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Based

Since 1975



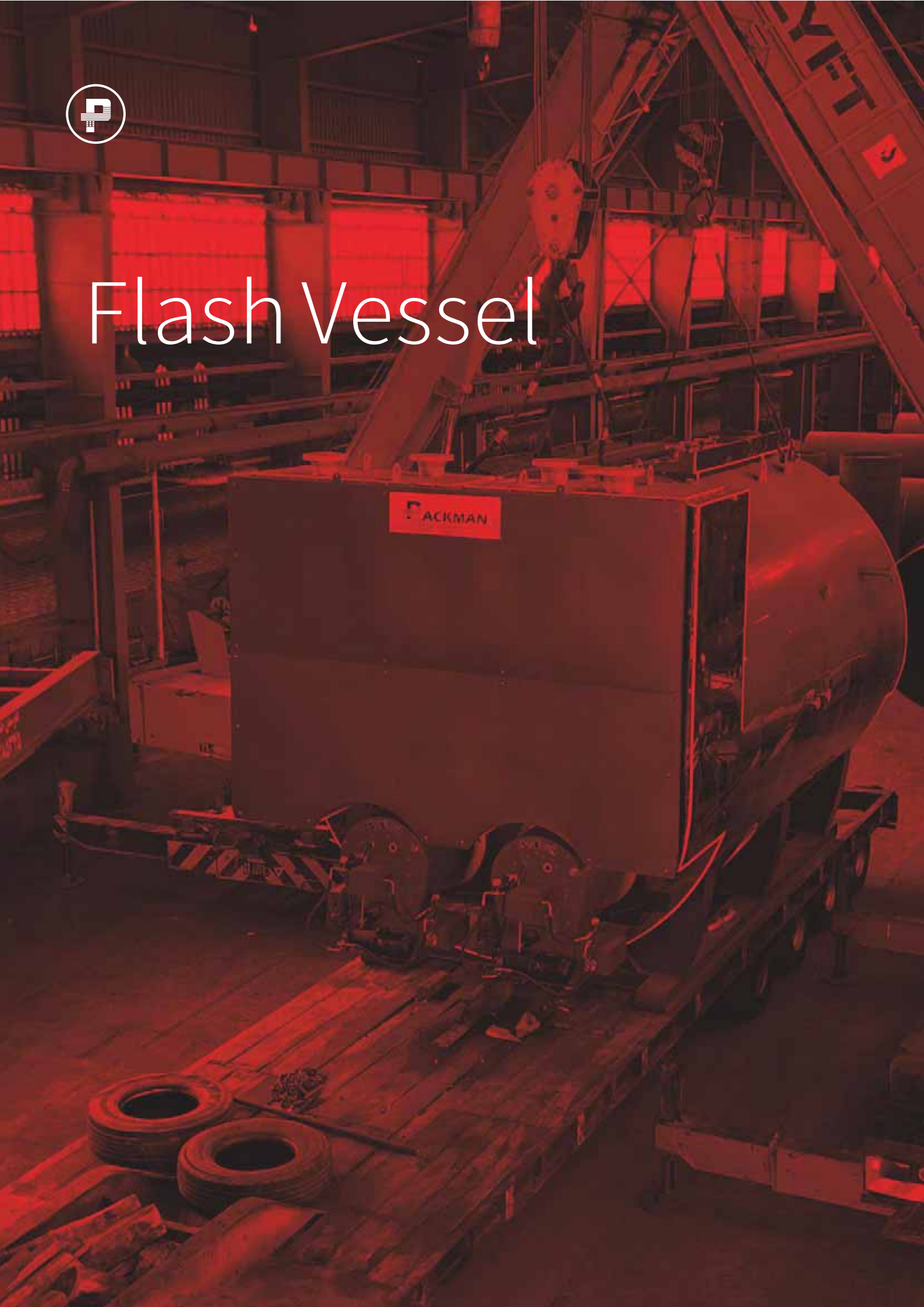
**PACKMAN**  
Industrial Group

 Flash Vessel

powered by PACKMAN industrial group



# Flash Vessel





## Product Description

The Packman Flash Vessel is designed and constructed to ASME VIII DIV 1. The design is free-draining which is essential in boiler blowdown & condensate return applications.

## Applications

These vessels are particularly suited to condensate returning from system or boiler blowdown heat recovery systems where efficient separation of the flash steam from the blowdown is essential to prevent contamination of the boiler feed Vessel and / or heat transfer surfaces.

## Principal Features

Designed and constructed in compliance with pressure vessels standards.  
Low separation velocity to produce drier steam.  
Free-draining.

## Sizes and Pipe Connections

Connections available as standard: Screwed connections to BS 21 taper. Flanged connections to EN 1092 PN16.

Note: Vessels are available to BS 1560 Class 150 or 300, or screwed NPT

## How to Size

Use the chart below to select the appropriate flash Vessel. It is necessary to know the pressure on the steam traps or boiler pressure in the case of blowdown heat recovery, the flash steam pressure (desired or existing), and the condensate or blowdown flowrate.

### Example 1: (solid lines)

A boiler plant operating at 12 bar g has a TDS control blowdown flowrate of 2 500 kg /h (3 boilers at 833 kg /h each).

The flash steam from the blowdown is to be added to the low pressure steam system operating at 1 bar g.

1. From boiler pressure move horizontally to flash steam pressure - A
2. Drop vertically to blowdown flowrate in kg / h - B

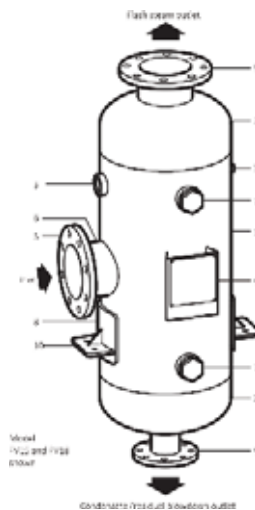


3. Follow curve to right-hand scale and across to same flash pressure - C
4. Move upwards to flash vessel size. Select flash vessel - in this case an PFV8 is required.

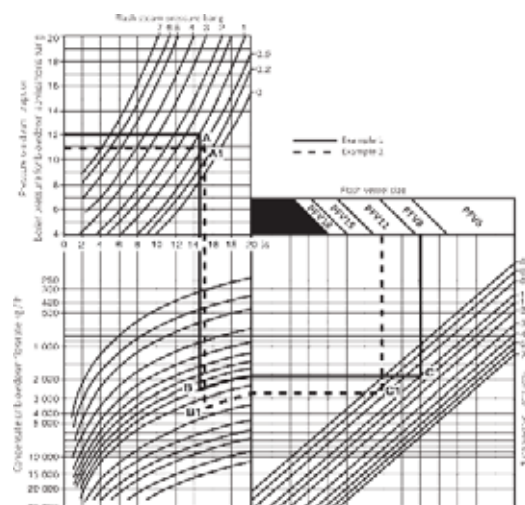
### Example 2: (dotted lines)

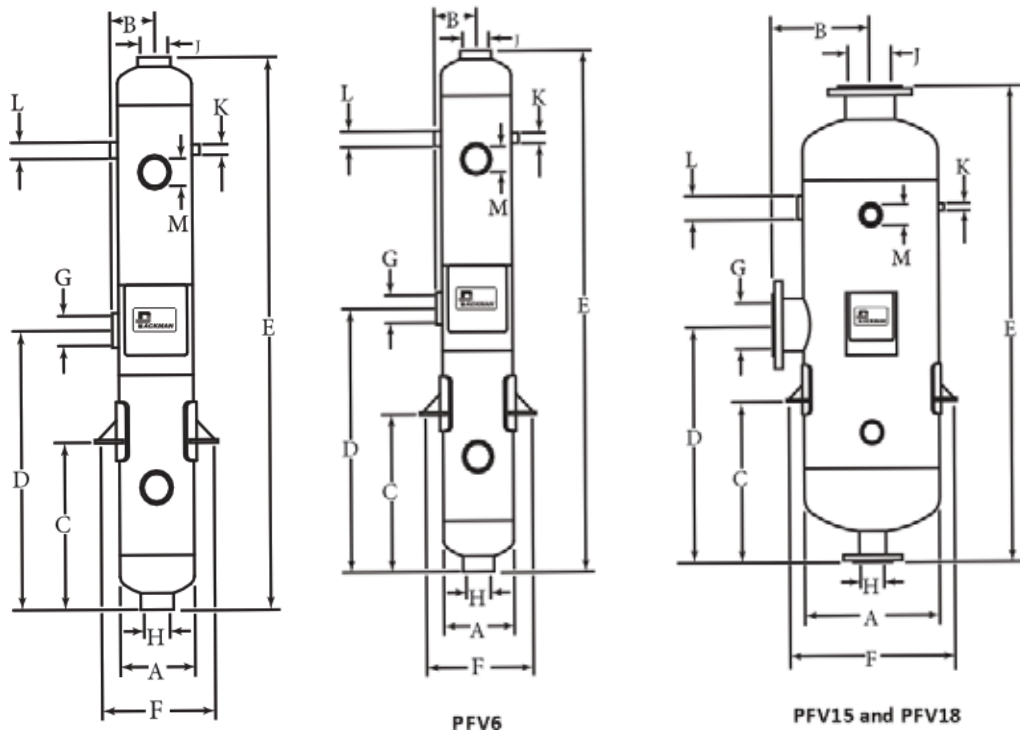
A plant operating on steam at 11 barg condenses 4 000 kg / h of steam. Flash is to be recovered at 0.5 barg.

1. From pressure on steam traps move horizontally to flash steam pressure - A1
2. Drop vertically to condensate flowrate in kg / h - B1
3. Follow curve to right hand scale and across to same flash pressure - C1
4. Move upwards to flash vessel size. Select flash vessel - in this case an PFV12 is required.



Design Data		
No.	Part	Material
1	Shell Cylinder	ASTMA106B
2	End Cap	ASTMA234 WPB
3	Nozzle - Half Coupling	ASTMA105N
4	Nozzle - Full Coupling	ASTMA105N
5	Nozzle - Flange	ASTMA516-70
6	Nozzle - Pipe	ASTMA106B
7	Blanking Plug	ASTMA105N
8	Wrapper plate	ASTMA516-60
9	Name-plate Bracket	BS EN 10028-2 P265GH
10	Support Foot /Gusset	BS EN 10025 S275





MODEL	PFV6	PFV8	PFV12	PFV15	PFV18
<b>Design Data</b>					
A	168	219	324	406	457
B	104	210	262	303	329
C	370	413	418	390	514
D	620	663	668	640	764
E	1225	1391	1400	1275	1521
F	230	281	411	492	544
G	2"	DN80	DN100	DN150	DN150
H	2"	2"	2"	DN80	DN80
J	2"	DN80	DN100	DN150	DN150
K	3/4"	3/4"	3/4"	3/4"	3/4"
L	3/4"	1"	1 1/2"	1 1/2"	2"
M	2"	2"	2"	2"	2"

# PACKMAN GROUP

## History

The Packman Company was founded in February 1975, and was soon afterwards registered in companies Registration Office. In early years the Packman construction and service branch focused on building installations. Different mega power plants were built by cooperating with Brown Boveri and Asseck companies in 1976.

The company started its official activities in construction of High-Pressure Vessels such as Hot-Water Boilers, Steam Boilers, Storage Tanks, Softeners and Heat Exchangers from 1984.

Packman Company is one of the first companies which supplied the high quality and standard hot water boilers to the customers.

Packman has exported its products to countries such as Uzbekistan, United Arab Emirates and other countries in the Middle East. It is one of the largest producers of hot-water and steam boilers in the Middle East.

Now we are proud to announce that the Packman industrial group has five major sub-brands that have product titles in all field of HVAC equipment and engineering services, and we do not know this success except with the help and support of our customers.

1. Construction Services Industry Association
2. Industry Association
3. Construction Companies' Syndicate
4. Technical Department Association
5. Mechanical Engineering Association
6. Engineering Standard Association

### Departements:

#### Sales Deps:

- ⌒ Power Plant & Petrochemical
- ⌒ Industrial
- ⌒ Hospitality Service
- ⌒ Commercial & Residential
- ⌒ Sport Complex & Pool

#### Technical Deps:

- ≡ Manufacturing R&D
- ≡ Innovation Center
- ≡ EPC Execute Unit
- ≡ Product Develop Unit
- ≡ Sales Engineering Dep.

#### Others:

- ≈ After Sales Service
- ≈ Project Control
- ≈ Financial Office
- ≈ Commercial Office
- ≈ Marketing Department





# PACKMAN GROUP Brands



**PACKMAN**  
Industrial Group

Designer&manufacturer  
of Condensing, Hot  
Water, Steam, Hot Oil &  
Waste Heat Boilers, Heat  
Exchangers, Autoclave  
Pressure & Storage  
Vessels & etc



**GREENMAN**  
Green mindset, green future

Engineering &  
Designing Commercial  
Greenhouse Plant, CO2  
Dosing System, Flue  
gas Condenser &  
Special HVAC Systems,  
Sustainable Agriculture  
& etc



**ROMAN**  
Water solution

Designer&manufacturer  
Reverse Osmosis Plant &  
Package, Water  
Treatment, Softener &  
Filters and Chemical  
Dosing Systems & etc



**RAADMAN**  
a look to the future

Designer&manufacturer  
of Industrial Mono & Dual  
Block Gas, LPG, Light &  
Heavy Oil Burners,  
Premixed & Postmixed  
Burners, Water tube  
burners, Process burners,  
Special application  
burners & Combustion  
Solutions & etc



**CHILLMAN**  
Coolest hvac around

Designer&manufacturer  
of Air & Water Cooled  
Chillers, Air Handling  
Units, Fancoil, HVAC  
Equipment, Cold  
Storage Room & etc



1. Isfahan Factory



2. Vilashahr Factory



3. Parand Factory



4. Parand (2) Factory



5. Bonyad Factory

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# Knowledge Based



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