



Tyrol Series PH+ Windows and Doors

Alpen is committed to leading the industry through innovation, supporting a wide range of high performance building communities and providing **validated** proof that our product performance matches our claims.

We understand the challenges of designing and building a passive house certified project, and appreciate the extra lengths owners and consultants go through to be responsible stewards of our planet by promoting passive house principles.

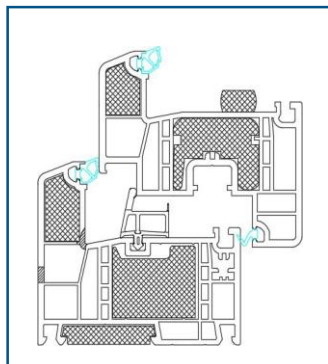
Benefits of Tyrol Series PH+

- First North American manufacturer to achieve dual PHIUS and PHI certifications
- Thick-wall extrusions and compression seals deliver best-in-class sound attenuation STC/OITC ratings
- Custom crafted in the U.S., with short lead times and local servicing
- Highly knowledgeable and consultative support to help guide you through the process of making the best selections
- AAMA certified for residential, commercial and multifamily applications
- Award winning, fiberglass-reinforced, European style, Rehau 4700 Geneo profile





Passive House Institute — PHPP & WUFI Performance Data

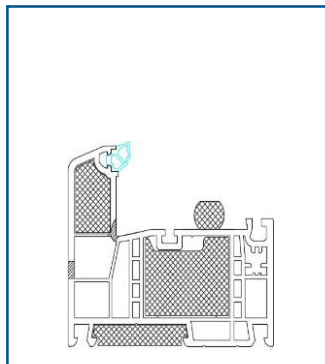


PH+ Tilt Turn True Triple

- PH Uf 0.13
- Frame Dimension 4.53"

PH+ Tilt Turn Heat Mirror

- PH Uf 0.14
- Frame Dimension 4.53"

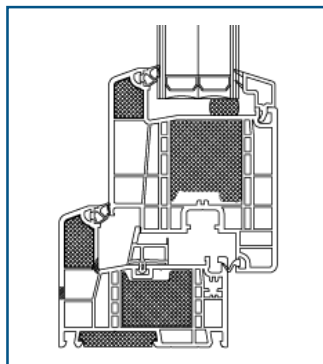


PH+ Fixed True Triple

- PH Uf 0.13
- Frame Dimension 2.83"

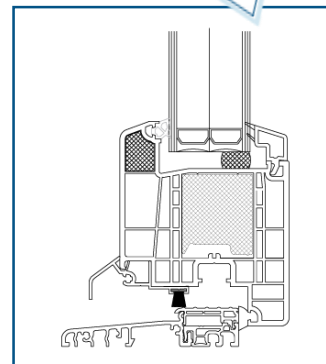
PH+ Fixed Heat Mirror

- PH Uf 0.13
- Frame Dimension 2.83"



PH+ Swing Door

- PH Uf 0.15
- Frame Dimension 5.56"



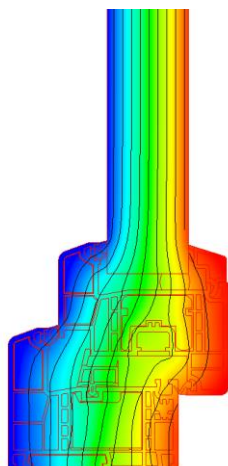
PH+ Low Profile Door Sill

- PH Uf 0.19
- Frame Dimension 4.50"



Glazing Data

Glazing Type	Overall Thickness [in]	U _g [BTU/hr-ft ² ·°F]	SHGC	VT	U _w (Tilt-Turn) [BTU/hr-ft ² ·°F]
HighGain-6 PH+ True Triple	1-7/8"	0.107	0.57	0.70	0.13
Balanced-6 PH+ True Triple	1-7/8"	0.096	0.38	0.57	0.12
SolarControl-6 PH+ True Triple	1-7/8"	0.098	0.28	0.57	0.12
Balanced-6 PH+	1-5/8"	0.095	0.37	0.56	0.13
SolarControl-6 PH+	1-5/8"	0.106	0.28	0.57	0.14
HighGain-6 PH+	1-5/8"	0.113	0.54	0.70	0.14
HighGain-6 Pro PH+	1-5/8"	0.102	0.51	0.67	0.13
Balanced-9 PH+	1-5/8"	0.066	0.33	0.49	0.11
Solarcontrol-9 PH+	1-5/8"	0.071	0.25	0.51	0.11
HighGain-9 PH+	1-5/8"	0.077	0.45	0.62	0.12
HighGain-9 Pro PH+	1-5/8"	0.070	0.44	0.60	0.11
TR-11 PH+	1-5/8"	0.060	0.21	0.38	0.106



These charts are a small representative sample of Tyrol Series PH+ products available for passive house. For additional options to fit your project's needs and optimize your energy model, please visit the Alpen website at:

www.thinkalpen.com/passivehouse

