

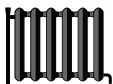


ENERG

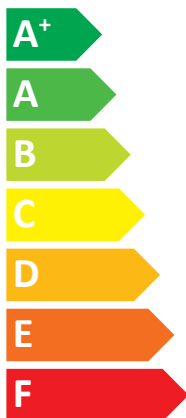
енергия · ενεργεια



Indoor unit E*ST20C-**D
Outdoor unit PUHZ-SHW112VAA(-BS)



A⁺⁺



A⁺

Two icons showing sound power levels: a speaker icon with a house and the text "40 dB", and a house icon with a speaker and the text "60 dB".



- 11 kW
- 13 kW**
- 11 kW

2019

811/2013

BH79V003H45

	English Nederlands suomi	Deutsch Svenska Čeština	Français Dansk Български	Italiano Português Polski	Español Ελληνικά -
1	Outdoor unit buitenunit Ulkoyksikkö	Außengerät Utomhusenhet Venkovní jednotka	unité extérieure Udendørs enhed Външно тяло	unità esterna unidade exterior jednostka zewnętrzna	unidad exterior Εξωτερική μονάδα -
2	Indoor unit binnenunit Sisäyksikkö	Innengerät Inomhusenhet Vnitřní jednotka	unité intérieure Indendørs enhed Вътрешно тяло	unità interna unidade interior jednostka wewnętrzna	unidad interior Εσωτερική μονάδα -
3	Medium-temperature application middentemperatuur-toepassing keskilämpötilan sovellus	Mitteltemperaturanwendung mediumentemperatuurapplikation středněteplotní aplikace	l'application à moyenne température middeltemperatuuravvendelsen среднотемпературното приложение	le applicazioni a media temperatura a aplicação a média temperatura zastosowania w średnich temperaturach	la aplicación de media temperatura η εφαρμογή σε μέση θερμοκρασία -
4	Low-temperature application lagetemperatuur-toepassing matalanlämpötilan sovellus	Niedertemperaturanwendung lågtemperaturapplikation nízkoteplotní aplikace	l'application à basse température lavtemperaturavvendelsen нискотемпературни приложения	le applicazioni a bassa temperatura a aplicação a baixa temperatura zastosowania w niskich temperaturach	la aplicación de baja temperatura η εφαρμογή σε χαμηλή θερμοκρασία -
5	Declared load profile Opgegeven capaciteitsprofiel Ilmoitettu kuormitusprofiili	Angegebenes Lastprofil Deklarerad belastningsprofil Deklarovaný zátěžový profil	Profil de soutirage déclaré Angivet forbrugsprofil Объявлен товароv профиль	Profilo di carico dichiarato Perfil de carga declarado Deklarowany profil obciążenia	Perfil de carga declarado Δηλωμένο προφίλ φορτίου -
6	Seasonal space heating energy efficiency class de seizoensgebonden energie-efficiëntieklasse voor ruimteverwarming tilalämmityksen kausittainen energiatehokkuusluokka	die Klasse für die jahreszeitbedingte Raumheizungs-Energieeffizienz säsongrelaterade energieeffektivitetsklass vid rumsuppvärmning třída sezonní energetické účinnosti vytápění	la classe d'efficacité énergétique saisonnière, pour le chauffage des locaux klassen for årsvirkningsgrad ved rumopvarmning класът на сезонната отоплителна енергийна ефективност	la classe di efficienza energetica stagionale del riscaldamento d'ambiente A classe de eficiência energética do aquecimento ambiente sazonal A klasa sezonowej efektywności energetycznej ogrzewania pomieszczeń	la clase de eficiencia energética estacional de calefacción η τάξη ενεργειακής απόδοσης της εποχιακής θέρμανσης χώρου -
7	Water heating energy efficiency class de energie-efficiëntieklasse voor waterverwarming vedenlämmityksen energiatehokkuusluokka	die Klasse für die Warmwasserbereitungs-Energieeffizienz energieeffektivitetsklass vid vattenuppvärmning třída energetické účinnosti ohřevu vody	la classe d'efficacité énergétique, pour le chauffage de l'eau klassen for årsvirkningsgrad ved vandopvarmning класът на енергийната ефективност при подгряване на вода	la classe di efficienza energetica del riscaldamento dell'acqua A classe de eficiência energética do aquecimento de água Klasa efektywności energetycznej podgrzewania wody	la clase de eficiencia energética del caldeo de agua η τάξη ενεργειακής απόδοσης θέρμανσης νερού -
8	Rated heat output under average climate conditions de nominale warmteafgifte(onder gemiddelde klimaatomstandigheden) nimellislämpöteho(keskimääräisissä ilmasto-olosuhteissa)	die Wärmenennleistung bei durchschnittlichen Klimaverhältnissen Den nominella avgivna värmeeffekten(under genomsnittliga klimatförhållanden) jmenovitý tepelný výkon(zá průměrných klimatických podmínek)	la puissance thermique nominale dans les conditions climatiques moyennes den nominelle nytteeffekt(under gennemsnitlige klimaforhold) номиналната топлинна мощност(при средни климатични условия)	la potenza termica nominale(in condizioni climatiche medie) A potência calorífica nominal(em condições climáticas médias) znamionowa moc cieplna(w warunkach klimatu umiarkowanego)	la potencia calorífica nominal(en condiciones climáticas medias) η ονομαστική θερμική ισχύς(υπό μέσες κλιματικές συνθήκες) -
9	For space heating, annual energy consumption under average climate conditions voor ruimteverwarming, het jaarlijkse energieverbruik(onder gemiddelde klimaatomstandigheden) tilalämmityksestä vuotuinen energiankulutus(keskimääräisissä ilmasto-olosuhteissa)	für die Raumheizung, den jährlichen Energieverbrauch bei durchschnittlichen Klimaverhältnissen För rumsuppvärmning, årlig energiförbrukning(vid genomsnittliga klimatförhållanden) pro vytápění – roční spotřeba energie za průměrných klimatických podmínek	pour le chauffage des locaux, la consommation annuelle d'énergie(dans les conditions climatiques moyennes) for rumopvarmning det årlige energiforbrug(under gennemsnitlige klimaforhold) за отопление, годишното потребление на енергия(при средни климатични условия)	per il riscaldamento d'ambiente, il consumo annuo di energia(in condizioni climatiche medie) Para o aquecimento ambiente, o consumo anual de energia(em condições climáticas médias) w odniesieniu do ogrzewania pomieszczeń, roczne zużycie energii(w warunkach klimatu umiarkowanego)	para calentar espacios, el consumo anual de energía(en condiciones climáticas medias) για τη θέρμανση χώρου, η ετήσια κατανάλωση ενέργειας(υπό μέσες κλιματικές συνθήκες) -
10	For water heating, annual electricity consumption under average climate conditions voor waterverwarming, het jaarlijkse elektriciteitsverbruik(onder gemiddelde klimaatomstandigheden) vedenlämmityksestä vuotuinen sähkönkulutus(keskimääräisissä ilmasto-olosuhteissa)	für die Warmwasserbereitung, den jährlichen Stromverbrauch bei durchschnittlichen Klimaverhältnissen För vattenuppvärmning, årlig elförbrukning(vid genomsnittliga klimatförhållanden) pro ohřev vody – roční spotřeba elektrické energie za průměrných klimatických podmínek	pour le chauffage de l'eau, la consommation annuelle d'électricité(dans les conditions climatiques moyennes) for vandopvarmning det årlige elforbrug(under gennemsnitlige klimaforhold) за подгряване на вода, годишното потребление(при средни климатични условия)	per il riscaldamento dell'acqua, il consumo annuo di energia(in condizioni climatiche medie) para o aquecimento de água, o consumo anual de electricidade(em condições climáticas médias) w odniesieniu do podgrzewania wody, roczne zużycie energii elektrycznej(w warunkach klimatu umiarkowanego)	para calentar agua, el consumo anual de electricidad(en condiciones climáticas medias) για την θέρμανση νερού, η ετήσια κατανάλωση ηλεκτρικής ενέργειας(υπό μέσες κλιματικές συνθήκες) -
11	Seasonal space heating energy efficiency under average climate conditions de seizoensgebonden energie-efficiëntie voor ruimteverwarming(onder gemiddelde klimaatomstandigheden) tilalämmityksen kausittainen energiatehokkuus(keskimääräisissä ilmasto-olosuhteissa)	die jahreszeitbedingte Raumheizungs-Energieeffizienz bei durchschnittlichen Klimaverhältnissen Säsongmedelverkningsgrad för rumsuppvärmning(vid genomsnittliga klimatförhållanden) sezonní energetická účinnost vytápění za průměrných klimatických podmínek	l'efficacité énergétique saisonnière pour le chauffage des locaux(dans les conditions climatiques moyennes) årsvirkningsgraden ved rumopvarmning(under gennemsnitlige klimaforhold) сезонната енергийна ефективност при отопление(при средни климатични условия)	l'efficienza energetica stagionale di riscaldamento d'ambiente(in condizioni climatiche medie) A eficiência energética do aquecimento ambiente sazonal(em condições climáticas médias) sezonowa efektywność energetyczna ogrzewania pomieszczeń(w warunkach klimatu umiarkowanego)	la eficiencia energética estacional de calefacción(en condiciones climáticas medias) η ενεργειακή απόδοση της εποχιακής θέρμανσης χώρου(υπό μέσες κλιματικές συνθήκες) -
12	Water heating energy efficiency under average climate conditions de energie-efficiëntie voor waterverwarming(onder gemiddelde klimaatomstandigheden) vedenlämmityksen energiatehokkuus(keskimääräisissä ilmasto-olosuhteissa)	die Warmwasserbereitungs-Energieeffizienz bei durchschnittlichen Klimaverhältnissen Energieeffektivität vid vattenuppvärmning(vid genomsnittliga klimatförhållanden) energetická účinnost ohřevu vody za průměrných klimatických podmínek	l'efficacité énergétique pour le chauffage de l'eau(dans les conditions climatiques moyennes) energieeffektivitet ved vandopvarmning(under gennemsnitlige klimaforhold) енергийната ефективност при подгряване на вода(при средни климатични условия)	l'efficienza energetica di riscaldamento dell'acqua(in condizioni climatiche medie) a eficiência energética do aquecimento de água(em condições climáticas médias) efektywność energetyczna podgrzewania wody(w warunkach klimatu umiarkowanego)	la eficiencia energética del caldeo de agua(en condiciones climáticas medias) η ενεργειακή απόδοση θέρμανσης νερού(υπό μέσες κλιματικές συνθήκες) -
13	Sound power level L _{WA} indoor het geluidsvermogensniveau L _{WA} binnen äänitehotaso L _{WA} sisällä	der Schalleistungspegel L _{WA} in Gebäuden Ljudeffektivnivå L _{WA} i inomhus hladina akustického výkonu L _{WA} ve vnitřním prostoru	le niveau de puissance acoustique L _{WA} , à l'intérieur lydeeffektiveauet L _{WA} i inde ниводо на звуковата мощност L _{WA} на закрито	il livello di potenza sonora L _{WA} all'interno O nível de potência sonora L _{WA} no interior poziom mocy akustycznej L _{WA} w pomieszczeniu	el nivel de potencia acústica L _{WA} en interiores η στάθμη ηχητικής ισχύος L _{WA} εσωτερικού χώρου -
14	Work only during off-peak hours werken uitsluitend in de daluren toimimaan ainoastaan kulutusluppujen ulkopuolella	dass ein ausschließlicher Betrieb des Kombiheizgerätes zu Schwachlastzeiten drivas uteslutande under perioder med låg belastning provou pouze mimo špičku	fonctionner qu'en heures creuses fungere uden for spidsbelastningsperioder работи само в часовете извън върховото натоварване	funzionare soltanto durante le ore morte de funcionar unicamente fora das horas de pico pracować jedynie w godzinach poza szczytowym obciążeniem	funcionar solamente durante las horas de baja demanda λειτουργία μόνο εκτός των ωρών αιχμής -
15	Rated heat output under colder climate conditions de nominale warmteafgifte, onder koudere klimaatomstandigheden nimellislämpöteho, kylmissä ilmasto-olosuhteissa	die Wärmenennleistung bei kälteren Klimaverhältnissen Nominell avgiven värmeeffekt vid kallare klimatförhållanden jmenovitý tepelný výkon za chladnějších klimatických podmínek	la puissance thermique nominale, dans les conditions climatiques plus froides den nominelle nytteeffekt under koldere klimaforhold номиналната топлинна мощност при по-студени климатични условия	A potencia calorífica nominal em condições climáticas mais frias Znamionowa moc cieplna w warunkach klimatu chłodnego	la potencia calorífica nominal en condiciones climáticas más frías η ονομαστική θερμική ισχύς υπό ψυχρότερες κλιματικές συνθήκες -
16	Rated heat output under warmer climate conditions de nominale warmteafgifte, onder warmere klimaatomstandigheden nimellislämpöteho, lämpimissä ilmasto-olosuhteissa	die Wärmenennleistung bei wärmeren Klimaverhältnissen Nominell avgiven värmeeffekt vid varmare klimatförhållanden jmenovitý tepelný výkon za teplejších klimatických podmínek	la puissance thermique nominale, dans les conditions climatiques plus chaudes den nominelle nytteeffekt under varmere klimaforhold номиналната топлинна мощност при по-топли климатични условия	A potencia calorífica nominal, in condizioni climatiche più calde A potência calorífica nominal em condições climáticas mais quentes znamionowa moc cieplna w warunkach klimatu ciepłego	la potencia calorífica nominal en condiciones climáticas más cálidas η ονομαστική θερμική ισχύς υπό θερμότερες κλιματικές συνθήκες -
17	For space heating, annual energy consumption under colder climate conditions voor ruimteverwarming, het jaarlijkse energieverbruik onder koudere klimaatomstandigheden tilalämmityksestä vuotuinen energiankulutus kylmissä ilmasto-olosuhteissa	für die Raumheizung, der jährliche Energieverbrauch bei kälteren Klimaverhältnissen För rumsuppvärmning, årlig energiförbrukning under kallare klimatförhållanden pro vytápění – roční spotřeba energie za chladnějších klimatických podmínek	pour le chauffage des locaux, la consommation annuelle d'énergie, dans les conditions climatiques plus froides for rumopvarmning det årlige energiforbrug under koldere klimaforhold за отопление, годишното потребление на енергия при по-студени климатични условия	per il riscaldamento d'ambiente, il consumo annuo di energia, in condizioni climatiche più fredde Para o aquecimento ambiente, o consumo anual de energia em condições climáticas mais frias w odniesieniu do ogrzewania pomieszczeń, roczne zużycie energii w warunkach klimatu chłodnego	para calentar espacios, el consumo anual de energía en condiciones climáticas más frías για θέρμανση χώρου, η ετήσια κατανάλωση ενέργειας υπό ψυχρότερες κλιματικές συνθήκες -
18	For space heating, annual energy consumption under warmer climate conditions voor ruimteverwarming, het jaarlijkse energieverbruik onder warmere klimaatomstandigheden tilalämmityksestä vuotuinen energiankulutus lämpimissä ilmasto-olosuhteissa	für die Raumheizung, der jährliche Energieverbrauch bei wärmeren Klimaverhältnissen För rumsuppvärmning, årlig energiförbrukning under varmare klimatförhållanden pro vytápění – roční spotřeba energie za teplejších klimatických podmínek	pour le chauffage des locaux, la consommation annuelle d'énergie, dans les conditions climatiques plus chaudes for rumopvarmning det årlige energiforbrug under varmere klimaforhold за отопление, годишното потребление на енергия при по-топли климатични условия	per il riscaldamento d'ambiente, il consumo annuo di energia, in condizioni climatiche più calde Para o aquecimento ambiente, o consumo anual de energia em condições climáticas mais quentes w odniesieniu do ogrzewania pomieszczeń, roczne zużycie energii w warunkach klimatu ciepłego	para calentar espacios, el consumo anual de energía en condiciones climáticas más cálidas για θέρμανση χώρου, η ετήσια κατανάλωση ενέργειας υπό θερμότερες κλιματικές συνθήκες -
19	For water heating, annual energy consumption under colder climate conditions voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder koudere klimaatomstandigheden vedenlämmityksestä vuotuinen sähkönkulutus kylmissä ilmasto-olosuhteissa	für die Warmwasserbereitung, der jährliche Stromverbrauch bei kälteren Klimaverhältnissen För vattenuppvärmning, årlig elförbrukning under kallare klimatförhållanden pro ohřev vody – roční spotřeba elektrické energie za chladnějších klimatických podmínek	pour le chauffage de l'eau, la consommation annuelle d'électricité, dans les conditions climatiques plus froides for vandopvarmning det årlige elforbrug under koldere klimaforhold за подгряване на вода, годишното потребление на електроенергия при по-студени климатични условия	per il riscaldamento dell'acqua, il consumo annuo di energia, in condizioni climatiche più fredde para o aquecimento de água, o consumo anual de electricidade em condições climáticas mais frias w odniesieniu do podgrzewania wody, roczne zużycie energii elektrycznej w warunkach klimatu chłodnego	para calentar agua, el consumo anual de electricidad en condiciones climáticas más frías για θέρμανση νερού, η ετήσια κατανάλωση ηλεκτρικής ενέργειας υπό ψυχρότερες κλιματικές συνθήκες -
20	For water heating, annual energy consumption under warmer climate conditions voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder warmere klimaatomstandigheden vedenlämmityksestä vuotuinen sähkönkulutus lämpimissä ilmasto-olosuhteissa	für die Warmwasserbereitung, der jährliche Stromverbrauch bei wärmeren Klimaverhältnissen För vattenuppvärmning, årlig elförbrukning under varmare klimatförhållanden pro ohřev vody – roční spotřeba elektrické energie za teplejších klimatických podmínek	pour le chauffage de l'eau, la consommation annuelle d'électricité, dans les conditions climatiques plus chaudes for vandopvarmning det årlige elforbrug under varmere klimaforhold за подгряване на вода, годишното потребление на електроенергия при по-топли климатични условия	per il riscaldamento dell'acqua, il consumo annuo di energia, in condizioni climatiche più calde para o aquecimento de água, o consumo anual de electricidade em condições climáticas mais quentes w odniesieniu do podgrzewania wody, roczne zużycie energii elektrycznej w warunkach klimatu ciepłego	para calentar agua, el consumo anual de electricidad en condiciones climáticas más cálidas για θέρμανση νερού, η ετήσια κατανάλωση ηλεκτρικής ενέργειας υπό θερμότερες κλιματικές συνθήκες -
21	Seasonal space heating energy efficiency under colder climate conditions de seizoensgebonden energie-efficiëntie voor ruimteverwarming onder koudere klimaatomstandigheden tilalämmityksen kausittainen energiatehokkuus kylmissä ilmasto-olosuhteissa	die jahreszeitbedingte Raumheizungs-Energieeffizienz bei kälteren Klimaverhältnissen Säsongmedelverkningsgrad för rumsuppvärmning under kallare klimatförhållanden sezonní energetická účinnost vytápění za chladnějších klimatických podmínek	l'efficacité énergétique saisonnière pour le chauffage des locaux, dans les conditions climatiques plus froides årsvirkningsgraden ved rumopvarmning under koldere klimaforhold сезонната енергийна ефективност при отопление при по-студени климатични условия	l'efficienza energetica stagionale di riscaldamento d'ambiente in condizioni climatiche più fredde A eficiência energética do aquecimento ambiente sazonal em condições climáticas mais frias sezonowa efektywność energetyczna ogrzewania pomieszczeń w warunkach klimatu chłodnego	la eficiencia energética estacional de calefacción en condiciones climáticas más frías η ενεργειακή απόδοση της εποχιακής θέρμανσης χώρου υπό ψυχρότερες κλιματικές συνθήκες -
22	Seasonal space heating energy efficiency under warmer climate conditions de seizoensgebonden energie-efficiëntie voor ruimteverwarming onder warmere klimaatomstandigheden tilalämmityksen kausittainen energiatehokkuus lämpimissä ilmasto-olosuhteissa	die jahreszeitbedingte Raumheizungs-Energieeffizienz bei wärmeren Klimaverhältnissen Säsongmedelverkningsgrad för rumsuppvärmning under varmare klimatförhållanden sezonní energetická účinnost vytápění za teplejších klimatických podmínek	l'efficacité énergétique saisonnière pour le chauffage des locaux, dans les conditions climatiques plus chaudes årsvirkningsgraden ved rumopvarmning under varmere klimaforhold сезонната енергийна ефективност при отопление при по-топли климатични условия	l'efficienza energetica stagionale di riscaldamento d'ambiente in condizioni climatiche più calde A eficiência energética do aquecimento ambiente sazonal em condições climáticas mais quentes sezonowa efektywność energetyczna ogrzewania pomieszczeń w warunkach klimatu ciepłego	la eficiencia energética estacional de calefacción en condiciones climáticas más cálidas η ενεργειακή απόδοση της εποχιακής θέρμανσης χώρου υπό θερμότερες κλιματικές συνθήκες -
23	Water heating energy efficiency under colder climate conditions de energie-efficiëntie voor waterverwarming onder koudere klimaatomstandigheden vedenlämmityksen energiatehokkuus kylmissä ilmasto-olosuhteissa	die Warmwasserbereitungs-Energieeffizienz bei kälteren Klimaverhältnissen Energieeffektivität vid vattenuppvärmning under kallare klimatförhållanden energetická účinnost ohřevu vody za chladnějších klimatických podmínek	l'efficacité énergétique pour le chauffage de l'eau, dans les conditions climatiques plus froides energieeffektivitet ved vandopvarmning under koldere klimaforhold енергийната ефективност при подгряване на вода при по-студени климатични условия	l'efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più fredde a eficiencia energética do aquecimento de água em condições climáticas mais frias efektywność energetyczna podgrzewania wody w warunkach klimatu chłodnego	la eficiencia energética de caldeo de agua en condiciones climáticas más frías η ενεργειακή απόδοση της θέρμανσης νερού υπό ψυχρότερες κλιματικές συνθήκες -
24	Water heating energy efficiency under warmer climate conditions de energie-efficiëntie voor waterverwarming onder warmere klimaatomstandigheden vedenlämmityksen energiatehokkuus lämpimissä ilmasto-olosuhteissa	die Warmwasserbereitungs-Energieeffizienz bei wärmeren Klimaverhältnissen Energieeffektivität vid vattenuppvärmning under varmare klimatförhållanden energetická účinnost ohřevu vody za teplejších klimatických podmínek	l'efficacité énergétique pour le chauffage de l'eau, dans les conditions climatiques plus chaudes energieeffektivitet ved vandopvarmning under varmere klimaforhold енергийната ефективност при подгряване на вода при по-топли климатични условия	l'efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più calde a eficiencia energética do aquecimento de água em condições climáticas mais quentes efektywność energetyczna podgrzewania wody w warunkach klimatu ciepłego	la eficiencia energética de caldeo de agua en condiciones climáticas más cálidas η ενεργειακή απόδοση της θέρμανσης νερού υπό θερμότερες κλιματικές συνθήκες -
25	Sound power level L _{WA} outdoor het geluidsvermogensniveau L _{WA} buiten äänitehotaso L _{WA} ulkona	der Schalleistungspegel L _{WA} im Freien Ljudeffektivnivå L _{WA} i utomhus hladina akustického výkonu L _{WA} ve venkovním prostoru	le niveau de puissance acoustique L _{WA} à l'extérieur lydeeffektiveauet L _{WA} i ude ниводо на звуковата мощност L _{WA} на открито	il livello di potenza sonora L _{WA} all'esterno O nível de potência sonora L _{WA} no exterior poziom mocy akustycznej L _{WA} na zewnątrz	el nivel de potencia acústica L _{WA} en exteriores η στάθμη ηχητικής ισχύος L _{WA} εξωτερικού χώρου -

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

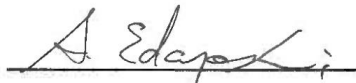
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.7	kW	Seasonal space heating energy efficiency	η_s	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	11.2	kW	Tj = - 7 °C	COPd	2.12	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.31	-
Tj = + 2 °C	Pdh	6.8	kW	Tj = + 7 °C	COPd	4.79	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.12	-
Tj = + 7 °C	Pdh	4.7	kW	Tj = bivalent temperature	COPd	2.12	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.03	-
Tj = +12 °C	Pdh	5.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	10.9	kW	Rated heat output (*)	Psup	1.8	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	7588	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details: MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

· Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.
 · Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.
 (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	171	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	12.3	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	4.08	-
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.45	-
Tj = + 7 °C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.90	-
Tj = +12 °C	Pdh	5.6	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	12.3	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.8	kW	Rated heat output (*)	Psup	2.1	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	6618	kWh				

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	145	%
Declared load profile	L						
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	medium-temperature application.	
Parameters for	colder climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10.7	kW	Seasonal space heating energy efficiency	η_s	123	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	6.5	kW	Tj = - 7 °C	COPd	3.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	3.34	-
Tj = + 2 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	4.50	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.28	-
Tj = + 7 °C	Pdh	3.5	kW	Tj = bivalent temperature	COPd	1.86	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.63	-
Tj = +12 °C	Pdh	4.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.98	-
Degradation co-efficient (**)	Cdh	0.98	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	9.0	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	9.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	8.7	kW	Rated heat output (*)	Psup	1.7	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8367	kWh				

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	123	%
Declared load profile	L						
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	164	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _d _h	8.4	kW	T _j = - 7 °C	COP _d	4.26	-
Degradation co-efficient (**)	C _d _h	0.99	-	T _j = + 2 °C	COP _d	4.40	-
T _j = + 2 °C	P _d _h	5.1	kW	T _j = + 7 °C	COP _d	5.38	-
Degradation co-efficient (**)	C _d _h	0.99	-	T _j = +12 °C	COP _d	7.00	-
T _j = + 7 °C	P _d _h	3.6	kW	T _j = bivalent temperature	COP _d	2.62	-
Degradation co-efficient (**)	C _d _h	0.98	-	T _j = operation limit temperature (***)	COP _d	2.01	-
T _j = +12 °C	P _d _h	4.3	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.80	-
Degradation co-efficient (**)	C _d _h	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _d _h	11.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _d _h	10.4	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _d _h	11.3	kW	Rated heat output (*)	P _{sup}	3.5	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8183	kWh				

For heat pump combination heater:							
Declared load profile				Water heating energy efficiency			
L				η_{wh}	123	%	
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

Contact details		MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.	Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.
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(**) If C_d_h is not determined by measurement then the default degradation coefficient is C_d_h = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	158	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	2.29	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	3.44	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.34	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	2.29	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.29	-
Tj = +12 °C	Pdh	4.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items	Capacity control	variable	Rated air flow rate, outdoors	-	2700	m ³ /h
	Sound power level, indoors/outdoors	L _{WA} 40 / 60				dBA
	Annual energy consumption	Q _{HE} 3708				kWh

For heat pump combination heater:						
Declared load profile	L			Water heating energy efficiency	η_{wh}	161 %
Daily electricity consumption	Q _{elec}	3.080	kWh			
Annual electricity consumption	AEC	678	kWh			

Contact details

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Manager, Quality Assurance Department

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	219	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	3.22	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	5.27	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	6.73	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	3.22	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.22	-
Tj = +12 °C	Pdh	4.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	2695	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	161	%	
Daily electricity consumption	Q _{elec}	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier;

Atsushi EDAYOSHI

The signature is signed in the average climate / medium-temperature section.

Manager, Quality Assurance Department

UNITED KINGDOM

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

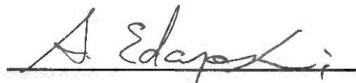
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.7	kW	Seasonal space heating energy efficiency	η_s	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	11.2	kW	Tj = - 7 °C	COPd	2.12	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.31	-
Tj = + 2 °C	Pdh	6.8	kW	Tj = + 7 °C	COPd	4.79	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.12	-
Tj = + 7 °C	Pdh	4.7	kW	Tj = bivalent temperature	COPd	2.12	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.03	-
Tj = +12 °C	Pdh	5.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	10.9	kW	Rated heat output (*)	Psup	1.8	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	7588	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details
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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	171	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dH}	12.3	kW	T _j = - 7 °C	COP _d	3.15	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = + 2 °C	COP _d	4.08	-
T _j = + 2 °C	P _{dH}	7.5	kW	T _j = + 7 °C	COP _d	5.56	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	7.45	-
T _j = + 7 °C	P _{dH}	5.0	kW	T _j = bivalent temperature	COP _d	3.15	-
Degradation co-efficient (**)	C _{dH}	0.98	-	T _j = operation limit temperature (***)	COP _d	2.90	-
T _j = +12 °C	P _{dH}	5.6	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dH}	0.98	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dH}	12.3	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dH}	11.8	kW	Rated heat output (*)	P _{sup}	2.1	kW
Bivalent temperature	T _{biv}	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	6618	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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(**) If C_{dH} is not determined by measurement then the default degradation coefficient is C_{dH} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10.7	kW	Seasonal space heating energy efficiency	η_s	123	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	6.5	kW	T _j = - 7 °C	COP _d	3.05	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	3.34	-
T _j = + 2 °C	P _{d,h}	3.9	kW	T _j = + 7 °C	COP _d	4.50	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	6.28	-
T _j = + 7 °C	P _{d,h}	3.5	kW	T _j = bivalent temperature	COP _d	1.86	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.63	-
T _j = +12 °C	P _{d,h}	4.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.98	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	9.0	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	9.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	8.7	kW	Rated heat output (*)	P _{sup}	1.7	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			
Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8367	kWh				
For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	123	%	
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

Contact details

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 (**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	no	
Heat pump combination heater:	yes	
Parameters for	low-temperature application.	
Parameters for	colder climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	164	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	8.4	kW	T _j = - 7 °C	COP _d	4.26	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	4.40	-
T _j = + 2 °C	P _{d,h}	5.1	kW	T _j = + 7 °C	COP _d	5.38	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	7.00	-
T _j = + 7 °C	P _{d,h}	3.6	kW	T _j = bivalent temperature	COP _d	2.62	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	2.01	-
T _j = +12 °C	P _{d,h}	4.3	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.80	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	11.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	10.4	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	11.3	kW	Rated heat output (*)	P _{sup}	3.5	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8183	kWh				

For heat pump combination heater:							
Declared load profile				Water heating energy efficiency			
L				η_{wh}	123	%	
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

Contact details		MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.	Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.
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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	no	
Heat pump combination heater:	yes	
Parameters for	medium-temperature application.	
Parameters for	warmer climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	158	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	2.29	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	3.44	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.34	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	2.29	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.29	-
Tj = +12 °C	Pdh	4.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	3708	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	161	%	
Daily electricity consumption	Q _{elec}	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

Contact details	MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.	Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.
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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	219	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	3.22	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	5.27	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	6.73	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	3.22	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.22	-
Tj = +12 °C	Pdh	4.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	2695	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	161	%	
Daily electricity consumption	Q _{elec}	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.7	kW	Seasonal space heating energy efficiency	η_s	137	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	11.2	kW	Tj = - 7 °C	COPd	2.12	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.34	-
Tj = + 2 °C	Pdh	6.8	kW	Tj = + 7 °C	COPd	4.79	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.12	-
Tj = + 7 °C	Pdh	4.7	kW	Tj = bivalent temperature	COPd	2.12	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.03	-
Tj = +12 °C	Pdh	5.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	10.9	kW	Rated heat output (*)	Psup	1.8	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	7498	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details: MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

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 (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	173	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	12.3	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	4.11	-
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.45	-
Tj = + 7 °C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.90	-
Tj = +12 °C	Pdh	5.6	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	12.3	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.8	kW	Rated heat output (*)	Psup	2.1	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	6539	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details
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 (***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	medium-temperature application.	
Parameters for	colder climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10.7	kW	Seasonal space heating energy efficiency	η_s	125	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	6.5	kW	T _j = - 7 °C	COP _d	3.10	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	3.35	-
T _j = + 2 °C	P _{d,h}	3.9	kW	T _j = + 7 °C	COP _d	4.60	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	6.28	-
T _j = + 7 °C	P _{d,h}	3.5	kW	T _j = bivalent temperature	COP _d	1.86	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.63	-
T _j = +12 °C	P _{d,h}	4.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.98	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	9.0	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	9.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	8.7	kW	Rated heat output (*)	P _{sup}	1.7	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8263	kWh				

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	123	%
Declared load profile	L						
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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Manager, Quality Assurance Department

UNITED KINGDOM

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	166	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	8.4	kW	T _j = - 7 °C	COP _d	4.33	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	4.40	-
T _j = + 2 °C	P _{d,h}	5.1	kW	T _j = + 7 °C	COP _d	5.50	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	7.00	-
T _j = + 7 °C	P _{d,h}	3.6	kW	T _j = bivalent temperature	COP _d	2.62	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	2.01	-
T _j = +12 °C	P _{d,h}	4.3	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.80	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	11.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	10.4	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	11.3	kW	Rated heat output (*)	P _{sup}	3.5	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8089	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	123	%	
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

Contact details		MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.		Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.	
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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature T_j is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	161	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	2.29	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	3.41	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.34	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	2.29	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.29	-
Tj = +12 °C	Pdh	4.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	3656	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	161	%	
Daily electricity consumption	Q _{elec}	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

Contact details

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Manager, Quality Assurance Department

UNITED KINGDOM

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	223	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	3.22	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	5.21	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	6.72	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	3.22	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.22	-
Tj = +12 °C	Pdh	4.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	2644	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	161	%	
Daily electricity consumption	Q _{elec}	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

Contact details

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST30C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.


Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.7	kW	Seasonal space heating energy efficiency	η_s	137	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	11.2	kW	Tj = - 7 °C	COPd	2.12	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.34	-
Tj = + 2 °C	Pdh	6.8	kW	Tj = + 7 °C	COPd	4.79	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.12	-
Tj = + 7 °C	Pdh	4.7	kW	Tj = bivalent temperature	COPd	2.12	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.03	-
Tj = +12 °C	Pdh	5.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	10.9	kW	Rated heat output (*)	Psup	1.8	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	7498	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	XL			η_{wh}	120	%	
Daily electricity consumption	Q _{elec}	6.580	kWh				
Annual electricity consumption	AEC	1448	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST30C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	low-temperature application.	
Parameters for	average climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	173	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	12.3	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	4.11	-
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.45	-
Tj = + 7 °C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.90	-
Tj = +12 °C	Pdh	5.6	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	12.3	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.8	kW	Rated heat output (*)	Psup	2.1	kW
Bivalent temperature	Tbiv	-7	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	6539	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	XL			η_{wh}	120	%	
Daily electricity consumption	Q _{elec}	6.580	kWh				
Annual electricity consumption	AEC	1448	kWh				

Contact details		MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.		Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.	
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Atsushi EDAYOSHI

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Manager, Quality Assurance Department

UNITED KINGDOM

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST30C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10.7	kW	Seasonal space heating energy efficiency	η_s	125	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	6.5	kW	T _j = - 7 °C	COP _d	3.10	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	3.35	-
T _j = + 2 °C	P _{d,h}	3.9	kW	T _j = + 7 °C	COP _d	4.60	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	6.28	-
T _j = + 7 °C	P _{d,h}	3.5	kW	T _j = bivalent temperature	COP _d	1.86	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.63	-
T _j = +12 °C	P _{d,h}	4.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.98	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	9.0	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	9.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	8.7	kW	Rated heat output (*)	P _{sup}	1.7	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			
Capacity control				Rated air flow rate, outdoors			
variable				-			
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA	2700 m ³ /h			
Annual energy consumption	Q _{HE}	8263	kWh				

For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	η_{wh}	93	%
Daily electricity consumption	Q _{elec}	8.430	kWh				
Annual electricity consumption	AEC	1855	kWh				

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature T_j is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST30C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.9	kW	Seasonal space heating energy efficiency	η_s	166	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.4	kW	Tj = - 7 °C	COPd	4.33	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.40	-
Tj = + 2 °C	Pdh	5.1	kW	Tj = + 7 °C	COPd	5.50	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.00	-
Tj = + 7 °C	Pdh	3.6	kW	Tj = bivalent temperature	COPd	2.62	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.01	-
Tj = +12 °C	Pdh	4.3	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.80	-
Degradation co-efficient (**)	Cdh	0.98	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	11.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	10.4	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	11.3	kW	Rated heat output (*)	Psup	3.5	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8089	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	XL			η_{wh}	93	%	
Daily electricity consumption	Q _{elec}	8.430	kWh				
Annual electricity consumption	AEC	1855	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112VAA(-BS)
	Indoor unit:	ERST30C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	medium-temperature application.	
Parameters for	warmer climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	161	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	2.29	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	3.41	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.34	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	2.29	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.29	-
Tj = +12 °C	Pdh	4.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	3656	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	XL			η_{wh}	127	%	
Daily electricity consumption	Q _{elec}	6.220	kWh				
Annual electricity consumption	AEC	1368	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	Indoor unit:	ERST30C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	low-temperature application.	
Parameters for	warmer climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.2	kW	Seasonal space heating energy efficiency	η_s	223	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 °C	COPd	3.22	-
Tj = + 2 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	5.21	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	6.72	-
Tj = + 7 °C	Pdh	7.2	kW	Tj = bivalent temperature	COPd	3.22	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.22	-
Tj = +12 °C	Pdh	4.3	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	11.2	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	11.2	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items	Capacity control	variable	Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA			
Annual energy consumption	Q _{HE}	2644	kWh			

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	XL			η_{wh}	127	%	
Daily electricity consumption	Q _{elec}	6.220	kWh				
Annual electricity consumption	AEC	1368	kWh				

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