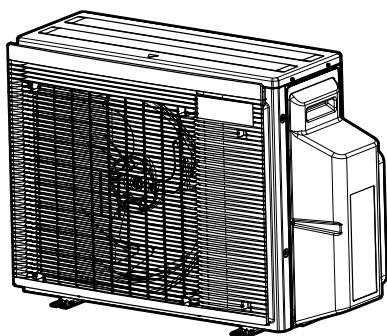




Installation manual



R32 Split series



5MWXM68A2V1B9
5MWXM90A2V1B9

Installation manual
R32 Split series

English

[illegible]

Daikin Industries Czech Republic s.r.o.

- 01 declare under its sole responsibility that the products to which this declaration relates:
02 erkärt in alleiniger Verantwortung, dass die Produkte, auf die sich diese Erklärung bezieht:
03 déclare sous sa seule responsabilité que les produits visés par la présente déclaration:
04 verklaart hierbij op eigen verantwoordelijkheid dat de producten waarop deze verklaring betrekking heeft:
05 declare bajo su única responsabilidad que los productos a los que hace referencia esta declaración:
06 dichiara sotto la propria responsabilità che i prodotti a cui è riferita questa dichiarazione:
07 δηλώνει κάτω από την αποκλειστική της ευθύνη ότι το προϊόν/τα οποία αναφέρονται στην παρούσα δήλωση:
08 declare sous sa seule responsabilité que les produits à laquelle cette déclaration se réfère:

- 5MWXM68A2V1B9, 5MWXM90A2V1B9,

- | | | | |
|----|---|----|--|
| 01 | are in conformity with the following directives(s) or regulations(s), provided that the products are used in accordance with our instructions. | 05 | estran en conformidat cu următoarele directive(s) sau regulamente(s), cu condiția ca produsele să fie utilizate în conformitate cu instrucțiunile noastre. |
| 02 | following in Richtlinien oder Vorschriften eingehend werden, vorausgesetzt, dass diese gemäß unseren Instruktionen verwendet werden. | 06 | conformi ale directive și/sau regulamentele respective, atâta timp cât produsele vor fi utilizate în conformitate cu instrucțiunile noastre. |
| 03 | conformes à la(s) directive(s) ou règlement(s) suivants(s), à condition que les produits soient utilisés conformément à nos instructions. | 07 | conformi cu directivele și/sau regulamentele următoare, în condiția ca produsele să fie utilizate în conformitate cu instrucțiunile noastre. |
| 04 | in overeenstemming zij met de volgende richtlijn(en) of verordening(en) op voorwaarde dat de producten worden gebruikt overeenkomstig onze instructies. | 08 | în concordanță cu următoarele directive(s) și/sau regulamente(s), desigur că produsele sunt utilizate în conformitate cu instrucțiunile noastre. |

Pressure Equipment 2014/68/EU**

Machinery 2006/42/EC***

Low Voltage 2014/35/EU

Electromagnetic Compatibility 2014/30/EU*

- | | | | |
|----|-----------------------------------|----|---------------------------------|
| 01 | following the provisions of: | 10 | under liggelse af: |
| 02 | gemäß den Bestimmungen in: | 11 | enligt bestemmelserne for: |
| 03 | conformément aux dispositions de: | 12 | i henhold til bestemmelserne i: |
| 04 | volgens de bepalingen van: | 13 | noudatien sääntöksi: |
| 05 | según las disposiciones de: | 14 | za određene sámkoká: |
| 06 | secondo le disposizioni di: | 15 | za određene ustanovi: |
| 07 | según las disposiciones de: | 16 | prema odredbeni: |
| 08 | segundo as disposições de: | 17 | zgodnje z ustanovitvenimi: |
| 09 | as disposições de: | 18 | umaind gredvelier: |

- 001 * as set out in <A> and judged positively by according to the **Certificado** <A>
 * as set out in the Technical Construction File <A> and judged positively by (Modulo <A> aplicado) <A> Risk category <A> Also refer to next page
- 002 * wie in <A> aufgeführt und von positiv beurteilt gemäß **Zertifikat** <A>
 * wie in der Technischen Konstruktionsakte <A> aufgeführt und von (Angewandtes Modul <A>) positiv ausgezeichnet <A> Risikoart <A> Siehe auch nächste Seite
- 003 * tel que défini dans <A> et évalué positivement par conformément au **Certificat** <A>
 * tel que stipulé dans le Fichier de Construction Technique <A> et jugé positivement par (Module appliqué) <A> Catégorie de risque <A> Se reporter également à la page suivante
- 004 * zoals is vermeld in <A> en positief beoordeeld door overeenkomstig **Certificaat** <A>
 * zoals is vermeld in het Technisch Constructiedossier <A> en is orde bevonden door (Toegestelde module) <A> Risicocategorie <A> Zie ook de volgende pagina
- 005 * como se establece en <A> y es valorado positivamente por de acuerdo con el **Certificado** <A>
 * tal como se expone en el Archivo de Construcción Técnica <A> y juzgado positivamente por (Modulo aplicado) <A> Categoría de riesgo <A> Consulte también la siguiente página
- 006 * delineato nel <A> e giudicato positivamente da secondo il **Certificato** <A>
 * delineato nel File Tecnico di Costruzione <A> e giudicato positivamente da (Modulo applicato) <A> Categoria di rischio <A> Fare riferimento anche alla pagina successiva
- 007 * как указано в <A> и квалифицировано с положительным решением по **Сертификату** <A>
 * как провозглашено автором Проекта Технической Конструкции <A> как критерий для (Применяемого модуля) <A> Категория риска <A> Смотрите также следующую страницу
- 008 * tal como establecido en <A> e com o parecer positivo de de acordo com o **Certificado** <A>
 * tal como estabelecido no Ficheiro Técnico de Construção <A> e com o parecer positivo de (Modulo aplicado) <A> Categoria de risco <A> Consultar também a página seguinte
- 009 * как указано в <A> и в соответствии с положительным решением согласно **Свидетельству** <A>
 * как указано в Досье технического толкования <A> и в соответствии с положительным решением (Применяемый модуль) <A> Категория риска <A> Также смотрите следующую страницу
- 010 * som arten i den tekniske konstruktionsfil <A> godkiftet vurderet af som arten i den tekniske konstruktionsfil <A> godkiftet vurderet af (Anvendt modul) <A> Risikoklasse <A> Se også næste side

- 01** DIC² is authorised to compile the Technical Construction File.
02** DIC² hat die Berechtigung die Technische Konstruktionsakte zusammenzustellen.
03** DIC² est autorisé à compiler le Dossier de Construction Technique.
04** DIC² is bevoegd om het Technisch Constructiedossier samen te stellen.
05** DIC² está autorizado a compilar el Archivo de Construcción Técnica.
06** DIC² è autorizzata a redigere il File Tecnico di Costruzione.

- [†]
- DICZ = Daikin Industries Czech Republic s.r.o.

- | | | | |
|----|---|----|---------------------------------|
| 29 | отвечает требованиям, упомянутых ниже директив или нормативных документов при условии эксплуатации данной продукции в соответствии с нашими инструкциями. | 01 | as amended, |
| 10 | overniet bepaalde in de volgende directie(n) of bestimmung(en), lousst at productie anderszins overeenstemme met voor | 02 | in der jeweils gültigen Fassung |
| 11 | instelling: (n) volgende directie of bestimmung(en) voor toelating att | 03 | telles que modifiées, |
| 10 | productie anderszins in eenge met voor instructies. | 04 | zoals gewijzigd, |
| | | 05 | en su forma emendada, |
| | | 06 | e successive modifiée, |
| | | 07 | оных и/или поправлений, |

- 19 v skladu z določbami:
20 vastavali nōutele:
21 с предвайнкы клязкыте н
22 vadovavajantis šio doku
23 atbilstoši šādai standar
24 nasledovnyimi ustanov
25 su standartarn būkum

EN 60335-2-40,

- 11 *enligt med sig godkänds av $\diamond$ enligt **Confirmität** $\diamond$
 12 *enligt med den Tekniska Konstruktionsjournen $\diamond$ som positivt utnyttas
 av $\diamond$ (Fasistt modl) $\diamond$ Reskalogori $\diamond$ Se även nästa
 sida.
 12 *som de framkommer i $\diamond$ och därnäm om positivt bedömmelse av $\diamond$
 tillge **Serifitakt** $\diamond$
 som de framkommer i den Tekniska Konstruktionsjournen $\diamond$ och därnäm
 positivt bedömmelse av $\diamond$ (Använd modl) $\diamond$ Riskkalogori
 $\diamond$ Se også neste side.
 13 *idita en enligt asatkrassas $\diamond$ ja paka $\diamond$ en hyalysynt
Serifitakt $\diamond$ mulakstet.
 14 *idita en enligt i tekniska Asatkrassas $\diamond$ paka $\diamond$ en hyalysynt
 (Sovetlet modl) $\diamond$ Varrakucka $\diamond$ Kato myös seinäava
 sivu.
 15 *rak bivo i mediet $\diamond$ a rönjälve rönjälve $\diamond$ rönjälve

- 20
5. **ovisnostima** <?>
*jako bi u učenju i sabiranu tehničkoj konstrukciji <?> a pozitivne
zbišeno <?> pozivaj modli <?> <?> Kaldreine rizi <?>
Viz takie nasljeduju strana.
6. **Certifikat** <?>
kako je izloženo <?> pozitivno ocijenjeno od strane <?> prema
7. **certifikat** <?>
kako je izloženo i Dobišeno i Lembičoj konstrukciji <?> pozitivno
ocijenjeno od strane <?> (Primijenjen modli <?> <?> Kategorija
opasnosti <?>). Također pogledajte na sljedećoj stranici.
8. **ovisnostima** <?>
vin i ovu ovješću; toj Tekstnoj ovješću kompoziciji
implar a dokumentaciju tehnica de fabrico.
eua coarsim; komentir tehničkoj ovješću taumai.
tebeje de tekste tekst udvorskida.
imnialita; den teksta konstitucijstien
lere den Tekste konstitucijstien.

- 07** Η DICZ είναι εξουσιοδοτημένη να συντάξει τον Τεχνικό φάκελο κατασκευής.
- 08** Α DICZ está autorizada a compilar a documentação técnica de fabrico.
- 09** Компания ДИЦЗ уполномочена составить Комплект технической документации.
- 10** DICZ är auktoriserad att sammanställa de tekniska konstruktionsdata.
- 11** DICZ är bemyndigad att sammanställa den tekniska konstruktionsfilen.
- 12** DICZ har tillatelse til å kompilere den Tekniske konstruktionsfilen.

- [illegible]

- 08 conforme emendado,
09 в действующей редакции,
10 som tilføjet,
11 med tilføjet,
12 med forelæste endringer,
13 sellaisina kuin ne ovat muuttetuina

- [illegible]

- 13^o DICZ na vialluettelu laimaan Teknisen asiakirjan.
- 14^o Seuran DICZ na ovrninen ke kompilaat souboru teknické konstrukce.
- 15^o DICZ je ovršen za trzdu. Datoteke o temickoj konstrukciji.
- 16^o ADICZ pogostu a miszaké konstrukcijske dokumentacije oszeallatására.
- 17^o DICZ este autorizatna sa ovrzavanja dokumentacije konstrukcijske konstrukcije.
- 18^o DICZ este autorizatna sa ovrzavanja dokumentacije konstrukcijske konstrukcije.

- [illegible]

- 17 spehaja vinnosti nastopajočih direktiv, ki so razporejeni, pod
18 varstvom, da postopki uveljavne so zgodbe z našimi institucijami;
19 sult i nformacije cu umirabotbe direktive su regulaminte, cu
20 condita ca proutseje sa le uveljate i nformate cu i nstruicije
21 roabote;
22 v skladu z naslednjo direktivo(-) ali predpisom(-) pod pogojem, da se
23 izdeli poročilo / skladu z našimi narodi;
24 vasedar jagnje (jagniste direktive) de ja matruise (matruise)
25 nooleje, trigimse, i nad kaseljeke vavstave meje i jhuiste;
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
8

14. v plátnem zření,
15. jako je zmíněno amandamentem,
16. a mladšími redakcemi,
17. z pozdějšími změnami.
18. o amandamentě respektive,
19. jako je blo srovnáno,
20. koss mudatstvega,
21. srevne zovlenia,
22. iz vs toboisn redakcijas,
23. a gipozujem.
24. v poslednom plátnom vydaní,
25. dešitindji sektivje.

- | | | | |
|----|---|-----|----------------------------|
| 21 | *kato je kategorija v <A> i ošieneno popozimelno ot sblagano | <A> | DAIKIN.TCF.032F/15/01-2025 |
| | Serifizacija | | |
| | *kato je zaplojeno v kta za tehnikosa vspozitij <D> i ošieneno popozimelno ot <E> (priplojeno kopti <F> <G> kategorija pizic | | DEKRA (NB0344) |
| 22 | klike caulo na ošienelata moptina <A>
*kap nistajta <A> i kap leglana na nuprešta pagal | <C> | 2159619.0651-EMC |
| | Serifizacija | | |
| | *kap nuprešta Tehnične konstrukcije blyže <D> i rativrima <E> (konkoma modalis <F>). Rizikos kategorija <A>. Tap rat žürekite i kila puzijaj. | <D> | DAIKIN.TCF.PED.07.431B |
| 23 | *ka narditis <A> an ablistoš pozivijajam velijajumam saskajaj at serifizatu <C>
*ka narditis temisajja dokumentacija <A> ablistoš pozivijajam lenumam (pektrajja sadala <F>). <G> Riska kategorija <A> Skat anif narkoš lapusi. | <E> | VINÇOTTE nv (NB0026) |
| | | <F> | D1 |
| | | <G> | — |
| 24 | *ako bolo uvietenje <A> a pozivijne zistanje v silade | <H> | II |

- 19¹⁹ DIC² je pooblaščen za sestavo dodatke a) in tehnično mapo.
20²⁰ DIC² on volitvati kosostana temilist dokumentaciioni.
21²¹ DIC² e poropirana da osastavi Arta za tehnična konstrukcija.
22²² DIC² ya galida sudarjti si tehnične konstrukcije lala.
23²³ DIC² e autorizirani sasilisti tehnično dokumentacija.
24²⁴ Spodobnost DIC² je opranirani vyvorit slobor tehničke konstrukcije.
25²⁵ DIC² Teknik Ya Dosvami derlemeye vekildir.

[illegible][illegible][illegible]

Table of contents

1	About the documentation	4
1.1	About this document.....	4
2	Specific installer safety instructions	5
3	About the box	6
3.1	Outdoor unit.....	6
3.1.1	To remove the accessories from the outdoor unit.....	6
4	Unit installation	6
4.1	Preparing the installation site	6
4.1.1	Installation site requirements of the outdoor unit	7
4.1.2	Additional installation site requirements of the outdoor unit in cold climates	7
4.2	Mounting the outdoor unit.....	7
4.2.1	To provide the installation structure	7
4.2.2	To install the outdoor unit.....	8
4.2.3	To provide drainage	8
5	Piping installation	8
5.1	Preparing refrigerant piping	8
5.1.1	Refrigerant piping requirements.....	8
5.1.2	Refrigerant piping insulation	9
5.1.3	Refrigerant piping length and height difference	9
5.2	Connecting the refrigerant piping	9
5.2.1	Connections between outdoor and indoor unit using reducers	10
5.2.2	To connect the refrigerant piping to the outdoor unit..	11
5.2.3	To install sound insulation.....	11
5.3	Checking the refrigerant piping.....	11
5.3.1	To check for leaks.....	11
5.3.2	To perform vacuum drying	11
6	Charging refrigerant	12
6.1	About the refrigerant.....	12
6.2	To determine the additional refrigerant amount.....	12
6.3	To determine the complete recharge amount.....	12
6.4	To charge additional refrigerant.....	12
6.5	To fix the fluorinated greenhouse gases label.....	13
6.6	To check refrigerant piping joints for leaks after charging refrigerant	13
7	Electrical installation	13
7.1	Specifications of standard wiring components	13
7.2	To connect the electrical wiring to the outdoor unit	14
8	Finishing the outdoor unit installation	14
8.1	To finish the outdoor unit installation.....	14
9	Maintenance and service	15
10	Configuration	15
10.1	About standby electricity saving function.....	15
10.1.1	To turn ON standby electricity saving function.....	15
10.2	About priority room function.....	15
10.2.1	To set the priority room function	15
10.3	About night quiet mode.....	16
10.3.1	To turn ON the night quiet mode.....	16
10.4	About heat mode lock.....	16
10.4.1	To turn ON heat mode lock.....	16
11	Commissioning	16
11.1	Checklist before commissioning.....	16
11.2	Checklist during commissioning	17
11.3	Trial operation and testing.....	17
11.3.1	About wiring error check	17
11.3.2	To perform a test run	17
11.4	Starting up the outdoor unit	18

12	Disposal	18
-----------	-----------------	-----------

13	Technical data	18
-----------	-----------------------	-----------

13.1	Wiring diagram	18
13.1.1	Unified wiring diagram legend.....	18
13.2	Piping diagram: Outdoor unit.....	19

1 About the documentation

1.1 About this document



WARNING

Make sure installation, servicing, maintenance, repair and applied materials follow the instructions from Daikin (including all documents listed in "Documentation set") and, in addition, comply with applicable legislation and are performed by qualified persons only. In Europe and areas where IEC standards apply, EN/IEC 60335-2-40 is the applicable standard.

Target audience

Authorised installers



INFORMATION

This appliance is intended to be used by expert or trained users in shops, in light industry, and on farms, or for commercial and household use by lay persons.



INFORMATION

This document only describes installation instructions specific to the outdoor unit. For installation of the indoor unit (mounting the indoor unit, connecting the refrigerant piping to the indoor unit, connecting the electrical wiring to the indoor unit ...), see the installation manual of the indoor unit.

Documentation set

This document is part of a documentation set. The complete set consists of:

- **General safety precautions:**
 - Safety instructions that you **MUST** read before installing
 - Format: Paper (in the box of the outdoor unit)
- **Outdoor unit installation manual:**
 - Installation instructions
 - Format: Paper (in the box of the outdoor unit)
- **Installer reference guide:**
 - Preparation of the installation, reference data, ...
 - Format: Digital files on <https://www.daikin.eu>. Use the search function 🔍 to find your model.

The latest revision of the supplied documentation is published on the regional Daikin website and is available via your dealer.

Scan the QR code below to find the full documentation set and more information about your product on the Daikin website.

5MWXM-A9



The original instructions are written in English. All other languages are translations of the original instructions.

Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).

- The **full set** of the latest technical data is available on the Daikin Business Portal (authentication required).

2 Specific installer safety instructions

Always observe the following safety instructions and regulations.

Unit installation (see "[4 Unit installation](#)" ▶ 6))



WARNING

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation. In Europe, EN378 is the applicable standard.

Installation site (see "[4.1 Preparing the installation site](#)" ▶ 6))



CAUTION

- Check if the installation location can support the unit's weight. Poor installation is hazardous. It can also cause vibrations or unusual operating noise.
- Provide sufficient service space.
- Do NOT install the unit so that it is in contact with a ceiling or a wall, as this may cause vibrations.



WARNING

The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (e.g. open flames, an operating gas appliance, or an operating electric heater). The room size shall be as specified in the General safety precaution.

Piping installation (see "[5 Piping installation](#)" ▶ 8))



CAUTION

Piping and joints of a split system shall be made with permanent joints when inside an occupied space except joints directly connecting the piping to the indoor units.



CAUTION

- No brazing or welding on site for units with R32 refrigerant charge during shipment.
- During installation of the refrigeration system, joining of parts with at least one part charged shall be performed taking into account the following requirements: inside occupied spaces non-permanent joints are NOT allowed for R32 refrigerant except for site made joints directly connecting the indoor unit to piping. Site made joints directly connecting piping to indoor units shall be of non-permanent type.



CAUTION

Do NOT connect the embedded branch piping and the outdoor unit when only carrying out piping work without connecting the indoor unit in order to add another indoor unit later.



WARNING

Connect the refrigerant piping securely before running the compressor. If the refrigerant piping is NOT connected and the stop valve is open when the compressor is run, air will be sucked in. This will cause abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.



CAUTION

- Incomplete flaring may cause refrigerant gas leakage.
- Do NOT re-use flares. Use new flares to prevent refrigerant gas leakage.
- Use flare nuts that are included with the unit. Using different flare nuts may cause refrigerant gas leakage.



CAUTION

Do NOT open the valves before flaring is complete. This would cause refrigerant gas leakage.



DANGER: RISK OF EXPLOSION

Do NOT open the stop valves before the vacuum drying is finished.

Charging refrigerant (see "[6 Charging refrigerant](#)" ▶ 12))



A2L WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



WARNING

- The refrigerant inside the unit is mildly flammable, but normally does NOT leak. If the refrigerant leaks in the room and comes in contact with fire from a burner, a heater, or a cooker, this may result in fire, or the formation of a harmful gas.
- Turn OFF any combustible heating devices, ventilate the room, and contact the dealer where you purchased the unit.
- Do NOT use the unit until a service person confirms that the part from which the refrigerant leaked has been repaired.



WARNING

- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.



WARNING

NEVER directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.

Electrical installation (see "[7 Electrical installation](#)" ▶ 13))



WARNING

- All wiring MUST be performed by an authorised electrician and MUST comply with the national wiring regulation.
- Make electrical connections to the fixed wiring.
- All components procured on-site and all electrical construction MUST comply with the applicable legislation.



WARNING

ALWAYS use multicore cable for power supply cables.



WARNING

Use an all-pole disconnection type breaker with at least 3 mm between the contact point gaps that provides full disconnection under overvoltage category III.

3 About the box



WARNING

If the supply cord is damaged, it **MUST** be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



WARNING

Do **NOT** connect the power supply to the indoor unit. This could result in electrical shock or fire.



WARNING

- Do **NOT** use locally purchased electrical parts inside the product.
- Do **NOT** branch the power supply for the drain pump, etc. from the terminal block. This could result in electrical shock or fire.



WARNING

Keep the interconnection wiring away from copper pipes without thermal insulation as such pipes will be very hot.



DANGER: RISK OF ELECTROCUTION

All electrical parts (including thermistors) are powered by the power supply. Do **NOT** touch them with bare hands.



DANGER: RISK OF ELECTROCUTION

Disconnect the power supply for more than 10 minutes, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage **MUST** be less than 50 V DC before you can touch electrical components. For the location of the terminals, see the wiring diagram.

Finishing the outdoor unit installation (see "**8 Finishing the outdoor unit installation**" [p 14])



DANGER: RISK OF ELECTROCUTION

- Make sure that the system is earthed properly.
- Turn **OFF** the power supply before servicing.
- Install the switch box cover before turning **ON** the power supply.

Maintenance and service (see "**9 Maintenance and service**" [p 15])



DANGER: RISK OF ELECTROCUTION



DANGER: RISK OF BURNING/SCALDING



WARNING

- Before carrying out any maintenance or repair activity, **ALWAYS** switch off the circuit breaker on the supply panel, remove the fuses or open the protection devices of the unit.
- Do **NOT** touch live parts for 10 minutes after the power supply is turned off because of high voltage risk.
- Please note that some sections of the electric component box are hot.
- Make sure you do **NOT** touch a conductive section.
- Do **NOT** rinse the unit. This may cause electric shocks or fire.



DANGER: RISK OF ELECTROCUTION

- Use this compressor on a grounded system only.
- Turn the power off before servicing the compressor.
- Reattach the switch box cover and service lid after servicing.



CAUTION

ALWAYS wear safety glasses and protective gloves.



DANGER: RISK OF EXPLOSION

- Use a pipe cutter to remove the compressor.
- Do **NOT** use the brazing torch.
- Use approved refrigerants and lubricants only.



DANGER: RISK OF BURNING/SCALDING

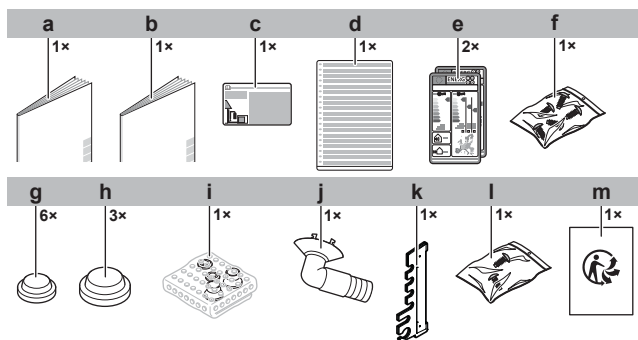
Do **NOT** touch the compressor with bare hands.

3 About the box

3.1 Outdoor unit

3.1.1 To remove the accessories from the outdoor unit

Make sure you have all following accessories delivered with the unit:



- a Outdoor unit installation manual
- b General safety precautions
- c Fluorinated greenhouse gases label
- d Multilingual fluorinated greenhouse gases label
- e Energy label
- f Screw bag. The screws will be used for fixing the electrical wire anchor bands.
- g Drain cap (small)
- h Drain cap (large)
- i Reducer assembly
- j Drain socket
- k Sound insulation plate
- l Screw bag. The screws will be used for fixing the sound insulation plate.
- m Triman logo addendum (for France)

4 Unit installation



WARNING

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation. In Europe, EN378 is the applicable standard.

4.1 Preparing the installation site

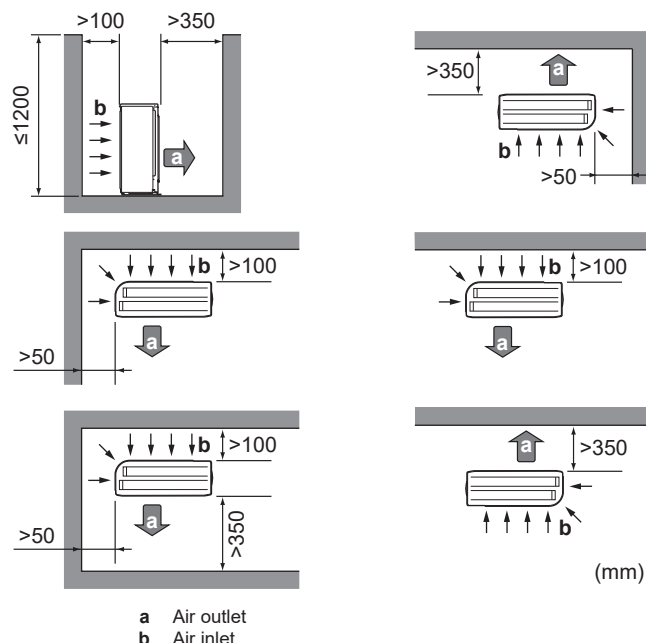


WARNING

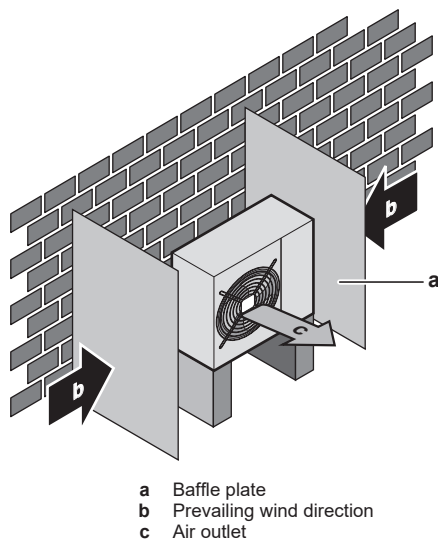
The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (e.g. open flames, an operating gas appliance, or an operating electric heater). The room size shall be as specified in the General safety precaution.

4.1.1 Installation site requirements of the outdoor unit

Mind the following spacing guidelines:



Allow 300 mm of work space below the ceiling surface and 250 mm for piping and electrical servicing.



Do NOT install the unit in sound sensitive areas (e.g. near a bedroom), so that the operation noise will cause no trouble.

Note: If the sound is measured under actual installation conditions, the measured value might be higher than the sound pressure level mentioned in "Sound spectrum" in the data book due to environmental noise and sound reflections.



INFORMATION

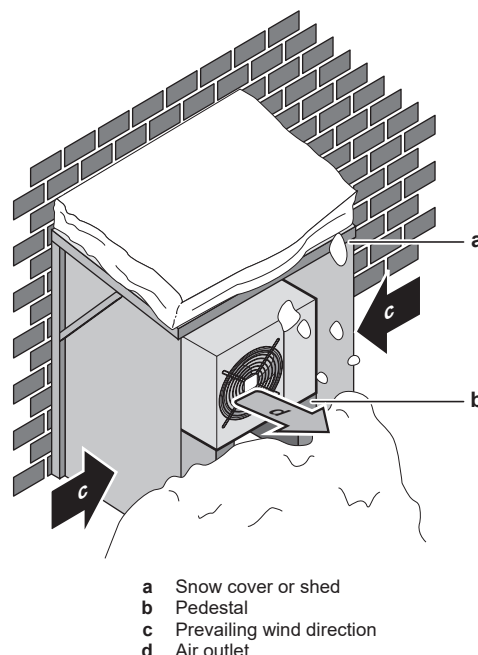
The sound pressure level is less than 70 dBA.

The outdoor unit is designed for outdoor installation only, and for ambient temperatures within the following ranges (unless otherwise specified in the operation manual of the connected indoor unit):

DX operation range	
Cooling mode	Heating mode
-10~46°C DB	-15~24°C DB
DHW operation range	
-15~43°C DB	

4.1.2 Additional installation site requirements of the outdoor unit in cold climates

Protect the outdoor unit against direct snowfall and take care that the outdoor unit is NEVER snowed up.



It is recommended to provide at least 150 mm of free space below the unit (300 mm for heavy snowfall areas). Additionally, make sure the unit is positioned at least 100 mm above the maximum expected level of snow. If necessary, construct a pedestal. See "4.2 Mounting the outdoor unit" [p. 7] for more details.

In heavy snowfall areas it is very important to select an installation site where the snow will NOT affect the unit. If lateral snowfall is possible, make sure that the heat exchanger coil is NOT affected by the snow. If necessary, install a snow cover or shed and a pedestal.

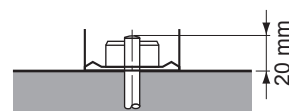
4.2 Mounting the outdoor unit

4.2.1 To provide the installation structure

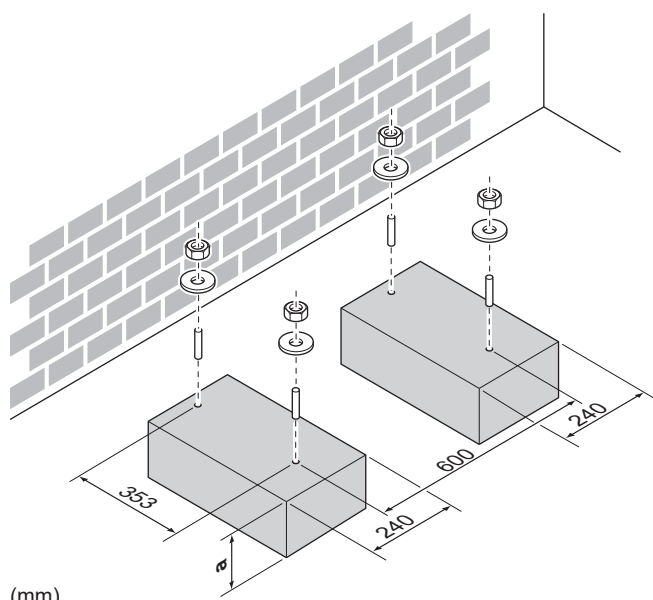
Use a vibration-proof rubber (field supply) in cases where vibrations may be transmitted to the building.

The unit may be installed directly on a concrete veranda or another solid surface as long as it provides proper drainage.

Prepare 4 sets of M8 or M10 anchor bolts, nuts and washers (field supply).

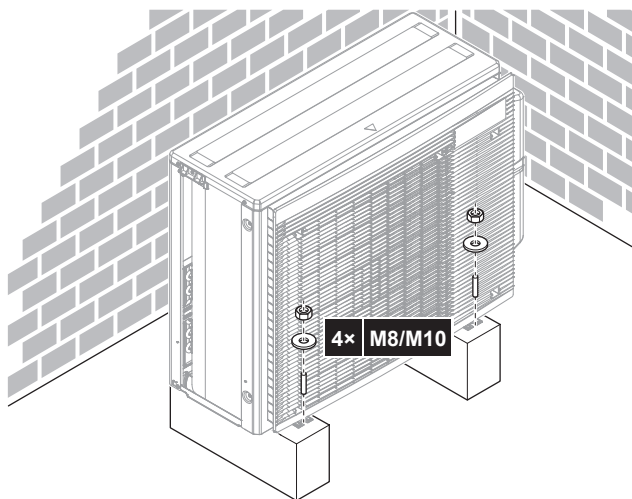


5 Piping installation



a 100 mm above expected level of snow

4.2.2 To install the outdoor unit



4.2.3 To provide drainage



NOTICE

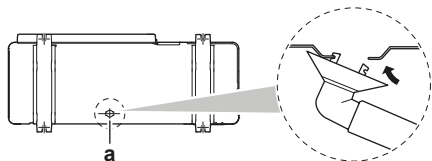
In cold areas, do NOT use a drain socket, hose and caps (large, small) with the outdoor unit. Take adequate measures so that the evacuated condensate CANNOT freeze.



NOTICE

If the drain holes of the outdoor unit are blocked up by a mounting base or floor surface, place additional foot bases ≤ 30 mm under the outdoor unit's feet.

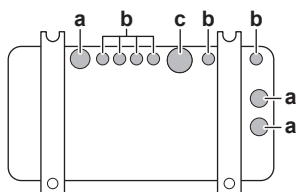
- Use a drain socket for drainage if necessary.



a Drain hole

To close the drain holes and attach the drain socket

- Install drain caps (accessory h) and (accessory g). Make sure the edges of the drain caps close off the holes completely.
- Install the drain socket.



- a Drain hole. Install a drain cap (large).
- b Drain hole. Install a drain cap (small).
- c Drain hole for drain socket

5 Piping installation

5.1 Preparing refrigerant piping

5.1.1 Refrigerant piping requirements



CAUTION

Piping and joints of a split system shall be made with permanent joints when inside an occupied space except joints directly connecting the piping to the indoor units.



CAUTION

- When **mechanical** connectors are re-used indoors, renew the sealing parts.
- When **flared joints** are re-used indoors, re-make the flared part.



NOTICE

The piping and other pressure-containing parts shall be suitable for refrigerant. Use phosphoric acid deoxidised seamless copper for refrigerant piping.

- Foreign materials inside pipes (including oils for fabrication) must be ≤ 30 mg/10 m.

Refrigerant piping diameter

5MWXM68A2V1B9	
Liquid piping	Gas piping
5× Ø6.4 mm (1/4")	2× Ø9.5 mm (3/8")
	2× Ø12.7 mm (1/2")
	1× Ø15.9 mm (5/8")

5MWXM90A2V1B9	
Liquid piping	Gas piping
5× Ø6.4 mm (1/4")	1× Ø9.5 mm (3/8")
	1× Ø12.7 mm (1/2")
	3× Ø15.9 mm (5/8")



INFORMATION

Usage of reducers might be required based on the indoor unit. See "5.2.1 Connections between outdoor and indoor unit using reducers" [p 10] for more information.

Refrigerant piping material

Piping material

Phosphoric acid deoxidised seamless copper

Flare connections

Only use annealed material.

Piping temper grade and thickness

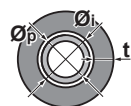
Outer diameter (Ø)	Temper grade	Thickness (t) ^(a)	
6.4 mm (1/4")	Annealed (O)	≥0.8 mm	
9.5 mm (3/8")			
12.7 mm (1/2")			
15.9 mm (5/8")		≥1 mm	

^(a) Depending on the applicable legislation and the maximum working pressure of the unit (see "PS High" on the unit name plate), larger piping thickness might be required.

5.1.2 Refrigerant piping insulation

- Use polyethylene foam as insulation material:
 - with a heat transfer rate between 0.041 and 0.052 W/mK (0.035 and 0.045 kcal/mh°C)
 - with a heat resistance of at least 120°C
- Insulation thickness:

Pipe outer diameter (Ø _p)	Insulation inner diameter (Ø _i)	Insulation thickness (t)
6.4 mm (1/4")	8~10 mm	≥10 mm
9.5 mm (3/8")	12~15 mm	≥13 mm
12.7 mm (1/2")	14~16 mm	≥13 mm
15.9 mm (5/8")	17~20 mm	≥13 mm



If the temperature is higher than 30°C and the humidity is higher than RH 80%, the thickness of the insulation materials should be at least 20 mm to prevent condensation on the surface of the insulation.

5.1.3 Refrigerant piping length and height difference

The shorter the refrigerant piping, the better the performance of the system.

The piping length and height differences must comply with the following requirements.

Shortest allowable length per room is 3 m.

For combination...	...refrigerant piping length to each indoor unit is:	...refrigerant piping total length is:
DX + 5MWXM90-A	≤25 m	≤75 m
DHW + 5MWXM90-A	≤30 m	
DX + 5MWXM68-A	≤25 m	≤60 m
DHW + 5MWXM68-A	≤30 m	
FBA71, 100 + 5MWXM68	≤30 m	30 + 0.64×DHW length
FBA71, 100, 125 + 5MWXM90	≤40 m	40 + 0.64×DHW length

	Outdoor unit installed HIGHER than indoor unit	
	Height difference outdoor-indoor	Height difference indoor-indoor
DX	≤15 m	≤7.5 m
DHW	≤30 m	
FBA71, 100, 125	≤30 m	

	Outdoor unit installed LOWER than at least 1 indoor unit	
	Height difference outdoor-indoor	Height difference indoor-indoor
DX	≤7.5 m	≤15 m
DHW	≤15 m	
FBA71, 100, 125	≤30 m	

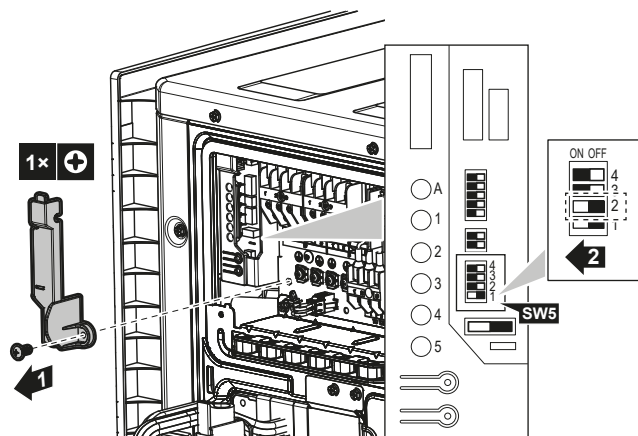


INFORMATION

If you connect the FBA unit with a height difference between the outdoor and indoor unit <15 m, slide the switch SW5-2 to the ON side, see the procedure below.

To turn the switch SW5-2 ON

- Remove the switch cover on the service PCB.
- Slide switch SW5-2 to the ON side.



5.2 Connecting the refrigerant piping



DANGER: RISK OF BURNING/SCALDING



CAUTION

- No brazing or welding on site for units with R32 refrigerant charge during shipment.
- During installation of the refrigeration system, joining of parts with at least one part charged shall be performed taking into account the following requirements: inside occupied spaces non-permanent joints are NOT allowed for R32 refrigerant except for site made joints directly connecting the indoor unit to piping. Site made joints directly connecting piping to indoor units shall be of non-permanent type.



CAUTION

Do NOT connect the embedded branch piping and the outdoor unit when only carrying out piping work without connecting the indoor unit in order to add another indoor unit later.

5 Piping installation

5.2.1 Connections between outdoor and indoor unit using reducers

Outdoor unit	Total indoor air conditioning units capacity class that can be connected to this outdoor unit
5MWXM68	≤11 kW
5MWXM90	≤15.6 kW



INFORMATION

This outdoor unit can be connected in the following ways:

- To a DHW tank and up to 4 indoor units (DX)
- To a DHW tank only
- To 2 to 4 indoor units (DX) only.

⇒ **Note:** Connecting only 1 indoor unit is NOT allowed, except when using model FBA71 or 100 with unit 5MWXM68, or model FBA71, 100, or 125 with unit 5MWXM90.

5MWXM68

Port	Dimensions	Class	Reducer
A+B	Liquid Ø6.4 mm Gas Ø9.5 mm	15, 20, 25, 35, 42 ^(a)	—
C+D	Liquid Ø6.4 mm Gas Ø12.7 mm	15, 20, 25, 35, 42 ^(a) 42 ^(b) , 50, 60 71 ^(c) , 100 ^(c)	2, 4 — Use option ASYCPIR-MD1
Tank	Liquid Ø6.4 mm Gas Ø15.9 mm	90, 120 180, 230	Field supply ^(d) —

^(a) Excluding FTXJ.

^(b) Only for FTXJ.

^(c) For connection of the FBA use D port only.

^(d) In the case of connecting 5MWXM-A9 to EKHWT-BV3 unit, please use appropriate field-supplied reducers.

5MWXM90

Port	Dimensions	Class	Reducer
A	Liquid Ø6.4 mm Gas Ø9.5 mm	15, 20, 25, 35, 42 ^(a)	—
B	Liquid Ø6.4 mm Gas Ø12.7 mm	15, 20, 25, 35, 42 ^(a) 42 ^(b) , 50, 60	2, 4 —
C+D	Liquid Ø6.4 mm Gas Ø15.9 mm	15, 20, 25, 35, 42 ^(a) 42 ^(b) , 50, 60 71 ^(c) 71 ^(d) , 100 ^(d) , 125 ^(d)	5, 6 3, 1 — Use option ASYCPIR-MD1
To tank	Liquid Ø6.4 mm Gas Ø15.9 mm	90, 120 180, 230	Field supply ^(e) —

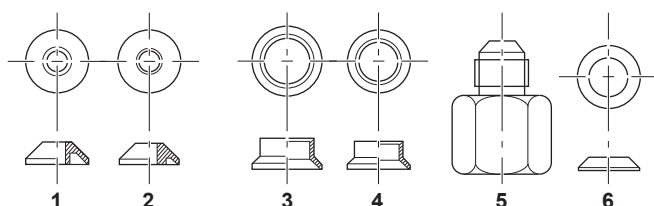
^(a) Excluding FTXJ.

^(b) Only for FTXJ.

^(c) Only for FTXM71A.

^(d) For connection of the FBA use D port only.

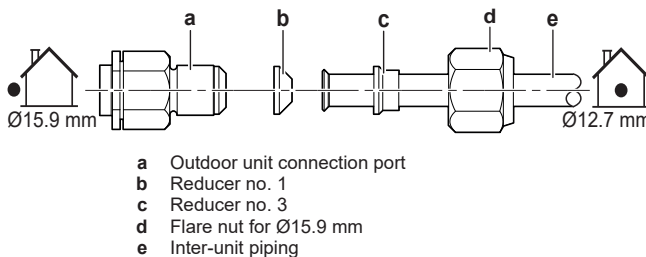
^(e) In the case of connecting 5MWXM-A9 to EKHWT-BV3 unit, please use appropriate field-supplied reducers.



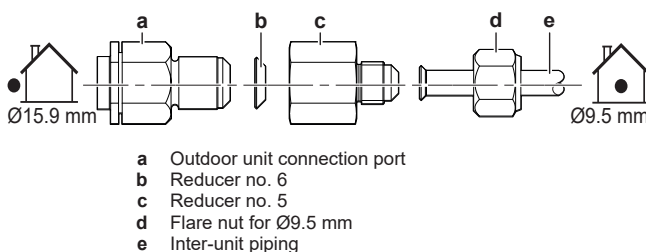
Reducer type	Connection
1	Ø15.9 mm → Ø12.7 mm
2	Ø12.7 mm → Ø9.5 mm
3	Ø15.9 mm → Ø12.7 mm
4	Ø12.7 mm → Ø9.5 mm
5	Ø15.9 mm → Ø9.5 mm
6	Ø15.9 mm → Ø9.5 mm

Connection examples:

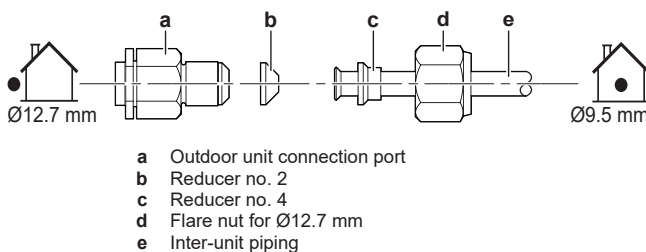
- Connecting a Ø12.7 mm pipe to a Ø15.9 mm gas pipe connection port



- Connecting a Ø9.5 mm pipe to a Ø15.9 mm gas pipe connection port



- Connecting a Ø9.5 mm pipe to a Ø12.7 mm gas pipe connection port



NOTICE

To prevent gas leakage, apply refrigeration oil for R32 (FW68DA):

- Ø9.5 mm → Ø15.9 mm, to both sides of the Reducer 6 (b) AND to the inner surface of the flare.
- Ø12.7mm → Ø15.9 mm or Ø9.5 mm → Ø12.7 mm, to both sides of Reducer 1 or 2 (b).

Flare nut for (mm)	Tightening torque (N·m)
Ø9.5	33~39
Ø12.7	50~60
Ø15.9	62~75



NOTICE

Use an appropriate wrench to avoid damaging the connection thread by overtightening the flare nut. Be careful NOT to overtighten the nut, or the smaller pipe may be damaged (about 2/3~1× the normal torque).

5.2.2 To connect the refrigerant piping to the outdoor unit

- **Piping length.** Keep field piping as short as possible.
- **Piping protection.** Protect the field piping against physical damage.



WARNING

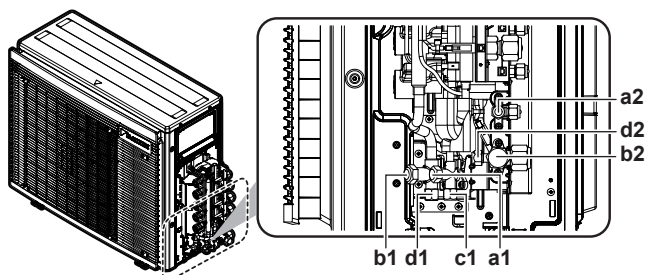
Connect the refrigerant piping securely before running the compressor. If the refrigerant piping is NOT connected and the stop valve is open when the compressor is run, air will be sucked in. This will cause abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.



NOTICE

- Use the flare nut fixed to the main unit.
- To prevent gas leakage, apply refrigeration oil only to the inside of the flare. Use refrigeration oil for R32 (**Example:** FW68DA, SUNISO Oil).
- Do NOT reuse joints.

- 1 Connect the liquid refrigerant connection from the indoor unit to the liquid stop valve of the outdoor unit.



To air-conditioning unit:

- a1 Liquid stop valve
- b1 Gas stop valve
- c1 Liquid service port
- d1 Gas service port

To tank:

- a2 Liquid stop valve
- b2 Gas stop valve
- d2 Gas service port

- 2 Connect the gas refrigerant connection from the indoor unit to the gas stop valve of the outdoor unit.

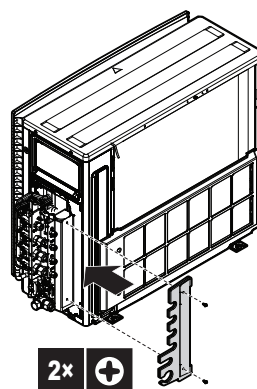


NOTICE

It is recommended that the refrigerant piping between indoor and outdoor unit is installed in a ducting or the refrigerant piping is wrapped with finishing tape.

5.2.3 To install sound insulation

After connecting piping, mount sound insulation (accessory k) on the outdoor unit using two screws (accessory l) as it is shown in picture below.



5.3 Checking the refrigerant piping

5.3.1 To check for leaks



NOTICE

Do NOT exceed the unit's maximum working pressure (see "PS High" on the unit name plate).



NOTICE

ALWAYS use a recommended bubble test solution from your wholesaler.

NEVER use soap water:

- Soap water may cause cracking of components, such as flare nuts or stop valve caps.
- Soap water may contain salt, which absorbs moisture that will freeze when the piping gets cold.
- Soap water contains ammonia which may lead to corrosion of flared joints (between the brass flare nut and the copper flare).

- 1 Charge the system with nitrogen gas up to a gauge pressure of at least 200 kPa (2 bar). It is recommended to pressurize to 3000 kPa (30 bar) or higher (depending on local legislation) to detect small leaks.
- 2 Check for leaks by applying the bubble test solution to all connections.
- 3 Discharge all nitrogen gas.

5.3.2 To perform vacuum drying



DANGER: RISK OF EXPLOSION

Do NOT open the stop valves before the vacuum drying is finished.



NOTICE

Connect the vacuum pump to **both** the service ports of the gas stop valves.

- 1 Vacuum the system until the pressure on the manifold indicates -0.1 MPa (-1 bar).
- 2 Leave as is for 4-5 minutes and check the pressure:

If the pressure...	Then...
Does not change	There is no moisture in the system. This procedure is finished.
Increases	There is moisture in the system. Go to the next step.

- 3 Vacuum the system for at least 2 hours to a manifold pressure of -0.1 MPa (-1 bar).

6 Charging refrigerant

- 4 After turning the pump OFF, check the pressure for at least 1 hour.
- 5 If you do NOT reach the target vacuum or CANNOT maintain the vacuum for 1 hour, do the following:
 - Check for leaks again.
 - Perform vacuum drying again.



NOTICE

Make sure to open the stop valves after installing the refrigerant piping and performing vacuum drying. Running the system with the stop valves closed may break the compressor.



NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO₂ equivalent.

Formula to calculate the quantity in CO₂ equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg]/1000

Contact your installer for more information.

6 Charging refrigerant

6.1 About the refrigerant

This product contains fluorinated greenhouse gases. Do NOT vent gases into the atmosphere.

Refrigerant type: R32

Global warming potential (GWP) value: 675

Periodical inspections for refrigerant leaks may be required depending on the applicable legislation. Contact your installer for more information.



A2L WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



WARNING

- The refrigerant inside the unit is mildly flammable, but normally does NOT leak. If the refrigerant leaks in the room and comes in contact with fire from a burner, a heater, or a cooker, this may result in fire, or the formation of a harmful gas.
- Turn OFF any combustible heating devices, ventilate the room, and contact the dealer where you purchased the unit.
- Do NOT use the unit until a service person confirms that the part from which the refrigerant leaked has been repaired.



WARNING

The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (e.g. open flames, an operating gas appliance, or an operating electric heater). The room size shall be as specified in the General safety precaution.



WARNING

- Do NOT pierce or burn refrigerant cycle parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.
- Be aware that the refrigerant inside the system is odourless.



WARNING

NEVER directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.

6.2 To determine the additional refrigerant amount

In case of connection FBA71, 100, 125

- 1 Calculate the **total required charge (RT)** by using the following formula:

- **5MWXM68:** $RT = 0.9 \text{ kg} + 0.055 \text{ (kg)} \times \text{FBA piping length (m)} + 0.02 \text{ (kg)} \times \text{DHW piping length (m)}$
- **5MWXM90:** $RT = 1.1 \text{ kg} + 0.055 \text{ (kg)} \times \text{FBA piping length (m)} + 0.02 \text{ (kg)} \times \text{DHW piping length (m)}$

Note: Total required charge cannot be higher than maximum allowable refrigerant charge amount.

Note: If difference between "total required charge" and nominal charge is >0 use the following formula instead:

- 2 Additional charge (R) = *total required charge* - *nominal charge* (for 90 class 2.4 kg, for 68 class 2.0 kg)

For connection with other indoor units

If the total liquid piping length is...	Then...
≤30 m	Do NOT add additional refrigerant.
>30 m	$R = (\text{total length (m) of liquid piping} - 30 \text{ m}) \times 0.020$ $R = \text{Additional charge (kg) (rounded in units of 0.1 kg)}$



INFORMATION

Piping length is the one-way length of liquid piping.

Maximum allowable refrigerant charge amount:

5MWXM68	2.6 kg
5MWXM90	3.3 kg

6.3 To determine the complete recharge amount



INFORMATION

If a complete recharge is necessary, the total refrigerant charge is: the factory refrigerant charge (see unit name plate) + the determined additional amount.

6.4 To charge additional refrigerant



WARNING

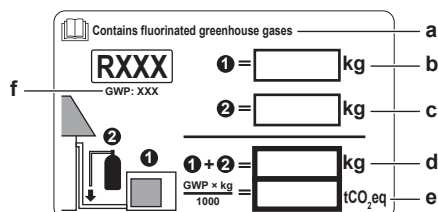
- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.

Prerequisite: Before charging refrigerant, make sure the refrigerant piping is connected and checked (leak test and vacuum drying).

- 1 Connect the refrigerant cylinder to the service port.
- 2 Charge the additional refrigerant amount.
- 3 Open the gas stop valve.

6.5 To fix the fluorinated greenhouse gases label

- 1 Fill in the label as follows:



- If a multilingual fluorinated greenhouse gases label is delivered with the unit (see accessories), peel off the applicable language and stick it on top of a.
- Factory refrigerant charge: see unit name plate
- Additional refrigerant amount charged
- Total refrigerant charge
- Quantity of fluorinated greenhouse gases** of the total refrigerant charge expressed as tonnes CO₂ equivalent.
- GWP = Global Warming Potential



NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO₂ equivalent.

Formula to calculate the quantity in CO₂ equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg] / 1000

Use the GWP value mentioned on the refrigerant charge label.

- 2 Fix the label on the inside of the outdoor unit near the gas and liquid stop valves.

6.6 To check refrigerant piping joints for leaks after charging refrigerant

- 1 Perform the leak tests see "5.3 Checking the refrigerant piping" [p 11].
- 2 Charge refrigerant.
- 3 Check for refrigerant leaks after charging (see below)

Tightness test of field-made refrigerant joints indoors

- 1 Use a leakage test method with a minimum sensitivity of 5 g of refrigerant/year. Test leaks using a pressure of at least 0.25 times the maximum working pressure (see "PS High" on the unit nameplate).

If a leak is detected

- 1 Recover the refrigerant, repair the joint, and repeat the test.

7 Electrical installation



DANGER: RISK OF ELECTROCUTION



WARNING

ALWAYS use multicore cable for power supply cables.



WARNING

Use an all-pole disconnection type breaker with at least 3 mm between the contact point gaps that provides full disconnection under overvoltage category III.



WARNING

If the supply cord is damaged, it **MUST** be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



WARNING

Do **NOT** connect the power supply to the indoor unit. This could result in electrical shock or fire.



WARNING

- Do **NOT** use locally purchased electrical parts inside the product.
- Do **NOT** branch the power supply for the drain pump, etc. from the terminal block. This could result in electrical shock or fire.



WARNING

Keep the interconnection wiring away from copper pipes without thermal insulation as such pipes will be very hot.



DANGER: RISK OF ELECTROCUTION

All electrical parts (including thermistors) are powered by the power supply. Do **NOT** touch them with bare hands.

7.1 Specifications of standard wiring components



NOTICE

We recommend using solid (single-core) wires. If stranded wires are used, slightly twist the strands to consolidate the end of the conductor for either direct use in the terminal clamp or insertion in a round crimp-style terminal. Details are described in "Guidelines when connecting the electrical wiring" in the installer reference guide.



NOTICE

For power supply cable, if stranded wires are used, make sure to use round crimp-style terminal.

Power supply	
Voltage	220~240 V
Frequency	50 Hz
Phase	1~
Current	25.2 A

Components	
Power supply cable	MUST comply with national wiring regulation 3-core cable Wire size based on the current, but not less than 4 mm ²
Interconnection cable (indoor↔outdoor or indoor↔user interface)	Only use harmonised wire providing double insulation and suitable for applicable voltage 4-core cable Minimum size 1.5 mm ²
Recommended circuit breaker	32 A

8 Finishing the outdoor unit installation

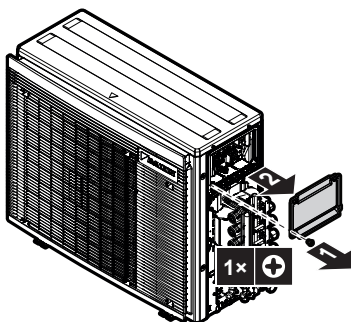
Components

Earth leakage circuit breaker / residual current circuit breaker	MUST comply with national wiring regulation
--	---

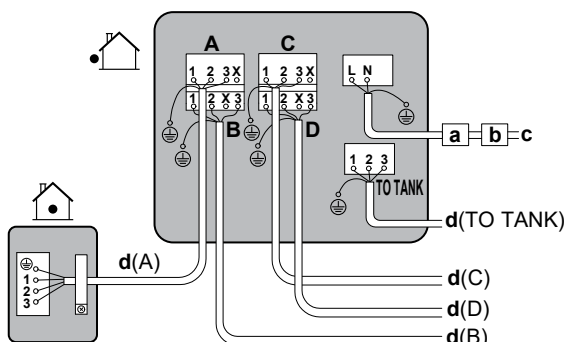
Electrical equipment must comply with EN/IEC 61000-3-12, the European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase.

7.2 To connect the electrical wiring to the outdoor unit

- 1 Remove the switch box cover (1 screw).

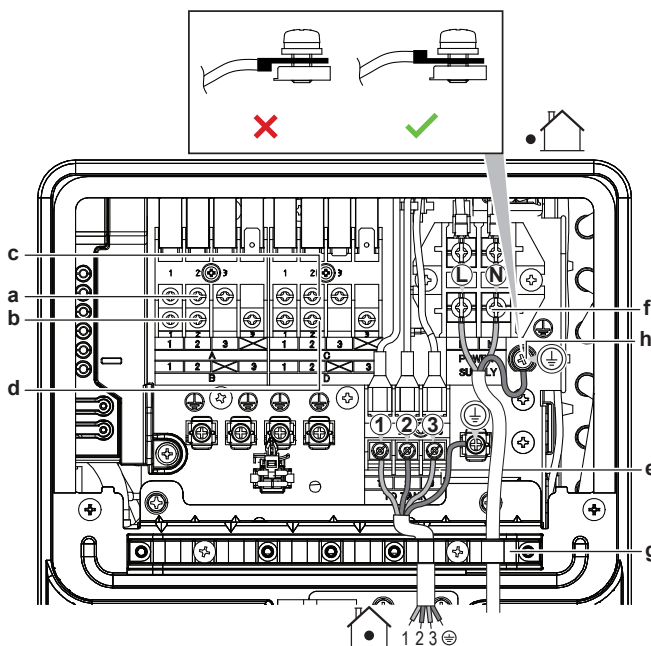


- 2 Connect the wires between the indoor and outdoor units so that the terminal numbers match. Make sure to match the symbols for piping and wiring.
- 3 Make sure to connect correct wiring to correct room.



- A Terminal for room A
- B Terminal for room B
- C Terminal for room C
- D Terminal for room D
- TO TANK Terminal for DHW tank
- a Circuit breaker
- b Residual current device
- c Power supply wire
- d Interconnection wire for room (A, B, C, D, TO TANK)

- 4 Tighten the terminal screws securely using a Phillips screwdriver.
- 5 Check that the wires do NOT disconnect by pulling them lightly.
- 6 Firmly secure the wire retainer using screws (accessory f) to avoid external stress on wire terminations.
- 7 Pass the wiring through the cutout on the bottom of the protection plate.
- 8 Make sure that the electrical wiring does NOT make contact with the gas piping.



- a Terminal for indoor unit A
- b Terminal for indoor unit B
- c Terminal for indoor unit C
- d Terminal for indoor unit D
- e Terminal for DHW tank
- f Power supply terminal
- g Wire retainer
- h Earth wire

- 9 Reattach the switch box cover and the service cover.

8 Finishing the outdoor unit installation

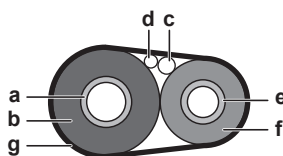
8.1 To finish the outdoor unit installation



DANGER: RISK OF ELECTROCUTION

- Make sure that the system is earthed properly.
- Turn OFF the power supply before servicing.
- Install the switch box cover before turning ON the power supply.

- 1 Insulate and fix the refrigerant piping and cables as follows:



- a Gas pipe
- b Gas pipe insulation
- c Interconnection cable
- d Field wiring (if applicable)
- e Liquid pipe
- f Liquid pipe insulation
- g Finishing tape

- 2 Install the service cover.

9 Maintenance and service



NOTICE

General maintenance/inspection checklist. Next to the maintenance instructions in this chapter, a general maintenance/inspection checklist is also available on the Daikin Business Portal (authentication required).

The general maintenance/inspection checklist is complementary to the instructions in this chapter and can be used as a guideline and reporting template during maintenance.



NOTICE

Maintenance **MUST** be done by an authorised installer or service agent.

We recommend performing maintenance at least once a year. However, applicable legislation might require shorter maintenance intervals.



NOTICE

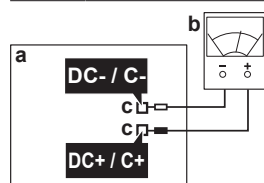
Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO₂ equivalent.

Formula to calculate the quantity in CO₂ equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg] / 1000



DANGER: RISK OF ELECTROCUTION

Disconnect the power supply for more than 10 minutes, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage **MUST** be less than 50 V DC before you can touch electrical components. For the location of the terminals, see the wiring diagram.



- a Main printed circuit board
- b Multimeter
- c Residual voltage measuring points

10 Configuration



INFORMATION

Following field settings are applicable only for direct expansion indoor units (DX). For the DHW tank field setting, refer to the installation manual of the DHW tank.

10.1 About standby electricity saving function



INFORMATION

This function is available only for the indoor units listed below.

The standby electricity saving function:

- turns OFF the power supply to the outdoor unit and,
- turns ON the standby electricity saving mode on the indoor unit.

The standby electricity saving function works with following units:



FTXM, FTXJ, FVXM, FTXA, CTXA, CTXM, CVXM, EKHWT, FTXP, CKHWS

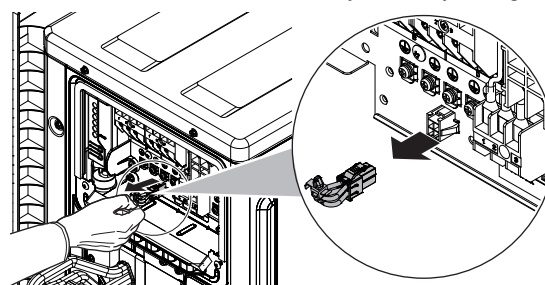
If another indoor unit is used, the connector for standby electric saving **MUST** be plugged in.

The standby electricity saving function is turned OFF before shipping.

10.1.1 To turn ON standby electricity saving function

Prerequisite: The main power supply **MUST** be turned OFF.

- 1 Remove the service cover.
- 2 Disconnect the selective standby electricity saving connector.



- 3 Turn ON the main power supply.

10.2 About priority room function



INFORMATION

- The priority room function requires initial settings to be made during the installation of the unit. Ask the customer in which rooms he plans to use this function and make the necessary settings during installation.
- The priority room setting is only applicable for an air conditioner indoor unit and only one room can be set.

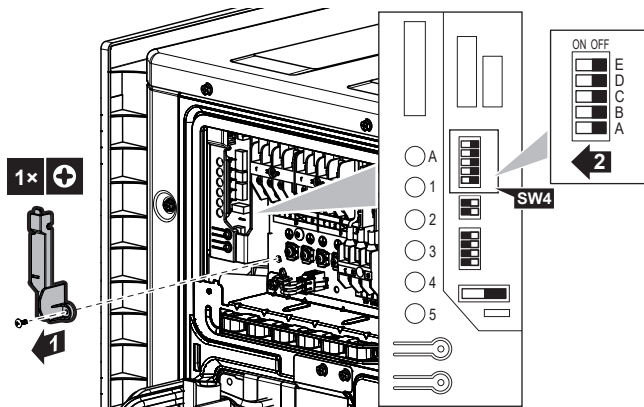
The indoor unit for which the priority room setting is applied takes priority in the following cases:

- **Operation mode priority:** If the priority room function is set on an indoor unit, all other indoor units enter the standby mode.
- **Priority during high-power operation:** If the indoor unit on which the priority room function is set operates at high power, the other indoor units will run with reduced capabilities.
- **Quiet operation priority:** If the indoor unit on which the priority room function is set to quiet operation, the outdoor unit will also run quietly.

Ask the customer in which rooms he plans to use this function and make the necessary settings during installation. Setting it in the guest rooms is convenient.

10.2.1 To set the priority room function

- 1 Remove the switch cover on the service PCB.
- 2 Set the switch (SW4) for the indoor unit for which you want to activate the priority room function to ON.



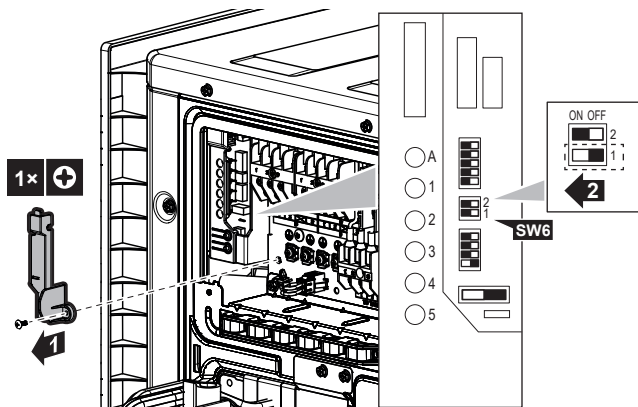
3 Reset the power.

10.3 About night quiet mode

The night quiet mode function makes the outdoor unit run more quietly at nighttime. This will reduce the cooling capacity of the unit. Explain Night quiet mode to the customer and confirm if customer wants to use this mode.

10.3.1 To turn ON the night quiet mode

- 1 Remove the switch cover on the service PCB.



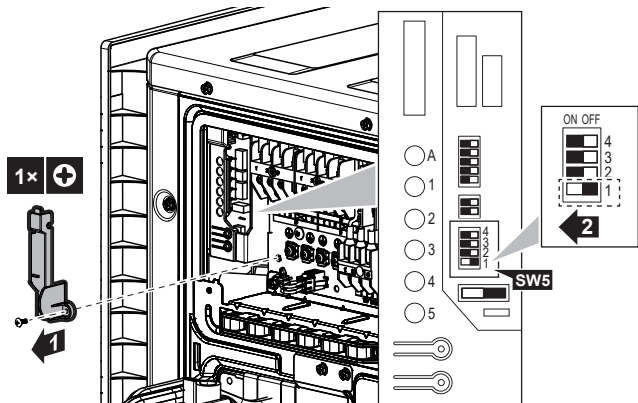
- 2 Set the night quiet mode switch (SW6-1) to ON.

10.4 About heat mode lock

Heat mode lock limits the unit to heat operation.

10.4.1 To turn ON heat mode lock

- 1 Remove the switch cover on the service PCB.
- 2 Set the heat mode lock switch (SW5-1) to ON.



11 Commissioning



NOTICE

General commissioning checklist. Next to the commissioning instructions in this chapter, a general commissioning checklist is also available on the Daikin Business Portal (authentication required).

The general commissioning checklist is complementary to the instructions in this chapter and can be used as a guideline and reporting template during commissioning and hand-over to the user.



NOTICE

ALWAYS operate the unit with thermistors and/or pressure sensors/switches. If NOT, burning of the compressor might be the result.



INFORMATION

In the case of an outdoor unit and tank-only connection, the backup heater may be used instead of the heat pump during cold outdoor conditions. This can occur within the first 7 hours after the power supply is turned on to ensure reliable compressor operation.

11.1 Checklist before commissioning

- 1 After the installation of the unit, check the items listed below.
- 2 Close the unit.
- 3 Power up the unit.

☐	The indoor unit is properly mounted.
☐	The outdoor unit is properly mounted.
☐	The system is properly earthed and the earth terminals are tightened.
☐	The power supply voltage matches the voltage on the identification label of the unit.
☐	There are NO loose connections or damaged electrical components in the switch box.
☐	There are NO damaged components or squeezed pipes on the inside of the indoor and outdoor units.
☐	There are NO refrigerant leaks .
☐	The refrigerant pipes (gas and liquid) are thermally insulated.
☐	The correct pipe size is installed and the pipes are properly insulated.
☐	The stop valves (gas and liquid) on the outdoor unit are fully open.
☐	Drainage Make sure drainage flows smoothly. Possible consequence: Condensate water might drip.
☐	The indoor unit receives the signals of the user interface .
☐	The specified wires are used for the interconnection cable .
☐	The fuses, circuit breakers , or locally installed protection devices are installed according to this document, and have NOT been bypassed.
☐	Check if marks (room A~D and TO TANK) on the wiring and piping match for each connected unit.

☐	Check if the priority room setting is NOT set for 2 or more rooms. Keep in mind that the DHW tank for Multi shall NOT be selected as the priority room.
--------------------------	---

11.2 Checklist during commissioning

☐	To perform a wiring check.
☐	To perform an air purge .
☐	To perform a test run .

11.3 Trial operation and testing

☐	Before starting the test run, measure the voltage at the primary side of the safety breaker .
☐	The pipng and wiring work match.
☐	The stop valves (gas and liquid) on the outdoor unit are fully open.

Initialization of the Multi system can take several minutes depending on the number of indoor units and options used.

11.3.1 About wiring error check



INFORMATION

This function is available only for the air-conditioning indoor units. DHW tank wiring **MUST** be check manually, automatic correction is NOT possible.

The wiring error check function will check and automatically correct any wiring errors. This is useful for checking wiring that CANNOT be checked directly, such as underground wiring.

This function CANNOT be used within 3 minutes after activating the safety breaker or when the outside air temperature is $\leq 10^{\circ}\text{C}$ and if water temperature in DHW tank is $\geq 20^{\circ}\text{C}$.

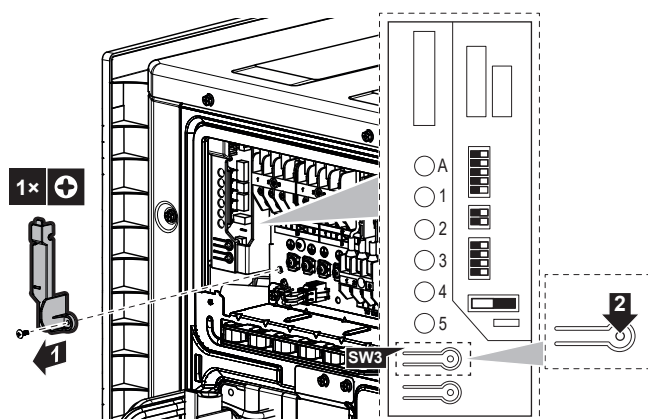
To perform a wiring error check



INFORMATION

You only have to perform a wiring error check if you are not sure that the electrical wiring and piping is connected correctly.

- 1 Remove the service PCB switch cover.



- 2 Press shortly the wiring error check switch (SW3) on the outdoor unit service PCB.

Result: The service monitor LEDs indicate whether correction is possible or not. For details about how to read the LED display, refer to the service manual.

Result: Wiring errors will be corrected after 15-20 minutes. If automatic correction is not possible, check the indoor unit wiring and piping in the usual way.



INFORMATION

- The number of LEDs displayed depends on the number of rooms.
- The wiring error check function will NOT work if outside temperature is $\leq 5^{\circ}\text{C}$ and if water temperature in DHW tank is $\geq 20^{\circ}\text{C}$.
- After wiring error check operation is completed, LED indication will continue until normal operation starts.
- Follow the product diagnosis procedures. For details of product error diagnosis refer to service manual.

Status of LEDs:

- All LEDs flash: automatic correction is NOT possible.
- LEDs flash alternately: automatic correction is completed.
- One or more LEDs are permanently on: abnormal stop (follow the diagnosis procedure on the back of the right side plate and refer to service manual).

11.3.2 To perform a test run



INFORMATION

For DHW tank test run procedure, refer to installation manual of DHW tank unit.



INFORMATION

If the unit runs into an error during commissioning, see the service manual for the detailed troubleshooting guidelines.

Prerequisite: Power supply **MUST** be in the specified range.

Prerequisite: Test run operation may be done in cooling or heating mode.

Prerequisite: Test run should be done in accordance with the operation manual of the indoor unit to make sure that all functions and parts are working properly.

- 1 In cooling mode, select the lowest programmable temperature. In heating mode, select the highest programmable temperature.
- 2 Measure the temperature at the indoor unit inlet and outlet after running the unit for about 20 minutes. The difference should be more than 8°C (cooling) or 20°C (heating).
- 3 First check operation of each unit individually, then check simultaneous operation of all indoor units. Check both heating and cooling operation.
- 4 When test run is finished, set the temperature to a normal level. In cooling mode: $26\sim 28^{\circ}\text{C}$, in heating mode: $20\sim 24^{\circ}\text{C}$.



INFORMATION

- Test run can be disabled if necessary.
- After the unit is turned OFF, it cannot be started again for 3 minutes.
- When the test run is started in the heat mode right after turning the safety breaker on, in some cases no air will be output for about 15 minutes in order to protect the unit.
- During cooling operation, frost may form on the gas stop valve or other parts. This is normal.



INFORMATION

- Even if the unit is turned OFF, it consumes electricity.
- When the power turns back on after a power break, the previously selected mode will be resumed.

12 Disposal

11.4 Starting up the outdoor unit

See the indoor unit installation manual for configuration and commissioning of the system.

12 Disposal



NOTICE

Do NOT try to dismantle the system yourself: dismantling of the system, treatment of the refrigerant, oil and other parts MUST comply with applicable legislation. Units MUST be treated at a specialised treatment facility for reuse, recycling and recovery.



INFORMATION

To protect the environment, make sure to perform an automatic pump down operation when relocating or dismantling the unit. For the pump down procedure, refer to the service manual or the installer reference guide.

13 Technical data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of the latest technical data is available on the Daikin Business Portal (authentication required).

13.1 Wiring diagram

The wiring diagram is delivered with the unit, located inside of the outdoor unit (bottom side of the top plate).

13.1.1 Unified wiring diagram legend

For applied parts and numbering, refer to the wiring diagram on the unit. Part numbering is by Arabic numbers in ascending order for each part and is represented in the overview below by "*" in the part code.

Symbol	Meaning	Symbol	Meaning
	Circuit breaker		Protective earth
			Noiseless earth
	Connection		Protective earth (screw)
	Connector		Rectifier
	Earth		Relay connector
	Field wiring		Short-circuit connector
	Fuse		Terminal
	Indoor unit		Terminal strip
	Outdoor unit		Wire clamp
	Residual current device		Heater

Symbol	Colour	Symbol	Colour
BLK	Black	ORG	Orange
BLU	Blue	PNK	Pink
BRN	Brown	PRP, PPL	Purple

Symbol	Colour	Symbol	Colour
GRN	Green	RED	Red
GRY	Grey	WHT	White
SKY BLU	Sky blue	YLW	Yellow

Symbol	Meaning
A*P	Printed circuit board
BS*	Pushbutton ON/OFF, operation switch
BZ, H*O	Buzzer
C*	Capacitor
AC*, CN*, E*, HA*, HE*, HL*, HN*, HR*, MR*_A, MR*_B, S*, U, V, W, X*A, K*R_*, NE	Connection, connector
D*, V*D	Diode
DB*	Diode bridge
DS*	DIP switch
E*H	Heater
FU*, F*U, (for characteristics, refer to PCB inside your unit)	Fuse
FG*	Connector (frame ground)
H*	Harness
H*P, LED*, V*L	Pilot lamp, light emitting diode
HAP	Light emitting diode (service monitor green)
HIGH VOLTAGE	High voltage
IES	Intelligent eye sensor
IPM*	Intelligent power module
K*R, KCR, KFR, KHuR, K*M	Magnetic relay
L	Live
L*	Coil
L*R	Reactor
M*	Stepper motor
M*C	Compressor motor
M*F	Fan motor
M*P	Drain pump motor
M*S	Swing motor
MR*, MRCW*, MRM*, MRN*	Magnetic relay
N	Neutral
n=*, N=*	Number of passes through ferrite core
PAM	Pulse-amplitude modulation
PCB*	Printed circuit board
PM*	Power module
PS	Switching power supply
PTC*	PTC thermistor
Q*	Insulated gate bipolar transistor (IGBT)
Q*C	Circuit breaker
Q*DI, KLM	Earth leak circuit breaker
Q*L	Overload protector
Q*M	Thermo switch
Q*R	Residual current device
R*	Resistor
R*T	Thermistor
RC	Receiver
S*C	Limit switch

Symbol	Meaning
S*L	Float switch
S*NG	Refrigerant leak detector
S*NPH	Pressure sensor (high)
S*NPL	Pressure sensor (low)
S*PH, HPS*	Pressure switch (high)
S*PL	Pressure switch (low)
S*T	Thermostat
S*RH	Humidity sensor
S*W, SW*	Operation switch
SA*, F1S	Surge arrester
SR*, WLU	Signal receiver
SS*	Selector switch
SHEET METAL	Terminal strip fixed plate
T*R	Transformer
TC, TRC	Transmitter
V*, R*V	Varistor

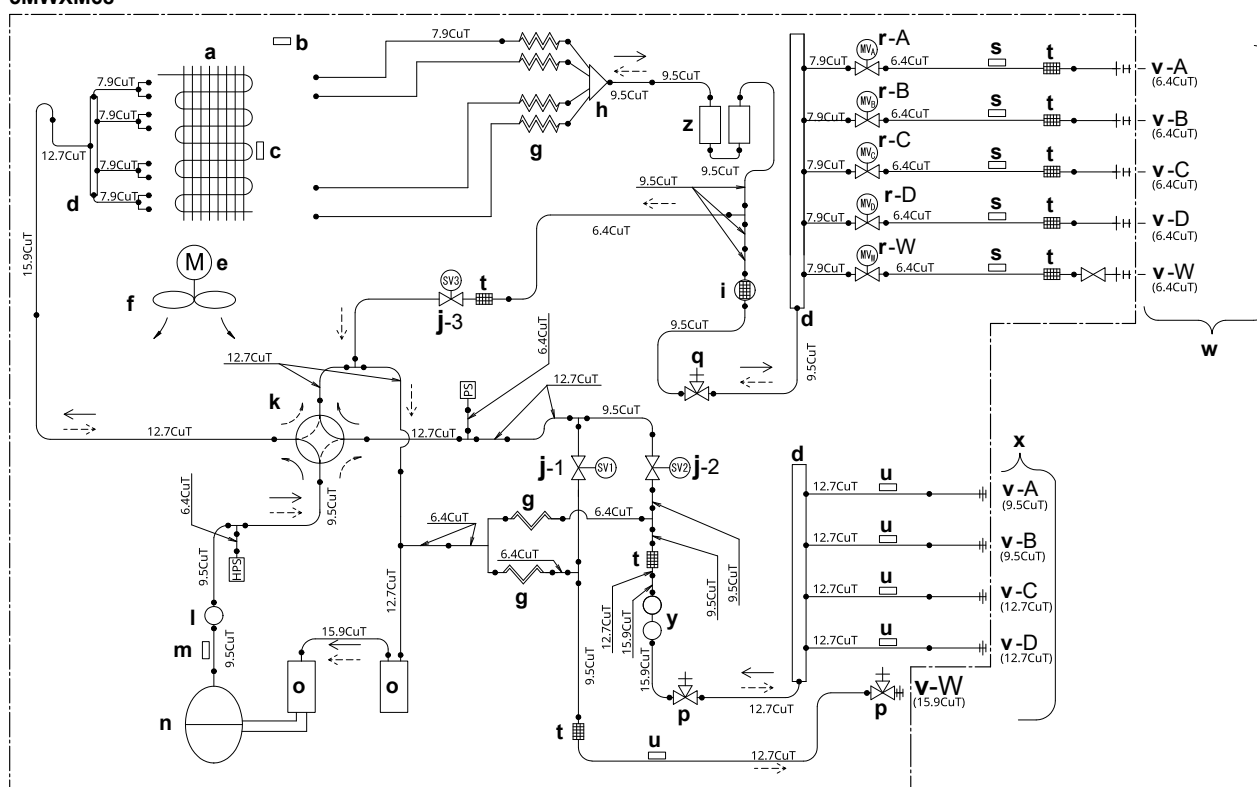
Symbol	Meaning
V*R	Diode bridge, Insulated-gate bipolar transistor (IGBT) power module
WRC	Wireless remote controller
X*	Terminal
X*M	Terminal strip (block)
Y*E	Electronic expansion valve coil
Y*R, Y*S	Reversing solenoid valve coil
Z*C	Ferrite core
ZF, Z*F	Noise filter

13.2 Piping diagram: Outdoor unit

Component PED category classification:

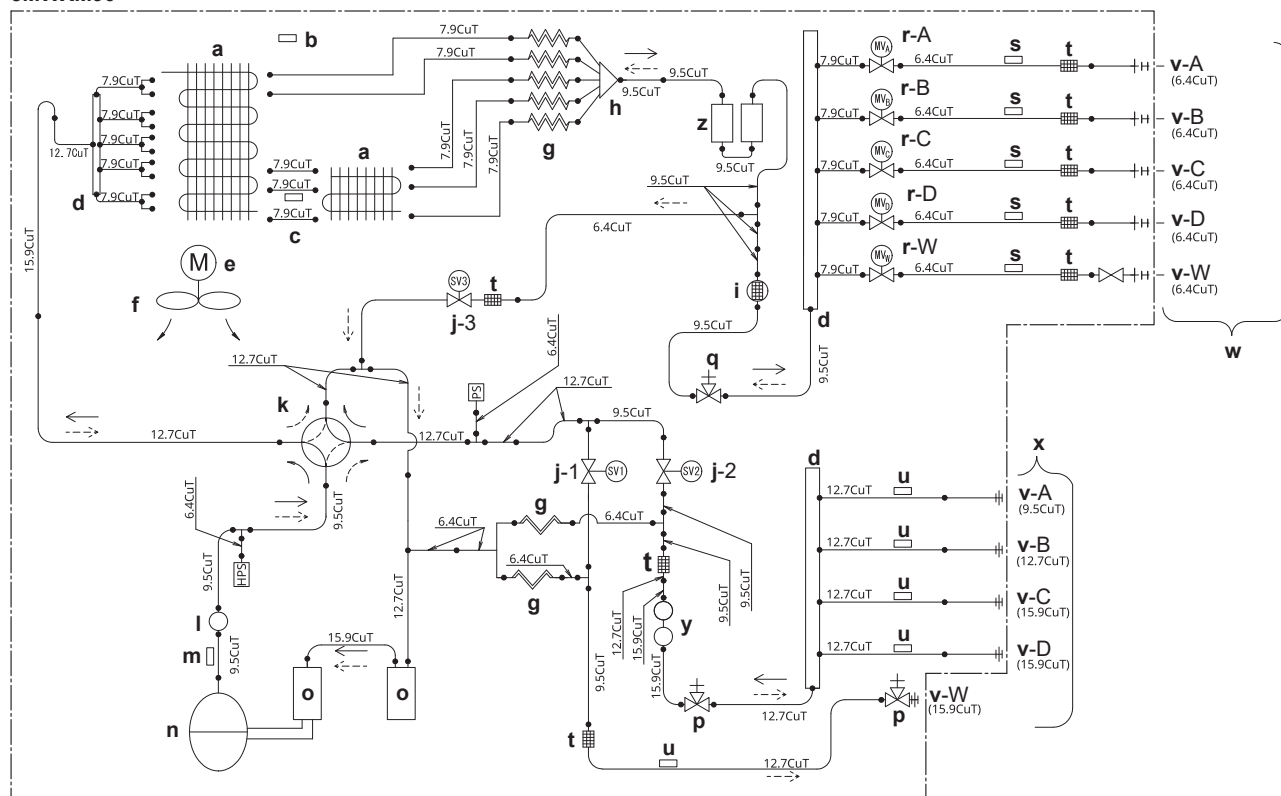
- High pressure switches: category IV
- Compressor: category II
- Accumulator: category II
- Other components: refer to PED article 4, paragraph 3

5MWXM68

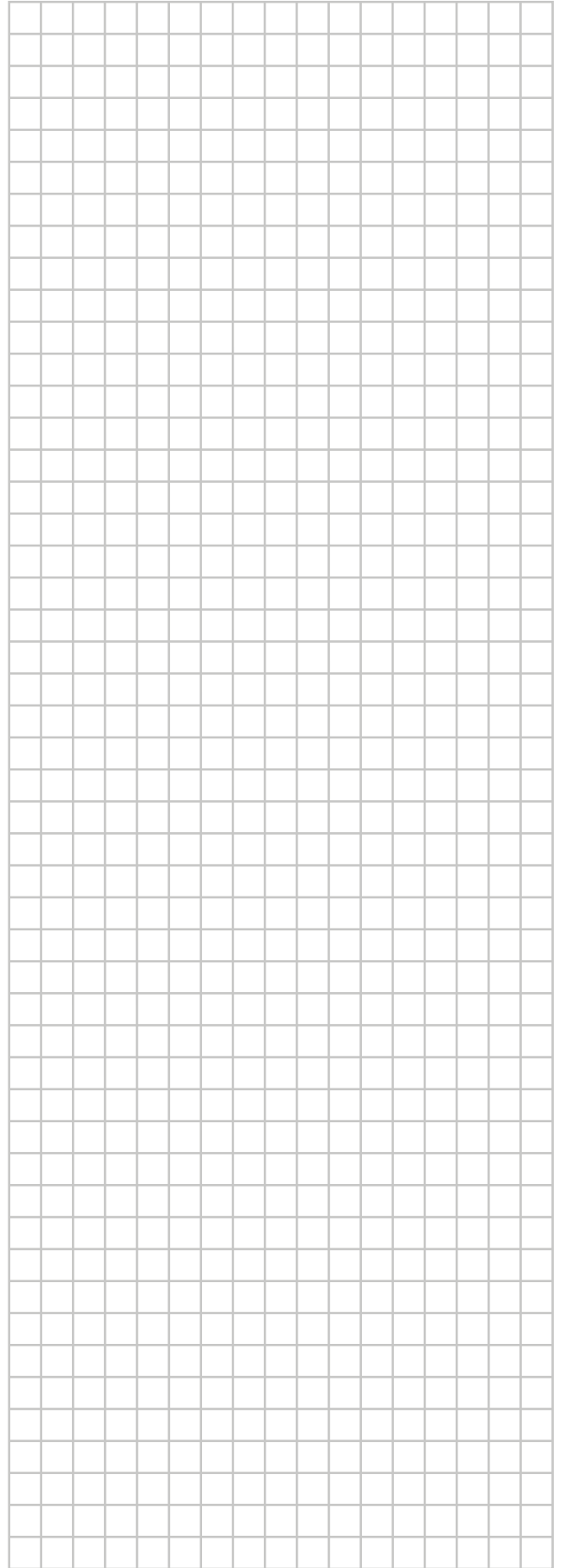
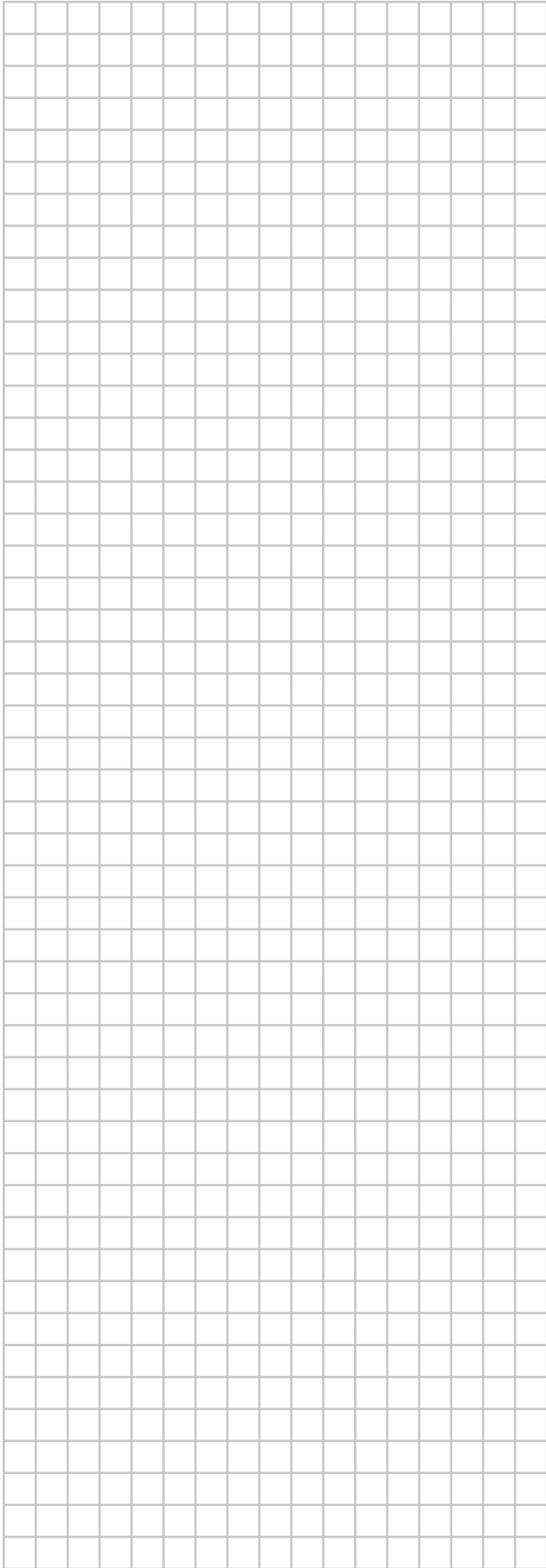


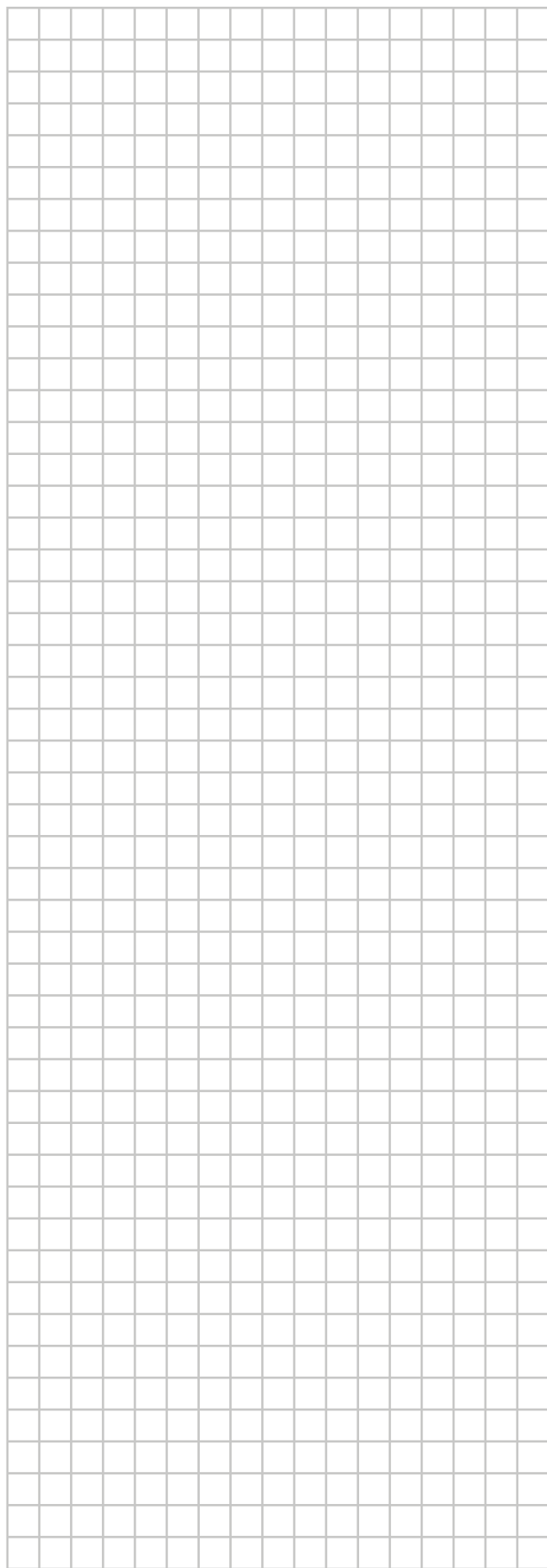
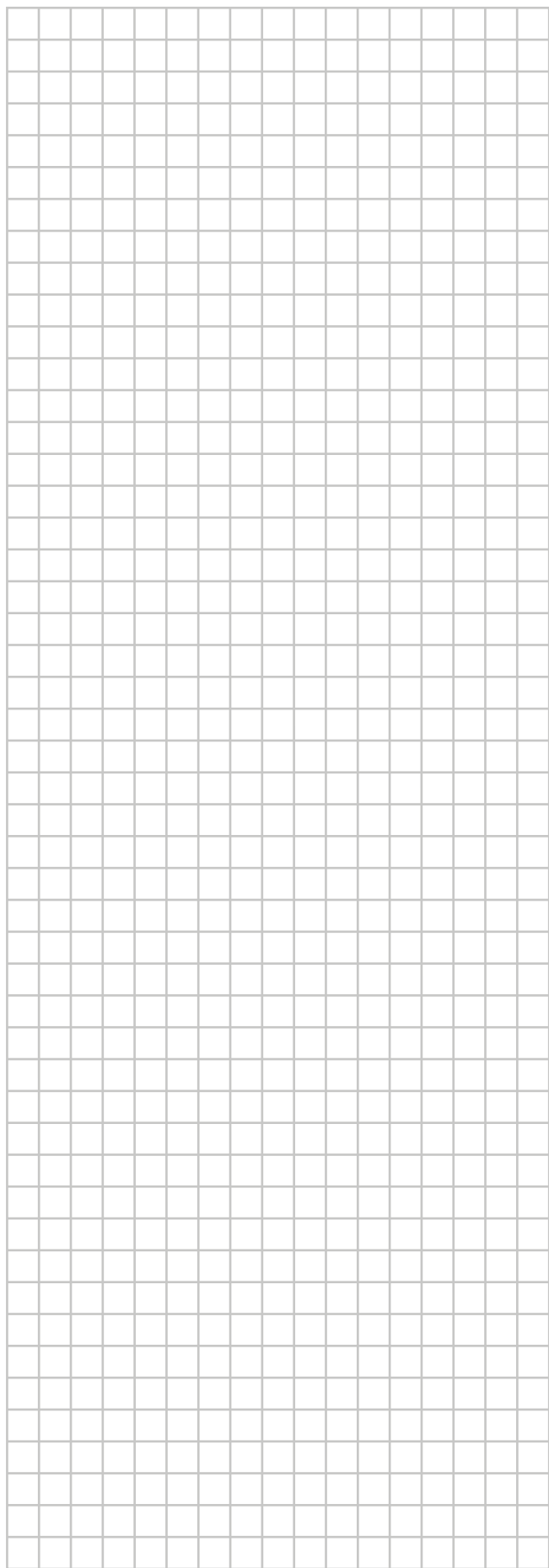
13 Technical data

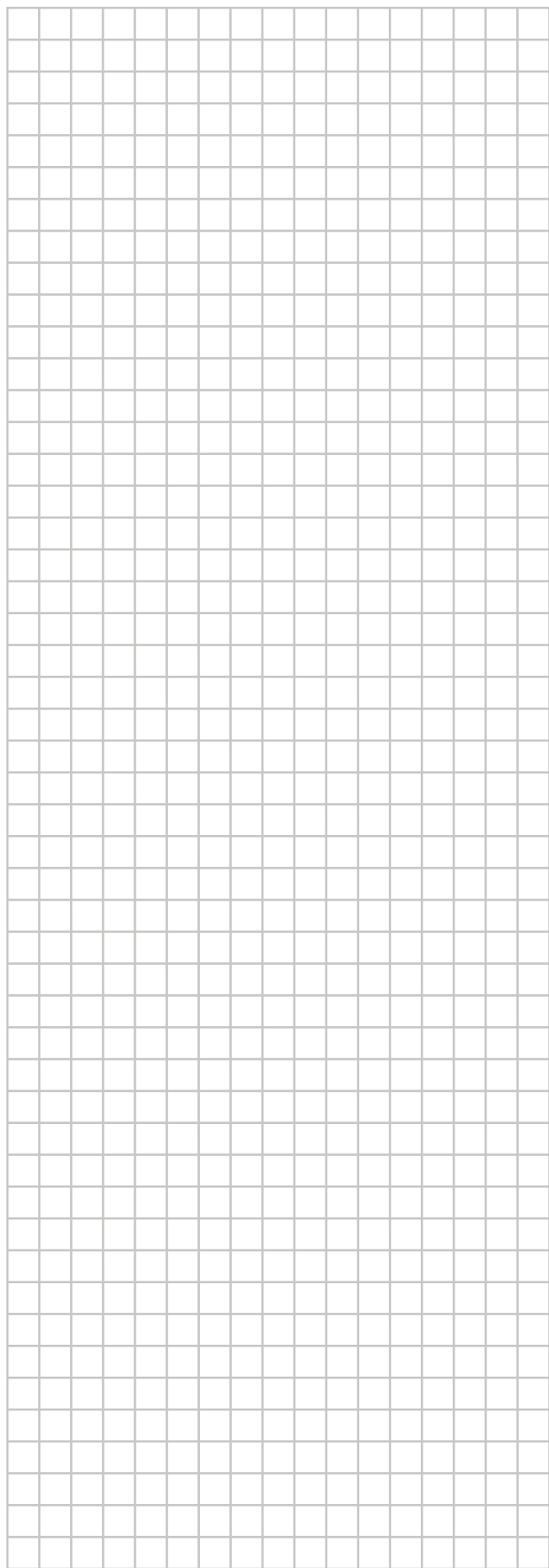
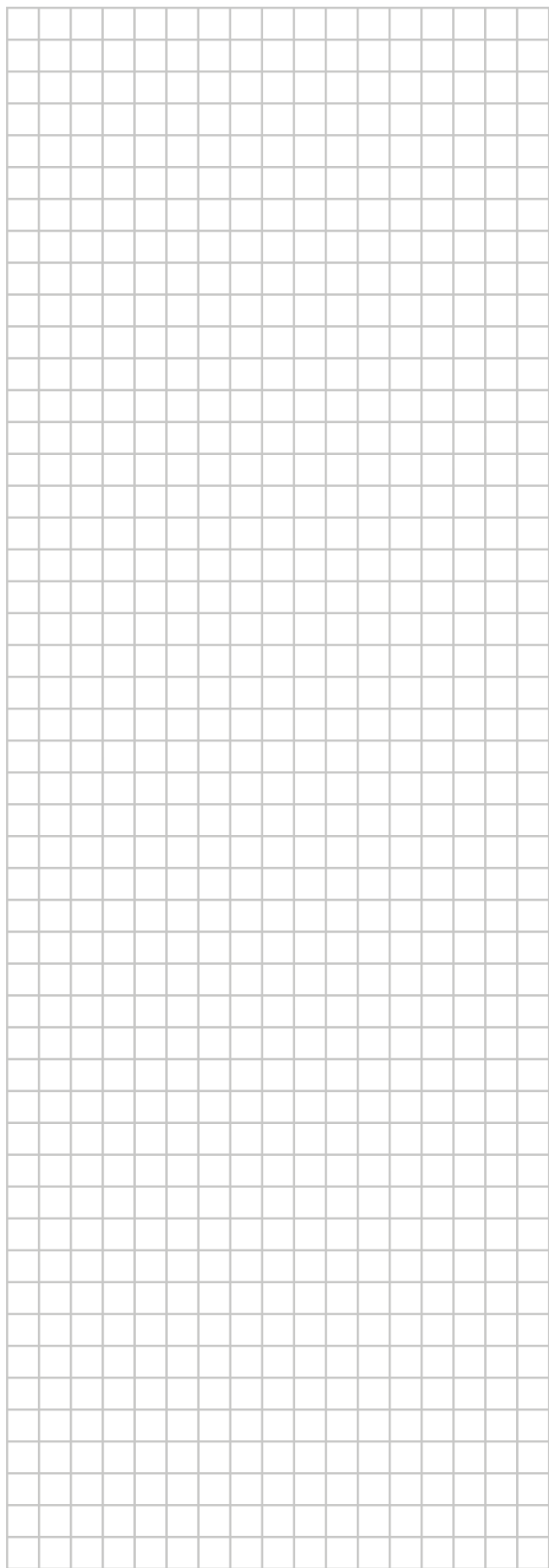
5MWXM90



- | | | |
|--------------------------------------|------------------------------|---|
| a Heat exchanger | k 4-way valve | u Thermistor (gas) |
| b Outdoor air temperature thermistor | l Muffler | v Room (A, B, C, D) and Domestic hot water tank (W) |
| c Heat exchanger thermistor | m Discharge pipe thermistor | w Field piping – liquid |
| d Refnet header | n Compressor | x Field piping – gas |
| e Fan motor | o Accumulator | y Twin-branched muffler |
| f Propeller fan | p Gas stop valve | z Liquid receiver |
| g Capillary tube | q Liquid stop valve | PS Pressure sensor |
| h Distributor | r Electronic expansion valve | HPS High pressure switch (automatic reset) |
| i Muffler with filter | s Thermistor (liquid) | → Refrigerant flow: cooling |
| j Solenoid valve | t Filter | ---→ Refrigerant flow: DX heating / DHW |









Copyright 2024 Daikin

DAIKIN INDUSTRIES CZECH REPUBLIC s.r.o.

U Nové Hospody 1155/1, 301 00 Plzeň Skvrňany, Czech Republic

DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

3P766062-3H 2025.08