西咸新区宙思盾防护科技有限公司
XIXIAN NEW AREA ZHOUSIDUN PROTECTION TECHNOLOGY CO., LTD.

MCT标准产品
选型手册

MCT STANDARD PRODUCT
SELECTION MANUAL

西咸新区宙思盾防护科技有限公司
XIXIAN NEW AREA
ZHOUSIDUN PROTECTION
TECHNOLOGY CO., LTD.

地址:陕西省西咸新区空港新城空港商务中心J区3层10311-01室
Add: Room 10311-01, 3/F, Block J, Airport Business Center, Airport New City, Xixian New Area, Shaanxi Province

王辉
T 18702953635
E wanghui53635@163.com

CERTIFIED PROTECTION

宙思盾
ZOSSHIELD

应用行业

APPLICATION INDUSTRIES



船舶
MARINE

豪华游轮、FPSO等
Luxury Cruise Ships, Fpso, Etc



海工
OFFSHORE ENGINEERING

风电平台、石油钻井平台
Wind Power Platforms, Oil Drilling Platforms



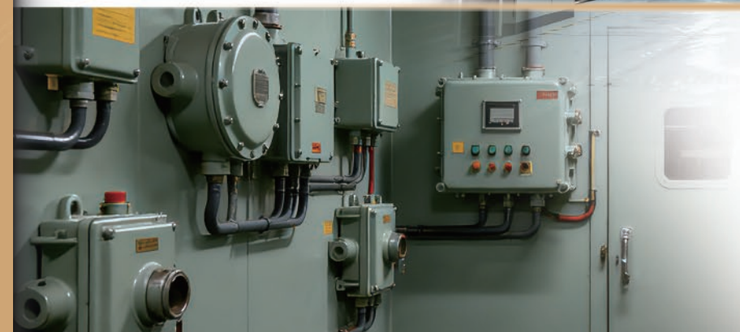
石化
PETROCHEMICAL

陆上石化设备（配电间）
Onshore Petrochemical Equipment
(Electrical Distribution Rooms)



其它行业
OTHER INDUSTRIES

陆上电气防爆间
Onshore Electrical Explosion-proof Rooms



核工业
NUCLEAR INDUSTRY

电磁屏蔽
Electromagnetic Shielding

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① 矩形密封模块

1.1 S1矩形密封模块（带中心塞）

具备变径功能的密封模块，变径范围3~99mm，有单通道和多通道两种类型，带有中心塞，安装在矩形框内，长度60mm。

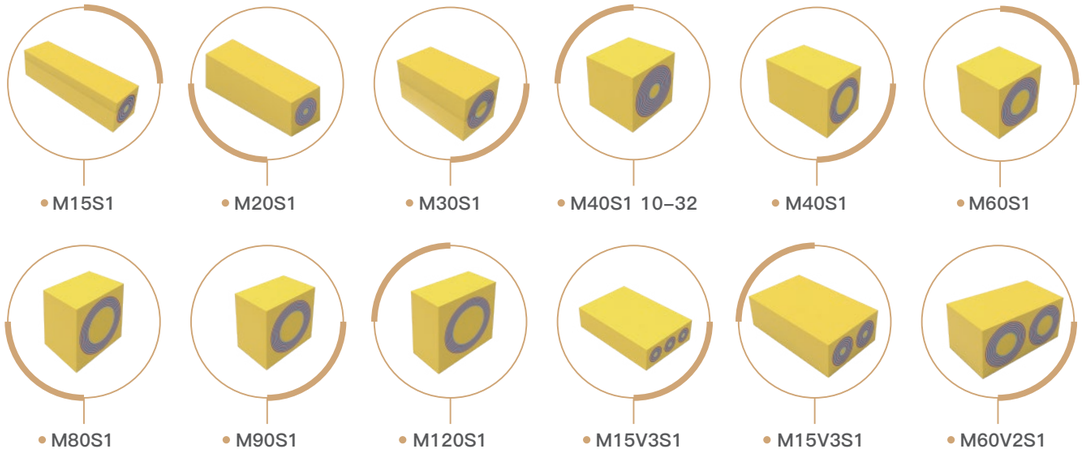
材料为乙丙橡胶和硅橡胶（膜片）。

RECTANGULAR SEALING MODULE

S1 RECTANGULAR SEALING MODULE (WITH CENTER PLUG)

A sealing module with a variable diameter function, ranging from 3 to 99mm. Available in single-channel and multi-channel types, it features a center plug and is installed within a rectangular frame with a length of 60mm.

The materials are EPDM and silicone rubber (for the diaphragm).



型号 Modul	通道数量 Number of cable	变径范围 For cable diameter Ømin~Ømax	外部尺寸 External dim L=60	重量 Weight
M15S1	1	3~11	15×15	0.02
M15V3S1	3	3.5~10.5	15×40	0.05
M20S1	1	4~14.5	20×20	0.04
M20V2S1	2	3.5~16.5	20×40	0.07
M30S1	1	10~25	30×30	0.08
M40H30S1	1	10~25	30×40	0.1
M40S1	1	21~32	40×40	0.14
M40S1 10–32	1	10~32	40×40	0.14
M60S1	1	28~54	60×60	0.32
M60S1 24–54	1	24~54	60×60	0.33
M60V2S1	2	24~54	60×60	0.64
M60V2S1 24–54	2	24~54	60×60	0.66
M80S1	1	48~71	80×80	0.6
M90S1	1	48~71	90×90	0.73
M120S1	1	67.5~99	120×120	1.2

1.2 S1矩形密封模块（不带中心塞）

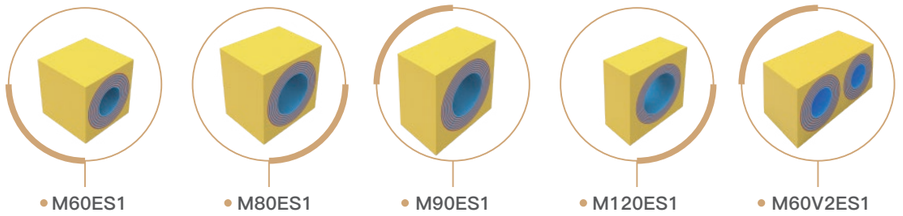
具备变径功能的密封模块，变径范围24~99mm，M60有双通道，不带中心塞，安装在矩形框内，长度60mm。

材料为乙丙橡胶和硅橡胶（膜片）。

S1 RECTANGULAR SEALING MODULE (WITH CENTER PLUG)

Sealing module with diameter reduction capability. Diameter range: 24~99mm. M60 version features dual channels and no center plug. Installed inside rectangular frames. Length: 60mm.

Materials: EPDM and Silicone Rubber (diaphragm).



型号 Modul	通道数量 Number of cable	变径范围 For cable diameter Ømin~Ømax	外部尺寸 External dim L=60	重量 Weight
M60ES1	1	28~54	60×60	0.26
M60V2ES1	2	28~54	60×60	0.52
M60ES1 24–54	1	24~54	60×60	0.28
M60V2ES1 24–54	2	24~54	60×60	0.56
M80ES1	1	48~71	80×80	0.4
M90ES1	1	48~71	90×90	0.55
M120ES1	1	67.5~99	120×120	0.9

1.3 S2矩形密封模块

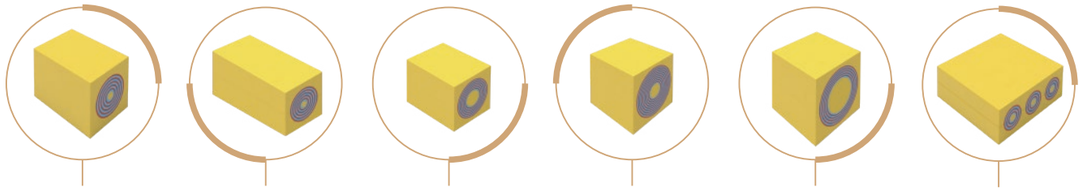
具备变径功能的密封模块，变径范围3~32mm，有单通道和多通道两种类型，带有中心塞，安装在矩形框内，长度40mm。

材料为乙丙橡胶和硅橡胶（膜片）。

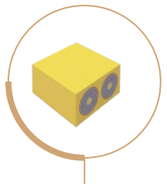
S2 RECTANGULAR SEALING MODULE

Sealing module with diameter adjustment function, covering a range of 3-32mm. Available in single-channel and multi-channel types. Equipped with a center plug and designed for installation in a rectangular frame. Length: 40mm.

Materials: EPDM and Silicone (Diaphragm).



• M15S2 • M20S2 • M30S2 • M40S2 10–32 • M40S2 • M15V3S2



• M40V2S2

型号 Modul	通道数量 Number of cable	变径范围 For cable diameter Ømin~Ømax	外部尺寸 External dim L=40	重量 Weight
M15S2	1	3~11	15×15	0.01
M15V3S2	3	3.5~10.5	15×40	0.03
M20S2	1	4~14.5	20×20	0.03
M20V2S2	2	3.5~16.5	20×40	0.05
M30S2	1	10~25	30×30	0.05
M40H30S2	1	10~25	30×40	0.07
M40S2 10–32	1	10~32	40×40	0.09
M40S2	1	21~32	40×40	0.09

1.4 S3矩形密封模块

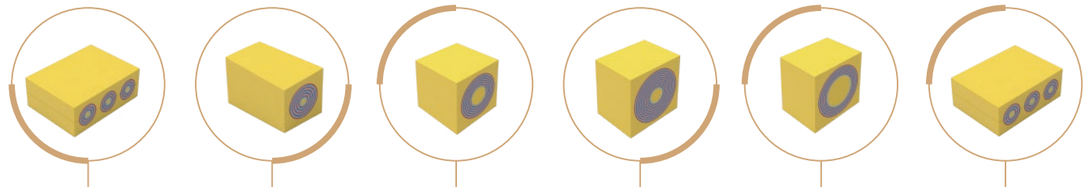
具备变径功能的密封模块，变径范围3~32mm，有单通道和多通道两种类型，带有中心塞，安装在矩形框内，长度30mm。

材料为乙丙橡胶和硅橡胶（膜片）。

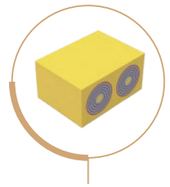
S3 RECTANGULAR SEALING MODULE

Sealing module with diameter adjustment function, covering a range of 3-32mm. Available in single-channel and multi-channel types. Equipped with a center plug and designed for installation in a rectangular frame. Length: 30mm.

Materials: EPDM and Silicone (Diaphragm).



• M15S3 • M20S3 • M30S3 • M40S3 10–32 • M40S3 • M15V3S3



• M20V2S3

型号 Modul	通道数量 Number of cable	变径范围 For cable diameter Ømin~Ømax	外部尺寸 External dim L=60	重量 Weight
M15S3	1	3~11	15×15	0.01
M15V3S3	3	3.5~10.5	15×40	0.025
M20S3	1	4~14.5	20×20	0.02
M40V2S3	2	3.5~16.5	20×40	0.035
M30S3	1	10~25	30×30	0.04
M40H30S3	1	10~25	30×40	0.05
M40S3 10–32	1	10~32	40×40	0.07
M40S3	1	21~32	40×40	0.07

2 圆形密封件

2.1 圆形密封组件（带中心塞）

CR系列密封组件由可变径橡胶密封件和耐酸不锈钢（304或316L）构成，密封范围为3.5~98mm，可安装在圆形套筒内或直接安装在标准的混凝土圆孔内。

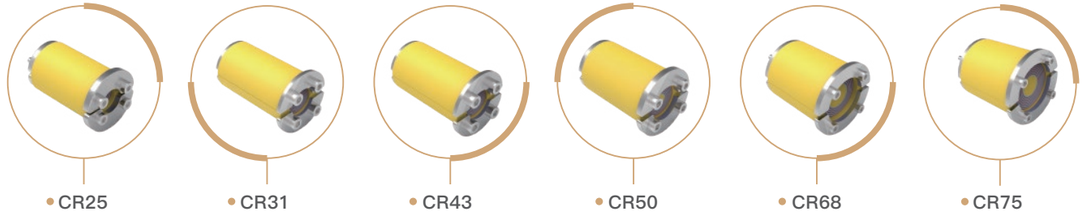
橡胶材料为乙丙和硅橡胶。

CIRCULAR SEAL

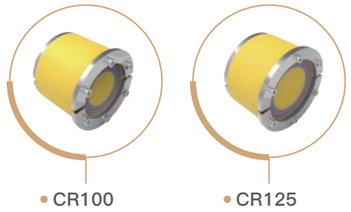
CIRCULAR SEALING MODULE (WITH CENTER PLUG)

The CR series sealing assembly consists of a variable-diameter rubber seal and acid-resistant stainless steel (304 or 316L). It offers a sealing range of 3.5-98mm and can be installed inside a circular sleeve or directly into a standard concrete opening.

Materials: EPDM and Silicone.



• CR25 • CR31 • CR43 • CR50 • CR68 • CR75



• CR100 • CR125

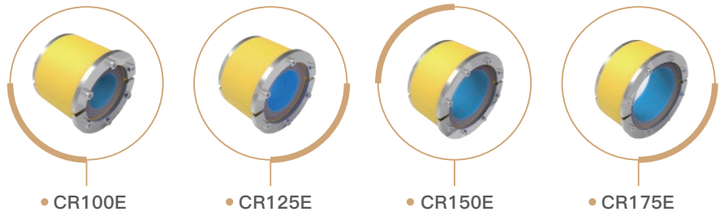
型号 Modul	变径范围 For cable diameter Ømin-Ømax	开孔尺寸 For hole diameter	重量 Weight
CR25	3.6~12	26	0.04
CR31	4~17	32	0.06
CR43	4~23	44	0.2
CR50	8~30	51	0.3
CR68	26~48	69	0.5
CR75	24~54	76	0.7
CR100	48~70	101	1.0
CR125	66~98	126	1.6

2.2 圆形密封组件（不带中心塞）

CR系列密封组件由可变径橡胶密封件和耐酸不锈钢（304或316L）构成，密封范围为48~536mm，不带中心塞，可安装在圆形套筒内或直接安装在标准的混凝土圆孔内。

CIRCULAR SEALING MODULE (WITHOUT CENTER PLUG)

The CR series sealing assembly consists of a variable-diameter rubber seal and acid-resistant stainless steel (304 or 316L). It offers a sealing range of 48-536mm. Designed without a center plug, it can be installed inside a circular sleeve or directly into a standard concrete opening.



• CR100E • CR125E • CR150E • CR175E

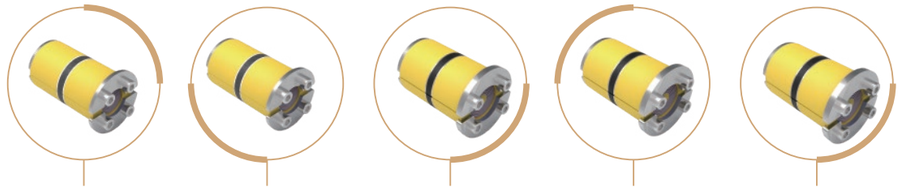
型号 Modul	变径范围 For cable diameter Ømin-Ømax	开孔尺寸 For hole diameter	重量 Weight
CR100E	48~70	101	0.8
CR125E	66~98	126	1.2
CR150E	93~119	151	1.6
CR175E	119~145	176	2.2
CR200E	138~170	201	2.8
CR225E	151~181	226	3.1
CR250E	176~206	251	3.3
CR300E	206~236	302	5.7
CR350E	244~286	352	7.3
CR400E	294~336	402	8.9
CR450E	344~386	452	10.7
CR500E	394~436	502	13
CR550E	444~486	552	14.4
CR600E	494~536	602	15.7

2.3 CR PPS圆形密封组件（带中心塞）

CR PPS是用于密封贯穿的塑料管道，在此状态下具备A-Class的防火等级，密封等级同CR密封件一致，不带中心塞，密封范围为4~54mm。

CR PPS CIRCULAR SEALING ASSEMBLY (WITH CENTER PLUG)

The CR PPS is designed for sealing plastic pipe penetrations. It provides an A-Class fire rating in this configuration, matching the sealing performance of standard CR seals. It features no center plug and covers a sealing range of 4-54mm.



• CR31 PPS • CR43 PPS • CR50 PPS • CR68 PPS • CR75 PPS

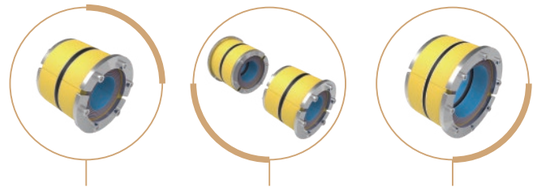
型号 Modul	变径范围 For cable diameter Ømin-Ømax	开孔尺寸 For hole diameter	重量 Weight
CR31 PPS	4~17	32	0.07
CR43 PPS	4~23	44	0.25
CR50 PPS	8~30	51	0.30
CR68 PPS	26~48	69	0.49
CR75 PPS	24~54	76	0.60

2.4 CR PPS圆形密封组件（不带中心塞）

CR PPS是用于密封贯穿的塑料管道，在此状态下具备A-Class的防火等级，密封等级同CR密封件一致，不带中心塞，密封范围为48~119mm。

CR PPS CIRCULAR SEALING ASSEMBLY (WITHOUT CENTER PLUG)

The CR PPS is designed for sealing plastic pipe penetrations. It provides an A-Class fire rating in this configuration, matching the sealing performance of standard CR seals. It features no center plug and covers a sealing range of 48-119mm.



• CR100E PPS • CR125E PPS • CR150E PPS

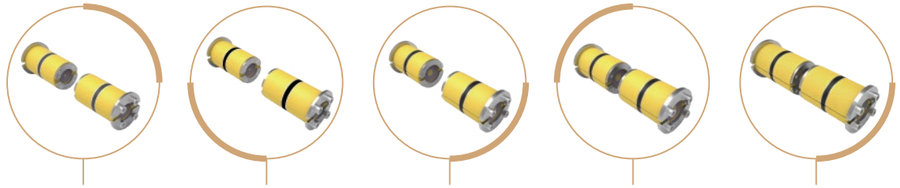
型号 Modul	变径范围 For cable diameter Ømin-Ømax	开孔尺寸 For hole diameter	重量 Weight
CR100E PPS	48~70	101	0.9
CR125E PPS	66~98	126	1.3
CR150E PPS	93~119	151	1.6

2.5 CR PPS WS圆形密封组件（带中心塞）

CR PPS WS是一组成套的产品，由两组相同的CR PPS密封件组成，安装时两组相同的CR PPS密封间以背靠背的方式置入套管内，以确保在火灾发生时塑料管道保持防水功能（不泄露到穿透的另一侧），密封范围为4~54mm，带中心塞。

CR PPS WS CIRCULAR SEALING ASSEMBLY (WITH CENTER PLUG)

The CR PPS WS is a complete kit consisting of two identical CR PPS seals. During installation, the two seals are placed inside the sleeve in a "back-to-back" configuration to ensure the plastic pipe remains watertight (preventing leakage to the opposite side of the penetration) in the event of a fire. Sealing range: 4~54mm. Includes center plug.



• CR31 PPS WS • CR43 PPS WS • CR50 PPS WS • CR68 PPS WS • CR75PPS WS

符合《国际海上人命安全公约》（SOLAS）第二章第 II-1 章第 13.2.3 条（2014年合并版）和国际海事组织 MSC 通函 736 第 2.1 段的要求。

Complies with the requirements of Chapter II-1, Regulation 13.2.3 of the International Convention for the Safety of Life at Sea (SOLAS), 2014 Consolidated Edition, and paragraph 2.1 of IMO MSC/Circ. 736.

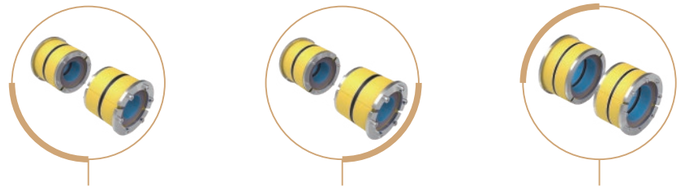
型号 Modul	变径范围 For cable diameter Ømin-Ømax	开孔尺寸 For hole diameter	重量 Weight
CR31 PPS WS	4~17	32	0.14
CR43 PPS WS	4~23	44	0.5
CR50 PPS WS	8~30	51	0.6
CR68 PPS WS	26~48	69	1
CR75 PPS WS	24~54	76	1.2

2.6 CR PPS WS圆形密封组件（不带中心塞）

CR PPS WS是一组成套的产品，由两组相同的CR PPS密封件组成，安装时两组相同的CR PPS密封间以背靠背的方式置入套管内，以确保在火灾发生时塑料管道保持防水功能（不泄露到穿透的另一侧），密封范围为48~119mm，不带中心塞。

CR PPS WS CIRCULAR SEALING ASSEMBLY (WITHOUT CENTER PLUG)

The CR PPS WS is a complete kit consisting of two identical CR PPS seals. During installation, the two seals are placed inside the sleeve in a "back-to-back" configuration to ensure the plastic pipe remains watertight (preventing leakage to the opposite side of the penetration) in the event of a fire. Sealing range: 48-119mm. No center plug.



CR100E PPS WS • CR125E PPS WS • CR150E PPS WS

符合《国际海上人命安全公约》（SOLAS）第二章第 II-1 章第 13.2.3 条（2014 年合并版）和国际海事组织 MSC 通函 736 第 2.1 段的要求。

Complies with the requirements of Chapter II-1, Regulation 13.2.3 of the International Convention for the Safety of Life at Sea (SOLAS), 2014 Consolidated Edition, and paragraph 2.1 of IMO MSC/Circ. 736.

型号 Modul	变径范围 For cable diameter Ømin-Ømax	开孔尺寸 For hole diameter	重量 Weight
CR100E PPS WS	48~70	101	1.8
CR125E PPS WS	66~98	126	2.6
CR150E PPS WS	93~119	151	3.2

2.7 DACS4C圆形密封件

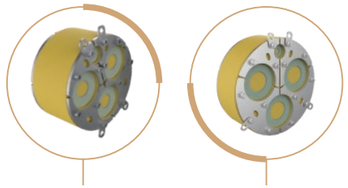
DACS4C是自带压紧功能的密封件，外部为圆形，三瓣拼接构成，多用于三相线路（带一根回流或接地）穿孔时的密封；金属件为304或316L。

具备防火功能。

DACS4C CIRCULAR SEAL

The DACS4C is a sealing unit with an integrated compression mechanism. It features a circular outer profile and a three-lobed construction. It is primarily designed for sealing three-phase electrical penetrations (including a neutral or grounding conductor). The metal components are made of 304 or 316L stainless steel.

Fire-rated.



DACS4C135 • DACS4C200

型号 Modul	变径范围 For cable diameter Ømin~Ømax	安装孔尺寸 Aperture dim	外部尺寸 External dim L=70	重量 Weight
DACS4C135	10~53	136	135	2.6
DACS4C200	10~68	201	201	4.2

2.8 HCF圆形橡胶框

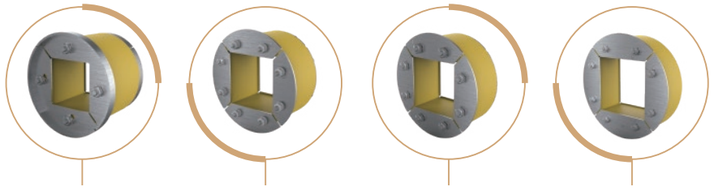
HCF是带压紧功能的橡胶框，外部为圆形，内部密封腔为矩形用于安装矩形密封模块；金属件为304或316L。

具备防火功能。

HCF CIRCULAR RUBBER FRAME

The HCF is a rubber frame with an integrated compression mechanism. It features a circular outer profile and a rectangular internal sealing cavity designed for the installation of rectangular sealing modules. Metal components are made of 304 or 316L stainless steel.

Fire-rated.



• HCF60×60 • HCF80×80 • HCF90×90 • HCF120×120

型号 Modul	密封腔尺寸 Packing space	安装孔尺寸 Aperture dim	外部尺寸 External dim L=70	重量 Weight
HCF60×60	60×60	101	Ø100	0.8
HCF80×80	80×80	126	Ø125	1.1
HCF90×90	90×90	151	Ø150	1.6
HCF120×120	120×120	201	Ø200	2.6

2.11 SCF圆形橡胶框

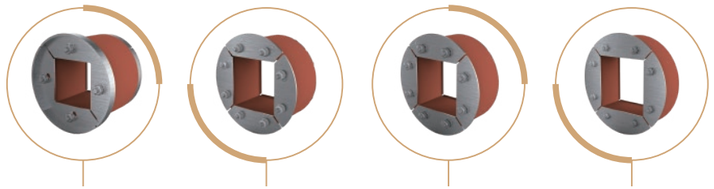
SCF是带压紧功能的橡胶框，外部为圆形，内部密封腔为矩形用于安装矩形密封模块；金属件为304或316L。

注:用于配合地埋电缆应用，不具备防火功能。

SCF CIRCULAR RUBBER FRAME

The SCF is a rubber frame with an integrated compression mechanism. It features a circular outer profile and a rectangular internal sealing cavity designed for the installation of rectangular sealing modules. Metal components are made of 304 or 316L stainless steel.

Note: Specifically designed for underground cable applications. Not fire-rated.



• SCF60×60 • SCF80×80 • SCF90×90 • SCF120×120

型号 Modul	密封腔尺寸 Packing space	安装孔尺寸 Aperture dim	外部尺寸 External dim L=70	重量 Weight
SCF60×60	60×60	101	Ø100	0.8
SCF80×80	80×80	126	Ø125	1.1
SCF90×90	90×90	151	Ø150	1.6
SCF120×120	120×120	201	Ø200	2.6

II 矩形框 RECTANGULAR FRAME

① 矩形框的设计规则

DESIGN RULES FOR RECTANGULAR FRAMES

作为基础的标准矩形框共8种，1~8数字代表了8种标准框的密封腔尺寸，如下表：

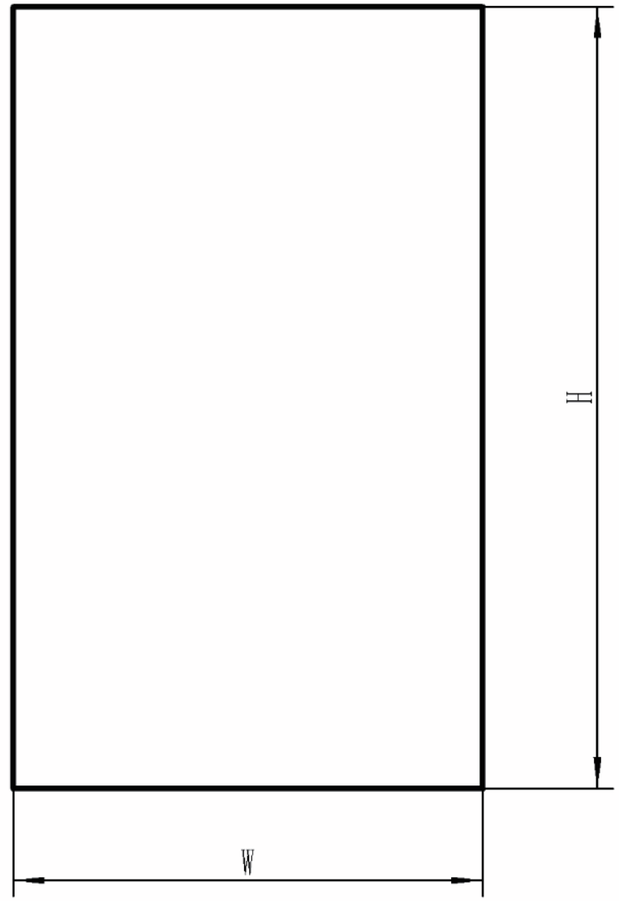
There are 8 types of standard rectangular frames as the base. The numbers 1-8 represent the sealing cavity dimensions of these 8 standard frames, as shown in the table below:

CODE	2	4	6	8	1	3	5	7
W（mm）	120	120	120	120	60	60	60	60
H(mm)	100	160	218	278	100	160	218	278

示例如下：

当代表数字为1时，表示密封腔的尺寸为W60，H100；

当代表数字为4时，表示密封腔的尺寸为W120，H160.



1.1 框架的横向扩展

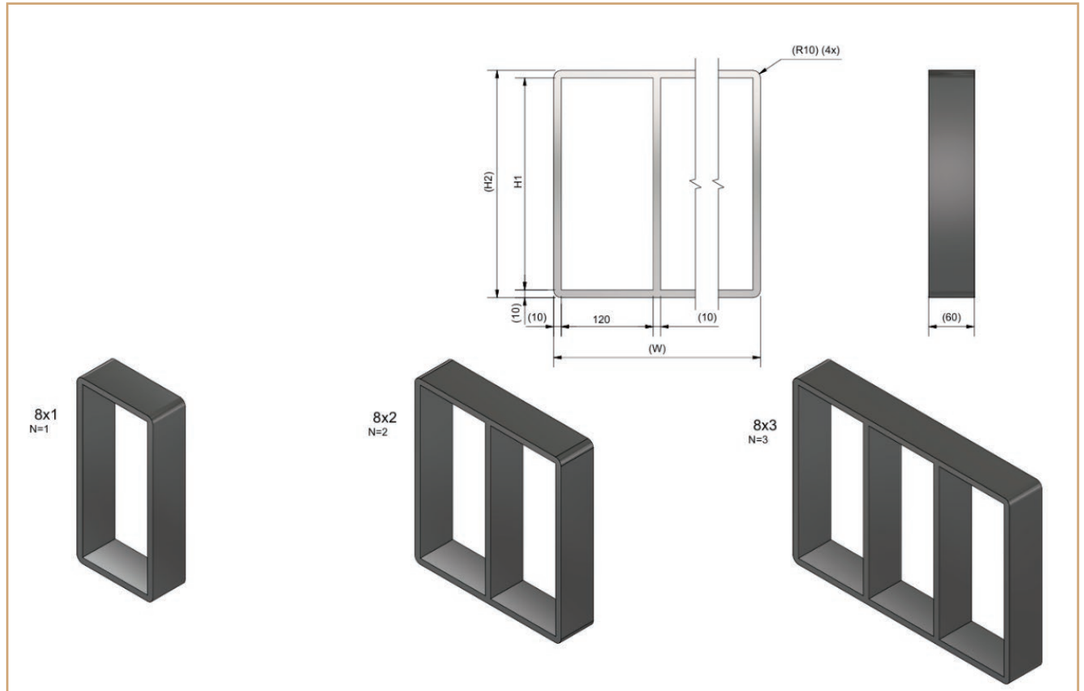
当某一个规格的标准框按列排列叠加时，其表示方式如下：

CODE（1~8）×叠加列的总数

LATERAL EXPANSION OF FRAMES

When standard frames of a specific size are stacked in columns, the notation is as follows:

CODE (1~8) × Total Number of Stacked Columns



1.2 框架的纵向扩展

当某一个规格的标准框按行排列叠加时，其表示方式如下：

CODE（1~8）+ CODE（1~8）+...+CODE（1~8）

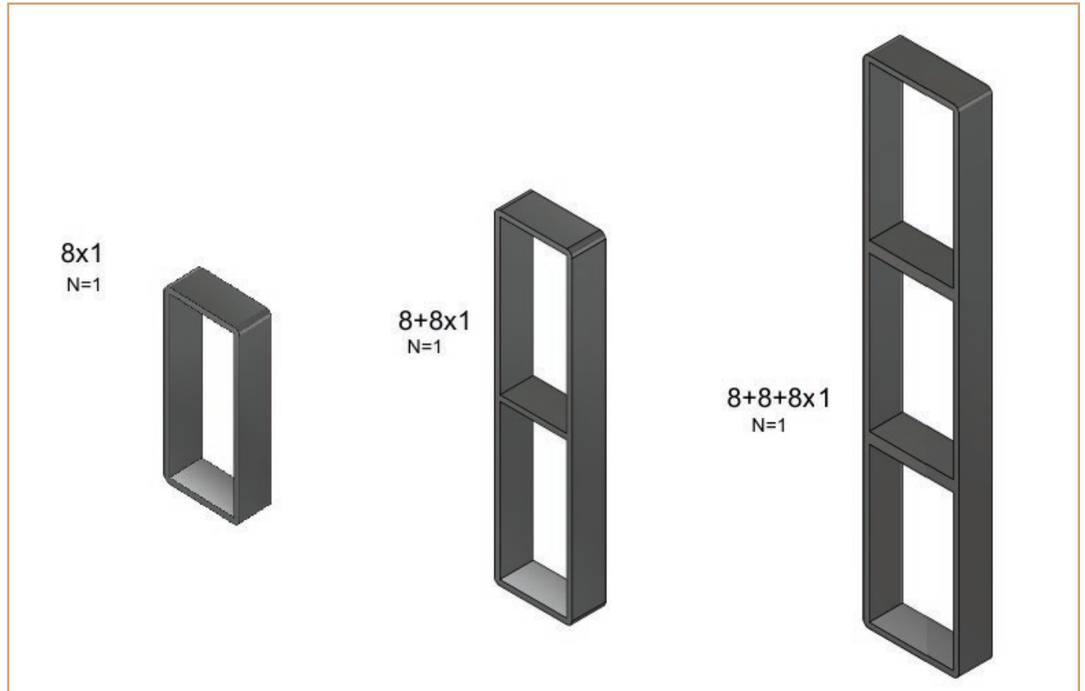
叠加行的总数

LONGITUDINAL EXPANSION OF THE FRAME

When standard frames of a specific size are stacked in a horizontal row, the notation is as follows:

CODE (1~8) × Total Number of Stacked Columns

Total Number of Stacked Rows



1.3 框架的纵向和横向扩展

当某一个规格的标准框按行和列都叠加时，其表示方式如下：

CODE（1~8）+ CODE（1~8）+...+CODE（1~8）×叠加列的总数

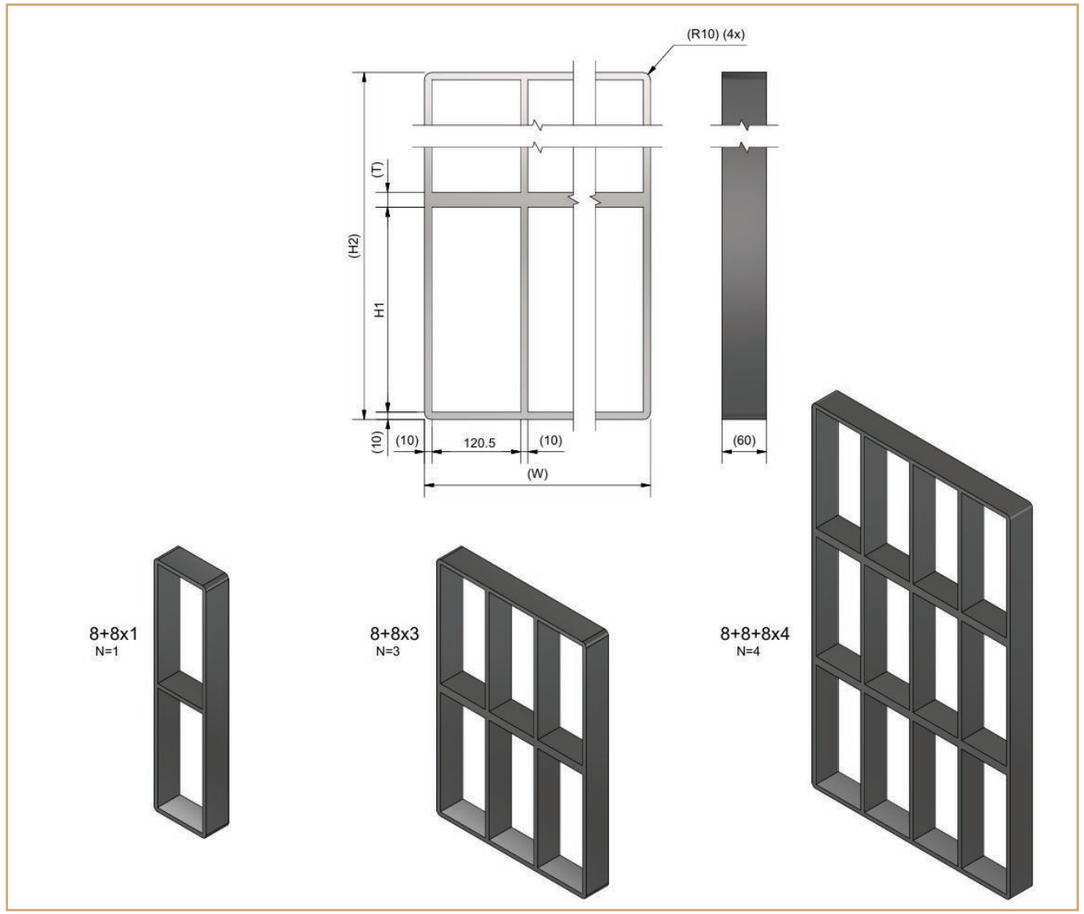
行的总数

LONGITUDINAL AND LATERAL EXPANSION OF THE FRAME

When standard frames of a specific size are stacked both horizontally (in rows) and vertically (in columns), the notation is as follows:

CODE (1-8) + CODE (1-8) + ... + CODE (1-8) × Total Number of Stacked Columns

Total Number of Rows



2 焊接固定的框架

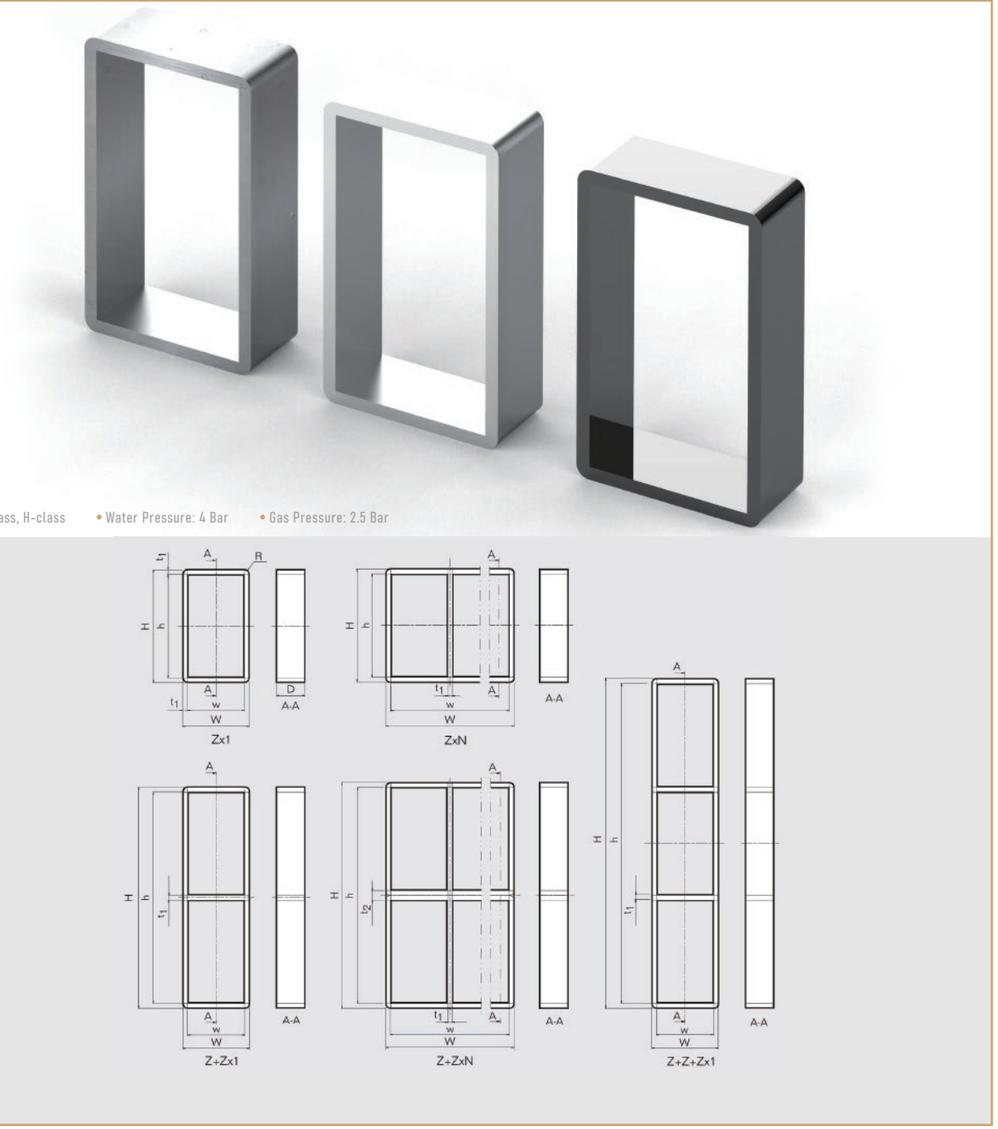
2.1 RWF用于焊接安装的矩形框（无法兰）

以焊接的方式固定在舱壁、甲板等钢制结构上（焊接方法请参见焊接指南），框架的材料分为碳钢（底漆状态）、铝合金、不锈钢三种（其中铝合金仅提供单个密封腔的结构，其它材料的结构尺寸符合矩形框的设计规则）。

WELD-FIXED FRAME

RWF RECTANGULAR FRAME FOR WELD MOUNTING (FLANGELESS)

The frame is fixed to steel structures such as bulkheads and decks by welding (please refer to the Welding Guide for welding methods). Frame materials are available in three options: carbon steel (in primer), aluminum alloy, and stainless steel. (Note: The aluminum alloy version is only available in a single-cavity structure; the structural dimensions of other materials comply with the Rectangular Frame Design Rules.)



• Fire: A-class, H-class • Water Pressure: 4 Bar • Gas Pressure: 2.5 Bar

CODE	h	w	D	t1	t2	R
Value	H–20	W–20	60	10	20	10

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWF1×1CS	1	60×60	120×80	1.6
RWF3×1CS	1	60×120	180×80	2.3
RWF5×1CS	1	60×180	238×80	2.8
RWF7×1CS	1	60×240	298×80	3.3
RWF2×1CS	1	120×60	120×140	2.2
RWF2×2CS	2	120×60	120×270	3.9
RWF2×3CS	3	120×60	120×400	5.5
RWF2×NCS	N	120×60	120×(130×N+10)	
RWF4×1CS	1	120×120	180×140	2.8
RWF4×2CS	2	120×120	180×270	4.7
RWF4×3CS	3	120×120	180×400	6.6
RWF4×NCS	N	120×120	180×(130×N+10)	
RWF4+4×1CS	2	120×120	349×140	5
RWF4+4×2CS	3	120×120	359×270	9.5
RWF4+4×3CS	6	120×120	359×400	13.5
RWF4+4×NCS	2N	120×120	359×(130×N+10)	
RWF4+4+4×1CS	3	120×120	519×140	6.6
RWF4+4+4×2CS	6	120×120	539×270	14.2
RWF4+4+4×3CS	9	120×120	539×400	19.9
RWF4+4+4×NCS	3N	120×120	539×(130×N+10)	
RWF6×1CS	1	120×180	238×140	3.3
RWF6×2CS	2	120×180	238×270	5.5
RWF6×3CS	3	120×180	238×400	7.7
RWF6×NCS	N	120×180	238×(130×N+10)	
RWF6+6×1CS	2	120×180	466×140	6.1
RWF6+6×2CS	3	120×180	476×270	11.1
RWF6+6×3CS	6	120×180	476×400	15.5
RWF6+6×NCS	2N	120×180	476×(130×N+10)	
RWF6+6+6×1CS	3	120×180	694×140	8.2
RWF6+6+6×2CS	6	120×180	714×270	16.1
RWF6+6+6×3CS	9	120×180	714×400	23.2
RWF6+6+6×NCS	3N	120×180	714×(130×N+10)	
RWF8×1CS	1	120×240	298×140	3.9
RWF8×2CS	2	120×240	298×270	6.1
RWF8×3CS	3	120×240	298×400	8.2
RWF8×NCS	N	120×240	298×(130×N+10)	
RWF8+8×1CS	2	120×240	586×140	7.3
RWF8+8×2CS	3	120×240	596×270	12.3
RWF8+8×3CS	6	120×240	596×400	16.6
RWF8+8×NCS	2N	120×240	596×(130×N+10)	
RWF8+8+8×1CS	3	120×240	874×140	9.9
RWF8+8+8×2CS	6	120×240	894×270	18.2
RWF8+8+8×3CS	9	120×240	894×400	26.8
RWF8+8+8×NCS	3N	120×240	894×(130×N+10)	

RWF 1×1 CS

CS/SS304/SS316L：材料代号，表示材质
CS/SS304/SS316L: Material Code,indicating Material

1X1：规格代号
1×1: Size Code

RWF：类型代号，表示矩形焊接框
RWF: Type Code Indicating Rectangular Weld Frame

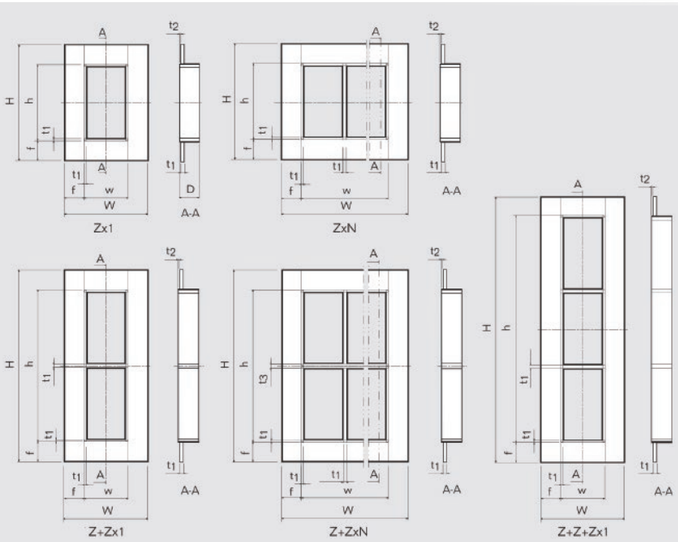
2.2 RWF60F用于焊接安装的矩形框（带法兰）

可将法兰焊接在舱壁、甲板等钢制结构上固定框架（焊接方法请参见焊接指南），法兰的标准宽度为60mm（其它可定制），框架的材料分为碳钢（底漆状态）、铝合金、不锈钢三种（其中铝合金仅提供单个密封腔的结构，其它材料的结构尺寸符合矩形框的设计规则）。

RWF60F RECTANGULAR FRAME FOR WELD MOUNTING (WITH FLANGE)

The frame is secured by welding the flange to steel structures such as bulkheads and decks (please refer to the Welding Guide for welding methods). The standard flange width is 60mm (custom widths are available). Frame materials are available in three options: carbon steel (in primer), aluminum alloy, and stainless steel. (Note: The aluminum alloy version is only available in a single-cavity structure; the structural dimensions of other materials comply with the Rectangular Frame Design Rules.)





CODE	h	w	D	f	t1	t2	t3
Value	H–120	W–120	60	60	10	3	20

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWF60F1×1CS	1	60×60	240×200	3.6
RWF60F3×1CS	1	60×120	300×200	4.3
RWF60F5×1CS	1	60×180	358×200	5.8
RWF60F7×1CS	1	60×240	418×200	7.3
RWF60F2×1CS	1	120×60	240×260	6
RWF60F2×2CS	2	120×60	240×390	9
RWF60F2×3CS	3	120×60	240×520	12
RWF60F2×NCS	N	120×60	240×【130×(N+1)】	
RWF60F4×1CS	1	120×120	300×260	7.1
RWF60F4×2CS	2	120×120	300×390	10.4
RWF60F4×3CS	3	120×120	300×520	13.6
RWF60F4×NCS	N	120×120	300×【130×(N+1)】	
RWF60F4+4×1CS	2	120×120	469×260	10.9
RWF60F4+4×2CS	3	120×120	479×390	22.4
RWF60F4+4×3CS	6	120×120	479×520	35.2
RWF60F4+4×NCS	2N	120×120	479×【130×(N+1)】	
RWF60F4+4+4×1CS	3	120×120	639×260	14.8
RWF60F4+4+4×2CS	6	120×120	659×390	34
RWF60F4+4+4×3CS	9	120×120	659×520	48
RWF60F4+4+4×NCS	3N	120×120	659×【【130×(N+1)】	
RWF60F6×1CS	1	120×180	358×260	8.2
RWF60F6×2CS	2	120×180	358×390	11.8
RWF60F6×3CS	3	120×180	358×520	15.3
RWF60F6×NCS	N	120×180	358×【130×(N+1)】	
RWF60F6+6×1CS	2	120×180	586×260	13.1
RWF60F6+6×2CS	3	120×180	596×390	19.6
RWF60F6+6×3CS	6	120×180	596×520	25.4
RWF60F6+6×NCS	2N	120×180	596×【130×(N+1)】	
RWF60F6+6+6×1CS	3	120×180	814×260	18.1
RWF60F6+6+6×2CS	6	120×180	834×390	38.2
RWF60F6+6+6×3CS	9	120×180	834×520	57.1
RWF60F6+6+6×NCS	3N	120×180	834×【130×(N+1)】	
RWF60F8×1CS	1	120×240	418×260	9.3
RWF60F8×2CS	2	120×240	418×390	13.2
RWF60F8×3CS	3	120×240	418×520	17
RWF60F8×NCS	N	120×240	418×【130×(N+1)】	
RWF60F8+8×1CS	2	120×240	706×260	15.5
RWF60F8+8×2CS	3	120×240	716×270	22.6
RWF60F8+8×3CS	6	120×240	716×400	28.9
RWF60F8+8×NCS	2N	120×240	716×【130×(N+1)】	
RWF60F8+8+8×1CS	3	120×240	994×260	21.6
RWF60F8+8+8×2CS	6	120×240	1014×270	44.4
RWF60F8+8+8×3CS	9	120×240	1014×400	65.2
RWF60F8+8+8×NCS	3N	120×240	1014×【130×(N+1)】	

RWF 60F 1×1 CS

- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 1X1：规格代号
  1×1: Size Code
- 60F：表示法兰宽度
  60F: Indicates Flange Width
- RWF：类型代号，表示矩形焊接框
  RWF: Type Code Indicating Rectangular Weld Frame

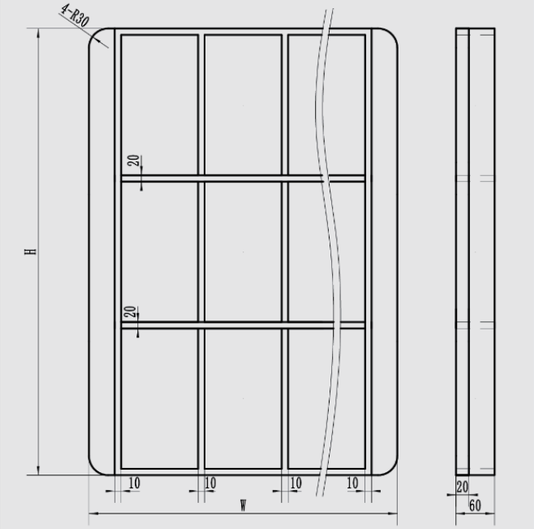
2.3 RWF30R用于焊接安装的矩形框

以焊接的方式固定在舱壁、甲板等钢制结构上（焊接方法请参见焊接指南），框架的材料分为碳钢（底漆状态）、不锈钢三种（框架的结构尺寸均符合矩形框的设计规则），外侧圆角为R30，用于消除开孔时导致的应力集中产生的风险。

RWF30R RECTANGULAR FRAME FOR WELD MOUNTING

The frame is fixed to steel structures such as bulkheads and decks by welding (please refer to the Welding Guide for welding methods). Frame materials are available in two options: carbon steel (in primer) and stainless steel. (The structural dimensions of the frame comply with the Rectangular Frame Design Rules.) The outer corners feature a 30mm radius (R30) to eliminate the risk of stress concentration during the opening process.





- Fire: A-class, H-class
- Water Pressure: 4 Bar
- Gas Pressure: 2.5 Bar

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWF30R1×1CS	1	60×60	120×160	2.88
RWF30R3×1CS	1	60×120	180×160	3.44
RWF30R5×1CS	1	60×180	238×160	4.64
RWF30R7×1CS	1	60×240	298×160	5.84
RWF30R2×1CS	1	120×60	120×220	4.8
RWF30R2×2CS	2	120×60	120×350	7.2
RWF30R2×3CS	3	120×60	120×480	9.6
RWF30R2×NCS	N	120×60	120×(130×N+90)	
RWF30R4×1CS	1	120×120	180×220	5.68
RWF30R4×2CS	2	120×120	180×350	8.32
RWF30R4×3CS	3	120×120	180×480	10.88
RWF30R4×NCS	N	120×120	180×(130×N+90)	
RWF30R4+4×1CS	2	120×120	349×220	8.72
RWF30R4+4×2CS	3	120×120	359×350	17.92

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWF30R4+4×3CS	6	120×120	359×480	28.16
RWF30R4+4×NCS	2N	120×120	359×(130×N+90)	
RWF30R4+4+4×1CS	3	120×120	519×220	11.84
RWF30R4+4+4×2CS	6	120×120	539×350	27.2
RWF30R4+4+4×3CS	9	120×120	539×480	38.4
RWF30R4+4+4×NCS	3N	120×120	539×(130×N+90)	
RWF30R6×1CS	1	120×180	238×220	6.56
RWF30R6×2CS	2	120×180	238×350	9.44
RWF30R6×3CS	3	120×180	238×480	12.24
RWF30R6×NCS	N	120×180	238×(130×N+90)	
RWF30R6+6×1CS	2	120×180	466×220	10.48
RWF30R6+6×2CS	3	120×180	476×350	15.68
RWF30R6+6×3CS	6	120×180	476×480	20.32
RWF30R6+6×NCS	2N	120×180	476×(130×N+90)	
RWF30R6+6+6×1CS	3	120×180	694×220	14.48
RWF30R6+6+6×2CS	6	120×180	714×350	30.56
RWF30R6+6+6×3CS	9	120×180	714×480	45.68
RWF30R6+6+6×NCS	3N	120×180	714×(130×N+90)	
RWF30R8×1CS	1	120×240	298×220	7.44
RWF30R8×2CS	2	120×240	298×350	10.56
RWF30R8×3CS	3	120×240	298×480	13.6
RWF30R8×NCS	N	120×240	298×(130×N+90)	
RWF30R8+8×1CS	2	120×240	586×220	12.4
RWF30R8+8×2CS	3	120×240	596×350	18.08
RWF30R8+8×3CS	6	120×240	596×480	23.12
RWF30R8+8×NCS	2N	120×240	596×(130×N+90)	
RWF30R8+8+8×1CS	3	120×240	874×220	17.28
RWF30R8+8+8×2CS	6	120×240	894×350	35.52
RWF30R8+8+8×3CS	9	120×240	894×480	52.16
RWF30R8+8+8×NCS	3N	120×240	894×(130×N+90)	14.48

RWF 30R 1×1 CS

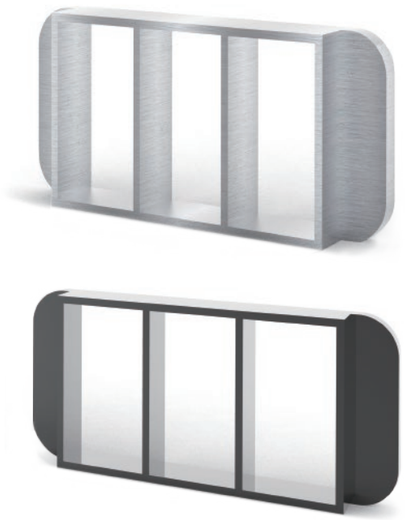
- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 1X1：规格代号
  1×1: Size Code
- 30R：表示圆角尺寸
  30R: Indicates Fillet Radius
- RWF：类型代号，表示矩形焊接框
  RWF: Type Code,indicating Rectangular Weld Frame

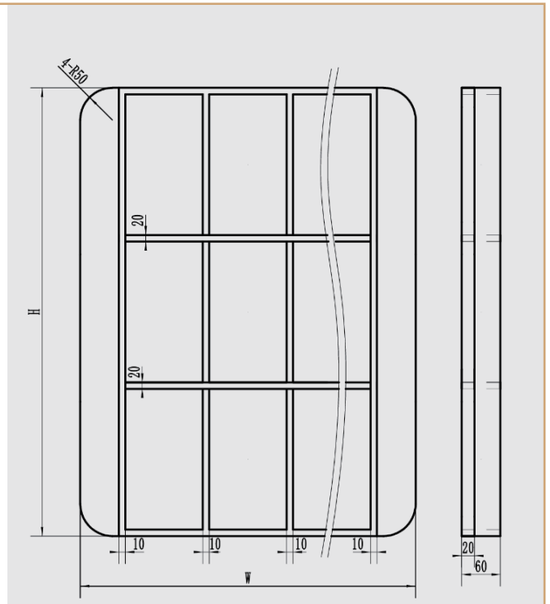
2.4 RWF50R用于焊接安装的矩形框

以焊接的方式固定在舱壁、甲板等钢制结构上（焊接方法请参见焊接指南），框架的材料分为碳钢（底漆状态）、不锈钢三种（框架的结构尺寸均符合矩形框的设计规则），外侧圆角为R50，用于消除开孔时导致的应力集中产生的风险。

RWF50R RECTANGULAR FRAME FOR WELD MOUNTING

Secured to steel structures such as bulkheads and decks via welding (refer to the Welding Guide for welding methods). Frame materials available in three options: Carbon Steel (primed), Stainless Steel, and [Material 3 missing in text]. (Frame dimensions comply with rectangular frame design rules). The outer corners feature a 50mm radius (R50) to eliminate the risk of stress concentration caused by the cut-out.





- Fire: A-class, H-class
- Water Pressure: 4 Bar
- Gas Pressure: 2.5 Bar

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWF50R1×1CS	1	60×60	120×200	
RWF50R3×1CS	1	60×120	180×200	
RWF50R5×1CS	1	60×180	238×200	
RWF50R7×1CS	1	60×240	298×200	
RWF50R2×1CS	1	120×60	120×260	
RWF50R2×2CS	2	120×60	120×390	
RWF50R2×3CS	3	120×60	120×520	
RWF50R2×NCS	N	120×60	120×【(130+1)×N】	
RWF50R4×1CS	1	120×120	180×260	
RWF50R4×2CS	2	120×120	180×390	
RWF50R4×3CS	3	120×120	180×520	
RWF50R4×NCS	N	120×120	180×【(130+1)×N】	
RWF50R4+4×1CS	2	120×120	349×260	
RWF50R4+4×2CS	3	120×120	359×390	

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWF50R4+4×3CS	6	120×120	359×520	
RWF50R4+4×NCS	2N	120×120	359×【(130+1)×N】	
RWF50R4+4+4×1CS	3	120×120	519×260	
RWF50R4+4+4×2CS	6	120×120	539×390	
RWF50R4+4+4×3CS	9	120×120	539×520	
RWF50R4+4+4×NCS	3N	120×120	539×【(130+1)×N】	
RWF50R6×1CS	1	120×180	238×260	
RWF50R6×2CS	2	120×180	238×390	
RWF50R6×3CS	3	120×180	238×520	
RWF50R6×NCS	N	120×180	238×【(130+1)×N】	
RWF50R6+6×1CS	2	120×180	466×260	
RWF50R6+6×2CS	3	120×180	476×390	
RWF50R6+6×3CS	6	120×180	476×520	
RWF50R6+6×NCS	2N	120×180	476×【(130+1)×N】	
RWF50R6+6+6×1CS	3	120×180	694×260	
RWF50R6+6+6×2CS	6	120×180	714×390	
RWF50R6+6+6×3CS	9	120×180	714×520	
RWF50R6+6+6×NCS	3N	120×180	714×【(130+1)×N】	
RWF50R8×1CS	1	120×240	298×260	
RWF50R8×2CS	2	120×240	298×390	
RWF50R8×3CS	3	120×240	298×520	
RWF50R8×NCS	N	120×240	298×【(130+1)×N】	
RWF50R8+8×1CS	2	120×240	586×260	
RWF50R8+8×2CS	3	120×240	596×390	
RWF50R8+8×3CS	6	120×240	596×520	
RWF50R8+8×NCS	2N	120×240	596×【(130+1)×N】	
RWF50R8+8+8×1CS	3	120×240	874×260	
RWF50R8+8+8×2CS	6	120×240	894×390	
RWF50R8+8+8×3CS	9	120×240	894×520	
RWF50R8+8+8×NCS	3N	120×240	894×【(130+1)×N】	

RWF 50R 1×1 CS

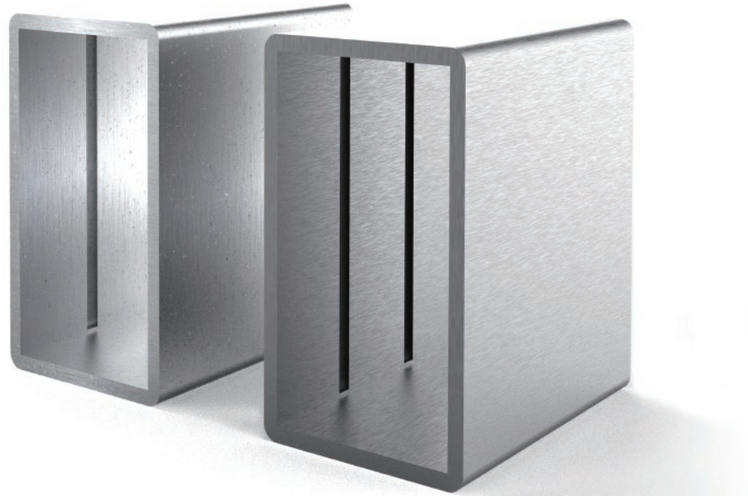
- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 1X1：规格代号
  1×1: Size Code
- 50R：表示圆角尺寸
  50R: Indicates Fillet Radius
- RWF：类型代号，表示矩形焊接框
  RWF: Type Code,indicating Rectangular Weld Frame

2.5 RWFBTB用于焊接安装的矩形框（背靠背）

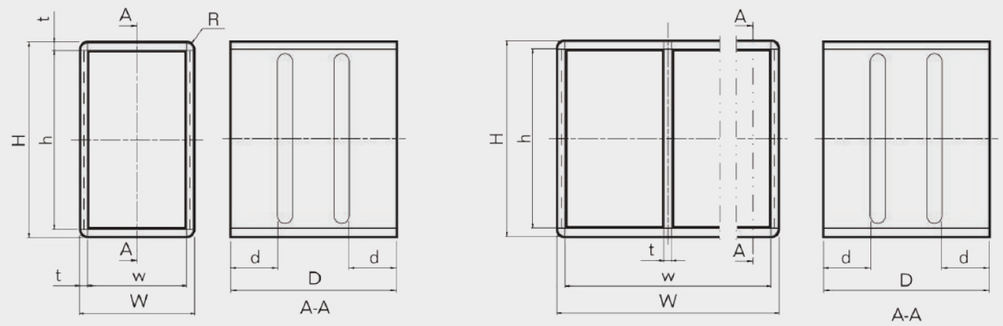
以焊接的方式固定在舱壁、甲板等钢制结构上（焊接方法请参见焊接指南），框架的材料分为碳钢（底漆状态）、不锈钢三种（框架的结构尺寸均符合矩形框的设计规则）；可以理解为在一个开孔处背靠背安装了2套矩形密封件，框架的标准长度为200mm。

RWFBTB RECTANGULAR FRAME FOR WELD MOUNTING (BACK-TO-BACK)

Secured to steel structures such as bulkheads and decks via welding (refer to the Welding Guide for methods). Frame materials available in three options: Carbon Steel (primed), Stainless Steel, and [Material 3]. (Frame dimensions comply with rectangular frame design rules).Functionally, this is equivalent to installing two rectangular seals back-to-back at a single opening. Standard frame length: 200mm.



- Fire: A-class, H-class
- Water Pressure: 4 Bar
- Gas Pressure: 2.5 Bar



CODE	h	w	D	d	t	R
Value	H–20	W–20	200	60	10	10

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RWFBTB1×1CS	1	60×60	120×80	5.4
RWFBTB3×1CS	1	60×120	180×80	6.7
RWFBTB5×1CS	1	60×180	238×80	7.8
RWFBTB7×1CS	1	60×240	298×80	9.3
RWFBTB2×1CS	1	120×60	120×140	7.2
RWFBTB2×2CS	2	120×60	120×270	12
RWFBTB2×3CS	3	120×60	120×400	16.7
RWFBTB2×4CS	4	120×60	120×530	21.5
RWFBTB4×1CS	1	120×120	180×140	8.9
RWFBTB4×2CS	2	120×120	180×270	14.2
RWFBTB4×3CS	3	120×120	180×400	19.5
RWFBTB4×4CS	4	120×120	180×530	24.8
RWFBTB6×1CS	1	120×180	238×140	10.6
RWFBTB6×2CS	2	120×180	238×270	16.5
RWFBTB6×3CS	3	120×180	238×400	22.3
RWFBTB6×4CS	4	120×180	238×530	28.2
RWFBTB8×1CS	1	120×240	298×140	12.4
RWFBTB8×2CS	2	120×240	298×270	18.8
RWFBTB8×3CS	3	120×240	298×400	25.2
RWFBTB8×4CS	4	120×240	298×530	31.6

RWF BTB 1×1 CS

- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 1X1：规格代号
  1×1: Size Code
- BTB：表示背靠背式结构
  BTB: Indicates Back-to-back Structure
- RWF：类型代号，表示矩形焊接框
  RWF: Type Code,indicating Rectangular Weld Frame

3 法兰固定的框架

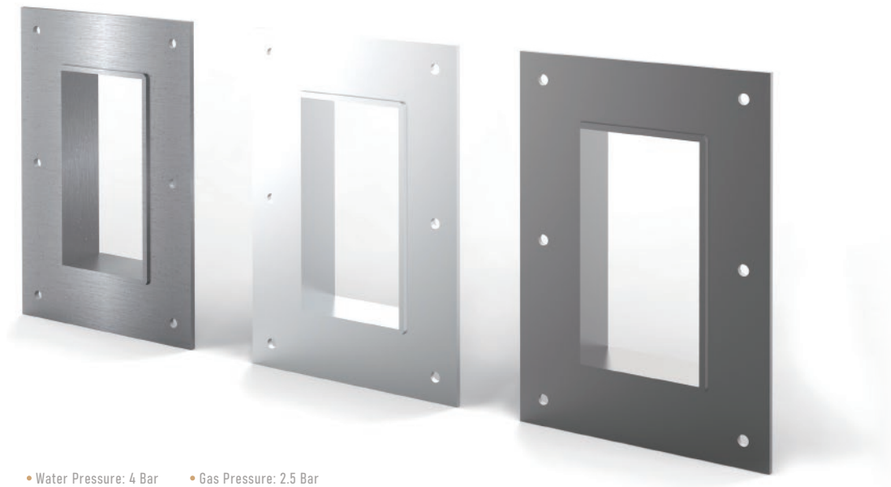
FLANGE-MOUNTED FRAME

3.1 RBFN窄法兰框架

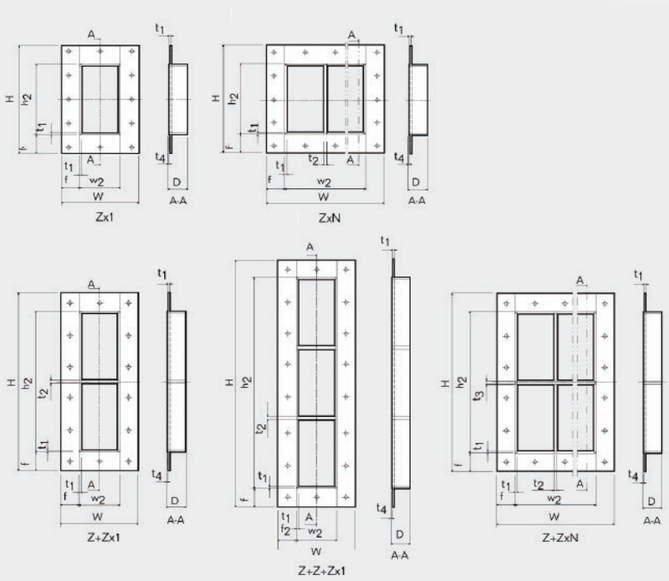
RBFN NARROW FLANGE FRAME

用螺栓连接的方式固定在钢制结构上，法兰的宽度尺寸为30mm，框架的材料分为碳钢（底漆状态）、不锈钢、铝合金（阳极化）三种（框架的结构尺寸均符合矩形框的设计规则）。

Secured to steel structures via bolting. Flange width: 30mm. Frame materials available in three options: Carbon Steel (primed), Stainless Steel, and Aluminum Alloy (anodized). (Frame dimensions comply with rectangular frame design rules.)



- Fire: A-class, H-class
- Water Pressure: 4 Bar
- Gas Pressure: 2.5 Bar



CODE	h2	w2	f	D	t1	t2	t3	t4
Value	H–60	W–60	30	60	10	10	20	3

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RBFN1×1CS	1	60×60	180×140	2.52
RBFN3×1CS	1	60×120	240×140	3.01
RBFN5×1CS	1	60×180	298×140	4.06
RBFN7×1CS	1	60×240	358×140	5.11
RBFN2×1CS	1	120×60	180×200	4.2
RBFN2×2CS	2	120×60	180×330	6.3
RBFN2×3CS	3	120×60	180×460	8.4
RBFN2×NCS	N	120×60	180×(130×N+70)	
RBFN4×1CS	1	120×120	240×200	4.97
RBFN4×2CS	2	120×120	240×330	7.28
RBFN4×3CS	3	120×120	240×460	9.52
RBFN4×NCS	N	120×120	240×(130×N+70)	
RBFN4+4×1CS	2	120×120	409×200	7.63
RBFN4+4×2CS	3	120×120	419×330	15.68
RBFN4+4×3CS	6	120×120	419×460	24.64
RBFN4+4×NCS	2N	120×120	419×(130×N+70)	
RBFN4+4+4×1CS	3	120×120	579×200	10.36
RBFN4+4+4×2CS	6	120×120	599×330	23.8
RBFN4+4+4×3CS	9	120×120	599×460	33.6
RBFN4+4+4×NCS	3N	120×120	599×(130×N+70)	
RBFN6×1CS	1	120×180	298×200	5.74
RBFN6×2CS	2	120×180	298×330	8.26
RBFN6×3CS	3	120×180	298×460	10.71
RBFN6×NCS	N	120×180	308×(130×N+70)	
RBFN6+6×1CS	2	120×180	526×200	9.17
RBFN6+6×2CS	3	120×180	536×330	13.72
RBFN6+6×3CS	6	120×180	536×460	17.78
RBFN6+6×NCS	2N	120×180	536×(130×N+70)	
RBFN6+6+6×1CS	3	120×180	754×200	12.67
RBFN6+6+6×2CS	6	120×180	774×330	26.74
RBFN6+6+6×3CS	9	120×180	774×460	39.97
RBFN6+6+6×NCS	3N	120×180	774×(130×N+70)	
RBFN8×1CS	1	120×240	358×200	6.51
RBFN8×2CS	2	120×240	358×330	9.24
RBFN8×3CS	3	120×240	358×460	11.9
RBFN8×NCS	N	120×240	358×(130×N+70)	
RBFN8+8×1CS	2	120×240	646×200	10.85
RBFN8+8×2CS	3	120×240	656×330	15.82
RBFN8+8×3CS	6	120×240	656×460	20.23
RBFN8+8×NCS	2N	120×240	656×(130×N+70)	
RBFN8+8+8×1CS	3	120×240	934×200	15.12
RBFN8+8+8×2CS	6	120×240	954×330	31.08
RBFN8+8+8×3CS	9	120×240	954×460	45.64
RBFN8+8+8×NCS	3N	120×240	954×(130×N+70)	

RBF N 1×1 CS

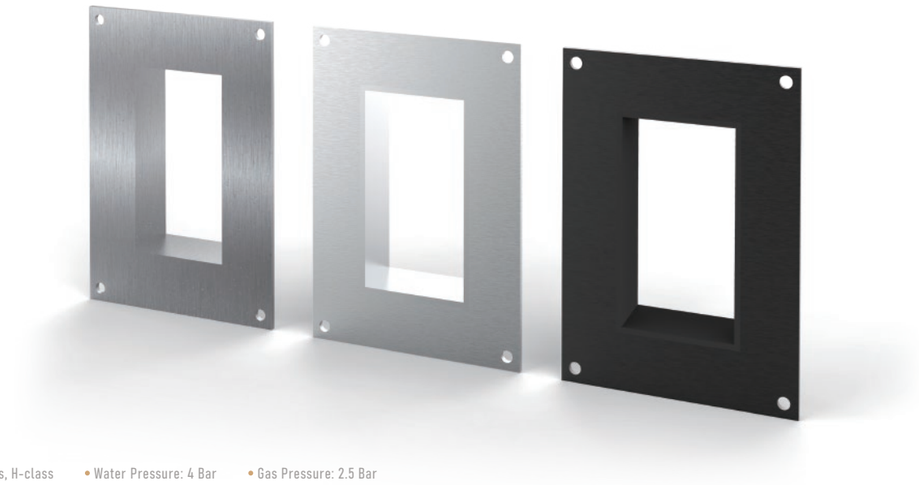
- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 1X1：规格代号
  1×1: Size Code
- N：表示窄法兰，法兰宽度尺寸为30mm
  N: Indicates Narrow Flange (flange width: 30mm)
- RBF：类型代号，表示矩形栓接框
  RBF: Type code indicating Rectangular Bolted Frame

3.2 RBFM中等法兰框架

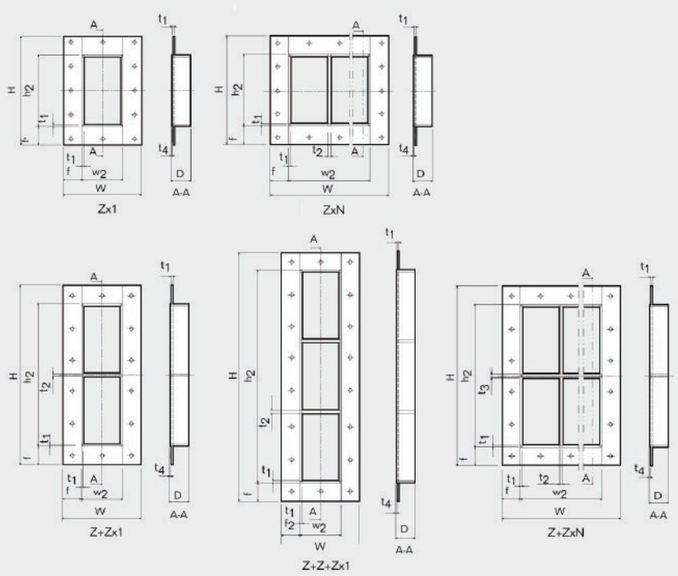
用螺栓连接的方式固定在夹芯板上，法兰的宽度尺寸为60mm，框架的材料分为碳钢（底漆状态）、不锈钢、铝合金（阳极化）三种（框架的结构尺寸均符合矩形框的设计规则）。

RBFM MEDIUM FLANGE FRAME

Secured to sandwich panels via bolting. Flange width: 60mm. Frame materials available in three options: Carbon Steel (primed), Stainless Steel, and Aluminum Alloy (anodized). (Frame dimensions comply with rectangular frame design rules.)



• Fire: A-class, H-class • Water Pressure: 4 Bar • Gas Pressure: 2.5 Bar



CODE	h2	w2	f	D	t1	t2	t3	t4
Value	H–120	W–120	60	60	10	10	20	3

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RBFM1×1CS	1	60×60	240×200	2.88
RBFM3×1CS	1	60×120	300×200	3.44
RBFM5×1CS	1	60×180	358×200	4.64
RBFM7×1CS	1	60×240	418×200	5.84
RBFM2×1CS	1	120×60	240×260	4.8
RBFM2×2CS	2	120×60	240×390	7.2
RBFM2×3CS	3	120×60	240×520	9.6
RBFM2×NCS	N	120×60	240×【130×(N+1)】	
RBFM4×1CS	1	120×120	300×260	5.68
RBFM4×2CS	2	120×120	300×390	8.32
RBFM4×3CS	3	120×120	300×520	10.88
RBFM4×NCS	N	120×120	300×【130×(N+1)】	
RBFM4+4×1CS	2	120×120	469×260	8.72
RBFM4+4×2CS	3	120×120	479×390	17.92
RBFM4+4×3CS	6	120×120	479×520	28.16
RBFM4+4×NCS	2N	120×120	479×【130×(N+1)】	
RBFM4+4+4×1CS	3	120×120	639×260	11.84
RBFM4+4+4×2CS	6	120×120	659×390	27.2
RBFM4+4+4×3CS	9	120×120	659×520	38.4
RBFM4+4+4×NCS	3N	120×120	659×【130×(N+1)】	
RBFM6×1CS	1	120×180	358×260	6.56
RBFM6×2CS	2	120×180	358×390	9.44
RBFM6×3CS	3	120×180	358×520	12.24
RBFM6×NCS	N	120×180	358×【130×（N+1）】	
RBFM6+6×1CS	2	120×180	586×260	10.48
RBFM6+6×2CS	3	120×180	596×390	15.68
RBFM6+6×3CS	6	120×180	596×520	20.32
RBFM6+6×NCS	2N	120×180	596×【130×(N+1)】	
RBFM6+6+6×1CS	3	120×180	814×260	14.48
RBFM6+6+6×2CS	6	120×180	834×390	30.56
RBFM6+6+6×3CS	9	120×180	834×520	45.68
RBFM6+6+6×NCS	3N	120×180	834×【130×(N+1)】	
RBFM8×1CS	1	120×240	418×260	7.44
RBFM8×2CS	2	120×240	418×390	10.56
RBFM8×3CS	3	120×240	418×520	13.6
RBFM8×NCS	N	120×240	418×【130×(N+1)】	
RBFM8+8×1CS	2	120×240	706×260	12.4
RBFM8+8×2CS	3	120×240	716×390	18.08
RBFM8+8×3CS	6	120×240	716×520	23.12
RBFM8+8×NCS	2N	120×240	716×【130×(N+1)】	
RBFM8+8+8×1CS	3	120×240	994×260	17.28
RBFM8+8+8×2CS	6	120×240	1014×370	35.52
RBFM8+8+8×3CS	9	120×240	1014×520	52.16
RBFM8+8+8×NCS	3N	120×240	1014×【130×(N+1)】	

RBF M 1×1 CS

CS/SS304/SS316L：材料代号，表示材质
CS/SS304/SS316L: Material Code,indicating Material

1X1：规格代号
1×1: Size Code

M：表示宽法兰，法兰宽度尺寸为60mm
M: Indicates Wide Flange (flange width: 60mm)

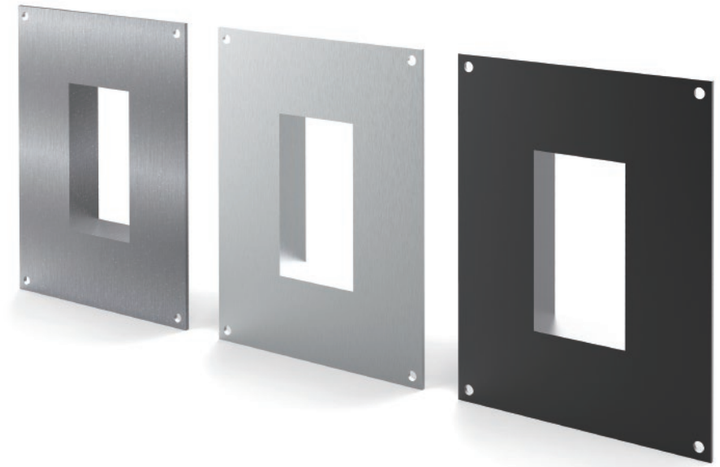
RBF：类型代号，表示矩形栓接框
RBF: Type code indicating Rectangular Bolted Frame

3.3 RBFW宽法兰框架

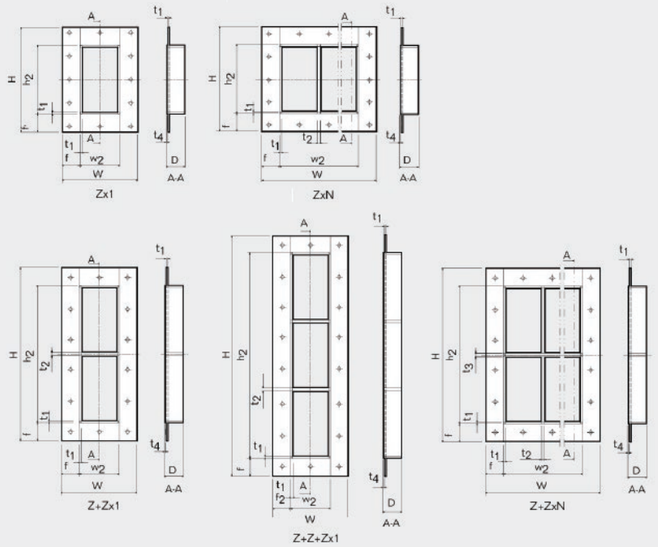
用螺栓连接的方式固定在混凝土墙体等强度低易破碎的结构上，法兰的宽度尺寸为100mm，框架的材料分为碳钢（底漆状态）、不锈钢、铝合金（阳极化）三种（框架的结构尺寸均符合矩形框的设计规则）。

RBFW WIDE FLANGE FRAME

Secured via bolting to structures with low strength and high fragility, such as concrete walls. Flange width: 100mm. Frame materials available in three options: Carbon Steel (primed), Stainless Steel, and Aluminum Alloy (anodized). (Frame dimensions comply with rectangular frame design rules.)

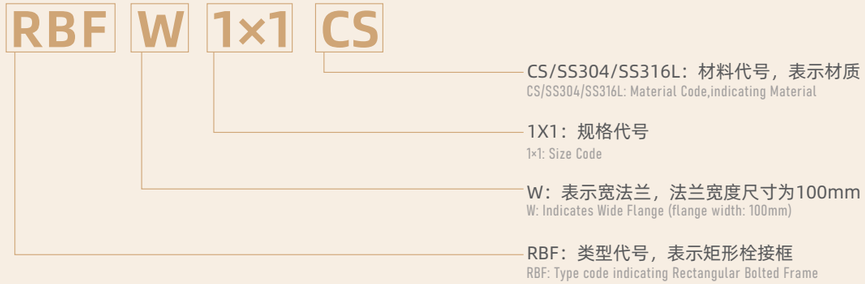


• Fire: A-class, H-class • Water Pressure: 4 Bar • Gas Pressure: 2.5 Bar



CODE	h2	w2	f	D	t1	t2	t3	t4
Value	H–200	W–200	100	60	10	10	20	3

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
RBFW1×1CS	1	60×60	320×280	3.24
RBFW3×1CS	1	60×120	380×280	3.87
RBFW5×1CS	1	60×180	438×280	5.22
RBFW7×1CS	1	60×240	498×280	6.57
RBFW2×1CS	1	120×60	320×340	5.4
RBFW2×2CS	2	120×60	320×470	8.1
RBFW2×3CS	3	120×60	320×600	10.8
RBFW2×NCS	N	120×60	320×(130×N+210)	
RBFW4×1CS	1	120×120	380×340	6.39
RBFW4×2CS	2	120×120	380×470	9.36
RBFW4×3CS	3	120×120	380×600	12.24
RBFW4×NCS	N	120×120	380×(130×N+210)	
RBFW4+4×1CS	2	120×120	549×340	9.81
RBFW4+4×2CS	3	120×120	559×470	20.16
RBFW4+4×3CS	6	120×120	559×600	31.68
RBFW4+4×NCS	2N	120×120	559×(130×N+210)	
RBFW4+4+4×1CS	3	120×120	719×340	13.32
RBFW4+4+4×2CS	6	120×120	739×470	30.6
RBFW4+4+4×3CS	9	120×120	739×600	43.2
RBFW4+4+4×NCS	3N	120×120	739×(130×N+210)	
RBFW6×1CS	1	120×180	438×340	7.38
RBFW6×2CS	2	120×180	438×470	10.62
RBFW6×3CS	3	120×180	438×600	13.77
RBFW6×NCS	N	120×180	438×(130×N+210)	
RBFW6+6×1CS	2	120×180	666×340	11.79
RBFW6+6×2CS	3	120×180	676×470	17.64
RBFW6+6×3CS	6	120×180	676×600	22.86
RBFW6+6×NCS	2N	120×180	676×(130×N+210)	
RBFW6+6+6×1CS	3	120×180	894×340	16.29
RBFW6+6+6×2CS	6	120×180	914×470	34.38
RBFW6+6+6×3CS	9	120×180	914×600	51.39
RBFW6+6+6×NCS	3N	120×180	914×(130×N+210)	
RBFW8×1CS	1	120×240	498×340	8.37
RBFW8×2CS	2	120×240	498×470	11.88
RBFW8×3CS	3	120×240	498×600	15.3
RBFW8×NCS	N	120×240	498×(130×N+210)	
RBFW8+8×1CS	2	120×240	786×340	13.95
RBFW8+8×2CS	3	120×240	796×470	20.34
RBFW8+8×3CS	6	120×240	796×600	26.01
RBFW8+8×NCS	2N	120×240	796×(130×N+210)	
RBFW8+8+8×1CS	3	120×240	1074×340	19.44
RBFW8+8+8×2CS	6	120×240	1094×470	39.96
RBFW8+8+8×3CS	9	120×240	1094×600	58.68
RBFW8+8+8×NCS	3N	120×240	1094×(130×N+210)	

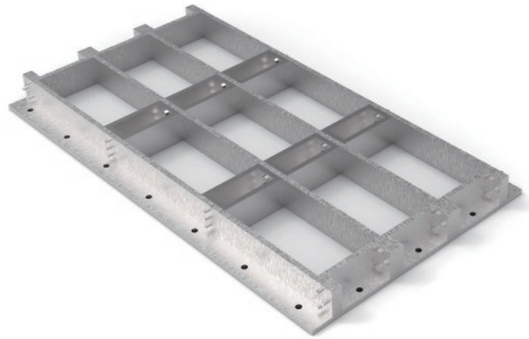


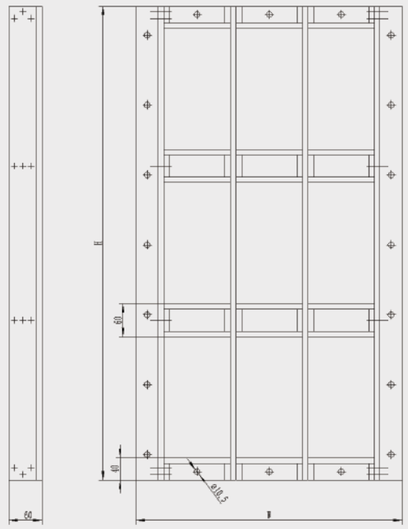
3.4 DARBF组合式框架

用螺栓连接的方式固定在钢结构上，也可以直接浇筑在混凝土墙体内，标准法兰的宽度尺寸为30mm，框架的材料分为碳钢（底漆状态）、不锈钢两种（框架的结构尺寸均符合矩形框的设计规则）。

DARBF MODULAR FRAME

The frame is secured to steel structures using bolted connections and can also be directly cast into concrete walls. The standard flange width is 30mm. Frame materials are available in two options: carbon steel (in primer) and stainless steel. (The structural dimensions of the frame comply with the Rectangular Frame Design Rules.)





• Fire: A-class, H-class • Water Pressure: 4 Bar • Gas Pressure: 2.5 Bar

框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸H×W External dimensions H×W	重量 Weight
DARBF1×1CS	1	60×60	180×140	4.32
DARBF3×1CS	1	60×120	240×140	5.16
DARBF5×1CS	1	60×180	298×140	6.96
DARBF7×1CS	1	60×240	358×140	8.76
DARBF2×1CS	1	120×60	180×200	7.2
DARBF2×2CS	2	120×60	180×330	10.8
DARBF2×3CS	3	120×60	180×460	14.4
DARBF2×NCS	N	120×60	180×(130×N+70)	0
DARBF4×1CS	1	120×120	240×200	8.52
DARBF4×2CS	2	120×120	240×330	12.48
DARBF4×3CS	3	120×120	240×460	16.32
DARBF4×NCS	N	120×120	240×(130×N+70)	0
DARBF4+4×1CS	2	120×120	449×200	13.08
DARBF4+4×2CS	3	120×120	459×330	26.88
DARBF4+4×3CS	6	120×120	459×460	42.24
DARBF4+4×NCS	2N	120×120	459×(130×N+70)	0
DARBF4+4+4×1CS	3	120×120	659×200	17.76
DARBF4+4+4×2CS	6	120×120	679×330	40.8
DARBF4+4+4×3CS	9	120×120	679×460	57.6
DARBF4+4+4×NCS	3N	120×120	679×(130×N+70)	0
DARBF6×1CS	1	120×180	298×200	9.84
DARBF6×2CS	2	120×180	298×330	14.16
DARBF6×3CS	3	120×180	298×460	18.36
DARBF6×NCS	N	120×180	308×(130×N+70)	0
DARBF6+6×1CS	2	120×180	566×200	15.72
DARBF6+6×2CS	3	120×180	576×330	23.52
DARBF6+6×3CS	6	120×180	576×460	30.48
DARBF6+6×NCS	2N	120×180	576×(130×N+70)	0
DARBF6+6+6×1CS	3	120×180	834×200	21.72
DARBF6+6+6×2CS	6	120×180	854×330	45.84
DARBF6+6+6×3CS	9	120×180	854×460	68.52
DARBF6+6+6×NCS	3N	120×180	854×(130×N+70)	0
DARBF8×1CS	1	120×240	358×200	11.16
DARBF8×2CS	2	120×240	358×330	15.84
DARBF8×3CS	3	120×240	358×460	20.4
DARBF8×NCS	N	120×240	358×(130×N+70)	0
DARBF8+8×1CS	2	120×240	686×200	18.6
DARBF8+8×2CS	3	120×240	696×330	27.12
DARBF8+8×3CS	6	120×240	696×460	34.68
DARBF8+8×NCS	2N	120×240	696×(130×N+70)	0
DARBF8+8+8×1CS	3	120×240	1014×200	25.92
DARBF8+8+8×2CS	6	120×240	1034×330	53.28
DARBF8+8+8×3CS	9	120×240	1034×460	78.24
DARBF8+8+8×NCS	3N	120×240	1034×(130×N+70)	

DARBF 1×1 CS

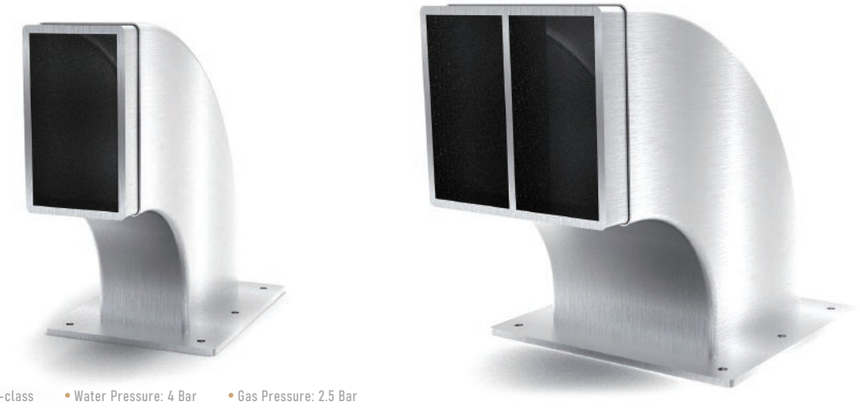
- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 1X1：规格代号
  1×1: Size Code
- DARBF：类型代号，表示组合式矩形栓接框
  DARBF: Type code indicating Modular Rectangular Bolted Frame

3.5 SNF用于焊接安装的矩形框（鹅颈）

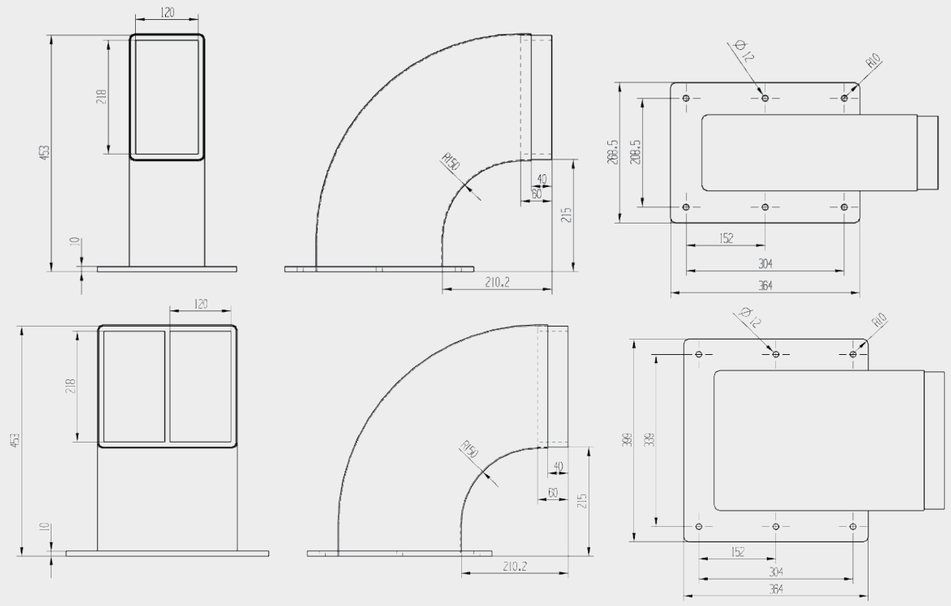
以栓接的方式固定在甲板等钢制结构上，框架的材料分为碳钢（底漆状态）、不锈钢两种（框架的结构尺寸均符合矩形框的设计规则）。

SNF RECTANGULAR FRAME FOR WELD MOUNTING (GOOSENECK)

Secured to steel structures such as decks via bolting. Frame materials available in two options: Carbon Steel (primed) and Stainless Steel. (Frame dimensions comply with rectangular frame design rules.)



• Fire: A-class, H-class • Water Pressure: 4 Bar • Gas Pressure: 2.5 Bar



框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸 External dimensions	重量 Weight
SNF6×1CS	1	180 x 120	268×517×454	18
SNF6×2CS	2	180 x 120	399×517×454	25

III 轻质框 LIGHTWEIGHT FRAME

1 RCF轻质框

RCF LIGHTWEIGHT FRAME

自带压紧功能，金属件可分为碳钢（镀锌）或304不锈钢，与S3矩形密封模块配合应用，防护等级IP55。

Integrated compression function. Metal components are available in carbon steel (galvanized) or 304 stainless steel. Designed for use with S3 rectangular sealing modules. Protection rating: IP55.



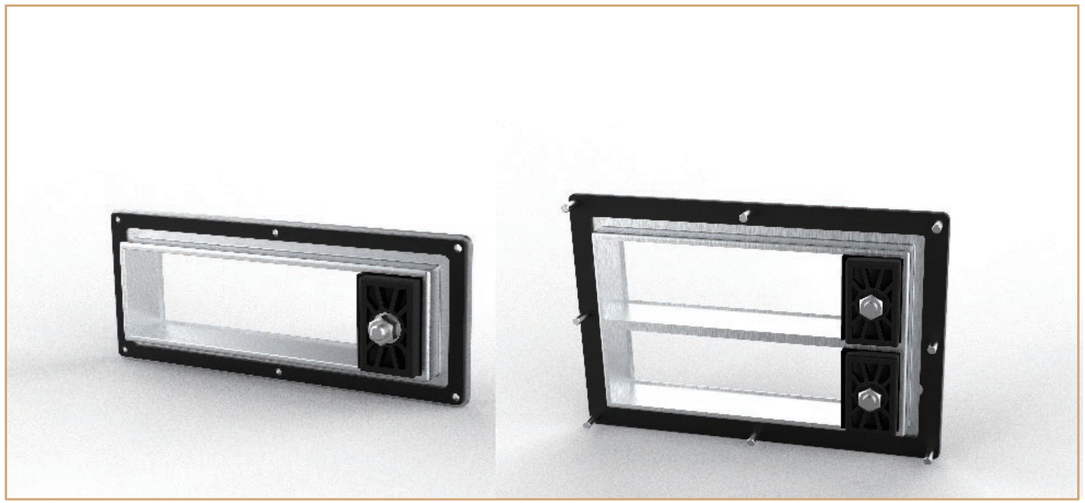
框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸 External dimensions	重量 Weight
RCF40×160	1	40×160	234 x 93	1.4
DARCF40×160	1	40×160	234 x 93	1.4

2 RSF轻质框

RSF LIGHTWEIGHT FRAME

自带压紧功能，框架材质为铝合金（阳极化），与S3矩形密封模块配合应用，防护等级IP68。

Integrated compression function. Frame material: Aluminum alloy (anodized). Designed for use with S3 rectangular sealing modules. Protection rating: IP68.



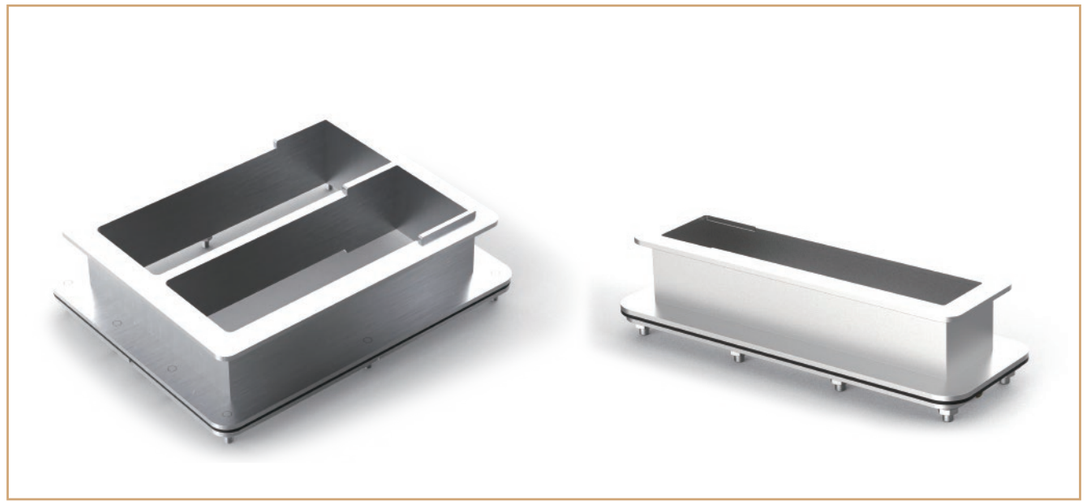
框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸 External dimensions	重量 Weight
RSF40×160	1	40×160	80×241	0.6
RSF2C 40×160	2	40×160	135×241	1.2

3 RTF轻质框

RTF LIGHTWEIGHT FRAME

框架材质为不锈钢，与S1矩形密封模块配合应用，防护等级IP68。

Frame material: Stainless steel. Designed for use with S1 rectangular sealing modules. Protection rating: IP68.



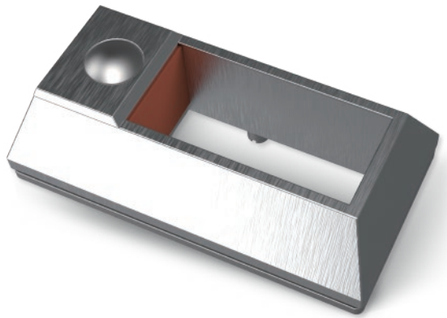
框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸 External dimensions	重量 Weight
RTF60×160	1	60×160	83.8 x 236 x 60	1.6
RTF2C60×160	2	60×160	130 x 236 x 60	2.3

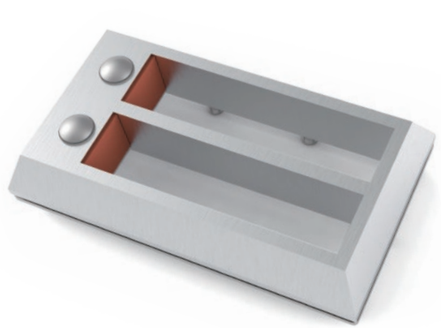
4 RPF轻质框

RPF LIGHTWEIGHT FRAME

自带压紧功能，框架材质为铝合金（阳极化），与S2矩形密封模块配合应用，防护等级IP68。

Integrated compression function. Frame material: Aluminum alloy (anodized). Designed for use with S2 rectangular sealing modules. Protection rating: IP68.





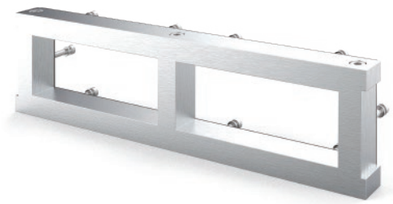
框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸 External dimensions	重量 Weight
RPF40×80	1	40×80	75 x 140 x 65	0.6
RPF2C 40×160	2	40×160	130 x 230 x 65	1.6

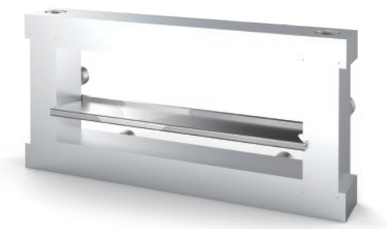
5 DAF轻质框

DAF LIGHTWEIGHT FRAME

自带压紧功能，组合式，框架材质为铝合金（阳极化），与S3矩形密封模块配合应用，防护等级IP55。

Integrated compression function. Modular design. Frame material: Aluminum alloy (anodized). Designed for use with S3 rectangular sealing modules. Protection rating: IP55.





框架 Frame	密封腔数量 Number of seal	密封腔尺寸 Packing space	外部尺寸 External dimensions	重量 Weight
DAF60×160	1	40×80	209 x 100 x 30	1.4
DAF2C 60×160	2	40×160	369 x 100 x 30	2.2

IV 套筒 SLEEVE

1 WS套筒

WS SLEEVE

用于焊接安装的套筒，材料为碳钢（底漆）和不锈钢两种，以焊接的方式固定在甲板或舱壁等钢制构造上。

Sleeve for weld mounting. Available in two materials: carbon steel (primed) and stainless steel. Secured to steel structures such as decks or bulkheads via welding.

• 型号说明 MODEL DESCRIPTION

WS 25 CS

- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material code,indicating material
- 25：规格代号
  25: Size code
- WS：类型代号，表示焊接型套管
  WS: Type code indicating Weld-in Sleeve





套筒 Sleeves	WS25	WS31	WS43	WS50	WS68	WS75	WS100
ØD	25.5	31.5	43.5	51	69	76	101
ØD1	31	37	53	60	78	85	110

套筒 Sleeves	WS125	WS150	WS175	WS200	WS225	WS250	WS300	WS350
ØD	126	151	176	202	227	252	302	352
ØD1	137	162	187	216	241	266	316	366

2 WS PPS套筒

WS PPS SLEEVE

用于焊接安装的套筒，材料为碳钢（底漆）和不锈钢两种，以焊接的方式固定在甲板或舱壁等钢制构造上。

Sleeve for weld mounting. Available in two materials: carbon steel (primed) and stainless steel. Secured to steel structures such as decks or bulkheads via welding.

• 型号说明 MODEL DESCRIPTION

WS PPS 25 CS

- CS/SS304/SS316L：材料代号，表示材质
  CS/SS304/SS316L: Material Code,indicating Material
- 25：规格代号
  25: Size Code
- WS PPS：类型代号，表示用于PPS密封件的焊接型套管
  WS PPS: Type Code Indicating A Weld-in Sleeve For PPS Seals



套筒 Sleeves	WS25	WS31	WS43	WS50	WS68	WS75	WS100
ØD	25.5	31.5	43.5	51	69	76	101
ØD1	31	37	53	60	78	85	110

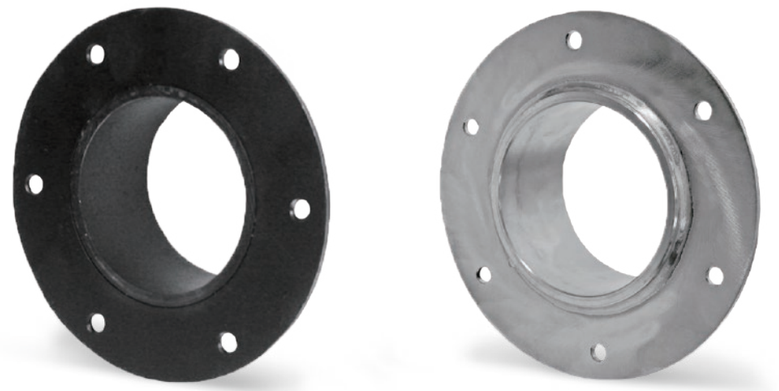
套筒 Sleeves	WS125	WS150	WS175	WS200	WS225	WS250	WS300	WS350
ØD	126	151	176	202	227	252	302	352
ØD1	137	162	187	216	241	266	316	366

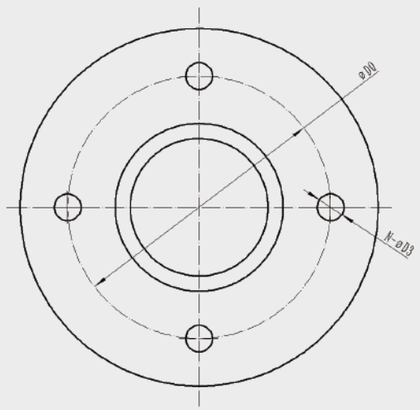
3 NBS栓接套筒

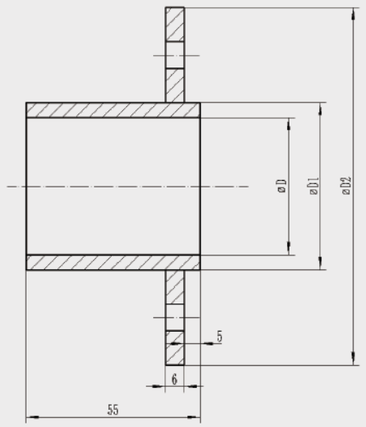
NBS BOLTED SLEEVE

用于栓接固定的套筒，材料为碳钢（底漆）和不锈钢两种，用于以栓接的方式固定在钢制结构上，含有密封垫。

Sleeve designed for bolted installation. Available in two materials: Carbon Steel (primed) and Stainless Steel. Intended for bolted attachment to steel structures. Includes a gasket.







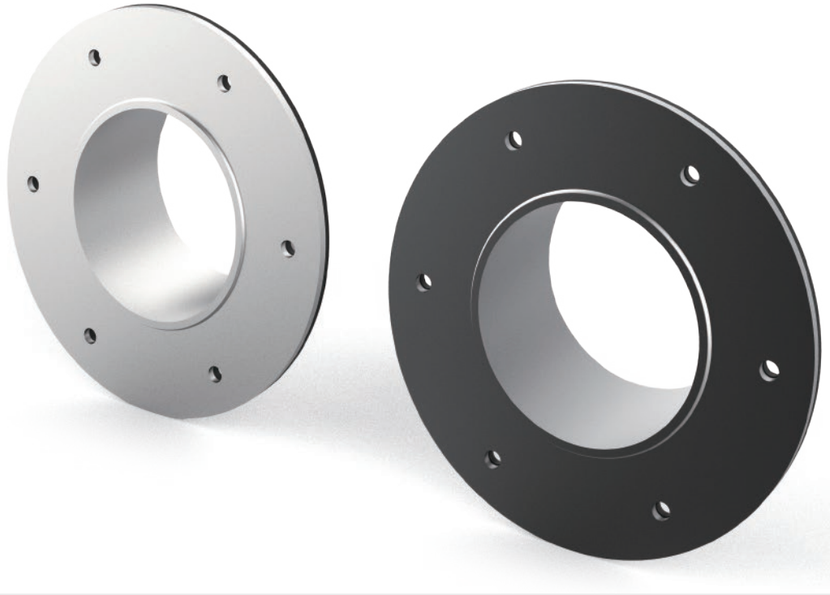
套筒 Sleeves	ØD	ØD0	ØD1	ØD2	ØD3
NBS25	25.5	61	31	91	4–Ø6.5
NBS31	31.5	67	37	97	4–Ø6.5
NBS43	43.5	83	53	113	4–Ø6.5
NBS50	51	90	60	120	4–Ø8.5
NBS68	69	108	78	138	4–Ø8.5
NBS75	76	115	85	145	4–Ø8.5
NBS100	101	140	110	170	6–Ø8.5
NBS125	126	167	137	197	6–Ø8.5
NBS150	151	162	162	192	6–Ø8.5
NBS175	176	217	187	247	6–Ø8.5
NBS200	202	246	216	276	6–Ø8.5
NBS225	227	271	241	301	8–Ø11
NBS250	252	296	266	326	8–Ø11
NBS300	302	346	316	376	8–Ø11
NBS350	352	396	366	426	8–Ø11

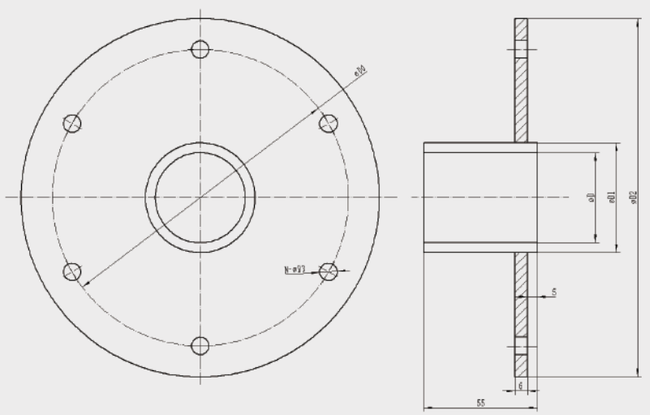
4 MBS栓接套筒

MBS BOLTED SLEEVE

可进行栓接固定的套筒，材料为碳钢（底漆）和不锈钢两种，用于以栓接的方式固定在夹芯板上，含有密封垫。

Sleeve designed for bolted installation. Available in two materials: Carbon Steel (primed) and Stainless Steel. Intended for bolted attachment to sandwich panels. Includes a gasket.





套筒 Sleeves	ØD	ØD0	ØD1	ØD2	ØD3
MBS25	25.5	121	31	151	6–Ø6.5
MBS31	31.5	127	37	157	6–Ø6.5
MBS43	43.5	143	53	173	6–Ø6.5
MBS50	51	150	60	180	6–Ø8.5
MBS68	69	168	78	198	6–Ø8.5
MBS75	76	175	85	205	6–Ø8.5
MBS100	101	200	110	230	6–Ø8.5
MBS125	126	227	137	257	6–Ø8.5
MBS150	151	252	162	282	8–Ø8.5
MBS175	176	277	187	307	8–Ø8.5
MBS200	202	306	216	336	8–Ø8.5
MBS225	227	331	241	361	8–Ø11
MBS250	252	356	266	386	8–Ø11
MBS300	302	406	316	436	8–Ø11
MBS350	352	456	366	486	8–Ø11

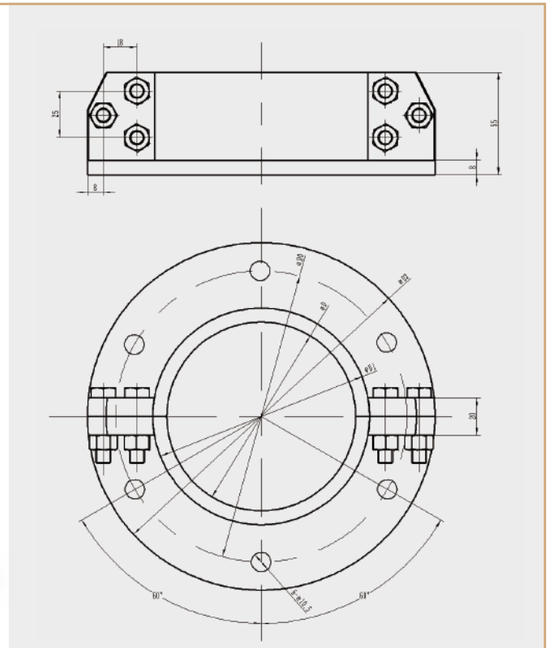
5 DABS栓接套筒

DABS BOLTED SLEEVE

可打开组合以栓接固定的套筒，用于在电缆敷设后的情况下安装，材料为碳钢（底漆）和不锈钢两种，用于以栓接的方式固定在夹芯板上，含有密封垫。

Split sleeve designed for bolted installation. Intended for post-installation (after cable pulling). Available in two materials: carbon steel (primed) and stainless steel. Designed for bolted attachment to sandwich panels. Includes a gasket.





套筒 Sleeves	ØD	ØD0	ØD1	ØD2
DABS75	76	132	92	162
DABS100	101	157	117	187
DABS125	126	182	142	212
DABS150	151	207	167	237
DABS175	176	232	192	262
DABS200	202	258	218	288

V 附件 ATTACHMENTS

1 限位板

LIMIT PLATE

用于将矩形模块限制在框架内，从而使模块在承受一定的压力（压紧件挤压以及外部水压或气压）时，模块不被压出。材料分为不锈钢SS316L和碳钢CS。

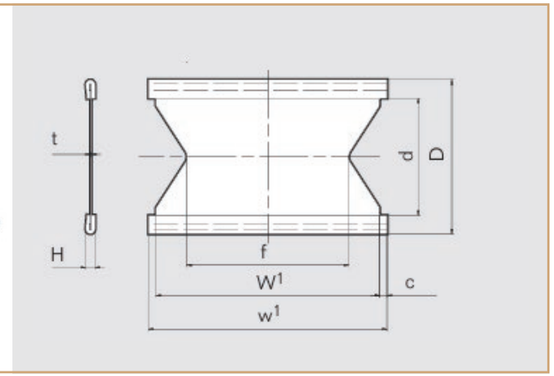
It is used to confine the rectangular modules within the frame, preventing the modules from being pushed out when subjected to certain pressures, including compression from clamping parts and external water pressure or air pressure. The material options are SS316L stainless steel and carbon steel (CS).

• 型号说明 MODEL DESCRIPTION

Hold Plate 120 /SS316L

- /SS316L：材料代号，表示材质
  CS/SS316L: Material Code,indicating Material
- 120：规格代号
  120: Size Code
- Hold Plate：类型代号，表示限位板
  Hold Plate: Type Code For Limit Plate





CODE	VALUE		
	Hold Plate120	Hold Plate60	Hold Plate40
D	82	82	82
d	62	62	62
W1	119	59	39
w1	127	67	47
f	86	56	36
c	4	4	4
t	0.5	0.5	0.5
H	5	5	5

② 压紧件

CLAMPING COMPONENT

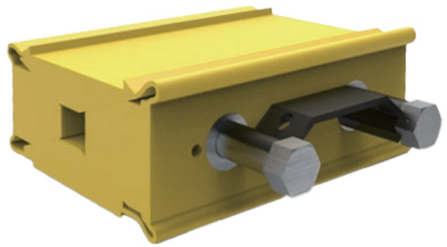
用于压紧矩形模块，从而使两瓣密封模块能够紧密结合，并产生一定内聚力。按金属结构件的材料可分为不锈钢SS316L和SS304。

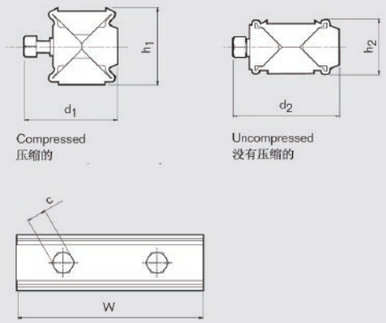
It is used to compress the rectangular modules, enabling the two halves of the sealing module to fit tightly and generate a certain cohesive force. According to the material of the metal structural parts, it is available in two grades: SS316L and SS304 stainless steel.

· 型号说明 MODEL DESCRIPTION

PTST 120 /SS316L

- /SS316L：SS316L/SS304：材料代号，表示材质
  SS316L/SS304: Material Code,indicating Material
- 120：120：规格代号
  120: Size Code
- PTST：PTST：类型代号，表示压紧块
  PTST: TYPE CODE FOR CLAMPING BLOCK





CODE	VALUE		
	Hold Plate120	Hold Plate60	Hold Plate40
d1	61	61	61
d20	70	70	70
h1	48	48	48
h2	32	32	32
c	ØL13	ØL13	ØL13
W	120	60	40

VI 工具 INSTALLATION TOOL

① 螺柱式预压紧工具

STUD-TYPE PRE-COMPRESSION TOOL

用于在模块安装过程中对其进行预压紧，共分为2个规格。

It is used for pre-compressing the modules during installation and is available in two specifications.

型号 MODEL

ST Pre-C Tool 01



ST Pre-C Tool 02



② 杠杆式预压紧工具

LEVERAGING PRE-COMPRESSION TOOL

在穿入电缆较多的情况下，模块通常被撑的很高，可用此工具将模块压缩至一定的位置，以便将预压紧工具塞入。

With numerous cables routed through, the modules are often forced open to a large height. Use this tool to compress the modules to a set position for inserting the pre-compression tool.

型号 MODEL

La Pre-C Tool



③ 预压紧工具

WEDGE PRE-COMPRESSION TOOL

在塞入压紧件之前，请先用此工具对模块进行预压缩。

Pre-compress the modules with this tool before inserting the clamping components.

型号 MODEL

Wedge Pre-C Tool 100
(用于密封腔宽度120mm的预压紧)
Pre-compression for 120mm wide sealing chamber.



Wedge Pre-C Tool 30
(用于密封腔宽度60mm和40mm的预压紧)
For pre-compression of 60mm and 40mm wide sealing chambers.



4 固定工具 FIXING TOOL

持模工具

用于在安装过程（尤其是模块垂直状态下）中对模块进行固定，防止其跌落，波动拨杆时该工具能够固定在宽度为120mm的框架的内壁上，从而临时将模块予以固定。建议在电缆较多(模块受到推挤力量较大)状况下使用此工具，从而能够使安装人员腾出手来进行其它后续工作或者休息。

HOLD MODULE TOOL

This tool is used to fix the modules during installation, especially when the modules are in a vertical position, preventing them from falling off. When the toggle lever is actuated, the tool can be secured to the inner wall of the 120mm-wide frame, temporarily fixing the modules in place. It is recommended to use this tool when a large number of cables are installed, which results in significant pushing force exerted on the modules, allowing installers to free their hands for subsequent operations or rest.

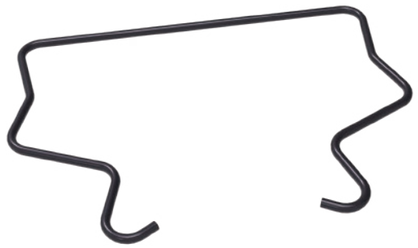


固定模块

用于在安装过程中对模块进行固定，实现固定模块的作用，从而防止模块跌落。可在宽度为120mm的框架上使用，建议没有电缆或电缆很少的情况下状况下使用此工具，从而能够使安装人员腾出手来进行其它后续工作或者休息。

FIXED MODULE TOOL

It fixes the modules during installation to prevent them from falling off. Suitable for 120mm-wide frames. Recommended for use with no cables or a small number of cables, enabling installers to free their hands for subsequent work or rest.



固定限位板

用于在安装过程（尤其是模块垂直状态下）中对限位板进行固定，实现让限位板固定模块的作用，从而防止模块跌落。扭动该工具两端的螺母时，其可以将限位板拉紧，使限位板和框架间产生较大的摩擦力，从而临时将模块予以固定；可在宽度为120mm的框架上使用，建议在电缆不多的状况下使用此工具，从而能够使安装人员腾出手来进行其它后续工作或者休息。

HOLD PLATE

This tool secures the limit plate during installation, particularly in vertical module orientation, enabling the limit plate to hold the modules and prevent falling. Tightening the nuts at both ends tensions the limit plate, generating high friction between the limit plate and the frame for temporary module fixation. Suitable for 120mm-wide frames. Recommended for scenarios with few cables, freeing installers' hands for subsequent work or rest.



5 拆卸工具 DISASSEMBLY TOOL

用于重新安装时，拔出压紧件。

It is used to remove the clamping components during reinstallation.

型号 MODEL

Dis-A Tool



6 凸轮式预压紧工具 CAM PRE-COMPRESSION TOOL

用于预压紧模块，应用在轻质框中。

It is used to pre-compress the modules and is applicable to lightweight frames.

型号 MODEL

Cam Pre-C Tool 01



Cam Pre-C Tool 02

