



GFT Valves & Pumps
ACE Mender Pty Ltd

**Bottom Discharge Valve –
Products & On-site Service**
反應槽出料底閥
- 產品及現場服務

ACE MENDER

□ Glass Lined Valve 搪玻璃閥門

- Machining the welded valve spindle after glass lining , ensure the concentricity both glass lining valve cone and operating unit.鋼材焊接件搪玻璃閥芯，搪玻璃後機加工，確保搪玻璃閥錐與執行單元的同軸度。
- Glass lining with the welded valve body, easy for customized inlet and outlet flange.鋼材焊接件搪玻璃閥體，便於客制化進出口法蘭。
- The corrosion resistance of glass for glass lining valve according to DIN EN 15159 standard.搪玻璃的閥塗搪符合歐洲DIN EN 15159標準的耐腐蝕瓷釉。

□ PFA Lined Valve 襯PFA閥門

- The German brand GFT is produced in a joint venture in China. The valve body castings meet PED requirements and provide MTC 3.1 documents.德國品牌GFT在中國合資生產，閥體鑄件符合PED要求，提供MTC 3.1 文件。

□ Stainless Steel 316L Valve 不鏽鋼316L閥門

Common points of valves made of three materials

以上三種材料閥門共同點

- The valve seat is made of PTFE resin mixed with FRP reinforced and modified by molding, which meets FDA requirements. FFKM O-rings can be installed to prevent residues from entering the gap between the valve seat and the nozzle. 樹脂混合玻璃纖維增強改性模壓製成閥座，符合FDA要求，可以加裝FFKM的O圈以阻止殘留物進入閥座與管口的縫隙。
- The bellow seal made by pure PTFE, it flex with the spindle move up and down, then it will without traditional rub both spindle and package, therefore it will without abrasive dust and also without abrasion on the spindle. 波紋管密封用純PTFE製造，在閥芯上下移動時波紋管也隨之伸縮，原來的閥芯與盤根之間的摩擦運動沒有了，這樣也不會產生磨削物，也不會因此磨損盤根或閥芯。



搪玻璃/不鏽鋼閥門結構

Glass Lined/ Stainless steel Valve

閥座 Valve Seat

- 填充鐵氟龍 Filled PTFE
- 襯PFA PFA lined
- 不銹鋼四氟複合 SS+PFA

波紋管密封 Bellow Seal

- 改性鐵氟龍 Modify PTFE

手輪開啟裝置

- 不銹鋼 Stainless steel

視鏡及清洗管孔

- 不銹鋼 Stainless steel

手輪

- 不銹鋼 Stainless steel

閥芯 Valve Spindle

- 搪玻璃 Glass lined
- 不銹鋼 Stainless steel

閥體 Valve Body

- 搪玻璃 Glass lined
- 不銹鋼 Stainless steel
- 搪玻璃外包不銹鋼
SS covered Glass lined

帶機械限位的聯軸器

- 不銹鋼 Stainless steel 304

氣動機架

- 不銹鋼 Stainless steel

氣動執行裝置

- 不銹鋼 Stainless steel
- 碳鋼噴漆 Painted CS

出口 outlet

手動執行裝置

- 不銹鋼 Stainless steel





Glass Lined/ Stainless steel Valve 搪玻璃/不鏽鋼閥門

Operating Condition 操作條件:

Reactor Temperature Range 反應釜溫度範圍 :

-20°C ~ +180°C

up to 230 °C on request 最高230 °C 請諮詢

Reactor Pressure Range 反應釜壓力範圍 :

-1 ~ 10bar

Discharge Temperature 出料時溫度 :

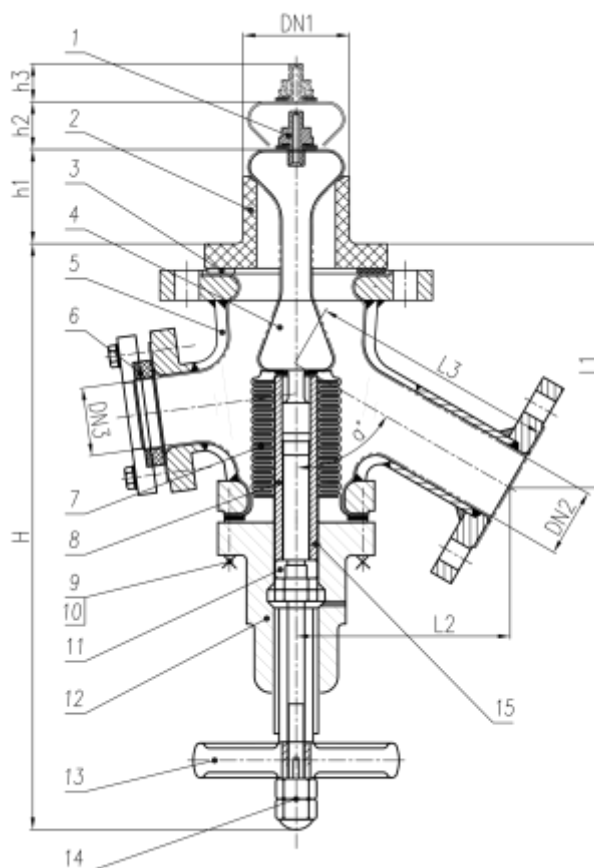
-20°C ~ +180°C

Discharge Pressure 出料時壓力 :

-1 ~ 3 bar

Optional 選配件 :

- Tantalum temperature measure tip
鉭測溫頭
- Glass detector 玻璃完好探測器
- Valve seat O Ring 閥座O圈



	DN1	DN2	DN3	L1	L2	L3	H	h1	h2	h3	a°
Inch	BDV-M系列美標手動放料閥外形尺寸 BDV-P series ANSI Pneumatic discharge valves outline dimensions										
3" / 2"	80	50	40	~180	~157	180	~430	~75	35	25	60
4" / 3"	100	80	50	~180	~157	180	~440	~73	35	25	60
6" / 4"	150	100	50	~172	~175	199	~440	~95	35	25	60
DN	BDV-P系列歐標氣動放料閥外形尺寸(PN16) BDV-P series DIN Pneumatic discharge valves outline dimensions(PN16)										
80 / 50	80	50	40	~180	~157	180	~430	~75	35	25	60
100 / 80	100	80	50	~180	~157	180	~440	~73	35	25	60
150 / 100	150	100	50	~172	~175	199	~440	~95	35	25	60



Glass Lined/ Stainless steel Valve 搪玻璃/不鏽鋼閥門

Operating Condition 操作條件:

Reactor Temperature Range 反應釜溫度範圍：
-20°C ~ +180°C
up to 230 °C on request 最高230 °C 請諮詢

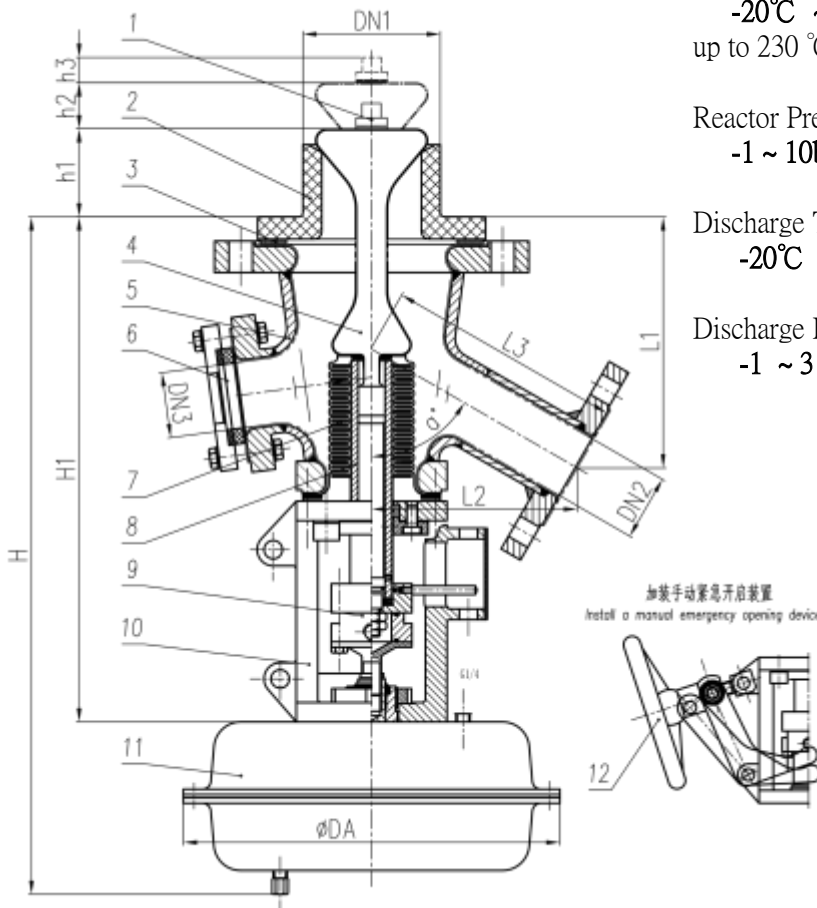
Reactor Pressure Range 反應釜溫壓力範圍：
-1 ~ 10bar

Discharge Temperature 出料時溫度：
-20°C ~ +180°C

Discharge Pressure 出料時壓力：
-1 ~ 3 bar

Optional 選配件：

- Solenoid valve 電磁閥
- Air Filter 空氣過濾器
- Position switch 位置開關
- Tantalum temperature measure tip 鉭測溫頭
- Glass detector 玻璃完好探測器
- Valve seat O Ring 閥座O圈



	DN1	DN2	DN3	L1	L2	L3	H	H1	h1	h2	h3	a°	ØDA
Inch	BDV-P系列美標氣動放料閥外形尺寸 BDV-P series ANSI Pneumatic discharge valves outline dimensions												
3" /2"	80	50	40	~180	~157	180	587	~415	~75	35	25	60	365
4" /3"	100	80	50	~180	~157	180	595	~421	~73	35	25	60	365
6" /4"	150	100	50	~172	~175	199	595	~421	~95	35	25	60	365
DN	BDV-P系列歐標氣動放料閥外形尺寸(PN16) BDV-P series DIN Pneumatic discharge valves outline dimensions(PN16)												
80/50	80	50	40	~180	~157	180	587	~415	~75	35	25	60	365
100/80	100	80	50	~180	~157	180	595	~421	~73	35	25	60	365
150/100	150	100	50	~172	~175	199	595	~421	~95	35	25	60	365

PFA Lined Discharge Valve 鋼襯PFA出料閥

General 概述

PFA lined reactor bottom discharge valves lining in inner surface of body and outer surface of stem. One-time compression molding, high temperature and vacuum resistance. Can withstand the same pressure, temperature and chemical media as glass-lined process equipment. This valve can only be used as a bottom valve for discharging materials, not as a flow control valve. PFA 內襯反應釜底部排料閥，閥體內表面和閥杆外表面均有內襯。一次性模壓成型，耐高溫 and 真空。可承受與搪玻璃工藝設備相同的壓力、溫度和化學介質。該閥門僅可用作排料底閥，不能用作流量控制閥。

Advantage 優點:

- The material of all the flow-through parts of the valve is PFA and Modify PTFE , all raw material approved by the pharmaceutical FDA. 閥門所有過流部件的材質均為PFA和改性PTFE，均為經藥品FDA批准的原料。
- The valve stem seal is a bellows seal without abrasive debris. Avoid contamination of overflowing material. 閥杆密封採用波紋管密封，不含磨料碎屑。避免溢流物料的污染。
- The valve body is designed to be drained, no residue, and each batch can be drained. 閥體採用排液設計，無殘留，每批次均可排空。
- The valve seat is installed in the discharge hole of the reaction kettle. After the valve is installed, the bottom of the reaction kettle is a complete flat bottom without accumulated materials. 閥座安裝在反應釜的出料口處，閥門安裝後反應釜底部為完整的平底，無積料。
- The material of the valve can be CF8/PFA, and the outer surface is all stainless steel, which is suitable for clean environment. 閥門材質可選CF8/PFA，外表面全不銹鋼，適用於潔淨環境。
- The opening height of the valve stem has a constant limit, which does not affect the minimum liquid level of the agitator. 閥杆的開啟高度有一個恒定的限度，不影響攪拌器的最低液位。





PFA Lined Discharge Valve 鋼襯PFA出料閥

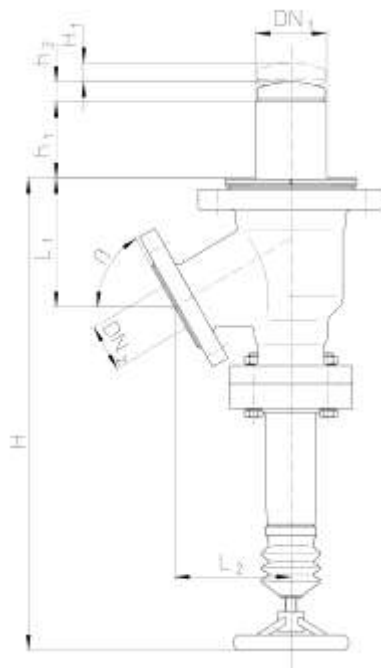
Operating Condition 操作條件:

Reactor Temperature Range 反應釜溫度範圍：
-40°C ~ +180°C

Reactor Pressure Range 反應釜溫壓力範圍：
-1 ~ 6bar
10bar is possible in limited temperature on request
有限溫度時10bar有可能使用，請諮詢

Discharge Temperature 出料時溫度：
-40°C ~ +180°C

Discharge Pressure 出料時壓力：
-1 ~ 3 bar



	DN ₁	DN ₂	L ₁	L ₂	H	h ₁	h ₂	β	H ₁
80/50	80	50	135.5	125.5	496	80	21	60°	20
100/80	100	80	143	152	446	90	11	45°	30
150/100	150	100	188	162	470	100	10	45°	30

Flange connection according DIN standard PN 16 class or ASME standard ANSI 150lb class optional.
法兰连接按DIN标准PN16级或ASME标准ANSI150lb级可选。

Materials 材料:

Body 閥體: WCB/PFA lined or CF8/PFA lined optional

Stem 閥芯: CF8/PFA lined

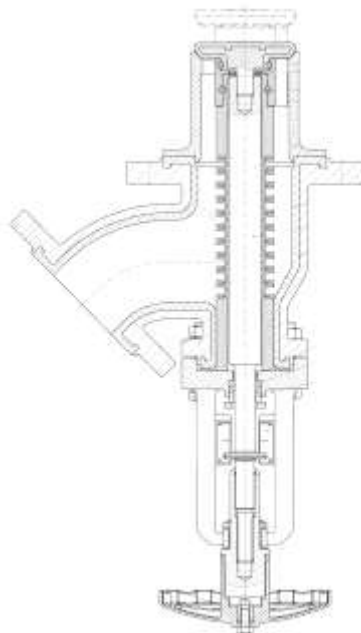
Bellow 波紋管: Modify PTFE 改性鐵氟龍 TFM1600

Seat 閥座: Modify PTFE 改性鐵氟龍 TFM1600

O ring O圈: FFKM 全氟醚

Optional 選配件:

- Tantalum temperature measure tip 鉭測溫頭
- Glass detector 玻璃完好探測器
- Valve seat O Ring 閥座O圈





PFA Lined Discharge Valve 鋼襯PFA出料閥

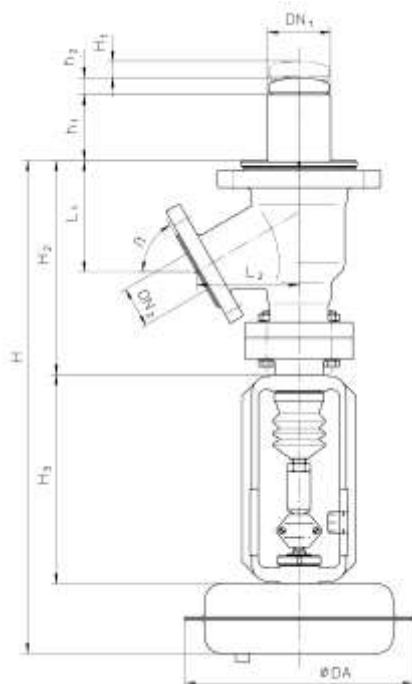
Operating Condition 操作條件:

Reactor Temperature Range 反應釜溫度範圍：
-40°C ~ +180°C

Reactor Pressure Range 反應釜溫壓力範圍：
-1 ~ 6bar
10bar is possible in limited temperature on request
有限溫度時10bar有可能使用，請諮詢

Discharge Temperature 出料時溫度：
-40°C ~ +180°C

Discharge Pressure 出料時壓力：
-1 ~ 3 bar



	DN ₁	DN ₂	L ₁	L ₂	H ₂	h ₁	h ₂	β	H ₁
80/50	80	50	135.5	125.5	261	80	21	60°	20
100/80	100	80	143	152	256	90	11	45°	30
150/100	150	100	188	162	279	100	10	45°	30

Flange connection according DIN standard PN 16 class or ASME standard ANSI 150lb class optional
法兰连接按DIN标准PN16级或ASME标准ANSI150lb级可选。

Materials 材料:

Body閥體: WCB/PFA lined or CF8/PFA lined optional

Stem閥芯: CF8/PFA lined

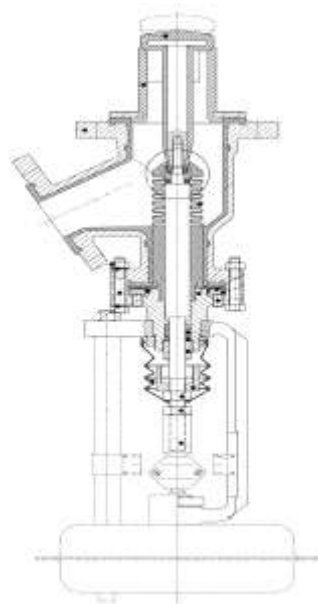
Bellow波紋管: Modify PTFE 改性鐵氟龍 TFM1600

Seat 閥座: Modify PTFE改性鐵氟龍 TFM1600

O ring O圈: FFKM 全氟醚

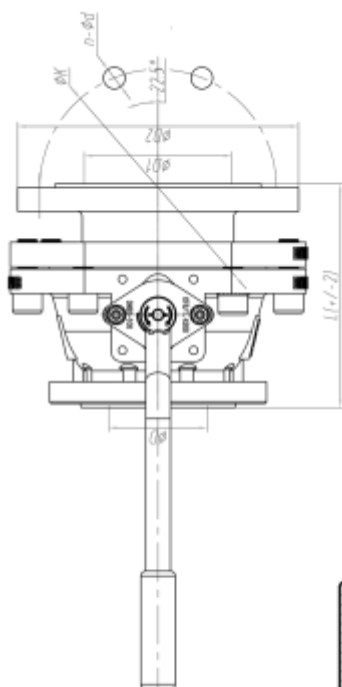
Optional 選配件:

- Solenoid valve 電磁閥
- Air Filter 空氣過濾器
- Position switch 位置開關
- Emergency hand wheel 緊急手輪
- Tantalum temperature measure tip 鉭測溫頭
- Glass detector 玻璃完好探測器
- Valve seat O Ring 閥座O圈





PFA Lined Discharge Ball Valve 鋼襯PFA出料球閥



Connection With Reactor Discharge Nozzle ,
DIN/ANSI Standard ,
customized possible 。與反應釜出料口法蘭連接，
DIN/ANSI標準，可定制。

Standard SP series PFA lined ball valves.
Informations please check catalogue of SP ball valve.
標準的SP系列鋼襯PFA球閥，
參數信息請查閱SP球閥樣本。

Operating Condition 操作條件:

Operating Temperature Range 操作溫度：
-40°C ~ +200°C

Operating Pressure Range 操作壓力：
-1 ~ 16bar



Materials 材料：

Body 閥體:

WCB/PFA lined or CF8/PFA lined

Ball 閥球:

CD4MCUN雙向不鏽鋼 /PFA lined

Bellow packing 波紋管填料：

Modify PTFE 改性鐵氟龍 TFM1600

Ball Seat 球閥:

Modify PTFE改性鐵氟龍 TFM1600

Optional 選配件：

- Pneumatic Actuator 氣動執行器
- Solenoid valve 電磁閥
- Air Filter 空气过滤器
- Position switch 位置开关

Optional 增選加配項

Tantalum tip for temperature measurement 鉭頭測溫

The tantalum tip set on the top of glass lining spindle and insert the PT100 probe. In case of measurement quick and accuracy, PT100 probe should be dip in the media, so we design the thrust type tantalum tip. 閥芯端部裝上鉭測溫頭可在反應釜釜底測溫，內置PT100熱電阻。為了快速且準確地測溫，PT100熱電阻應設在物料中，因此在閥芯上我們採用伸出式鉭測溫頭。



Tip of inline glass detector 線上玻璃監測頭



Two tantalum electrodes insulated from the steel body at the top of the valve core, a DC voltage is applied between the reference electrode and the outer wall of the container, and the measured current is used to monitor the damage of the container lining online. According to the absolute leakage rate that is independent of the conductivity of the solution, this value indicates the degree of damage at the leak point. 在閥芯頂端的與鋼體絕緣的兩個鉭電極，在參考電極與容器外壁之間加有一個直流電壓，測定電流用以線上監測容器內襯的破損。根據溶液的傳導率無關的絕對漏率，該數值即說明漏點的破損程度。

FFKM O ring of Valve seat 閥座上的全氟醚O圈

Adding FFKM O-ring to the valve seat can prevent materials from entering the gap between the valve seat and the pipe mouth. First, it can reduce residue and be more hygienic and clean. Second, it can prevent the valve seat and the pipe mouth from sticking and being difficult to remove. Third, it can also be used as a repair sleeve for the discharge pipe mouth with damaged outer flange and neck.

在閥座上加配FFKM O圈可以防止物料進入閥座與管口間的縫隙，一是減少殘留更衛生潔淨，二是防止閥座與管口黏連不好拆除，三也可以作為外法蘭和頸部破損的出料管口的修補套使用。



On-site Service 現場服務

Our site service included 我們的現場服務包括：

- On site Disassembly the Bottom Discharge valves from reactor, 現場從反應釜上拆出料底閥。
- On site Repair Glass Lined outlet Nozzle of Reactor 現場修補搪玻璃反應釜出料管口。



Inside curve damaged
內曲面破損



Outside flange & Nozzle neck damaged
外法蘭及頸部破損

- Replacement valve's parts or whole valves. 更換閥門部件或整閥。



Vertical lift For Bottom Discharge Valve
installation 出料閥安裝垂直升降車

