\ (50,100)}$ **(%)**	$P_{L,\ CDM\ (90,100)}$ **(W)**	$p_{L,\ CDM\ (90,100)}$ **(%)**	**IE2 Compliant**	P_r **(HP)**	$I_{r,\ OUT}$ **(A)**	$S_{r,equ}$ **(VA)**	$P_{L,\ CDM\ (0,25)}$ **(W)**	$p_{L,\ CDM\ (0,25)}$ **(%)**	$P_{L,\ CDM\ (50,25)}$ **(W)**	$p_{L,\ CDM\ (50,25)}$ **(%)**	$P_{L,\ CDM\ (0,50)}$ **(W)**	$p_{L,\ CDM\ (0,50)}$ **(%)**	$P_{L,\ CDM\ (50,50)}$ **(W)**	$p_{L,\ CDM\ (50,50)}$ **(%)**	$P_{L,\ CDM\ (90,50)}$ **(W)**	$p_{L,\ CDM\ (90,50)}$ **(%)**	$P_{L,\ CDM\ (0,100)}$ **(W)**	$p_{L,\ CDM\ (0,100)}$ **(%)**	$P_{L,\ CDM\ (50,100)}$ **(W)**	$p_{L,\ CDM\ (50,100)}$ **(%)**	$P_{L,\ CDM\ (90,100)}$ **(W)**	$p_{L,\ CDM\ (90,100)}$ **(%)**	**IE2 Compliant**	$P_{L,\ control\ standby}$ **(W)**
890PXSA-63160M-xxx-xxxxx	**150**	**160**	**159349**	1106.3	0.69	1150.2	0.72	1358.8	0.85	1547.0	0.97	1783.7	1.12	2086.4	1.31	2318.4	1.45	**2617.7**	**1.64**	✓	**200**	**210**	**209145**	1247.8	0.60	1308.0	0.63	1573.3	0.75	1842.2	0.88	2195.6	1.05	2527.9	1.21	2864.1	1.37	**3315.7**	**1.59**	✓	**36.2**
890PXSA-63260M-xxx-xxxxx	**250**	**260**	**258942**	1320.7	0.51	1392.1	0.54	1742.1	0.67	1902.0	0.73	2077.1	0.80	2991.6	1.16	3392.6	1.31	**3900.8**	**1.51**	✓	**300**	**310**	**308738**	1461.4	0.47	1548.0	0.50	1968.3	0.64	2164.7	0.70	2387.5	0.77	3498.3	1.13	3999.8	1.30	**4661.1**	**1.51**	✓	**36.2**
890PXSA-63310M-xxx-xxxxx	**300**	**310**	**308738**	1515.5	0.49	1611.0	0.52	2018.2	0.65	2225.2	0.72	2438.2	0.79	3479.7	1.13	3973.7	1.29	**4556.8**	**1.48**	✓	**400**	**420**	**418290**	1830.5	0.44	1964.5	0.47	2515.8	0.60	2812.8	0.67	3132.7	0.75	4562.9	1.09	5296.0	1.27	**6208.9**	**1.48**	✓	**36.2**
890PXSA-63410M-xxx-xxxxx	**400**	**410**	**408331**	1846.9	0.45	1974.9	0.48	2517.3	0.62	2797.8	0.69	3095.6	0.76	4499.6	1.10	5179.6	1.27	**6014.7**	**1.47**	✓	**500**	**480**	**478046**	2027.9	0.42	2181.3	0.46	2804.7	0.59	3146.7	0.66	3524.3	0.74	5129.8	1.07	5979.3	1.25	**7071.7**	**1.48**	✓	**36.2**

Table Abbreviations:

- P_r = Rated drive power (expressed in **k**ilo**W**atts)
- $I_{r,\ OUT}$ = Rated drive output current (expressed in **A**mps)
- $S_{r,equ}$ = Rated apparent drive output power (expressed in **V**olt-**A**mperes)
- $P_{L,\ CDM\ (X,Y)}$ = absolute power losses, CDM associated, in operating condition (X, Y), where X = Motor stator frequency (%) and Y = Torque producing current (%), (expressed in **W**atts)
- $p_{L,\ CDM\ (X,Y)}$ = relative power losses, CDM associated, in operating condition (X, Y), where X = Motor stator frequency (%) and Y = Torque producing current (%), (expressed as a Percentage)
- $P_{L,\ control\ standby}$ = Power losses, control board associated, when CDM is in standby mode (expressed in **W**atts)

Notes:

- All calculations performed at nominal 575V, 50Hz supply, using the default switching frequency of the drive rating. See Product Manual HA501299U001 for values.

ECO Design: Energy Efficiency Indicator – CDM Compliance to IEC 61800-9-2: 2017

Rated Supply Voltage:	3x 600 – 690Vac +/-10%																																											
Rated Supply Frequency:	45 – 65 Hz																																												
Duty:	Heavy Duty																					Heavy Duty																					
Temperature Rating:	0 – 40°C																					0 – 40°C																					
Product Code	P_r **(kW)**	$I_{r,\ OUT}$ **(A)**	$S_{r,equ}$ **(VA)**	$P_{L,\ CDM\ (0,25)}$ **(W)**	$p_{L,\ CDM\ (0,25)}$ **(%)**	$P_{L,\ CDM\ (50,25)}$ **(W)**	$p_{L,\ CDM\ (50,25)}$ **(%)**	$P_{L,\ CDM\ (0,50)}$ **(W)**	$p_{L,\ CDM\ (0,50)}$ **(%)**	$P_{L,\ CDM\ (50,50)}$ **(W)**	$p_{L,\ CDM\ (50,50)}$ **(%)**	$P_{L,\ CDM\ (90,50)}$ **(W)**	$p_{L,\ CDM\ (90,50)}$ **(%)**	$P_{L,\ CDM\ (0,100)}$ **(W)**	$p_{L,\ CDM\ (0,100)}$ **(%)**	$P_{L,\ CDM\ (50,100)}$ **(W)**	$p_{L,\ CDM\ (50,100)}$ **(%)**	$P_{L,\ CDM\ (90,100)}$ **(W)**	$p_{L,\ CDM\ (90,100)}$ **(%)**	**IE2 Compliant**	P_r **(kW)**	$I_{r,\ OUT}$ **(A)**	$S_{r,equ}$ **(VA)**	$P_{L,\ CDM\ (0,25)}$ **(W)**	$p_{L,\ CDM\ (0,25)}$ **(%)**	$P_{L,\ CDM\ (50,25)}$ **(W)**	$p_{L,\ CDM\ (50,25)}$ **(%)**	$P_{L,\ CDM\ (0,50)}$ **(W)**	$p_{L,\ CDM\ (0,50)}$ **(%)**	$P_{L,\ CDM\ (50,50)}$ **(W)**	$p_{L,\ CDM\ (50,50)}$ **(%)**	$P_{L,\ CDM\ (90,50)}$ **(W)**	$p_{L,\ CDM\ (90,50)}$ **(%)**	$P_{L,\ CDM\ (0,100)}$ **(W)**	$p_{L,\ CDM\ (0,100)}$ **(%)**	$P_{L,\ CDM\ (50,100)}$ **(W)**	$p_{L,\ CDM\ (50,100)}$ **(%)**	$P_{L,\ CDM\ (90,100)}$ **(W)**	$p_{L,\ CDM\ (90,100)}$ **(%)**	**IE2 Compliant**	$P_{L,\ control\ standby}$ **(W)**
890PXSA-73160M-xxx-xxxxx	**132**	**160**	**191218**	1227.3	0.64	1270.2	0.66	1508.9	0.79	1686.6	0.88	1899.7	0.99	2312.9	1.21	2531.0	1.32	**2799.1**	**1.46**	✓	**160**	**190**	**227072**	1310.8	0.58	1362.9	0.60	1636.8	0.72	1857.2	0.82	2128.4	0.94	2577.1	1.13	2849.7	1.25	**3193.2**	**1.41**	✓	**36.2**
890PXSA-73320M-xxx-xxxxx	**280**	**320**	**382437**	1770.7	0.46	1867.4	0.49	2350.7	0.61	2559.0	0.67	2773.8	0.73	4010.0	1.05	4500.4	1.18	**5083.5**	**1.33**	✓	**355**	**390**	**466095**	2005.6	0.43	2126.5	0.46	2714.1	0.58	2978.8	0.64	3261.5	0.70	4770.3	1.02	5409.9	1.16	**6203.3**	**1.33**	✓	**36.2**
890PXSA-73340M-xxx-xxxxx	**315**	**340**	**406339**	1858.8	0.46	1962.6	0.48	2483.5	0.61	2708.7	0.67	2944.7	0.72	4277.9	1.05	4814.2	1.18	**5464.6**	**1.34**	✓	**400**	**430**	**513899**	2137.2	0.42	2272.8	0.44	2919.7	0.57	3219.7	0.63	3546.0	0.69	5209.3	1.01	5945.7	1.16	**6877.6**	**1.34**	✓	**36.2**

Table Abbreviations:

- P_r = Rated drive power (expressed in **k**ilo**W**atts)
- $I_{r,\ OUT}$ = Rated drive output current (expressed in **A**mps)
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- $P_{L,\ control\ standby}$ = Power losses, control board associated, when CDM is in standby mode (expressed in **W**atts)

Notes:

- All calculations performed at nominal 690V, 50Hz supply, using the default switching frequency of the drive rating. See Product Manual HA501299U001 for values.