

This information was generated by the HP KEYMARK database on 5 Mar 2021

Summary of	WSAN-YMi 91-141	Reg. No.	041-K008-01
Certificate Holder			
Name	Clivet s.p.a.		
Address	Via camp lonc 25 c.ap.	Zip	I-32032
City	z.i. Villapaiera - Feltre (BL)	Country	Italy
Certification Body	BRE Global Limited		
Subtype title	WSAN-YMi 91-141		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass Of Refrigerant	5 kg		
Certification Date	18.12.2021		
Testing basis	Heat Pump Keymark Scheme Rules Rev 08		

Model: WSAN-YMi 91

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-4

Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2

	Low temperature	Medium temperature
Heat output	18.32 kW	18.10 kW
El input	3.96 kW	6.63 kW
COP	4.63	2.73

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	71.00 dB(A)	71.00 dB(A)

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EN 14825

	Low temperature	Medium temperature
η_s	181.00 %	125.00 %
Prated	17.99 kW	17.67 kW
SCOP	4.60	3.21
Tbiv	-7.00 °C	-7.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	15.90 kW	15.61 kW
COP Tj = -7°C	2.85	1.72
Cdh	0.90	0.90
Pdh Tj = +2°C	9.66 kW	9.59 kW
COP Tj = +2°C	4.59	3.32
Cdh	0.90	0.90
Pdh Tj = +7°C	6.56 kW	6.37 kW
COP Tj = +7°C	5.99	4.48
Cdh	0.90	0.90
Pdh Tj = 12°C	3.76 kW	3.57 kW
COP Tj = 12°C	7.08	5.27
Cdh	0.90	0.90
Pdh Tj = Tbiv	15.90 kW	15.61 kW
COP Tj = Tbiv	2.85	1.72

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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.13 kW	15.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.49	1.17
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	0.00 kW	2.64 kW
Annual energy consumption Qhe	8086.00 kWh	11375.00 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	71.00 dB(A)	71.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	226.00 %	157.00 %
Prated	17.67 kW	18.07 kW
SCOP	5.74	4.00

This information was generated by the HP KEYMARK database on 5 Mar 2021

Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	17.84 kW	18.44 kW
COP Tj = +2°C	3.53	2.12
Cdh	0.90	0.90
Pdh Tj = +7°C	11.36 kW	11.62 kW
COP Tj = +7°C	5.16	3.49
Cdh	0.90	0.90
Pdh Tj = 12°C	5.45 kW	5.35 kW
COP Tj = 12°C	7.01	5.09
Cdh	0.90	0.90
Pdh Tj = Tbiv	11.36 kW	11.62 kW
COP Tj = Tbiv	5.16	3.49
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.84 kW	18.44 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.53	2.12
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric

This information was generated by the HP KEYMARK database on 5 Mar 2021

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	4116.00 kWh	6041.00 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	71.00 dB(A)	71.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	146.00 %	97.00 %
Prated	17.76 kW	18.38 kW
SCOP	3.73	2.50
T _{biv}	-15.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
P _{dh} T _j = -7°C	11.21 kW	11.13 kW
COP T _j = -7°C	3.09	1.98
C _{dh}	0.90	0.90
P _{dh} T _j = +2°C	6.64 kW	6.65 kW
COP T _j = +2°C	4.50	3.44
C _{dh}	0.90	0.90

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = +7°C	4.77 kW	4.66 kW
COP Tj = +7°C	5.85	4.35
Cdh	0.90	0.90
Pdh Tj = 12°C	3.95 kW	3.74 kW
COP Tj = 12°C	7.18	5.68
Cdh	0.90	0.90
Pdh Tj = Tbiv	14.49 kW	11.13 kW
COP Tj = Tbiv	2.42	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.14 kW	13.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.67	1.21
WTOL	60.00 °C	60.00 °C
Poff	20.00 W	20.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	4.62 kW	18.38 kW
Annual energy consumption Qhe	11740.00 kWh	18156.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	14.49	13.56
COP Tj = -15°C (if TOL<-20°C)	2.42	1.21
Cdh	0.90	0.90

Model: WSAN-YMi 101

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-4

Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2

	Low temperature	Medium temperature
Heat output	22.30 kW	22.10 kW
El input	5.13 kW	8.33 kW
COP	4.35	2.65

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	73.00 dB(A)	73.00 dB(A)

This information was generated by the HP KEYMARK database on 5 Mar 2021

EN 14825

	Low temperature	Medium temperature
η_s	178.00 %	126.00 %
Prated	22.31 kW	22.43 kW
SCOP	4.53	3.22
Tbiv	-7.00 °C	-7.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	19.72 kW	19.82 kW
COP Tj = -7°C	2.74	1.74
Cdh	0.90	0.90
Pdh Tj = +2°C	12.03 kW	11.89 kW
COP Tj = +2°C	4.41	3.32
Cdh	0.90	0.90
Pdh Tj = +7°C	8.00 kW	7.97 kW
COP Tj = +7°C	6.29	4.66
Cdh	0.90	0.90
Pdh Tj = 12°C	3.79 kW	3.60 kW
COP Tj = 12°C	7.14	5.32
Cdh	0.90	0.90
Pdh Tj = Tbiv	19.72 kW	19.82 kW
COP Tj = Tbiv	2.74	1.74

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.33 kW	13.81 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.35	1.08
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	1.97 kW	8.60 kW
Annual energy consumption Qhe	10180.00 kWh	14390.00 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	73.00 dB(A)	73.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	234.00 %	161.00 %
Prated	21.90 kW	22.01 kW
SCOP	5.85	4.09

This information was generated by the HP KEYMARK database on 5 Mar 2021

Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	21.81 kW	22.12 kW
COP Tj = +2°C	3.31	2.12
Cdh	0.90	0.90
Pdh Tj = +7°C	14.08 kW	14.15 kW
COP Tj = +7°C	5.20	3.50
Cdh	0.90	0.90
Pdh Tj = 12°C	6.44 kW	6.38 kW
COP Tj = 12°C	7.50	5.34
Cdh	0.90	0.90
Pdh Tj = Tbiv	14.08 kW	14.15 kW
COP Tj = Tbiv	5.20	3.50
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	21.81 kW	22.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.31	2.12
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric

This information was generated by the HP KEYMARK database on 5 Mar 2021

Supplementary Heater: PSUP	0.09 kW	0.00 kW
Annual energy consumption Q _{he}	4945.00 kWh	7180.00 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	73.00 dB(A)	73.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	146.00 %	102.00 %
Prated	21.40 kW	22.36 kW
SCOP	3.72	2.62
T _{biv}	-15.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
P _{dh} T _j = -7°C	13.30 kW	13.53 kW
COP T _j = -7°C	3.12	2.07
C _{dh}	0.90	0.90
P _{dh} T _j = +2°C	8.25 kW	8.61 kW
COP T _j = +2°C	4.42	3.70
C _{dh}	0.90	0.90

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = +7°C	5.45 kW	5.21 kW
COP Tj = +7°C	5.87	4.49
Cdh	0.90	0.90
Pdh Tj = 12°C	3.98 kW	3.74 kW
COP Tj = 12°C	7.19	5.76
Cdh	0.90	0.90
Pdh Tj = Tbiv	17.46 kW	13.53 kW
COP Tj = Tbiv	2.36	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.27 kW	13.78 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.69	1.24
WTOL	60.00 °C	60.00 °C
Poff	20.00 W	20.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	8.13 kW	22.36 kW
Annual energy consumption Qhe	14179.00 kWh	21067.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	17.46	13.78
COP Tj = -15°C (if TOL<-20°C)	2.36	1.24
Cdh	0.90	0.90

Model: WSAN-YMi 121

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-4

Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2

	Low temperature	Medium temperature
Heat output	26.30 kW	26.06 kW
El input	6.50 kW	10.72 kW
COP	4.05	2.43

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	75.00 dB(A)	75.00 dB(A)

This information was generated by the HP KEYMARK database on 5 Mar 2021

EN 14825

	Low temperature	Medium temperature
η_s	177.00 %	123.00 %
Prated	25.04 kW	26.15 kW
SCOP	4.50	3.14
Tbiv	-7.00 °C	-6.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	22.12 kW	20.64 kW
COP Tj = -7°C	2.57	1.69
Cdh	0.90	0.90
Pdh Tj = +2°C	13.76 kW	14.26 kW
COP Tj = +2°C	4.44	3.12
Cdh	0.90	0.90
Pdh Tj = +7°C	9.36 kW	9.29 kW
COP Tj = +7°C	6.52	4.74
Cdh	0.90	0.90
Pdh Tj = 12°C	4.09 kW	3.89 kW
COP Tj = 12°C	7.35	5.48
Cdh	0.90	0.90
Pdh Tj = Tbiv	22.12 kW	22.11 kW
COP Tj = Tbiv	2.57	1.88

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.33 kW	13.86 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.35	1.08
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	4.68 kW	12.28 kW
Annual energy consumption Qhe	11489.00 kWh	17204.00 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	75.00 dB(A)	75.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	231.00 %	168.00 %
Prated	26.08 kW	26.22 kW
SCOP	5.85	4.26

This information was generated by the HP KEYMARK database on 5 Mar 2021

Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	25.50 kW	26.50 kW
COP Tj = +2°C	3.00	1.99
Cdh	0.90	0.90
Pdh Tj = +7°C	16.77 kW	16.86 kW
COP Tj = +7°C	5.02	3.47
Cdh	0.90	0.90
Pdh Tj = 12°C	7.65 kW	7.58 kW
COP Tj = 12°C	7.78	5.94
Cdh	0.90	0.90
Pdh Tj = Tbiv	16.77 kW	16.86 kW
COP Tj = Tbiv	5.02	3.47
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25.50 kW	26.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	1.99
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric

This information was generated by the HP KEYMARK database on 5 Mar 2021

Supplementary Heater: PSUP	0.58 kW	0.00 kW
Annual energy consumption Q _{he}	5959.00 kWh	8218.00 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	75.00 dB(A)	75.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	143.00 %	101.00 %
Prated	25.75 kW	26.27 kW
SCOP	3.64	2.59
T _{biv}	-12.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
P _{dh} T _j = -7°C	15.91 kW	15.90 kW
COP T _j = -7°C	3.10	2.10
C _{dh}	0.90	0.90
P _{dh} T _j = +2°C	10.10 kW	10.17 kW
COP T _j = +2°C	4.45	3.58
C _{dh}	0.90	0.90

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = +7°C	6.30 kW	6.52 kW
COP Tj = +7°C	6.06	4.99
Cdh	0.90	0.90
Pdh Tj = 12°C	4.03 kW	3.63 kW
COP Tj = 12°C	7.13	5.68
Cdh	0.90	0.90
Pdh Tj = Tbiv	18.97 kW	15.90 kW
COP Tj = Tbiv	2.36	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.07 kW	13.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.67	1.20
WTOL	60.00 °C	60.00 °C
Poff	20.00 W	20.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	12.68 kW	26.27 kW
Annual energy consumption Qhe	17421.00 kWh	24967.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.95	13.37
COP Tj = -15°C (if TOL<-20°C)	2.27	1.20
Cdh	0.90	0.90

Model: WSAN-YMi 141

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-4

Shutting off the heat transfer medium flow	
Complete power supply failure	
Defrost test	
Starting and operating test	

EN 14511-2

	Low temperature	Medium temperature
Heat output	29.93 kW	29.68 kW
El input	8.02 kW	12.97 kW
COP	3.73	2.29

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	77.00 dB(A)	77.00 dB(A)

This information was generated by the HP KEYMARK database on 5 Mar 2021

EN 14825

	Low temperature	Medium temperature
η_s	165.00 %	123.00 %
Prated	29.18 kW	29.69 kW
SCOP	4.19	3.14
Tbiv	-5.00 °C	-5.00 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	21.90 kW	20.11 kW
COP Tj = -7°C	2.54	1.63
Cdh	0.90	0.90
Pdh Tj = +2°C	16.16 kW	16.49 kW
COP Tj = +2°C	4.16	3.09
Cdh	0.90	0.90
Pdh Tj = +7°C	10.64 kW	10.50 kW
COP Tj = +7°C	6.38	4.75
Cdh	0.90	0.90
Pdh Tj = 12°C	4.54 kW	4.64 kW
COP Tj = 12°C	7.72	5.91
Cdh	0.90	0.90
Pdh Tj = Tbiv	23.51 kW	23.97 kW
COP Tj = Tbiv	2.71	2.02

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	20.37 kW	13.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.35	1.07
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	8.75 kW	15.86 kW
Annual energy consumption Qhe	14165.00 kWh	19316.17 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	77.00 dB(A)	77.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	213.00 %	163.00 %
Prated	30.44 kW	29.73 kW
SCOP	5.39	4.15

This information was generated by the HP KEYMARK database on 5 Mar 2021

Tbiv	7.00 °C	7.00 °C
TOL	2.00 °C	2.00 °C
Pdh Tj = +2°C	26.29 kW	26.41 kW
COP Tj = +2°C	2.94	1.99
Cdh	0.90	0.90
Pdh Tj = +7°C	19.57 kW	19.11 kW
COP Tj = +7°C	4.75	3.37
Cdh	0.90	0.90
Pdh Tj = 12°C	8.90 kW	8.92 kW
COP Tj = 12°C	7.53	6.09
Cdh	0.90	0.90
Pdh Tj = Tbiv	19.57 kW	19.11 kW
COP Tj = Tbiv	4.75	3.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	26.29 kW	26.41 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.94	1.99
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric

This information was generated by the HP KEYMARK database on 5 Mar 2021

Supplementary Heater: PSUP	4.15 kW	3.32 kW
Annual energy consumption Q _{he}	7540.00 kWh	9580.00 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	77.00 dB(A)	77.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	138.00 %	100.00 %
Prated	29.13 kW	30.41 kW
SCOP	3.52	2.56
T _{biv}	-10.00 °C	-7.00 °C
TOL	-22.00 °C	-15.00 °C
P _{dh} T _j = -7°C	18.49 kW	18.40 kW
COP T _j = -7°C	3.07	2.10
C _{dh}	0.90	0.90
P _{dh} T _j = +2°C	11.88 kW	11.22 kW
COP T _j = +2°C	4.42	3.51
C _{dh}	0.90	0.90

This information was generated by the HP KEYMARK database on 5 Mar 2021

Pdh Tj = +7°C	7.53 kW	7.42 kW
COP Tj = +7°C	6.15	5.18
Cdh	0.90	0.90
Pdh Tj = 12°C	4.11 kW	3.64 kW
COP Tj = 12°C	6.87	5.73
Cdh	0.90	0.90
Pdh Tj = Tbiv	19.93 kW	18.40 kW
COP Tj = Tbiv	2.44	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.17 kW	13.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.67	1.18
WTOL	60.00 °C	60.00 °C
Poff	18.00 W	18.00 W
PTO	96.00 W	96.00 W
PSB	18.00 W	18.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	15.96 kW	30.41 kW
Annual energy consumption Qhe	20390.00 kWh	29238.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	18.61	13.06
COP Tj = -15°C (if TOL<-20°C)	2.24	1.18
Cdh	0.90	0.90