



EC type-approval Certificate

Number **T2178** revision 20
Project number SO12201703
Page 1 of 1

Issued by NMI Certin B.V.,
designated and notified by the Netherlands to perform tasks with respect to
conformity modules mentioned in article 9 of Directive 2009/23/EC, after
having established that the measuring instrument meets the applicable
requirements of Directive 2009/23/EC, to:

Manufacturer A&D Instruments Ltd.
24, Blacklands Way
Abingdon Business Park, Abingdon
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United Kingdom

Measuring instrument **A Non-automatic weighing instrument**
Type : AD-1

Further properties are described in the annexes:

- Description T2178 revision 20;
- Documentation folder T2178-6.

Valid until 25 January 2023

Remarks This revision replaces the earlier versions, except for its documentation
folder.

Issuing Authority

NMI Certin B.V., Notified Body number 0122
25 January 2013


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1 General information about the non-automatic weighing instrument

All properties of the non-automatic weighing instrument, whether mentioned or not, shall not be in conflict with the legislation.

1.1 Essential parts

- Indicator, see table 1;
- Load cell(s), see table 2;
- Construction, see table 3.

Table 1 Indicators:

Manufacturer	Type	Test certificate number
A&D	AD4321	T2164 (TC2164)
A&D	AD4322	T2186 (TC2186)
A&D	AD4323	T2262 (TC2262)
A&D	AD4324	TC5180
A&D	AD4325	TC2935
A&D	AD4326	TC2599
A&D	AD4327	TC2726
A&D	AD4328	TC2958
A&D	AD4329	TC5870
A&D	AD4401	TC5416
A&D	AD-4402	TC6219
A&D	AD-4405, AD-4406, AD-4407	TC6604



Description

Number **T2178** revision 20
 Project number SO12201703
 Page 2 of 9

Table 2 Load cells:

No.	Manufacturer	Test certificate / OIML Declaration number	Type	Drawing number of load transmission
1	A&D	T2171 (TC2171)	LC-4102	FW-BWK 02, 03 AND 940400
2	A&D	T2280 (TC2280)	LC-4204	Page 8 and 10 Technical FV/FW-v.1.a.E
3	A&D	TC2332	LC-4103	Page 7 Technical FV/FW-v.1.a.E
4	Tedea Huntleigh	T(C)2272	3510	5003 and 9207
5	Tedea Huntleigh	T(C)2152	1040	M591 and 940400
6	Tedea Huntleigh	T(C)2153	HSB	9207 and 5003
7	Tedea Huntleigh	PTB 1.13-92.313	104S	940400
8	Tedea Huntleigh	PTB 93.278 93/11/24	1250	M591 and 940400
9	Thames Side	TC2315	T95	AS 2971
10	Thames Side	T(C)2205	T66	4921 - a,b,c,l,m
11	Tedea Huntleigh	T(C)2269	1030	4921 - d,e
12	Tedea Huntleigh	T(C)2353	3410/3411	4921 - a,b,c,d,e,l,m
13	Tedea Huntleigh	PTB 1.13-92.468	355	4921 - a,b,c,e,l,m
14	Tedea Huntleigh	T(C)2274/1	1320	4921 - d,e
15	Tedea Huntleigh	T(C)2462	1241	4921 - d,e
16	Revere Transducers	PTB 1.13-92.578	SHBxM	4921 - a,b,c,h,l,m
17	Revere Transducers	T(C)2508	SHBxR	4921 - a,b,c,h,l,m
18	Revere Transducers	SDLM C9301	SSB	4921 - a,b,c,d,e,h,l,m



Description

Number **T2178** revision 20
 Project number SO12201703
 Page 3 of 9

No.	Manufacturer	Test certificate / OIML Declaration number	Type	Drawing number of load transmission
19	Revere Transducers	T(C)2161	5102	4921 - a,b,c,e,l,m
20	Revere Transducers	T(C)2331	9102	4921 - a,b,c,e,l,m
21	Revere Transducers	T(C)2354	933	4921 - a,b,c,e,l,m
22	Revere Transducers	T(C)2453	HCB	4921 - a,b,c,e,l,m
23	Revere Transducers	T(C)2308	953	4921 - h,i
24	Revere Transducers	T(C)2555	BSP	4921 - h,i
25	Revere Transducers	T(C)2224	CHP	4921 - f,k
26	Revere Transducers	SDLM C9302	CSP-M	4921 - f,k
27	Revere Transducers	PTB 1.13-94.184	RLC	4921 - a,b,c
28	Revere Transducers	TC2513	HPS	4921 - d,e
29	Revere Transducers	TC2510	652	4921 - d,e
30	Hottinger	T(C)2207	Z6	4921 - a,b,c,e,h,l,m
31	Hottinger	PTB 1.13.14615/87	Z7	4921 - a,b,c,e,l,m
32	A&D	TC2406	LC-5223	LC-5223 Spec sheet 2
33	Flintlab	PTB 1.13-93.230	SB4	4921 - a, b, c, e, l, m
34	Flintlab	PTB 1.13-94.338	SB6	4921 - a, b, c, e, l, m
35	Flintlab	T(C)2097	RC1	4921 - a, b, c, h, l, m
36	Flintlab	SP 0402-MVm002	UB1	4921 - h, i
37	Flintlab	PTB D09-95.04	UB6	4921 - h, i
38	Epel	TC2512	ATC	4921 - d, e
39	Epel	TC2357	MC-1	4921 - d, e



Description

Number **T2178** revision 20
 Project number SO12201703
 Page 4 of 9

No.	Manufacturer	Test certificate / OIML Declaration number	Type	Drawing number of load transmission
40	Epel	T(C)2218	MC-2	4921 - d, e
41	Epel	T(C)2181	SB-2	4921 - a, b, c, e, h, i, l, m
42	Epel	T(C)2204	SC	4921 - a, b, c, e, h, i, l, m
43	Epel	T(C)2257	STR	4921 - n
44	Revere	R60/1991-GB-95.07	5222/5223	4921 - n
45	Tedea Huntleigh	TC2559	1260	4921 - d, e
46	Tedea Huntleigh	TC2399	240	4921 - d
47	HBM	T(C)2163	BLC/HLC	4921 - a, b, c, e, l, m
48	HBM	PTB 1.13-94.373	C16	4921 - f, k
49	Scaime	C9418 (France)	AG	4921 - d, e
50	Scaime	C9412 (France)	AH	4921 - d, e
51	Scaime	C9416 (France)	AB	4921 - d, e
52	Scaime	C9405 (France)	F15X	4921 - a, b, c, e, l, m
53	Scaime	C9406 (France)	F30X	4921 - a, b, c, e, h, i, l, m
54	Scaime	C9408 (France)	F60X	4921 - a, b, c, e, h, i, l, m
55	Scaime	C9404 (France)	SB30X	4921 - a, b, c, e, l, m
56	Scaime	C9421 (France)	S30X	4921 - a, b, c, e, l, m
57	Scaime	C9419 (France)	SA30X	4921 - a, b, c, e, l, m
58	Scaime	C9417 (France)	SD25X	4921 - h, i
59	Scaime	C9401 (France)	C50A-NX	4921 - f, k
60	Tedea Huntleigh	TC2584	220/230	4921 - f, k



Description

Number **T2178** revision 20
 Project number SO12201703
 Page 5 of 9

No.	Manufacturer	Test certificate / OIML Declaration number	Type	Drawing number of load transmission
61	Epel	TC2638	MC-3	4921 - d, e
62	Fagerberg	TC2662	3211/3221	4921 - a, b, c, d, e, l, m
63	Shering	TC2341	SBL130SA/ SBL120SA	4921 - a, b, c, e, l, m
64	Shering	R60/1991-GB-95.18	SBL30A	4921 - a, b, c, e, l, m
65	Shering	R60/1991-GB-95.22	SBL30SA	4921 - a, b, c, e, l, m
66	Shering	R60/1991-GB-95.17	SBL110SA	4921 - a, b, c, e, l, m
67	Shering	R60/1991-GB-95.23	SCL20SA	4921 - f, k
68	Shering	R60/1991-GB-95.21	SBL90A	4921 - n
69	Shering	R60/1991-GB-95.16	SBL100A	4921 - n

Table 3 Constructions:

Type	No. of load cells	Load cell type see No. of Table 2	Drawing number
Platform scale	1	1	B30973
Platform scale	1	2	Exploded view FW300/600 KA4, Page 8 Technical FV/FW-v.1.a.E
Platform scale	2	2	Exploded view FW600/1200 KA3, Page 10 Technical FV/FW- v.1.a.E
Platform scale	1	1	Platform Specifications FW100K1/B1 FW150KA1, drawing number FW-BWK02



Description

Number **T2178** revision 20
 Project number SO12201703
 Page 6 of 9

Type	No. of load cells	Load cell type see No. of Table 2	Drawing number
Platform scale	1	1	Platform Specifications FW10/15/30KA2 drawing number FW-BWK 03
Platform scale	1	3	Platform specifications FV60KA1/B1, page 49
Platform scale	1	3	Platform specifications FV150KA1/B1, page 47 maintenance-FV-series-v.1.b.
Platform scale	4	4 and 6	"U" frame, drawing number 9101
Platform scale	4	6	Foot/cell assembly & cell drawing number 9207
Platform scale	1	5 and 8	Turier 1540 series outline drawing number M591
Platform scale	1	1, 5, 7 and 8	Platform ATS drawing number 940400
Platform scale with corner load cells OR	4	4,5,6,8,12,13,14,15,16,17,18,19,20,21,22,27,28,29,30,31,32,33,34,35,41,42,47,52,53,54,55,56,57,62,63,64,65,66	See this column of Table 2
"U" shaped or "Bar" pair for pallet weighing	(2 per bar)		
Platform scale with lever system	1	36,37,41,42,47,52,53,54,55,56,57,58,62,63,64,65,66	See this column of Table 2
Platform scale with lever system OR	1	4,6,12,13,16,17,18,19,20,21,22,23,24,27,30,31,32,33,34,35,41,42,47,55,56,57,62,63,64,65,66	See this column of Table 2
"U" shaped or "Bar" pair for pallet weighing	(1 per bar)		



Description

Number **T2178** revision 20
 Project number SO12201703
 Page 7 of 9

Type	No. of load cells	Load cell type see No. of Table 2	Drawing number
Platform scale "single point" type	1	5,7,8,11,12,14,15,28,29,38,39, 40,46,49,50,51,61,62	See this column of Table 2
Wall scale platform with or without hook	1	8,40,45,61	See this column of Table 2
Hook scale	1	16,17,18,23,24,30,41,42,52,53,54,5 8	See this column of Table 2
Overhead track scale - fully electronic, two load cells	2	4,6,12,16,17,18,19,20,30,31,32,33, 34,35,40,41,42,45,47,50,51,52,53, 54,55,56,57,62,63	See this column of Table 2
Overhead track scale - fully electronic, single point load cells	1	5,8,28,29,39,40,45,50,51,61	See this column of Table 2
Hopper - fully electronic, with one or two single point load cells	1 or 2	5,8,28,29,38,39,40,45,46,50,51,61	See this column of Table 2
Hopper - fully electronic	3 or 4	4,6,12,16,17,18,19,20,21,22,25,26, 27,30,31,32,33,34,35,41,42,47,48, 52,53,54,55,56,57,59,60,61,62,63, 64,65,66,67,68,69	See this column of Table 2
Hopper with lever system	1	19,20,22,23,24,27,30,31,32,33,34, 35,36,41,42,47,52,53,54,55,56,57, 62,63,64,65,66,67	See this column of Table 2
Weighbridge concrete or steel platform or combinations thereof, with or without rails (fully electronic).	4 to 8	9,25,26,43,44,48,59,60,67,68,69	See this column of Table 2
Weighbridge concrete or steel platform or combinations thereof, with or without rails (with lever system).	1	4,6,10,12,13,16,17,18,19,20,21,22, 23,24,25,26,27,30,31,32,33,34,35, 36,37,41,42,47,48,52,53,54,55,56, 57,58,59,60,62,63,64,65,66,67	See this column of Table 2
Weighbridge	4 to 8	9	J.T.J. 94/1
Pallet scale	4	4 and 6	"U" frame, drawing number 9101

Type	No. of load cells	Load cell type see No. of Table 2	Drawing number
Platform scale	4	4, 6 and 32	Pallet Platform 940300

Any load cell(s) may be used under this EC type-approval certificate for instruments as described in WELMEC 2.4 Issue 2, provided the following conditions are met:

- There is a respective test certificate (EN45501) or an OIML Certificate of Conformity (R60) issued for the load cell by a Notified Body responsible for type examination under Directive 2009/23/EC.
- The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules (WELMEC 2 Issue 5 Section 11), and any particular installation requirements. A load cell marked **NH** is allowed only if humidity testing to EN45501 has been conducted on this load cell.
- The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in the above WELMEC 2 document, at the time of EC verification or declaration of EC conformity of type.
- The load transmission must conform to one of the examples shown in WELMEC 2.4 Issue 2.

1.2 Essential characteristics

Accuracy class	III or IIII
Maximum number of scale intervals	$n \leq$ the number of scale intervals mentioned in the test certificates involved.

Further essential characteristics are described in the test certificates involved.

1.3 Essential shapes

The descriptive markings plate is secured against removal by sealing or will be destroyed when removed.

Inside the cabinet is a calibration lock, located on the main board.

1.4 Conditional parts

The non-automatic weighing instrument may be equipped with peripheral equipment which is used for the applications listed in article 1(2)(a) of Directive 2009/23/EC, provided that the peripheral equipment is certified to be connected to an EC type-approved non-automatic weighing instrument by a Notified Body responsible for type examination under Directive 2009/23/EC, or that the equipment and the use of the equipment comply with the requirements of WELMEC 2.5 Issue 2 Section 2.2.



Description

Number **T2178** revision 20
Project number SO12201703
Page 9 of 9

1.5 Conditional characteristics

Further conditional characteristics are described in the test certificates involved.

1.6 Non-essential parts

The non-automatic weighing instrument may be connected to non-essential devices, for example but not limited to bar code readers, foot switches, second display's and cash drawers, provided that:

- They do not present primary data used for purposes mentioned in article 1(2)(a) of Directive 2009/23/EC unless the "preliminary observations" in Annex 1 of this directive is satisfied;
- They do not lead to an instrument having other essential characteristics than those fixed by this type-approval document.

2 Approval conditions

See chapter 1.3, essential shapes

3 Seals and verification marks

To secure components that may not be dismantled or adjusted by the user, the non-automatic weighing instrument has to be secured in a suitable manner on the locations indicated in the test certificates involved and the load cell cable (see drawing 4321-LCS-01 and 4329 - 004) and the junction box have to be secured.

4 Conditions for conformity assessment

The marks, facilities for the marks and the inscriptions on the non-automatic weighing instrument fulfill the requirements of article 1 of Annex IV of Directive 2009/23/EC.