Defender 88PH+ Pro
Fixed Window
Triple Glazed – **46mm Overall** IGU Thickness

INSULATED GLASS	U-FACTOR SI	U-FACTOR IP	SHGC	VT	CR	CPD #
4mm 180/ARG/4mm CL/ARG/4mm 180	0.79	0.14	0.36	0.45	80	INN-M-27-06618-00001
4mm 270/ARG/4mm CL/ARG/4mm 180	0.77	0.14	0.22	0.39	81	INN-M-27-10435-00001
4mm 366/ARG/4mm CL/ARG/4mm 180	0.77	0.13	0.18	0.41	80	INN-M-27-07279-00001
4mm 180/ARG/4mm 180/ARG/4mm i89	0.72	0.13	0.35	0.44	70	INN-M-27-14772-00001

TESTED SIZE: 1200 mm x 1500 mm (47 inches x 59 inches)

Defender 88PH+ Pro
Tilt + Turn Window
Triple Glazed – **46 mm Overall** IGU Thickness

INSULATED GLASS	U-FACTOR SI	U-FACTOR IP	SHGC	VT	CR	CPD #
4mm 180/ARG/4mm CL/ARG/4mm 180	0.81	0.14	0.31	0.39	81	INN-M-26-05060-00001
4mm 270/ARG/4mm CL/ARG/4mm 180	0.80	0.14	0.21	0.39	81	INN-M-26-01544-00001
4mm 366/ARG/4mm CL/ARG/4mm 180	0.79	0.14	0.16	0.36	81	INN-M-26-09730-00001
4mm 180/ARG/4mm 180/ARG/4mm i89	0.75	0.13	0.34	0.43	70	INN-M-26-11214-00001

TESTED SIZE: 1200 mm x 1500 mm (47 inches x 59 inches)

Additional NFRC values are available for different glass combinations, including various glass thicknesses, laminated glass options and Low-E coatings. Contact your Product Representative for additional NFRC values.

Defender 88PH+ XI
Fixed Window
Triple Glazed – **46mm Overall** IGU Thickness

INSULATED GLASS	U-FACTOR SI	U-FACTOR IP	SHGC	VT	CR	CPD #
4mm 180/ARG/4mm CL/ARG/4mm 180	0.80	0.14	0.41	0.51	77	INN-M-31-00605-00001
4mm 270/ARG/4mm CL/ARG/4mm 180	0.80	0.14	0.24	0.45	78	INN-M-31-00613-00001
4mm 366/ARG/4mm CL/ARG/4mm 180	0.74	0.13	0.18	0.42	78	INN-M-31-00608-00001
4mm 180/ARG/4mm 180/ARG/4mm i89	0.74	0.13	0.38	0.50	64	INN-M-31-00607-00001

TESTED SIZE: 1200 mm x 1500 mm (47 inches x 59 inches)

Defender 88PH+ XI
Tilt + Turn Window
Triple Glazed – **46 mm Overall** IGU Thickness

INSULATED GLASS	U-FACTOR SI	U-FACTOR IP	SHGC	VT	CR	CPD #
4mm 180/ARG/4mm CL/ARG/4mm 180	0.80	0.14	0.35	0.44	79	INN-M-32-00605-00001
4mm 270/ARG/4mm CL/ARG/4mm 180	0.80	0.14	0.21	0.39	79	INN-M-32-00613-00001
4mm 366/ARG/4mm CL/ARG/4mm 180	0.80	0.14	0.16	0.36	80	INN-M-32-00608-00001
4mm 180/ARG/4mm 180/ARG/4mm i89	0.74	0.13	0.34	0.43	65	INN-M-32-00607-00001

TESTED SIZE: 1200 mm x 1500 mm (47 inches x 59 inches)

Additional NFRC values are available for different glass combinations, including various glass thicknesses, laminated glass options and Low-E coatings. Contact your Product Representative for additional NFRC values.

See next page for legend and additional notes.

Legend & Notes

	Description
U-Factor	A measure of the rate of heat loss. The lower the number, the slower the heat loss.
U-Factor SI Units	Watts per square meter Kelvin (W/m^2-K)
U-Factor IP Units	British thermal units per hour per square foot Fahrenheit ($BTU/hr\text{-}ft^2$-F)
SHGC	Solar Heat Gain Coefficient (SHGC) is a ratio indicating the amount of the sun's solar heat that can pass through the product (solar gain). The higher the number, the greater the solar gain.
VT	Visual Transmittance (VT) is a ratio that indicates the amount of visible light that can pass through the product. The higher the number, the more visible light that can pass through.
CR	Condensation Resistance (CR) is the measure of the resistance to the formation of condensation on the inside surface. The higher the number, the greater the resistance against condensation.
ARG	Argon gas at 90% with air at 10%.
CL	Clear glass (no Low-E coating).
180	Cardinal Glass Industries LoĒ-180™ Coating
270	Cardinal Glass Industries LoĒ²-272® Coating
366	Cardinal Glass Industries LoĒ³-366® Coating
i89	Cardinal Glass Industries LoĒ-i89® Coating
Grids	All IG units are tested without grids (internal or external) as these are optional and will generally reduce SHGC and VT.
All glass combinations and NFRC values listed in this document is offered in good faith and is believed to be accurate as of the published date. Please confirm all details with your Product Representative at the time of order. NFRC values for numerous other glass combinations are available upon request.	