

Datasheet

Part no. and prices: see pricelist



**VITOCCELL 100-H** Type CHA

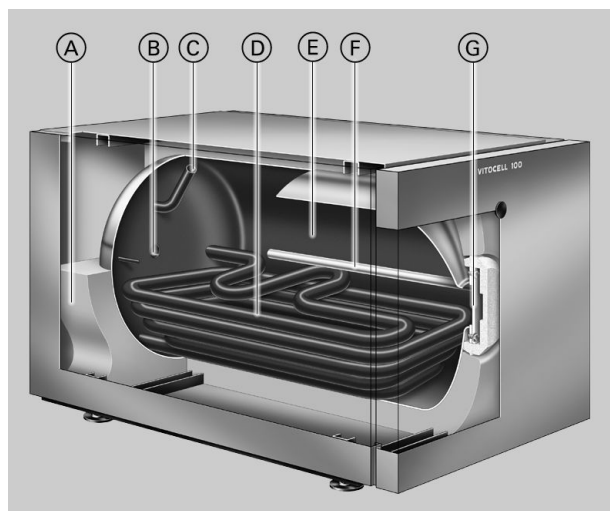
Horizontal DHW cylinder made from steel  
with Ceraprotect enamel coating

## Product information

The solution for cost-effective DHW heating. The Vitocell 100 is available as a horizontal version with up to 200 litre capacity.

## Benefits at a glance

- Corrosion-resistant cylinder made from steel with Ceraprotect enamel coating. Additional cathodic protection via a magnesium anode; impressed current anode available as an accessory.
- The total water content is heated up via internal indirect coils stretching right to the cylinder floor.
- High DHW convenience through rapid, even heat-up via generously sized heating surfaces.
- Low heat losses through highly effective, all-round thermal insulation.



- (A) Highly effective all-round thermal insulation made from rigid polyurethane foam
- (B) DHW circulation
- (C) DHW
- (D) Indirect coil stretching right to the cylinder floor – the entire DHW cylinder is therefore fully heated
- (E) Steel cylinder with Ceraprotect enamel coating
- (F) Magnesium anode
- (G) Inspection and cleaning aperture

## Specification

For DHW heating in conjunction with boilers

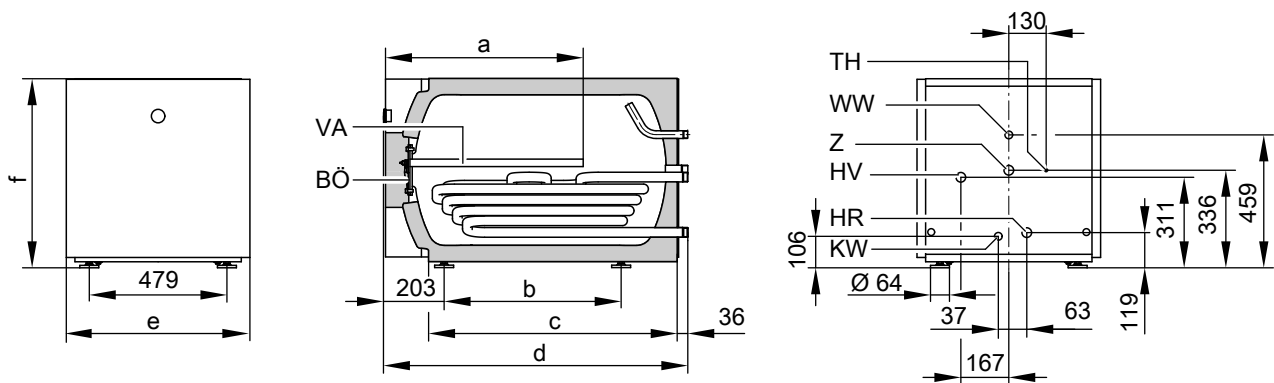
Suitable for systems with

- Heating water flow temperature up to **110 °C**
- DHW temperature up to **95 °C**
- operating pressure on the **heating water side** up to **10 bar**
- operating pressure on the **DHW side** up to **10 bar**

Cylinder capacity	I		130	160	200
<b>DIN register number</b>			0243/06-13 MC/E		
<b>Continuous output</b> for DHW heating from <b>10 to 45 °C</b> and a <b>heating water</b> flow temperature of ... at the heating water throughput stated below	90 °C	kW l/h	28 688	33 810	42 1032
	80 °C	kW l/h	23 565	28 688	32 786
	70 °C	kW l/h	19 466	22 540	26 638
	60 °C	kW l/h	14 344	16 393	18 442
<b>Continuous output</b> for DHW heating from <b>10 to 60 °C</b> and a <b>heating water</b> flow temperature of ... at the heating water throughput stated below	90 °C	kW l/h	27 464	32 550	38 653
	80 °C	kW l/h	20 344	24 412	29 498
	70 °C	kW l/h	14 241	17 292	19 326
<b>Heating water throughput</b> for the stated continuous outputs		m <sup>3</sup> /h	3.0	3.0	3.0
<b>Standby heat loss</b> q <sub>BS</sub> at 45 K temperature differential (actual values to DIN 4753-8)		kWh/24 h	1.20	1.30	1.50
<b>Overall dimensions</b>					
Total length d	mm		907	1052	1216
Total width e	mm		640	640	640
Total height f	mm		654	654	654
<b>Weight</b> DHW cylinder with thermal insulation	kg		90	103	116
<b>Heating water content</b>	l		5.5	7	8
<b>Heating surface</b>	m <sup>2</sup>		0.8	1	1.2
<b>Connections</b>					
Heating water flow and return	R		1	1	1
Cold water, hot water	R		¾	¾	¾
DHW circulation	R		1	1	1

### Information regarding continuous output

When designing the system for the continuous output as stated or calculated, allow for the corresponding circulation pump. The stated continuous output is only achieved when the rated boiler output ≥ continuous output.



- |    |                                                                   |    |                            |
|----|-------------------------------------------------------------------|----|----------------------------|
| BÖ | Inspection and cleaning aperture                                  | VA | Protective magnesium anode |
| HR | Heating water return                                              | WW | DHW                        |
| HV | Heating water flow                                                | Z  | DHW circulation            |
| KW | Cold water                                                        |    |                            |
| TH | Sensor well for cylinder temperature sensor or control thermostat |    |                            |

## Specification (cont.)

Cylinder capacity	I	130	160	200
a	mm	200	250	300
b	mm	471	616	780
c	mm	721	866	1030
d	mm	907	1052	1216
e	mm	640	640	640
f	mm	654	654	654

Dim. a: Minimum wall clearance to enable the installation/removal of the protective magnesium anode.

### Performance factor $N_L$

to DIN 4708

Cylinder storage temperature  $T_{cyl}$  = cold water inlet temperature +50 K

+5 K/-0 K

Cylinder capacity	I	130	160	200
<b>Performance factor <math>N_L</math></b>				
<b>at heating water flow temperature</b>				
90 °C		1.3	2.2	3.5
80 °C		1.3	2.2	3.5
70 °C		1.1	1.6	2.5

### Performance factor $N_L$

The performance factor  $N_L$  varies according to the cylinder storage temperature  $T_{cyl}$ .

#### Standard values

- $T_{cyl} = 60\text{ °C} \rightarrow 1.0 \times N_L$
- $T_{cyl} = 55\text{ °C} \rightarrow 0.75 \times N_L$
- $T_{cyl} = 50\text{ °C} \rightarrow 0.55 \times N_L$
- $T_{cyl} = 45\text{ °C} \rightarrow 0.3 \times N_L$

### Peak output (over 10 minutes)

Relative to the performance factor  $N_L$  and DHW heating from 10 to

45 °C

Cylinder capacity	I	130	160	200
<b>Peak output (l/10 min)</b>				
<b>at heating water flow temperature</b>				
90 °C		159	199	246
80 °C		159	199	246
70 °C		148	173	210

### Max. draw-off rate (over 10 minutes)

Based on performance factor  $N_L$

With booster

DHW heating from 10 to 45 °C

Cylinder capacity	I	130	160	200
<b>Max. draw-off rate (l/min)</b>				
<b>at heating water flow temperature</b>				
90 °C		16	20	24
80 °C		16	20	24
70 °C		15	17	21

### Available water volume

Cylinder volume heated to 60 °C

Without booster

Cylinder capacity	I	130	160	200
<b>Draw-off rate</b>	l/min	10	10	10
<b>Available water volume</b>	l	100	145	180
Water with $t = 60\text{ °C}$ (constant)				

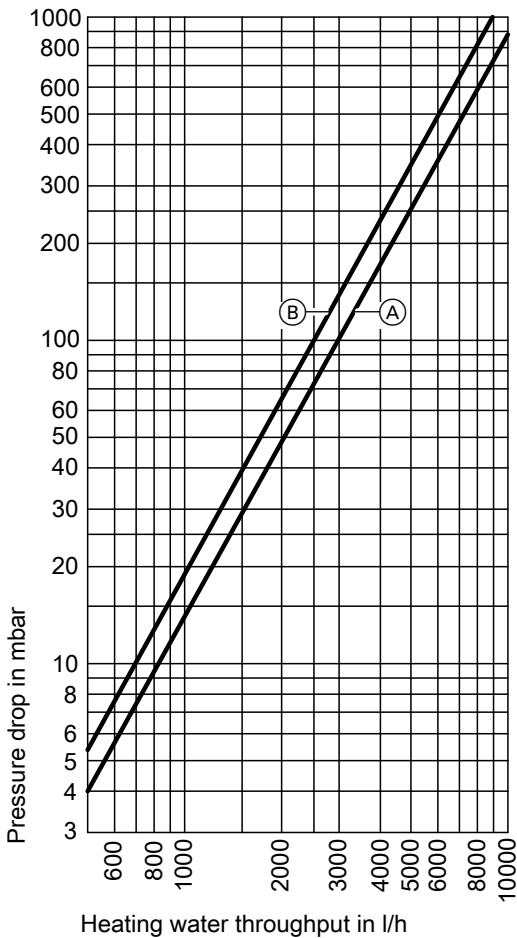
## Specification (cont.)

### Heat-up time

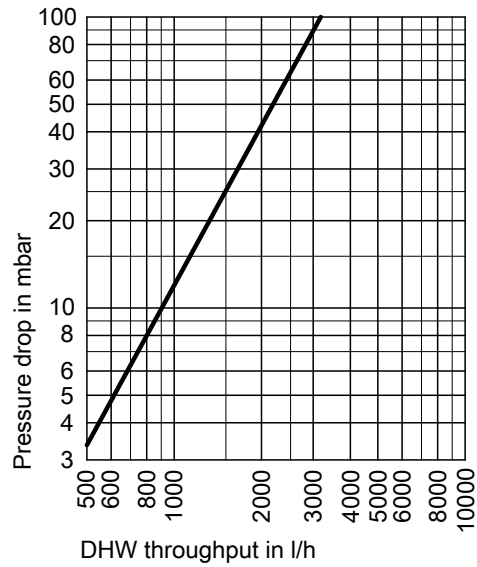
The heat-up times specified will be achieved subject to the maximum continuous output of the DHW cylinder being made available at the relevant flow temperature and when DHW is heated from 10 to 60 °C.

Cylinder capacity	130	160	200
Heat-up time (min) at heating water flow temperature			
90 °C	20	19	18
80 °C	25	26	25
70 °C	34	34	32

### Pressure drop (primary circuit)



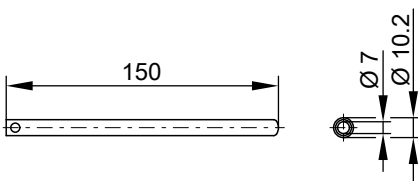
### Pressure drop on the DHW side



- (A) 130 litre cylinder capacity
- (B) 160 and 200 litre cylinder capacity

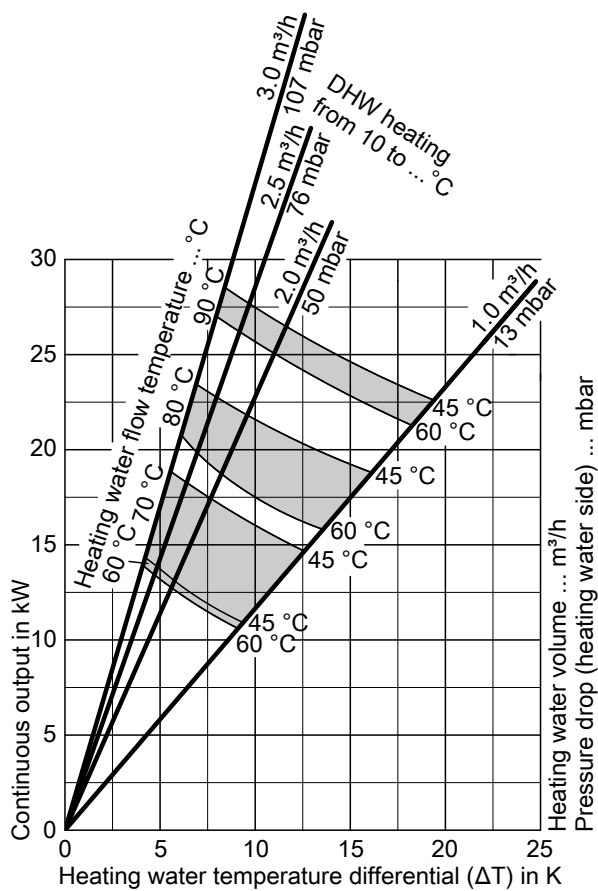
### Sensor well

The sensor well is welded into the DHW cylinder.

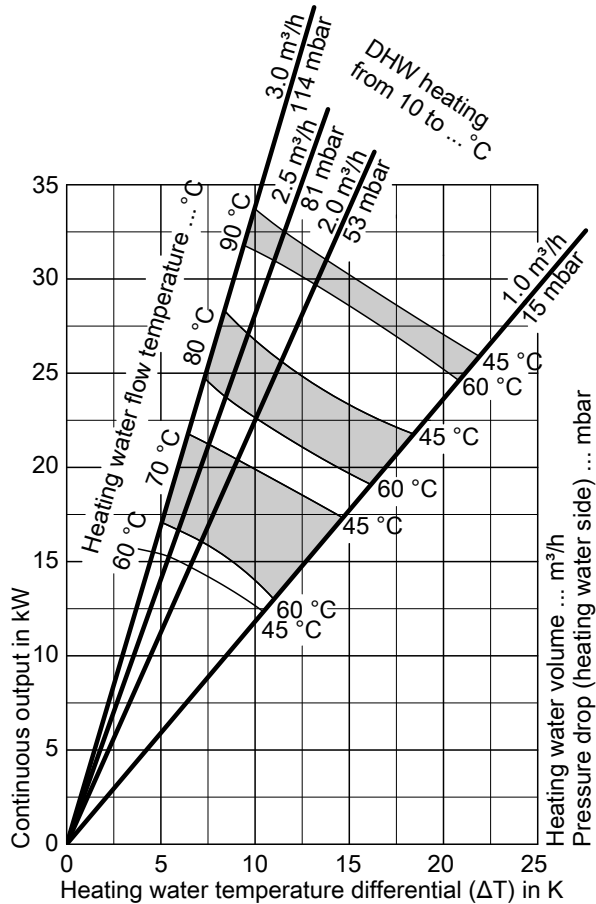


Continuous output

Vitocell 100-H with 130 litre capacity

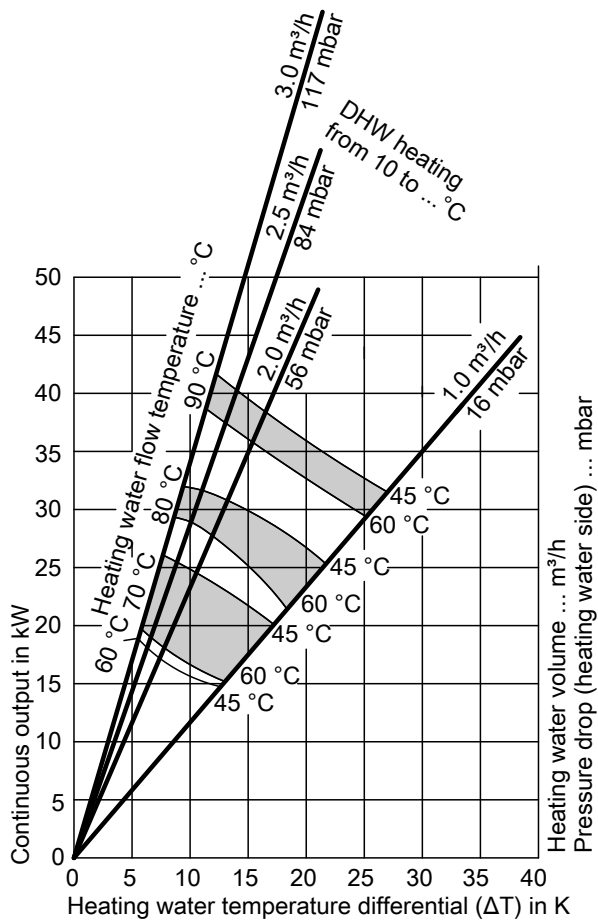


Vitocell 100-H with 160 litre capacity



## Specification (cont.)

### Vitocell 100-H with 200 litre capacity



## Delivered condition

### Vitocell 100-H, type CHA

#### 130, 160 and 200 litre capacity

DHW cylinder made from steel with Ceraprotect enamel coating.

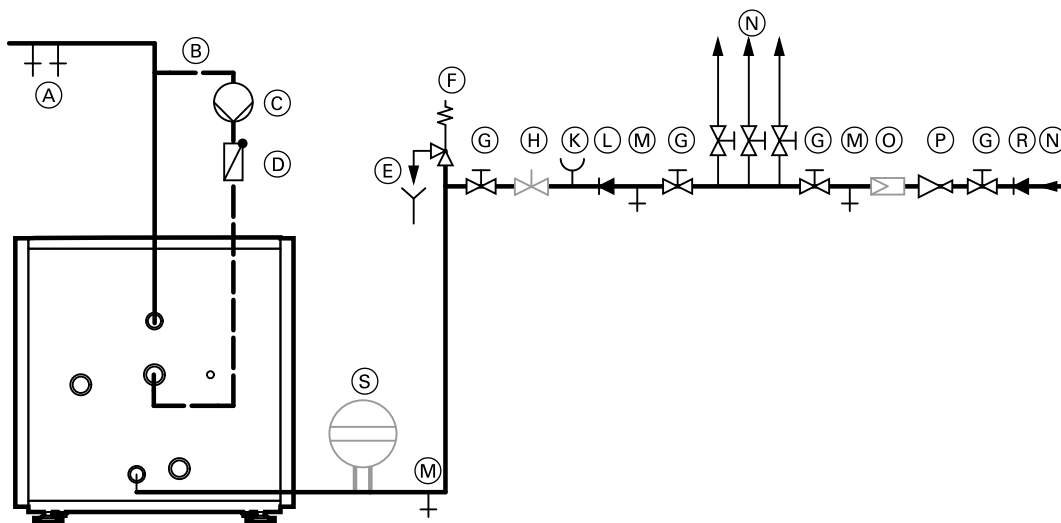
- integral protective magnesium anode
- fitted thermal insulation made from rigid polyurethane foam
- integral welded sensor well for cylinder temperature sensor or control thermostat and
- threaded adjustable feet

Colour of the epoxy-coated sheet steel casing: Vitosilver.

## Design information

### DHW connection

Connection to DIN 1988



- |                                                                                                                                                                                            |                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Ⓐ DHW                                                                                                                                                                                      | Ⓚ Pressure gauge connection                               |
| Ⓑ DHW circulation pipe                                                                                                                                                                     | Ⓛ Non-return valve                                        |
| Ⓒ DHW circulation pump                                                                                                                                                                     | Ⓜ Drain                                                   |
| Ⓓ Spring-loaded check valve                                                                                                                                                                | Ⓝ Cold water                                              |
| Ⓔ Visible discharge pipe outlet point                                                                                                                                                      | Ⓞ Drinking water filter* <sup>1</sup>                     |
| Ⓕ Safety valve                                                                                                                                                                             | Ⓟ Pressure reducer to DIN 1988-2<br>version Dec. 1988     |
| Ⓖ Shut-off valve                                                                                                                                                                           | Ⓡ Non-return valve/pipe separator                         |
| Ⓗ Flow regulating valve<br>(We recommend the installation and adjustment of the max. water<br>flow rate in accordance with the 10 minute peak rating of the DHW<br>cylinder (see page 6)). | Ⓢ Diaphragm expansion vessel, suitable for drinking water |

#### The safety valve must be installed.

Recommendation: Install the safety valve higher than the top edge of the cylinder. This protects the valve against contamination, scaling and high temperatures. The DHW cylinder does not then need to be drained when working on the safety valve.

### Warranty

Our warranty for DHW cylinders requires that the water to be heated meets the potable water quality in accordance with current Drinking Water Ordinance [Germany], and that existing water treatment systems work correctly.

### Heat transfer surface

The corrosion-resistant, protected heat transfer surface (DHW/heat transfer medium) corresponds to type C in accordance with DIN 1988-2.

### Vitocell 100-H with DHW cylinder below

Observe the relevant combinations in the pricelist for boiler-DHW cylinder combinations.

\*<sup>1</sup> According to DIN 1988-2, a drinking water filter should be installed in systems with metal pipework. DIN 1988 and Viessmann also recommend the installation of a drinking water filter when using plastic pipes to prevent contaminants entering the DHW system.



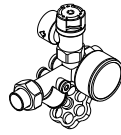
## Accessories

### Safety assembly to DIN 1988

- 10 bar: **Part no. 7219 722**
- 6 bar: **Part no. 7265 023**
- DN 15/R ¾
- Max. heat input: 75 kW

Components:

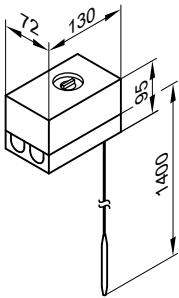
- Shut-off valve
- Non-return valve and test nipple
- Pressure gauge connector
- Diaphragm safety valve



### Temperature controller

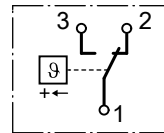
**Part no. 7151 989**

- With a thermostatically controlled system.
  - With selector on the outside of the casing.
  - Without sensor well
- The sensor well is part of the standard delivery of Viessmann DHW cylinders.
- With top-hat rail to be fitted to the DHW cylinder or the wall.



#### Specification

Connection	3-core cable with a cross-section of 1.5 mm <sup>2</sup>
IP rating	IP 41 acc. to EN 60529
Setting range	30 to 60 °C, adjustable to 110 °C
Switching differential	max. 11 K
Breaking capacity	6(1.5) A 250 V~
Switching function	with rising temperature from 2 to 3

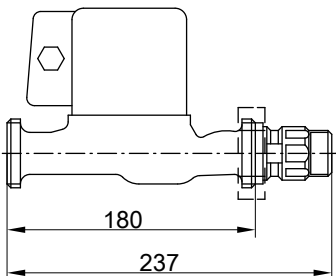


DIN reg. no.

DIN TR 116807  
or  
DIN TR 96808

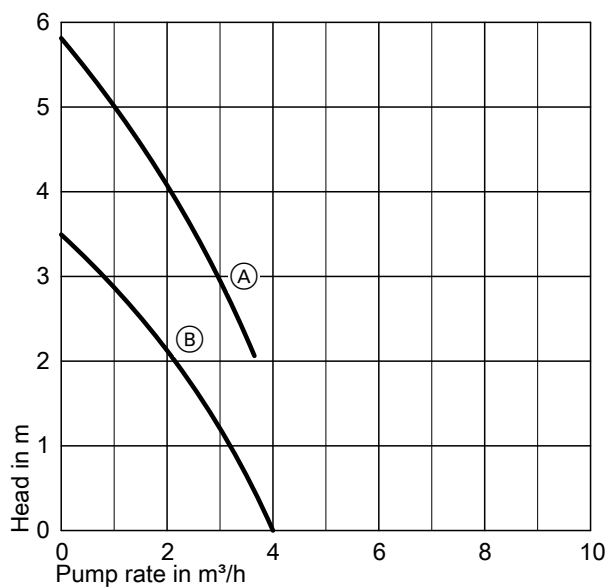
### Circulation pump for cylinder heating

Part no.		<b>7339 467</b>	<b>7339 468</b>
Pump type		UP 25-40	VIRS 30/6-1
Voltage	V~	230	230
Power consumption	W	55-65	110-140
Connection	R	1	1¼
Connecting cable for boilers	m	4.7	4.7
		up to 40 kW	from 40 to 70 kW



Part no. 7339 467 and 7339 468

## Accessories (cont.)



- Ⓐ Part no. 7339 468
- Ⓑ Part no. 7339 467

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Subject to technical modifications.

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