

# ATX™ JBEA Series Pre-Drilled Aluminum Junction Box

## Increased Safety

ATEX/IECEX: Zones 1 and 2 – 21 and 22

### Applications

- Terminal junction boxes to facilitate electrical connections in hazardous areas.
- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently.
- Ideal for wet or corrosive atmospheres.
- Petroleum, chemical, refineries and other industrial process facilities.
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently.
- Food processing, dairy, brewing, silos and other facilities.

### Features

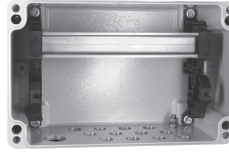
- Operating temperature:
  - PCe type: -55 °C to +60 °C (-67 °F to +140 °F)
  - CAe type: -40 °C to +55 °C (-40 °F to +131 °F)
- For use only with Ex certified terminal blocks.
- Stainless steel hardware.
- Yellow laminated plastic label with black lettering.
- Factory drilled and equipped.

### Standard Materials

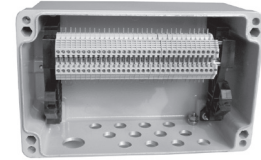
- Enclosure: gray painted grade marine aluminum alloy
- Hardware: stainless steel

### Options

- For use with equipment other than Ex terminal blocks, see ECEA series enclosures and controls.



Without Terminals



Equipped with Terminals

### ATEX/IECEX Certifications and Compliances

- Certification Type: PCe
  - Gas, Zones 1 and 2
    - Conforming to ATEX 2014/34/EU: Ⓢ II 2 G
    - Type of Protection: Ex e II, Ex eia IIC, Ex eib IIC
    - Temperature Class: T6
  - Dust, Zones 21 and 22
    - Conforming to ATEX 2014/34/EU: Ⓢ II 2 D
    - Type of Protection: Ex td A21
    - Surface Temperature: T80 °C (T176 °F)
  - Ambient Temperature: -50 °C to +60 °C (-58 °F to +140 °F)
  - ATEX Certificate: LCIE 00 ATEX 6047
- Certification Type: CAe
  - Gas, Zones 1 and 2
    - Conforming to ATEX 2014/34/EU: Ⓢ II 2 G
    - Type of Protection: Ex e II, Ex eia IIC, Ex eib IIC
    - Temperature Class: T6 for Ta ≤ +40 °C (+104 °F); T5 for +40 °C ≤ Ta ≤ +55 °C (+104 °F ≤ Ta ≤ +131 °F)
  - Dust, Zones 21 and 22
    - Conforming to ATEX 2014/34/EU: Ⓢ II 2 D
    - Type of Protection: Ex td A21
    - Ambient Temperature: T80 °C to T96 °C (T176 °F to T205 °F)
  - ATEX Certificate: LCIE 02 ATEX 6248X
  - IECEx Certificate: IECEx LCI 04.0016X
- Index of Protection according EN/IEC 60529: IP66

### Catalog Numbering Guide — JBEA Series Aluminum Junction Box

<b>JB</b> JB Series ATEX/IECEX Certified Junction Box	<b>E</b> Method of Protection: E - Increased Safety I - Intrinsic Safety	<b>A</b> Material: A - Aluminum	<b>12</b> Length Dimensions mm (in): 12 - 120 (4.72) 17 - 170 (6.69) 21 - 215 (8.47)	<b>11</b> Width Dimensions mm (in): 11 - 110 (4.33) 20 - 205 (8.07) 38 - 380 (14.96)	<b>09</b> Depth Dimensions mm (in): 09 - 91 (3.58) 13 - 130 (5.12) 19 - 190 (7.48)	<b>D1</b> Options: <i>(options must be listed alphabetically)</i> D1 - 5 x M20 D2 - 4 x M20 + 1 x M25 D3 - 7 x M20 + 1 x M25 D5 - 7 x M20 + 1 x M25 D6 - 12 x M20 + 1 x M32 D7 - 19 x M20 + 1 x M32 D8 - 27 x M20 + 1 x M40 P - Unarmored Cable A - Armored Cable L - Lead Sheath Armored Cable E - Earth Continuity Brass Plate # - Customized Enclosure (Digit number will be assigned at time of order placement)
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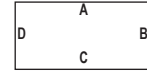
# ATX™ JBEA Series Pre-Drilled Aluminum Junction Box

## Increased Safety

ATEX/IECEx: Zones 1 and 2 – 21 and 22

### Factory Drilled Ex e II Aluminum Junction Boxes

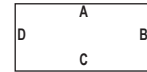
Fitted with: One horizontal symmetrical zinc plated rail. For use with Ex terminals only (not supplied). Yellow laminated plastic label with black lettering. Internal earth terminal. M5 external earth screw. Cable glands and plugs ordered separately.



Type	Dimensions L x W x D mm (in)	Rail Length Maximum mm (in)	Threaded Holes Per Side				Weight kg (lb)	Volume dm <sup>3</sup> (in <sup>3</sup> )	Catalog Number
			A	B	C	D			
PCe1	120 x 110 x 95 (4.72 x 4.33 x 3.74)	62.0 (2.44)	1 x M20	1 x M20	2 x M20	1 x M20	1.0 (2.20)	2.2 (134.25)	JBEA121109D1
PCe2	170 x 110 x 95 (6.69 x 4.33 x 3.74)	112.0 (4.41)	—	1 x M20	2 x M20 1 x M25	1 x M20	1.3 (2.87)	2.7 (164.76)	JBEA171109D2
PCe3	230 x 110 x 95 (9.10 x 4.33 x 3.74)	172.0 (6.77)	—	2 x M20	3 x M20 1 x M25	2 x M20	1.6 (3.53)	5.2 (317.32)	JBEA231109D3

### Factory Drilled Ex e II Aluminum Junction Boxes for Instrumentation Applications

Fitted with: Yellow laminated plastic label with black lettering. Set of two insulated side supports (096115). One horizontal symmetrical zinc plated rail. For use with Ex terminals only (not supplied). Also available for use with copper bar 12 x 2 mm (0.47" x 0.08") or 12 x 4 mm (0.47" x 0.16"). Cable glands and plugs ordered separately. M8 external earth crossing terminal.



Type	Dimensions L x W x D mm (in)	Cable	Rail Length Maximum mm (in)	Threaded Holes Side C	Weight kg (lb)	Volume dm <sup>3</sup> (in <sup>3</sup> )	Catalog Number	
CAe1	215 x 205 x 130 (8.47 x 8.07 x 5.12)	7 Pairs	221 (105)	1 x M25	7 x M20	4 (8.82)	13 (793.3)	JBEA212013D5
CAe2	320 x 205 x 130 (12.60 x 8.07 x 5.12)	12 Pairs	403 (206)	1 x M32	12 x M20	5 (11.02)	23 (1403.6)	JBEA322013D6
CAe5	480 x 380 x 190 (18.90 x 14.96 x 7.48)	27 Pairs	599 (315)	1 x M40	27 x M20	11 (24.25)	53 (3234.3)	JBEA483819D8

### Factory Assembled Ex Terminal Block for Junction Boxes Shown Above

Screwed/Screwed Terminal Block Fitted with Continuity Shield.



For Junction Boxes	Cable	Terminals 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Continuity Shield Qty.	Weight kg (lb)	Volume dm <sup>3</sup> (in <sup>3</sup> )	Catalog Number
215 x 205 x 130 (8.47 x 8.07 x 5.12)	7 Pairs	14	7	0.3 (0.66)	0.5 (30.5)	096039
320 x 205 x 130 (12.60 x 8.07 x 5.12)	12 Pairs	24	12	0.4 (0.88)	1.1 (63.1)	096041
480 x 380 x 190 (18.90 x 14.96 x 7.48)	27 Pairs	54	27	0.6 (1.32)	1.7 (103.7)	096044

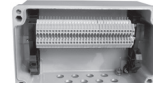
# ATX™ JBEA Series Pre-Drilled Aluminum Junction Box

## Increased Safety

ATEX/IECEx: Zones 1 and 2 – 21 and 22

### Factory Drilled and Equipped with Terminals Ex e II Aluminum Junction Boxes for Instrumentation Applications with Unarmored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields.  
Yellow laminated plastic label with black lettering. M16 to M50 threaded entries.  
Cable glands and plugs ordered separately.



Type	Terminal Block 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Earth Terminal 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Copper Bar 10 x 3 mm (0.39" x 0.12") Qty.	Cable Clamp 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Continuity Shield Qty.	Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
<b>Cable U1000 RQ2V — Single Cable Entries M20</b>								
CAe1	07G1.5	7	1	5	—	M20	3	JBEA212013P01
CAe1	12G1.5	12	1	8	—	M25	6	JBEA212013P02
CAe2	19G1.5	19	1	11	—	M25	9	JBEA322013P03
CAe2	24G1.5	24	1	14	—	M32	12	JBEA322013P04
CAe2	27G1.5	27	1	15	—	M32	13	JBEA322013P05
CAe1	07G2.5	7	1	5	—	M20	3	JBEA212013P07
CAe1	12G2.5	12	1	8	—	M25	6	JBEA212013P08
CAe2	19G2.5	19	1	11	—	M32	9	JBEA322013P09
CAe2	24G2.5	24	1	14	—	M32	12	JBEA322013P10
CAe2	27G2.5	27	1	15	—	M32	13	JBEA322013P11
<b>Cable EGSF — Single Cable Entries M16</b>								
CAe1	07IP05	14	—	—	7	M20	7	JBEA212013P21
CAe1	07IT05	21	—	—	7	M20	7	JBEA212013P22
CAe2	12IP05	24	—	—	12	M25	12	JBEA322013P23
CAe2	12IT05	36	—	—	12	M25	12	JBEA322013P24
CAe5	27IP05	54	—	—	27	M32	27	JBEA483819P26
CAe1	07IP09	14	—	—	7	M25	7	JBEA212013P27
CAe1	07IT09	21	—	—	7	M25	7	JBEA212013P28
CAe2	12IP09	24	—	—	12	M32	12	JBEA322013P29
CAe2	12IT09	36	—	—	12	M32	12	JBEA322013P30
CAe5	27IP09	54	—	—	27	M40	27	JBEA483819P32
<b>Cable EISF — Single Cable Entries M16</b>								
CAe1	07IP05	15	—	—	8	M25	7	JBEA212013P41
CAe1	07IT05	22	—	—	8	M32	7	JBEA212013P42
CAe2	12IP05	25	—	—	13	M32	12	JBEA322013P43
CAe2	12IT05	37	—	—	13	M32	12	JBEA322013P44
CAe5	27IP05	55	—	—	28	M40	27	JBEA483819P46
CAe1	07IP09	15	—	—	8	M32	7	JBEA212013P47
CAe1	07IT09	22	—	—	8	M32	7	JBEA212013P48
CAe2	12IP09	25	—	—	13	M40	12	JBEA322013P49
CAe2	12IT09	37	—	—	13	M40	12	JBEA322013P50
CAe5	27IP09	55	—	—	28	M50	27	JBEA483819P52

# ATX™ JBEA Series Pre-Drilled Aluminum Junction Box

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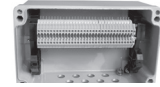
ATEX/IECEx: Zones 1 and 2 – 21 and 22

### Factory Drilled and Equipped with Terminals Ex e II Aluminum Junction Boxes for Instrumentation Applications with Armored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M50 threaded entries. Cable glands and plugs ordered separately.



Armored cables



Type	Terminal Block 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Earth Terminal 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Copper Bar 10 x 3 mm (0.39" x 0.12") Qty.	Cable Clamp 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Continuity Shield Qty.	Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
<b>Cable U1000 RVFV — Single Cable Entries M20</b>								
CAe1	07G1.5	7	1	5	—	M20	3	JBEA212013A01
CAe1	12G1.5	12	1	8	—	M20	6	JBEA212013A02
CAe2	19G1.5	19	1	11	—	M25	9	JBEA322013A03
CAe2	24G1.5	24	1	14	—	M25	12	JBEA322013A04
CAe2	27G1.5	27	1	15	—	M25	13	JBEA322013A05
CAe1	07G2.5	7	1	5	—	M20	3	JBEA212013A07
CAe1	12G2.5	12	1	8	—	M25	6	JBEA212013A08
CAe2	19G2.5	19	1	11	—	M25	9	JBEA322013A09
CAe2	24G2.5	24	1	14	—	M32	12	JBEA322013A10
CAe2	27G2.5	27	1	15	—	M32	13	JBEA322013A11
<b>Cable EGFA — Single Cable Entries M20</b>								
CAe1	07IP05	14	7	—	7	M20	7	JBEA212013A21
CAe1	07IT05	21	7	—	7	M20	7	JBEA212013A22
CAe2	12IP05	24	12	—	12	M25	12	JBEA322013A23
CAe2	12IT05	36	12	—	12	M25	12	JBEA322013A24
CAe5	27IP05	54	27	—	27	M32	27	JBEA483819A26
CAe1	07IP09	14	7	—	7	M25	7	JBEA212013A27
CAe1	07IT09	21	7	—	7	M25	7	JBEA212013A28
CAe2	12IP09	24	12	—	12	M25	12	JBEA322013A29
CAe2	12IT09	36	12	—	12	M32	12	JBEA322013A30
CAe5	27IP09	54	27	—	27	M40	27	JBEA483819A32
<b>Cable EIFA — Single Cable Entries M20</b>								
CAe1	07IP05	15	—	—	8	M25	7	JBEA212013A41
CAe1	07IT05	22	—	—	8	M25	7	JBEA212013A42
CAe2	12IP05	25	—	—	13	M32	12	JBEA322013A43
CAe2	12IT05	37	—	—	13	M32	12	JBEA322013A44
CAe5	27IP05	55	—	—	28	M40	27	JBEA483819A46
CAe1	07IP09	15	—	—	8	M32	7	JBEA212013A47
CAe1	07IT09	22	—	—	8	M32	7	JBEA212013A48
CAe2	12IP09	25	—	—	13	M40	12	JBEA322013A49
CAe2	12IT09	37	—	—	13	M40	12	JBEA322013A50
CAe5	27IP09	55	—	—	28	M50	27	JBEA483819A52

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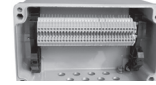
ATEX/IECEx: Zones 1 and 2 – 21 and 22

### Factory Drilled and Equipped with Terminals Ex e II Aluminum Junction Boxes for Instrumentation Applications with Lead Sheath Armored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M50 threaded entries. Cable glands and plugs ordered separately.



Armored cables with lead sheath



Type	Terminal Block 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Earth Terminal 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Copper Bar 10 x 3 mm (0.39" x 0.12") Qty.	Cable Clamp 0.5/2.5 mm <sup>2</sup> (0.0008/0.004 in <sup>2</sup> ) Qty.	Continuity Shield Qty.	Multi-cable Cable Entry Qty. 1	Single Cable Entries Qty.	Catalog Number
<b>U1000 RGPV — Single Cable Entries M20</b>								
CAe1	07 x 1.5	7	1	5	—	M20	3	JBEA212013L01
CAe1	12 x 1.5	12	1	8	—	M25	6	JBEA212013L02
CAe2	19 x 1.5	19	1	11	—	M25	9	JBEA322013L03
CAe2	24 x 1.5	24	1	14	—	M32	12	JBEA322013L04
CAe2	27 x 1.5	27	1	15	—	M32	13	JBEA322013L05
CAe1	07 x 2.5	7	1	5	—	M20	3	JBEA212013L07
CAe1	12 x 2.5	12	1	8	—	M25	6	JBEA212013L08
CAe2	19 x 2.5	19	1	11	—	M32	9	JBEA322013L09
CAe2	24 x 2.5	24	1	14	—	M32	12	JBEA322013L10
CAe2	27 x 2.5	27	1	15	—	M32	13	JBEA322013L11
<b>Cable EGPF — Single Cable Entries M20</b>								
CAe1	07IP05	14	—	—	7	M20	7	JBEA212013L21
CAe1	07IT05	21	—	—	7	M20	7	JBEA212013L22
CAe2	12IP05	24	—	—	12	M25	12	JBEA322013L23
CAe2	12IT05	36	—	—	12	M25	12	JBEA322013L24
CAe5	27IP05	54	—	—	27	M32	27	JBEA483819L26
CAe1	07IP09	14	—	—	7	M25	7	JBEA212013L27
CAe1	07IT09	21	—	—	7	M25	7	JBEA212013L28
CAe2	12IP09	24	—	—	12	M32	12	JBEA322013L29
CAe2	12IT09	36	—	—	12	M32	12	JBEA322013L30
CAe5	27IP09	54	—	—	27	M40	27	JBEA483819L32
<b>Cable EIPF — Single Cable Entries M20</b>								
CAe1	07IP05	15	—	—	8	M25	7	JBEA212013L41
CAe1	07IT05	22	—	—	8	M32	7	JBEA212013L42
CAe2	12IP05	25	—	—	13	M32	12	JBEA322013L43
CAe2	12IT05	37	—	—	13	M32	12	JBEA322013L44
CAe5	27IP05	55	—	—	28	M50	27	JBEA483819L46
CAe1	07IP09	15	—	—	8	M32	7	JBEA212013L47
CAe1	07IT09	22	—	—	8	M32	7	JBEA212013L48
CAe2	12IP09	25	—	—	13	M40	12	JBEA322013L49
CAe2	12IT09	37	—	—	13	M40	12	JBEA322013L50
CAe5	27IP09	55	—	—	28	M50	27	JBEA483819L52

# ATX™ JBEA Series Pre-Drilled Aluminum Junction Box

## Increased Safety

ATEX/IECEx: Zones 1 and 2 – 21 and 22

### Defining maximum terminal block quantity according to power dissipation:

- Junction boxes used for instrumentation applications have very low current levels. Therefore there is no risk of overheating whatever the number of terminals inside the box.
- For applications other than instrumentation, the following tables allow you to define your junction box depending on the number of terminals and the maximum authorized current being carried.

For other terminal block configurations, please consult our drilling guide available online at: [www.appleton.emerson.com](http://www.appleton.emerson.com)

T Rating: T6		Type		
		PCe1 120 x 110 x 95 mm (4.72 x 4.33 x 3.74")	PCe2 170 x 110 x 95 mm (6.69 x 4.33 x 3.74")	PCe3 230 x 110 x 95 mm (9.10 x 4.33 x 3.74")
2.5 mm <sup>2</sup> (0.004 in <sup>2</sup> )	Quantity	12	22	33
	I Maximum	15 A	13 A	12 A
4 mm <sup>2</sup> (0.006 in <sup>2</sup> )	Quantity	10	18	28
	I Maximum	20 A	19 A	16 A
6 mm <sup>2</sup> (0.009 in <sup>2</sup> )	Quantity	7	14	21
	I Maximum	32 A	27 A	24 A
10 mm <sup>2</sup> (0.016 in <sup>2</sup> )	Quantity	4	6	8
	I Maximum	50 A	50 A	50 A

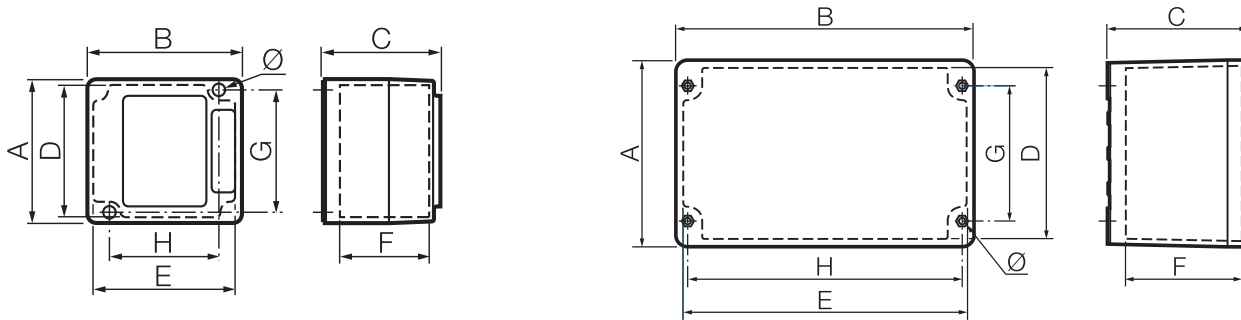
T Rating: T6 @ Ta 40 °C (104 °F) T5 @ Ta 55° C (131 °F)		Type		
		CAe1 215 x 205 x 130 mm (8.47 x 8.07 x 5.12")	CAe2 320 x 205 x 130 mm (12.60 x 8.07 x 5.12" )	CAe5 480 x 380 x 190 mm (18.90 x 14.96 x 7.48")
2.5 mm <sup>2</sup> (0.004 in <sup>2</sup> )	Quantity	20	21	38
	I Maximum	16 A	16 A	16 A
4 mm <sup>2</sup> (0.006 in <sup>2</sup> )	Quantity	19	20	38
	I Maximum	20 A	20 A	20 A
6 mm <sup>2</sup> (0.009 in <sup>2</sup> )	Quantity	12	13	23
	I Maximum	32 A	32 A	32 A
10 mm <sup>2</sup> (0.016 in <sup>2</sup> )	Quantity	10	11	30
	I Maximum	40 A	40 A	32 A
16 mm <sup>2</sup> (0.024 in <sup>2</sup> )	Quantity	8	10	22
	I Maximum	28 A	27 A	26 A
25 mm <sup>2</sup> (0.039 in <sup>2</sup> )	Quantity	8	8	20
	I Maximum	67 A	73 A	60 A
35 mm <sup>2</sup> (0.054 in <sup>2</sup> )	Quantity	8	8	12
	I Maximum	79 A	86 A	100 A

# ATX™ JBEA Series Pre-Drilled Aluminum Junction Box

Increased Safety

ATEX/IECEX: Zones 1 and 2 – 21 and 22

## Dimensions in Millimeters (Inches)



PCe1 to PCe3

CAe1 to CAe5

Type	External Dimensions			Internal Dimensions			Fixings		Thick	Ø
	A	B	C	D	E	F	G	H		
PCe1	110 (4.33)	120 (4.72)	95 (3.74)	100 (3.94)	110 (4.33)	70 (2.76)	94 (3.70)	84 (3.38)	20 (0.79)	5 (0.20)
PCe2	110 (4.33)	170 (6.69)	95 (3.74)	100 (3.94)	160 (6.30)	70 (2.76)	94 (3.70)	134 (5.28)	20 (0.79)	5 (0.20)
PCe3	110 (4.33)	230 (9.06)	95 (3.74)	100 (3.94)	220 (8.66)	70 (2.76)	94 (3.70)	194 (7.68)	20 (0.79)	5 (0.20)
CAe1	205 (8.07)	215 (8.46)	130 (5.12)	190 (7.48)	200 (7.87)	105 (4.13)	146 (5.75)	186 (7.32)	10 (0.39)	7 (0.28)
CAe2	205 (8.07)	320 (12.60)	130 (5.12)	190 (7.48)	305 (12.01)	105 (4.13)	146 (5.75)	290 (11.48)	10 (0.39)	7 (0.28)
CAe5	480 (18.90)	380 (14.96)	190 (7.48)	378 (14.88)	279 (10.98)	132 (5.20)	385 (15.16)	285 (11.22)	13 (0.51)	7 (0.28)