BFV

BFV(SHIJIAZHUANG)VALVE IMPORT AND EXPORT CO.,LTD

水流控制形式多种多样，主要表现在水流的截止与疏通，水位的调节与控制、水流逆止和上清液排出等方面。

水利工程建设，城市防洪、船坞、水处理工艺过程控制，市政工程建设等水域各种形式的水流控制过程，一般都需要配套水流控制设备，以实现设备检修、事故性隔离、工艺切换、工艺调节、防止倒灌等目的。

There are various forms of water-flow control such as water-flow cut-off and opening up,water level adjusting and control, water-flow inversed stopping and clear liquid output etc.

Generally water-flow control equipments are needed to realize device repairing and acci-dent separating, technology switch, technology adjusting and prevent inversed back flowing inthe course of water-flow control of hydraulic work building, urban flood defenses, boatyard,water treat process and municipal works building etc.

FZ、YZ型铸铁镶铜闸门、滑阀

Type FZ, YZ Cast-Iron Bronze-Inlaid Gate, Sliding Gate

BFV

应用场合 Applications

1. 通径内水流无阻，几乎无水流损失。
2. 主体材料为灰铸铁（或球铁）经过内应力消除，经久耐用无变形。
3. 结构强度针对不同水压而定，适用性广、经济耐用。
4. 采用精密加工的青铜硬止水密封，摩阻小、耐磨且密封效果好。渗水量一般小于0.72L/min（正向）和1.25L/min（反向）。
5. 结构形式全，适合多种洞口或渠道的安装使用。

1. There is a little resistance when water flowing through the equipment.
2. The main structure is made of grey cast-iron(or spherical graphite cast iron) by little inner stress so it is long service life and small deforming.
3. Structural strength is up to different hydraulic pressure, so it is wide and economic in application.
4. Sealed with bronze through precise processing. Small friction and good seal function. Forward leakage is less than 0.72L/min, and reversal leakage is less than 1.25L/min.
5. There are various structures applied to many situations' installation.

启闭力 Start-close Force

启门力：$F_{启}=F+W_1+W_2$

闭门力：$F_{闭}=F-W_1-W_2$

式中：W_1－理论门体重量(kg)，见表；

W_2－丝杆自重(kg)，$W_2=(H+1000-D/2)\times g$；

H－闸门孔中心至平台距离；

g－为丝杆每米重；

F－不同水深及面积摩擦阻力（估算值），单位值为每平方每米水头350kgf/m² · m；

$F=350 \cdot S \cdot h$（kgf）

S－闸门板面积（m²），方闸门：$S=a \cdot b$；

a－闸门宽（m），b－闸门高（m）

圆闸门为$S=\pi \cdot D^2/4$，D－闸门通径（m）

h－闸门孔中心至最高液面距离(水压或称闸前水深)(m)；

Start force: $F_{启}=F+W_1+W_2$

Close force: $F_{闭}=F-W_1-W_2$

And W_1-Theory weight of body (kg), can be seen in table;

W_2- Weight of lead screw (kg);

$W_2=(H+1000-D/2)\times g$;

H-Distance from the center of hole to flat-form;

g-Weight per meter of lead screw;

F-Fraction force in condition of different water depth and surface (estimation), unit value: 350kgf/m² · m;

$F=350 \cdot S \cdot h$(kgf)

S-Body surface(m²), Rectangle gate:$S=a \cdot b$; a-Widtha of gate(m), b-Height of gate(m)

Round gate: $S=\pi \cdot D^2/4$, D-Diameter of gate(m)

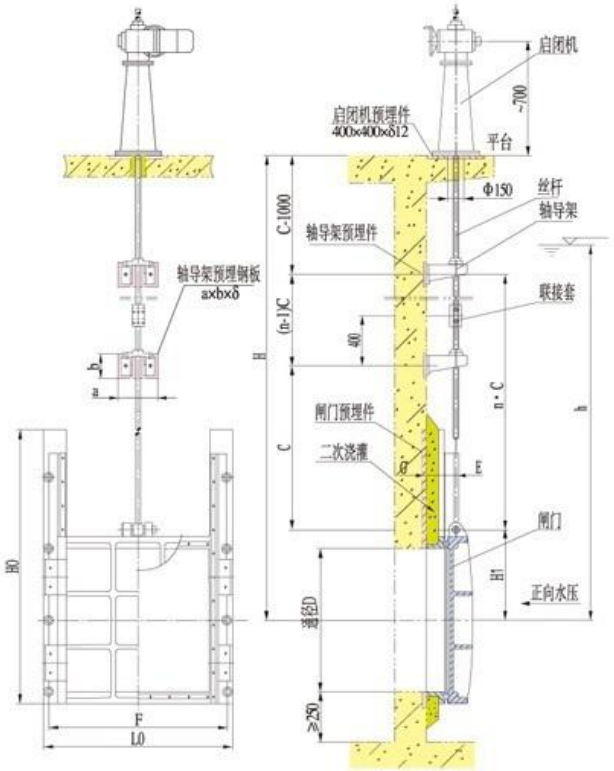
H- Distance from the center of gate hole to the highest liquid level(water depth)(m);

型号表示 Model Designations

□□□Z□□-□-□

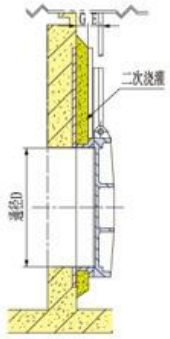
- 水压h(最高水位至门中心，反向为Fh)(m)
  Hydraulic Pressure h (maximum high-water to the centre of gate, reverse direction is Fh)(m)
- 标高H(m) Height (m)
- 闸门通径 Latus rectum of gate
  - 圆闸门D(mm) Round gate D (mm)
  - 矩形闸门：B×A(宽×高)(mm) Rectangle gate: B×A (width×height)(mm)
- 安装形式代号（代号见图例）
  Code of Mounting Patterns (can be seen in illustration)
- 铸铁镶铜闸门 Cast-Iron Bronze-Inlaid Gate
- 洞口形状 Shape of Hole
  - Y－圆形 Y-Round
  - F－方形 F- Rectangle
  - Q－渠用方形（浇嵌式）
    Q- Rectangle Used in Canal (casting type)
- 受压方向动作形式：Action Form in Press Direction
  - S－单向升杆式 S-One-Way Rising
  - A－单向暗杆式 A-One-Way Non-Rising
  - SS－双向升杆式 SS-Both-Way Rising
  - SA－双向暗杆式 SA-Both-Way Non-Rising
- 吊点 Suspension Centres
  - 1－单吊点（可省略） One Suspension Centres
  - 2－双吊点 Two Suspension Centres

闸门与启闭机的布置图 Layout of Gate and Headstock Gear



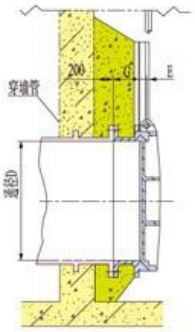
（以洞口用，单吊点外附式方闸门为例）

安装形式 Mounting Patterns



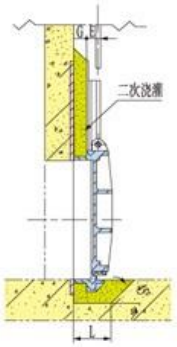
外附式(代号B,可省略)
土建预留孔与闸门通径相同，适用于所有规格的单向及双向闸门的安装。

Out-attachment form (code B, can be omitted)
Dimensions of preformed holes are the same to gate latus rectum applied in all installations of one-way and both-way gates.



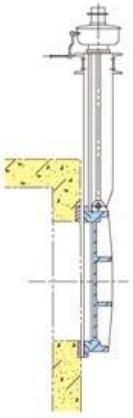
法兰式(代号F)
适用于管道端口安装，法兰标准：JB/T81-94，PN0.25Mpa(中垂线上无孔)。

Flange form (code F)
Applied in installations of pipeline port . Flange norm: JB/T81-94,PN0.25Mpa(no holes on the mid-perpendicular)



平底式(代号P)
主要为防止门前泥砂，特别是块状物堆积，适用于水流速度较高，能形成冲刷效果的场合。

Flat bottom form (code P)
It is applied in situations that prevent silt especially massive accumulation. Water velocity is so fast that can develop flushing effect.



一体式
(也称自撑式，代号Z)
启闭机装于闸门上，适用于浅型渠道安装，闸门打开后高出或接近平台场合。

Integration form
(self-supporting form code Z)
Applied in situations that the headstock gear is installed over gate and gate is over or approach the flat form in shallow channel.

轴导架 Shaft Guide Bracket

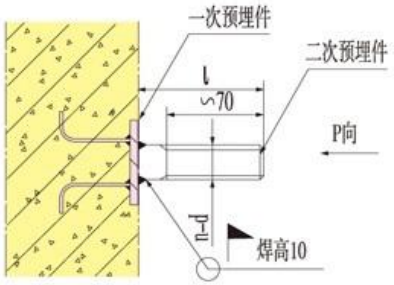
H+1000=（n+1）· C （C值初步估计取60d）
一般当：H+1000＜60d或n＜0.5时，则不设轴导架；
H+1000＞6000时需考虑联接套。
注：使用联接套对C值要求：C≥D+500；
闸门全开对C值要求：C≥D+300；
布置图中C−1000＞值可用于尺寸调节。
其中：D－圆闸门通径或方闸门洞口高度（mm）；
d－丝杆直径（mm）；
H－标高；
n－轴导架数量。

H+1000=(n+1) · C (initially make C 60d)
Generally not establish shaft guide bracket if H+1000＜60d or n＜0.5 and consider coupling sleeve if H+1000＞6000
Note: Request C≥D+500 when using coupling sleeve
Request C≥D+300 when gate completely open
Data(C-1000)is for adjustment in layout
And: D-diameter of round gate or height of Rectangle gate (mm)
d-diameter of lead screw (mm)
H-height mark
n-number of the shaft guide bracket

(mm)

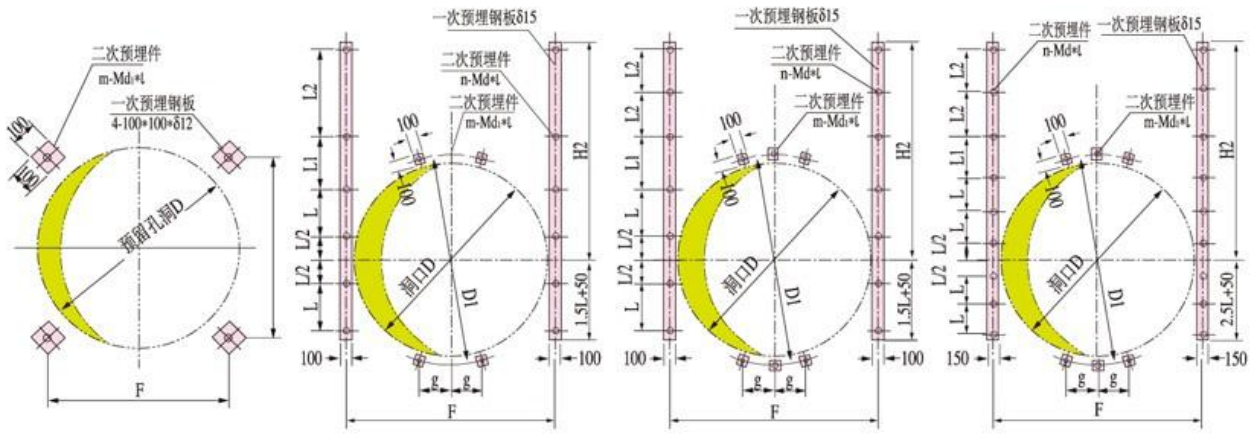
闭门力$F_{闭}$（T）	≤5	5＜$F_{闭}$＜10	≥10
a×b×δ	300×200×δ12	400×300×δ15	500×300×δ15
结构拉力F'(kN)	F'≥$F_{闭}$/n		

闸门预埋件 Embedded Parts

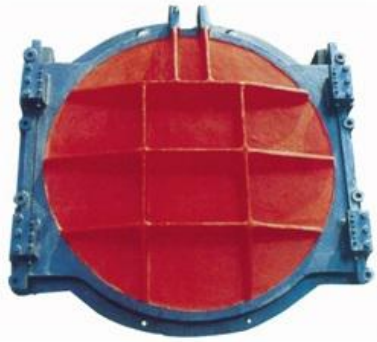


（一次预埋件的地脚铆钩间距一般为300mm一档焊接）

SYZ200-SYZ2700型圆闸门外形及预埋尺寸 SYZ200-SYZ2700 trolled thus to keel tension Side



SYZ200-SYZ1200



SYZ1400-SYZ1800

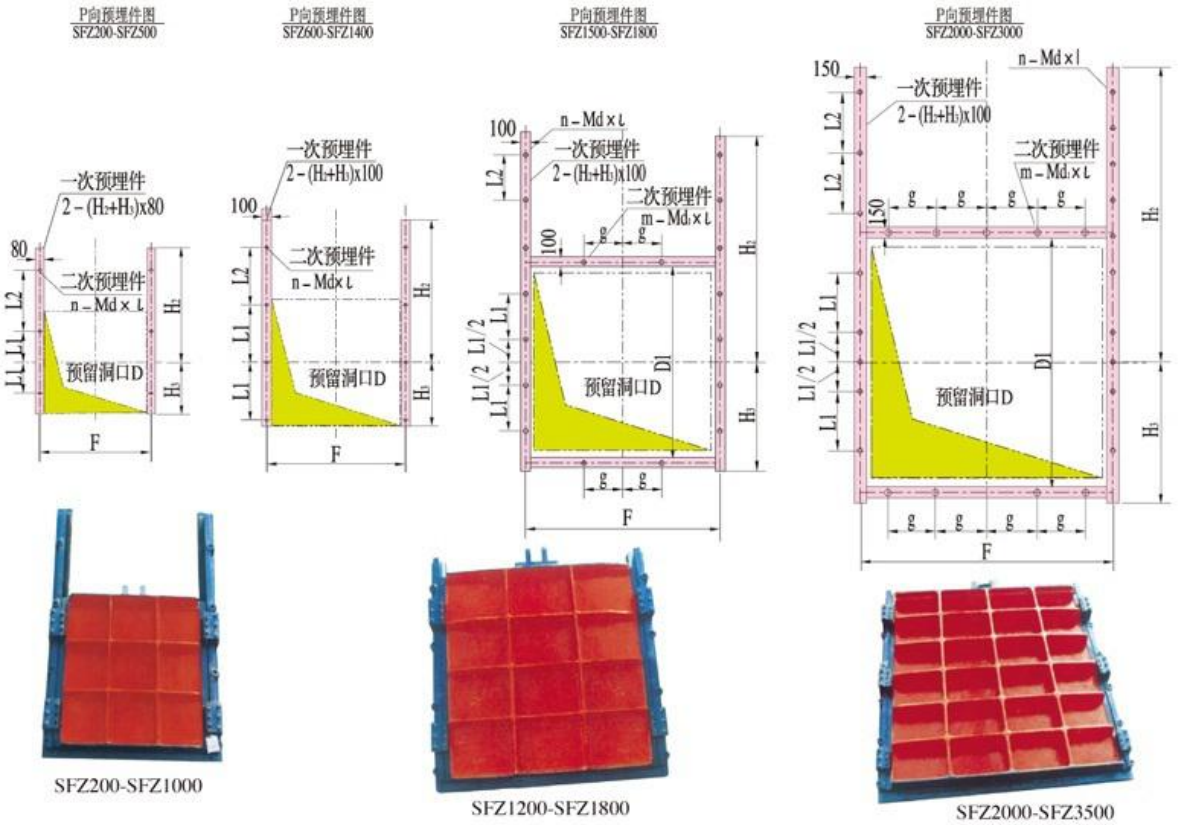
SYZ2000-SYZ2700

(mm)

通径D	L_0	H_0	H_1	H_2	D_1	L	L_1	L_2	G	E	F	g	n-Md1×l	m-Md1×l	W_1(kg)
ϕ200	370	415	160						80	55	220			2/2-M12×115/140	15
ϕ300	436	550	210						80	60	300			2/2-M12×115/140	20
ϕ400	536	700	270						80	70	400			2/2-M16×115/145	50
ϕ500	636	860	320						80	70	500			2/2-M16×115/145	82
ϕ600	736	1020	380						80	70	600			2/2-M16×115/145	112
ϕ700	836	1158	420						80	75	650			2/2-M16×115/145	170
ϕ800	936	1318	470						120	80	750			2/2-M20×160/195	194
ϕ900	1036	1468	530						120	85	850			2/2-M20×160/195	280
ϕ1000	1136	1618	570						120	90	950			2/2-M20×160/195	345
ϕ1100	1340	1870	640						120	90	1100			2/2-M24×165/205	304
ϕ1200	1440	1970	700						120	95	1200			2/2-M24×165/205	490
ϕ1400	1630	2495	850	1680		380	255	600	120	95	1570		12-M24×280		630
ϕ1500	1750	2635	875	1760	ϕ1680	400	200	650	120	105	1680	250	12-M24×275	2/2-M24×155/195	712
ϕ1600	1850	2785	925	1860	ϕ1775	430	270	650	120	105	1780	275	12-M24×275	2/2-M24×155/195	800
ϕ1700	1950	2930	970	1950	ϕ1870	450	225	400	120	110	1880	285	14-M24×285	3/3-M24×155/195	1030
ϕ1800	2050	3100	1025	2070	ϕ1970	480	205	400	120	110	1980	300	14-M24×285	3/3-M24×155/195	1160
ϕ2000	2270	3435	1150	2300	ϕ2180	310	275	450	120	125	2200	400	18-M24×305	3/3-M24×155/195	2100
ϕ2200	2470	3730	1250	2500	ϕ2380	330	275	500	120	125	2400	440	18-M24×305	3/3-M24×160/200	2650
ϕ2500	2770	4185	1400	2800	ϕ2690	资料另索		600	150	120	2700	500	22-M24×325	3/3-M24×185/225	2210
ϕ2700	2970	4375	1500	2890	ϕ2890			600	150	120	2900	550	22-M24×325	3/3-M24×185/225	3200

注： 1. W_1为理论门体重量(kg)。
2. L_0、H_0、H_1、G、E对应闸门与启闭机的布置图。
3. 斜杠前后分别指洞口上、下用预埋螺栓（二次）长度。

SFZ200-SFZ3000型方闸门外形及预埋尺寸 Shape of SFZ200-SFZ3000-Type Rectangle Gate and Embedded Size



(mm)

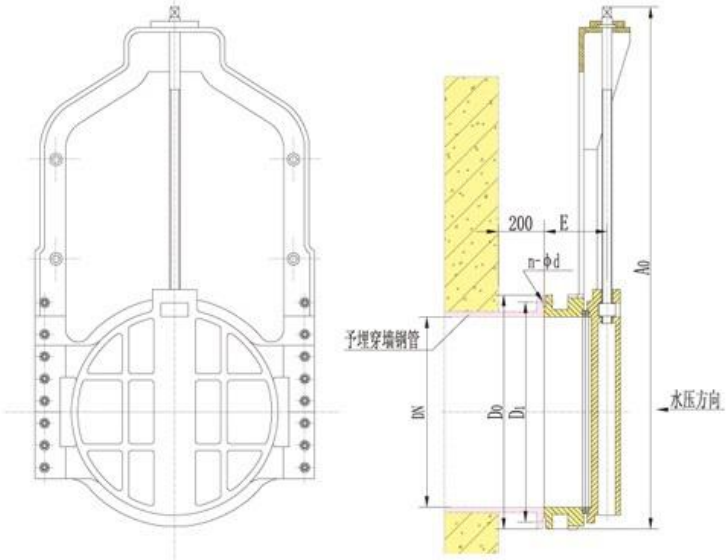
通径	G	E	H_1	H_2	H_3	F	L0	D1	m-Md×ℓ	n-Md×ℓ	L1	L2	g	W_t(kg)
200	80	60	170	300	155	316	356			6-M16×170	110	220		17
300	80	57	220	400	205	385	425			6-M16×170	140	220		35
400	80	62	285	500	255	485	525			6-M16×170	175	280		42
500	80	62	340	600	305	585	625			6-M16×175	240	300		67
600	80	62	390	700	355	685	725			8-M20×175	300	300		120
700	80	70	440	800	410	785	825			8-M20×190	350	350		135
800	120	75	505	900	460	885	925			8-M20×230	400	400		142
900	120	75	555	1000	510	985	1025			8-M20×230	450	450		280
1000	120	75	605	1100	560	1085	1125			8-M20×230	500	500		350
1100	120	83	660	1200	670	1270	1340			10-M20×265	350	350		415
1200	120	105	792	1425	715	1370	1430			12-M24×270	400	250		418
1300	120	110	825	1520	755	1470	1530			12-M20×250	400	350		520
1400	120	100	893	1625	815	1580	1640			12-M24×265	450	325		688
1500	120	115	940	1800	875	1680	1750	1670	2/2－M24×145/185	12-M24×265	500	300	250	985
1600	120	115	975	1900	925	1780	1840	1770	2/2－M24×145/185	12-M24×260	530	300	265	1260
1700	120	115	1055	1950	975	1880	1950	1850	3/3－M24×145/185	12-M24×275	570	300	600	1420
1800	120	112	1105	2100	1020	1980	2050	1970	2/2－M24×145/185	12-M24×275	600	350	600	1580
1900	120	125	1175	2195	1085	2100	2170	2070	3/3－M24×150/190	18-M24×290	375	325	400	1490
2000	120	125	1225	2280	1135	2200	2270	2180	3/3－M24×155/195	18-M24×290	400	300	400	2200
2200	120	125	1320	2415	1245	2400	2500	2400	5/5－M24×155/195	18-M24×285			400	2600
2300	120	125	1360	2500	1290	2500	2570	2480	5/5－M24×155/195	18-M24×290			400	2650
2400	120	130	1420	2650	1330	2580	2650	2580	6/6－M24×155/195	18-M24×290			400	2730
2500	120	130	1460	2775	1400	2700	2800	2700	6/6－M24×155/195	22-M24×285	详细尺寸请		400	3360
2600	140	130	1510	2800	1440	2800	2880	2800	6/6－M24×155/195	20-M24×295	另索资料		400	3750
2800	140	130	1610	3000	1550	3030	3130	3020	4/4－M24×175/215	20-M24×315			600	4500
3000	120	125	1710	3200	1650	3200	3300	3200	5/5－M24×155/195	18-M24×295			500	5560
3500	180	170	1975	3800	1915	3750	3850	3730	5/5－M24×220/260	18-M24×365			700	7500

注：1. W_t为理论门体重量。
2. L_0、H_1、G、E尺寸对应闸门与启闭机的布置图。
3. 斜杠前后分别指洞口上、下用预埋螺栓（二次）长度。

HF型滑阀 Type HF Sliding Gate

1. HF型滑阀自带螺母，多用于绿化地带，可省去启闭机及地面以上部分，一般装在井内，采用手轮操作。
2. 滑阀为钢铁行业习惯叫法，可与启闭机配套使用。

1. Equipped with nuts, Type HF Sliding Gate is often used for greenbelt, without need of a starter or any device above ground. Usually the Gate is mounted within a well and operated with a handwheel.
2. Sliding Gate is a generally called name in steel industry, and can be matched with the starter.



HF型滑阀

(mm)

通径DN	D_0	D_1	A_0	E	n-φd	W_1(kg)
φ300	445	400	973	170	12-φ23	40
φ400	565	515	1222	180	16-φ23	50
φ500	670	620	1481	180	20-φ28	98
φ600	780	725	1616	180	20-φ30	130
φ700	895	840	1635	185	24-φ30	157
φ800	1015	950	2085	230	24-φ30	160
φ900	1115	1050	2276	235	28-φ30	300
φ1000	1230	1160	2590	240	28-φ30	420
φ1200	1455	1380	2600	245	32-φ30	610

注：W_1为门体理论重量。

订货须知 Ordering Instructions

1. 订货时应对照安装及结构形式，详细注明型号、规格。
2. 样本中铸铁闸门数据对应正向承压水头10m；所有正向承压闸门的反向承压计算值为2.5m，超出压力范围均应特殊订货。
3. 闸门门体及门框材料一般用灰铸铁制造，密封面为锡青铜，若需要球墨铸铁、不锈钢或HDPE(高密度聚乙稀)塑料，应注明具体要求。
4. 除滑阀外，闸门配套用：启闭机、丝杆、轴导架、电控箱及所有预埋件应另外订货。
5. 暗杆闸门和滑阀主要表现在法兰尺寸和启闭形式不一样，订货时以名称作为区别，配套手轮或联接法兰均需另订。
6. 渠道用铸铁闸门（预留槽浇嵌式），应另索资料，商量订货。
7. 任何与本资料不相吻合的改动订货，订货时均需提供相应的土建资料。
8. 双吊点闸门一般用于B>2.5m，且B/A>1.5场合。

1. Please note type, specification and structure forms after reading mentioned content .
2. The data of gate forward bearing water head≤10m. And the calculation of backward bearing water head is 2.5m. Please special order if go beyond the pressure.
3. Body and frame of gate are generally made of grey cast iron and sealing face is made of tin bronze. If spheroidal graphite cast iron or stainless steel is needed, please note them.
4. Start and stop machine, lead screw, shaft guide bracket, electric cabinet and all the embedded parts, which are suited with the gates, are extra ordered in addition to sliding gate.
5. The difference between non-rising gate and sliding gate is the flange dimension and start-close form. Please distinguish the name when order and matched hand wheel and joined flange are needed especially order.
6. Please demand special data when canal cast iron gate (preformed groove casting type) is needed.
7. Related civil design data should be supplied when order is different from our data.
8. Generally gate with two suspension centres is used in case that B>2.5m and B/A>1.5. It should be ordered specially.

应用场合 Applications

钢闸门是给排水工程、水利、水电工程中常用的拦水、止水设备，我公司生产的钢闸门种类齐全，可适用于各种场合，从其结构形式上可分为以下六类：

插板闸门(CBZ)：三面止水，密封性能好，适用于渠道安装；

制水闸门(ZSZ)：三面或四面止水，适用于渠道或孔壁的安装；

叠梁闸门(DLZ)：适用于使用频率较少的场合，渠道安装，分块启吊；

平面闸门(PGZ)：承受水头较大，外形规格不受限制，广泛适用于水利水电工程中作工作闸门、事故闸门、检修闸门等；

水利闸门(SLZ)：外形尺寸较大，可制成推转式、横拉式、采用电液推杆或卷扬机操作，广泛适用于泄洪、河道换水等水利工程；

回流门(HLZ)：广泛用于控制和调节水位，也可用于配水、排水等场合。

Steel Gate is a commonly used device for blocking water in drainage works, irrigation projects, and water & electricity projects. We produce a great variety of steel gates, which are applicable widely. There are six kinds of structures shown as follows:

Gates made of plugboard (CBZ): block water from 3 surfaces, have good sealing performance, and can be mounted as channels;

Gates to control water (ZSZ): block water from 3 or 4 surfaces, and can be mounted as channels, in holes or on walls;

Gates made of piled-up beams (DLZ): are prepared for customers who seldom use the product, and can be mounted as channels, the beams of which can be hoisted up one by one;

Plane Gates (PGZ): can bear more pressure of water, have no limitation on specification of the outline; are widely used in irrigation projects, water and electricity works as working gates, accident gates, maintenance gates, etc;

Gates for Irrigation (SLZ): have large outline, can be pushed to rotate or be pulled horizontally by operations of the hydraulic bar or hoister, and can be applicable for irrigation projects by releasing floodwater, replacing water in rivers;

Reflux Gates (HLZ): are widely used to control and adjust water level, also applicable for water distribution and drainage.

Z型系列钢闸门分类及型号表示方式 Classification of Type Z Serial Steel Gates and Indication

钢闸门形式	型号表示方式	材质说明	适用场合	启闭形式	订货说明
插板闸门	CBZ－□×□ 高度(mm) 宽度(mm)	碳钢或不锈钢，门板可采用铝合金、玻璃钢	三面止水渠道安装	配专用启闭装置，仅需注明手动或电动	须注明渠道深度及启闭方式
制水闸门	ZSZ－□×□ 洞口高度(mm) 洞口宽度(mm)	碳钢或不锈钢	1.三面止水，渠道安装 2.四面止水，洞口安装	Q系列启闭机	须注明H及承受水头
叠梁闸门	DLZ－□×□ 门体总高(mm) 渠道宽度(mm)	铝合金、碳钢或不锈钢	渠道安装，使用频率少	手提操作或电动葫芦配自动抓落机构	订货须注明渠道深度
平面闸门	PGZ－□×□ 洞口高度(mm) 洞口渠宽(mm)	碳钢或不锈钢	承受水头较高,依靠静水压力止水	配Q系列启闭机或卷扬启闭机或电动葫芦配自动抓落机构	须注明H及承受水头。注明启门时的水头。闸槽也可采用耐腐蚀的铸铁闸槽
水利闸门	SLZ－□×□ 门体高度(mm) 渠道宽度(mm)	碳钢或不锈钢	用于水利工程中	配电液推杆或卷扬启闭机	订货须注明渠道深度及启闭形式
回流门	HLZ－□×□ 门体高度(mm) 渠道宽度(mm)	碳钢或不锈钢	用于曝气池控制和调节水位	配手动或电动驱动装置	订货须注明渠道深度及驱动形式

钢闸门启闭力计算与启闭机选用 Calculation of starting/shutting force of Steel Gates and Selection

1. CBZ型配套专用启闭装置，仅需注明手动或电动即可，无需另外注明启闭机型号。
2. ZSZ型按铸铁闸门启闭力计算方法计算。
3. DLZ型采用电动单梁吊车(电动葫芦、手动葫芦)配抓落机构启闭。
4. PGZ型可按启闭力配用我公司生产的Q系列启闭机，也可用卷扬式启闭机、电动葫芦配自动抓落机构。启闭力应按启门时的静水压力状况区别对待：

(1). 静水启闭(如某些检修闸门，设有旁路放水系统)，启闭力为门体自重，启闭力不考虑。

(2). 动水启闭(如放水闸门，事故闸门)，启闭力按铸铁闸门启闭力计算方法计算。

(3). 大型闸门承受水压较大时，为降低启闭力，可在闸门上设放水阀(水位平衡装置)，在打开闸门前先平衡两侧水位，此型在订货时应注明。

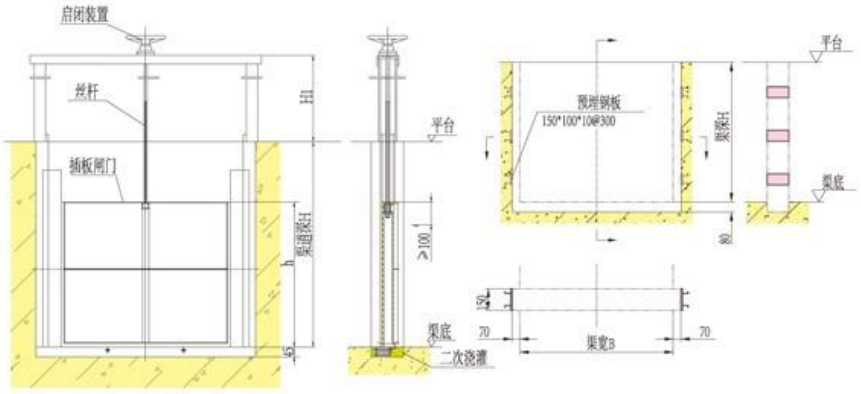
1. For Type CBZ Steel Gates, which is equipped with exclusive starting/shutting device, note manual operation or automatic operation only, there is no nee of note of the type of starter.
2. For Type ZSZ Steel Gates, the method for calculation of Starting/Shutting force is the same as that for Gates made of cast iron.
3. For Type DLZ Steel Gates, the starting/shutting operation is done by one-beam crane (manual / automatic hoist) which is equipped with catching and dropping device.
4. Q-serial starter, also product of our company, is used to work as the starter of Type PGZ Steel Gates. Hoister or electric hoist equipped with catching and dropping device can also work as the starter. The starter / shutting force differs when the static pressure of water changes while the gates being opened.

(1) When the gates, faced with static water, are opened (such as maintaining of gates, working of erected by-pass water discharging system), the force is nothing but the weight of the Gates.

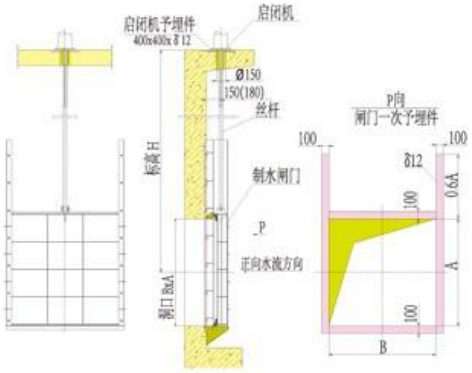
(2) When the gates, faced with flowing water, are opened (such as gates for water discharging, gates for preventing accident), the method for calculating the starting/shutting force is the same as that for Gates made of cast iron.

(3) For large gates, which are to bear higher pressure of water, valves for water discharging (balancing unit for water level) are mounted on the Gates to lower the starting/shutting force. The water levels at both sides of the Gates are first balanced before the Gates are opened. Note the type when placing the order.

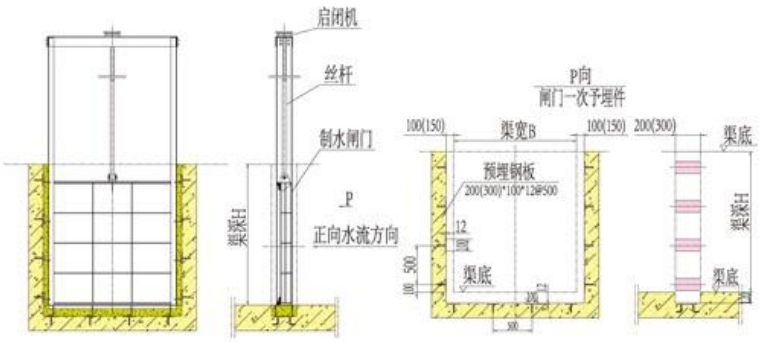
CBZ型插板闸门安装及埋件图 Type CBZ Mounting and Embedded Drawing



ZSZ型制水闸门安装及埋件图 Type ZSZ Mounting and Embedded Drawing

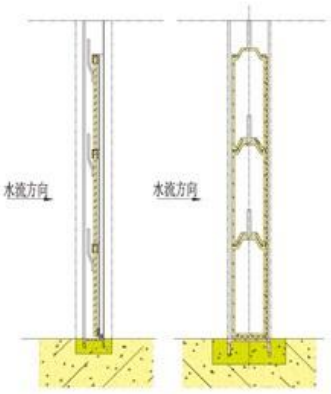


洞口安装（刮号外尺寸用于B≤1500，
刮号内尺寸用于B>1500）

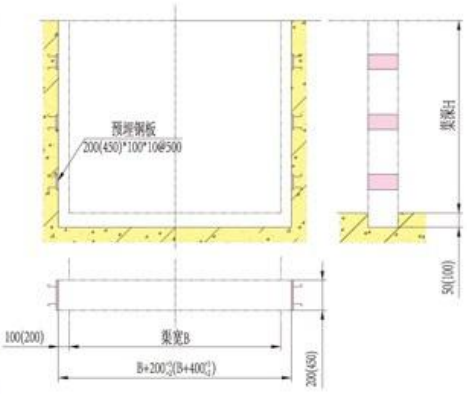


渠道安装（刮号外尺寸用于B≤1500，刮号内尺寸用于B>1500）

DLZ型叠梁门安装及埋件图 Type DLZ Mounting and Embedded Drawing



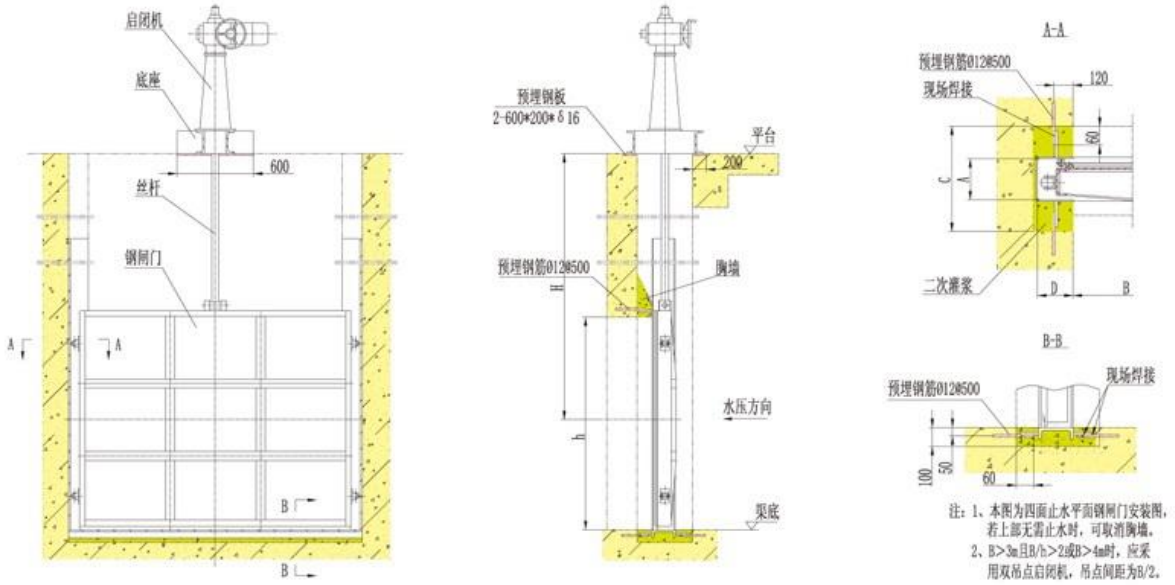
B≤1500 B>1500



预埋件图（刮号外尺寸用于B≤1500，
刮号内尺寸用于B>1500）

DLZ型叠梁门(多台)

PGZ型平面钢闸门安装及埋件图 Type PGZ Mounting and Embedded Drawing



注：1、本图为四面止水平面钢闸门安装图，若上部无需止水时，可取消胸墙。
2、B>3m且B/h>2或B>4m时，应采用双吊点启闭机，吊点间距为B/2。

启闭水压 \ 尺寸		A	C	D
静水启闭	B＜2.5(m)	250	475	220
	B≥2.5(m)	275	500	220
动水启闭	P＜90	275	500	220
	90≤B≤250	420	600	260

注：P=B·S·h（m^3）
S—最高水位至闸门中心的距离（或闸门前后侧水位差）。
P≥250的特大闸门或双向承压等特殊闸门，我公司可代为设计或按来图加工。

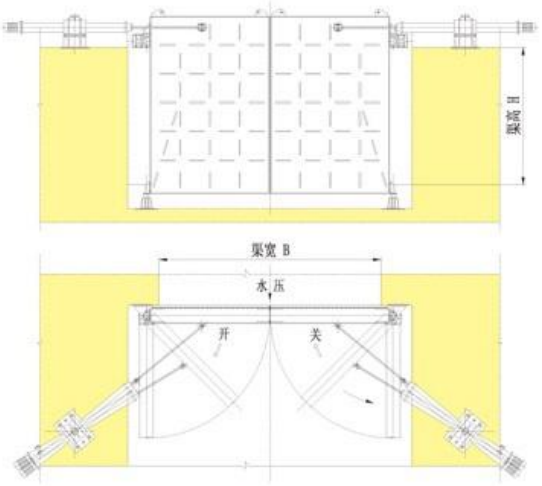

吊装现场


SLZ型钢闸门（制作现场）

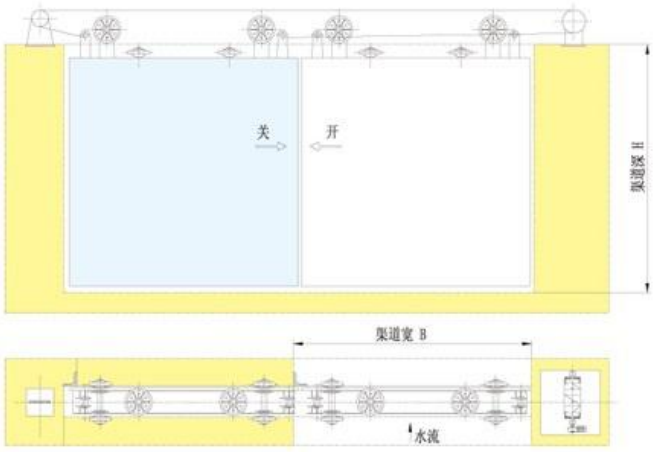

ZSZ型制水闸门


PGZ型钢闸门(多台)

SLZ型钢闸门安装示意图 Type SLZ Mounting and Embedded Drawing

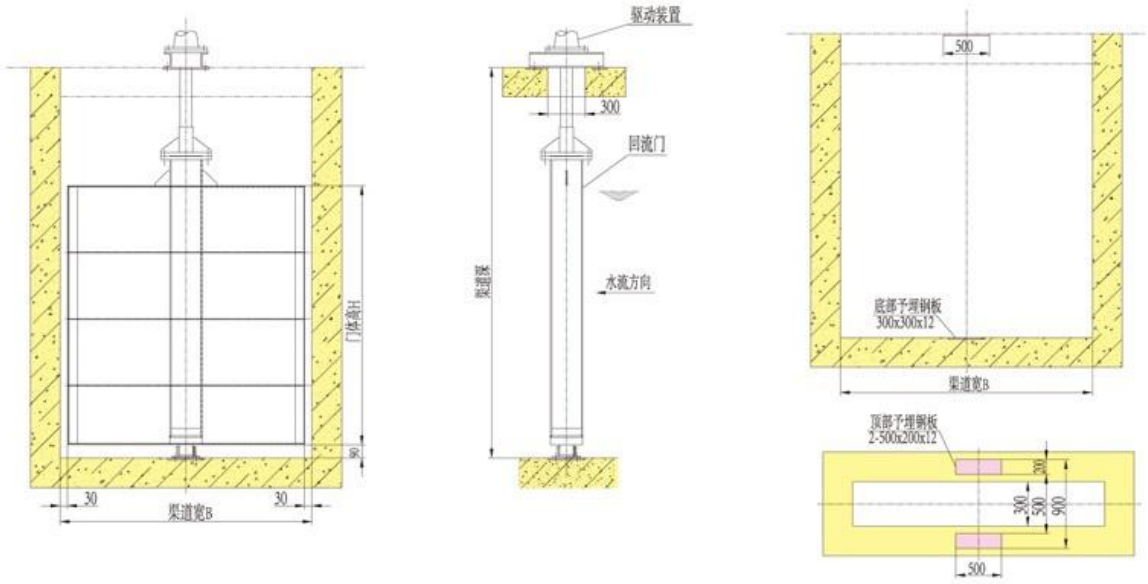


用于各种水利工程中，采用电液推杆的推力来进行闸门的开启与闭合，结构简单，性能可靠。可根据具体情况提供详细资料。



用于各种水利工程中的河道，用于泄洪、排涝，用卷扬机构来进行闸门的开启和关闭，安装方便，工作可靠，当跨度较大时可设计成对拉式。可根据具体情况提供详细资料。

HLZ型回流门安装及埋件图 Type HLZ Mounting and Embedded Drawing



订货须知 Ordering Instructions

1. 订货时应根据应用场合合理选型，注明具体型号规格或提供要求及相关资料。
2. 特殊材料应注明，例插板门、平面钢闸门分碳钢和不锈钢，叠梁门有铝合金材料。未注明均按碳钢环氧底漆防腐供货。
3. 平面钢闸门所有配件及附件（或配套件），例搁门器、抓落机构、电控箱、启闭机、一次预埋件（预埋钢板）、二次预埋件（焊接螺栓、闸槽等二次浇筑埋件）等均应另外订货。
4. 对吊耳形状、止水方式、启闭形式等有特殊要求的应注明要求，并提供简图，不注明表示按常规要求订货；
5. 样本中未作详细介绍的钢闸门（如卧倒门、弧形门等请提供要求，另索资料。）

1. Please select types properly according to the application, and note the specifications in detail, or offer requirements or material concerned.
2. Please note the material, for example, material for package boards and plane steel gates would be carton steel or stainless steel, while material for piled-up beams can be aluminium alloy. The product will be available with carbon steel as material, and coated with epoxy paints.
3. Separately order all accessory parts (or matching parts) for the plane gates, including gate shelf, catching device, electricity control box, starter, firstly embedded parts (steel plates), secondary embedded parts (welded bolt, gate channel etc).
4. Note special requirements, such as outline of hauls, manner of water blocking, type of starting/shutting etc., and offer brief drawings besides. If no special requirements are noted, the product ordered will meet normal requirements.
5. There is no detailed information about the steel gates in the sampling manual (horizontal gates, arc gates, and etc., are available on request).

GBZ型钢坝闸门
Type GBZ Steel Dam Gate

应用场合 Applications

1. 主要用于城市用水、景观建设、灌溉等场合，是本公司替代橡胶坝的自主开发产品。它是一种新型可调控溢流闸门，它有土建结构、带固定轴的钢闸门门体、启闭设备等组成。
2. 适合于闸孔较宽（10米～100米）而水位差比较小的工况（1～7米），由于它可以设计的比较宽，可以节省数孔闸墩。
3. 可以立门蓄水，卧门泄洪排涝，适当开启调节水位，还可以利用闸门门顶过水，形成人工瀑布的景观效果。

型号表示 Model Designations

GBZ □×□
- □ 蓄水高度(m) Level of stored water (m)
- □ 门体宽(m) Width of the gate (m)
- GBZ 钢坝闸门 Steel Dam Gate

1. As a self-developed product by our company, the Gates of Steel Dam can replace rubber dam and mainly be used in urban water supply, erection as scenic spots and irrigation projects. It is a new type of gates which can adjust and control water flow. It consists of civil construction, gates with fixed shaft, starting/shutting device, and etc.
2. The product is applicable under the situation that the interval between gate blocks is between 10-100m, and that the difference between water levels is between 1-7m. As the designed interval increases, the number of blocks of stone will decrease.
3. Water level can be adjusted by the Gates. When the Gates are erected vertically, water is stored, while floodwater is released and flooded fields is drained when the Gates are elected horizontally. Artificial waterfall can be formed when water is controlled to flow over the top of the Gates.

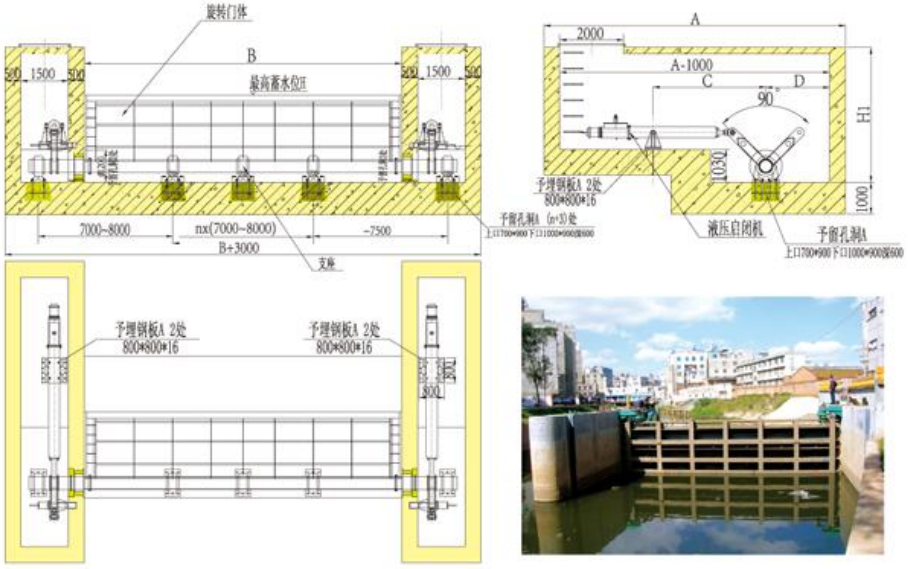
特点 Features

1. 适用闸孔宽，节省土建投资；
2. 升坝和塌坝时间短，一般小于2min；但橡胶坝正常需要2-3小时才能完成。
3. 使用寿命长，一般可达50-60年；而橡胶坝容易老化，特别是北方冬天冰块易刺破橡胶坝。
4. 自动化程度高；而橡胶坝一般很难实现。
5. 采用机械锁定，当升坝、塌坝和调节水位时任意角度都可锁定；而橡胶坝需要不断的充气，以防止塌坝。
6. 节省能源，100米的钢坝只需要4台驱动装置，用电负荷为60kw/h，只需要运行2-3分钟即可；而100米橡胶坝用电负荷为100kw/h，需要运行2-3小时才能完成。

1. Applicable to large interval between gate blocks, saving cost of civil construction.
2. Generally it takes the Gates less than 2min to raise or to lower, while it usually takes the rubber dam 2-3h to finish the same operations.
3. Commonly the service life of the product can reach 50-60 years; while it is easier for the rubber dam to get aged, especially in northern regions it is easier for ice blocks to tear the rubber dam in chill winter.
4. Compared with the rubber dam, operation of the Gates can be done more automatically.
5. Machine lock is adopted to make it locked at any angles when the dam is raised or lowered, or when water level is adjusted. While it is necessary for the rubber dam to charge air to keep the function of the dam normally.
6. Save resource. For a steel dam of 100m long, only four driving device is needed, and the power is 60kW per hour, and the operation time is 2-3min only; while for rubber dam of the same length, the power climbs to 100 kW per hour, and operation time increases to 2-3 hours.

外形结构 Outline

尺寸	技术参数									
渠宽B（m）	≤10	10～20	20～30	30～40	40～50	50～60	60～70	70～80	80～90	90～100
H（m）	2									
H1 (m)	H+2									
A (mm)	9500									
C (mm)	3550									
D (mm)	2010									
启闭力（T）	2×15	2×30	2×40	2×55	2×70	2×75	2×90	2×110	2×120	2×150
电液启闭机功率（kW）	2×5.5	2×7.5	2×11	2×15	2×15	2×22	2×22	2×22	2×30	2×30



订货须知 Ordering Instructions

1. 订货时须注明最高蓄水高度、门体宽度等参数；
2. 注明材质和防腐要求；
3. 所有配套件，如一次、二次预埋件，电控箱，液压锁定装置等应另外订货；
4. 渠宽大于100米、蓄水高度大于2米的钢坝闸请另索要资料。

1. Note parameters such as the highest level of stored water, width of the gates when placing orders.
2. Note requirements for material and anticorrosion for the product.
3. Order all accessory pacts, such as first embedded parts, electricity control box, hydraulic locker, and etc, separately.
4. For steel dam to be used under such condition that width of the channel is over 100m, and depth of stored water is over 2m, please request for concerned materials.

M型铸铁防潮门，拍门，浮箱拍门

Type M Cast-Iron Tide Gate, Flapper Gate and Floating Pontoon Flapper Gate

BFV

应用场合 Applications

潮门、拍门均属于单向阀，能起到反向逆止作用。

CM型潮门主要用于对管道压力损失要求不高；非频繁动作且密封要求不高的场合。一般应用于江河沿岸、市政排水管道出口。制作材料主要为玻璃钢和铸铁。

PM型拍门主要用于对管道压力损失要求不高，一般直接安装于水泵的出口端，耐冲击力较高的场合，制作材料可采用铸铁、玻璃钢或钢件，外形分为方形和圆形，稍加改造可当作窨井盖使用。

FPM型浮箱拍门，管道压力损失小，可认为是普通拍门的替代品，可以设定门盖的比重（一般δ=1.1～1.2T/m³），大都为焊接件。

The tide gate and flapper gate all belong to one-way valve, and could inversed seal.

Type CM tide gate is set in the entrance to rivers for occasions that there is little pressure loss in the pipeline, no frequent action and no high tightness requirement. Main materials of the gate is glass reinforced plastic and cast-iron.

Type PM flapper gate is made of cast-iron or steel for the accasions of little pressure loss and high impact force. Its outshape is classed to two types: rectangle and roundness, and would used as drain well cover after a little of transformation.

Type FPM flapper gate of floating pontoon, regarded as succedaneum of common flapper gate, generally made by wedding and density of the gate body can be assumed (generalδ=1.1~1.2T/m³).

型号表示 Model Designations

□M □ □ -□

耐压H	Bearing Head H
通径:	Latus Rectum
圆形DN(mm)	Round Form DN (mm)
方形或矩形 B(宽)×A(高)mm	
Quadratic Form or Rectangular Figure:	
B(Width)×A(Hight)mm	
(方形可省略B)	(Quadratic form can be omitted)
Y-圆型（可省略）	Y-Circular(Can be omitted)
F-方型或矩形	F-Rectangular
CM-防潮门	CM-Tide gate
PM-拍门	PM-Flapper gate
FPM-浮箱拍门	FPM-Floating pontoon flapper gate

特点 Features

1. CM型为硬止水密封，经济耐用，若采用玻璃钢制造，无形中可防盗。
2. PM型为橡胶软止水密封，效果好，耐冲击。
3. FPM型门体在水中比重稍大于水，开启水头极小(重力抵消后约0.06m水头)。
4. 安装形式多为法兰结构，安装方便。
5. 节省电能、人力、水处理费等。

1. CM-ype are rigid seal and have features of economic and durable. If they are made of glass reinforced plastic, they are guard against theft virtually.
2. PM-type are rubber elastic seal and have features of good effect and shockproof.
3. FPM-type have features of small opening head that a little higher than 0.06m because density of the gate body is a bit larger than water.
4. Installation forms common are flange structure and convenient installation.
5. Saving in electric energy, manpower, facility and water treatment fee.

CM型铸铁潮门

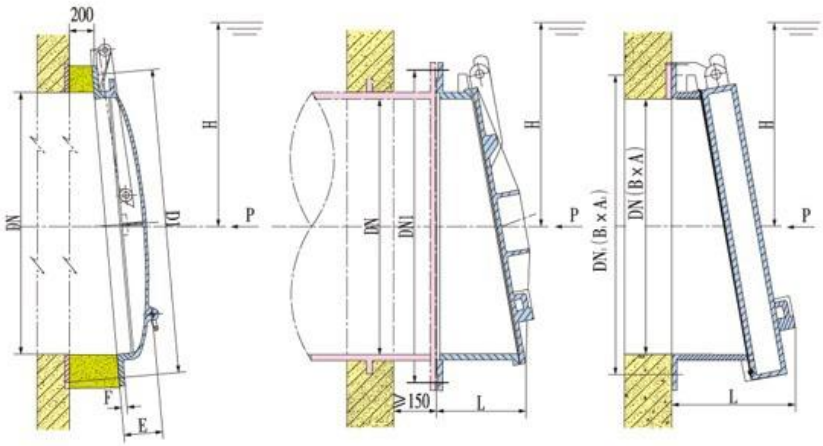
PM型铸铁拍门

外形布置 Outline and Layout

CM型铸铁潮门 墙壁安装

PM型拍门 管道安装

FPM型拍门 墙壁安装



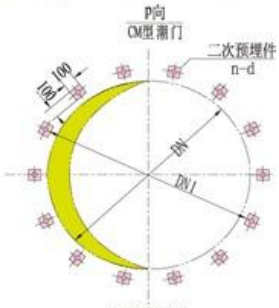
4m×4m玻璃钢浮箱拍门

PM型玻璃钢拍门

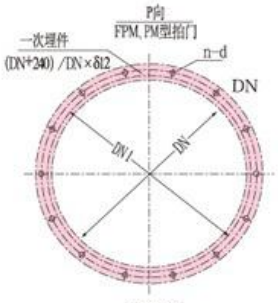
M型铸铁防潮门，拍门，浮箱拍门

Type M Cast-Iron Tide Gate, Flapper Gate and Floating Pontoon Flapper Gate

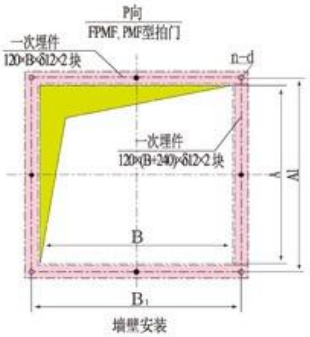
预埋件 Embeded Parts



墙壁结构安装
(中垂线上无孔)



管道安装
(法兰标准JB/T81-94, 0.25MPa)
(中垂线上无孔)



墙壁安装
(·表示n=4)

尺寸参数 Size Parameters

(mm)

型号	DN(A)	D1(A1)	E	F	L	n-d
CM	200	320	90	20		4-M16
	300	490	85	20		6-M16
	400	560	107	20		6-M16
	500	680	123	25		4-M16
	600	800	145	25		6-M16
	700	960	300	25		10-M16
	800	1060	160	25		10-M16
	900	1120	185	30		10-M16
	1000	1220	195	30		10-M16
	1200	1460	230	30		12-M16
	1500	1780	250	35		14-M16
PM、FPM	400	495			~230(280)	16-φ23
	500	600			~280(300)	16-φ23
	600	705			~330(380)	20-φ26
	700	810			~330(380)	24-φ26
	800	920			~330(415)	24-φ30
	900	1020			~350(430)	24-φ30
	1000	1120			~380(415)	28-φ30
	1200	1320			~420 (500)	32-φ30
	1400	1520			~480 (560)	36-φ30
	1500	1630			~500 (580)	36-φ30
PM、FPMF	300	390			~200 (280)	4-M16
	400	520			~230 (280)	4-M16
	600	765			~330 (380)	8-M20
	800	950			~330 (400)	8-M20
	1000	1150			~380 (450)	8-M20
	1200	1350			~420 (500)	10-M20
	1500	1650			~500 (580)	12-M20

注：1. L、E、F对应外形布置，上表中括号内L尺寸对应FPM型。
2. 上表PMF、FPMF为正方形拍门结构尺寸。

FPM型玻璃钢浮箱圆拍门

FPM型不锈钢浮箱拍门(使用现场)

订货须知 Ordering Instructions

1. 根据应用场合合理选型，注明型号规格。
2. 注明材质及防腐要求，不注明表示：CM型潮门按铸铁普通防腐订货，PM型拍门按碳钢焊接件普通防腐订货。
3. 不注明耐压值，表示按小于2.5m耐压水头订货。
4. 配套法兰及所有一次预埋件、二次预埋件（预埋螺栓）应另订。
5. 不注明钢制浮箱拍门门盖比重，表示按1.1～1.2T/m^3订货。
6. 墙壁安装结构在安装时应做出3～5°的倾角。
7. 通径大于1米或采用其它安装联接方式，另索资料.商量定货。

1. Please properly select indicate type, specification according to applications.
2. Note material and special anticorrosion requirements, CM-Type tide gate is supplied according to ordinary anticorrosion cast-iron and PM-Type flapper gate is ordinary anticorrosion carbon steel without note.
3. We will supply it according to 2.5m bearing head without note.
4. Mating flange and all the first embedded parts and the second embedded bolts should be ordered extra.
5. Steel floating pontoon flapper gate body is supplied according to density of 1.1-1.2T/ m^3 without note.
6. Wall type structure should have a tilt angle of 3~5 when it is set.
7. Written datum should be supplied when other connected styles are used.

TY型系列调节堰门
Type TY Serial Adjusting Weir-Gate

BFV

应用场合 Applications

调节堰门一般装于池子上部，用来调节池内水位，例如曝气池配水井或某些出水口。

小型洞孔（B＜2000）类，一般采用TY型铸铁直动式堰门，其功能亦可实现完全关闭。

中大型洞孔（B＞2000）类，一般可采用TYG型钢制直动式堰门，且宜采用双吊点启闭。

开口类（一般宽度大于2000，调节范围一般小于800，三边止水，且前后有操作空间的场合）宜选用TYX型旋转堰门，其安装结构分池内、池外二种，由于启闭机的固定需采用铰支式结构，故前后需一定操作空间。

Generally the adjusting weir-gate is used for controlling water level when it is installed on upper side of the tank such as distributing well of aeration basin and other effluent caves.

TY-Type cast-iron straight weir-gate is generally used in mini-type hole (B＜2000) and can be shut completely.

TYZ-Type steel straight weir-gate is used in medium & large hole (B＞2000) and should be lifted and dropped by two hanging points' headstock gears.

TYX-Type rotary weir-gate should be used on open type (generally the width of tank is larger than 2000, adjustable range is less than 800, stop water on three sides and has operating space). It has two installation structures: inside of the tank and outside of the tank. Fore and after operating space is needed because headstock gears has a structure of hinged support.

TY型铸铁堰门

型号表示 Model Designations

TY □－□×□－□

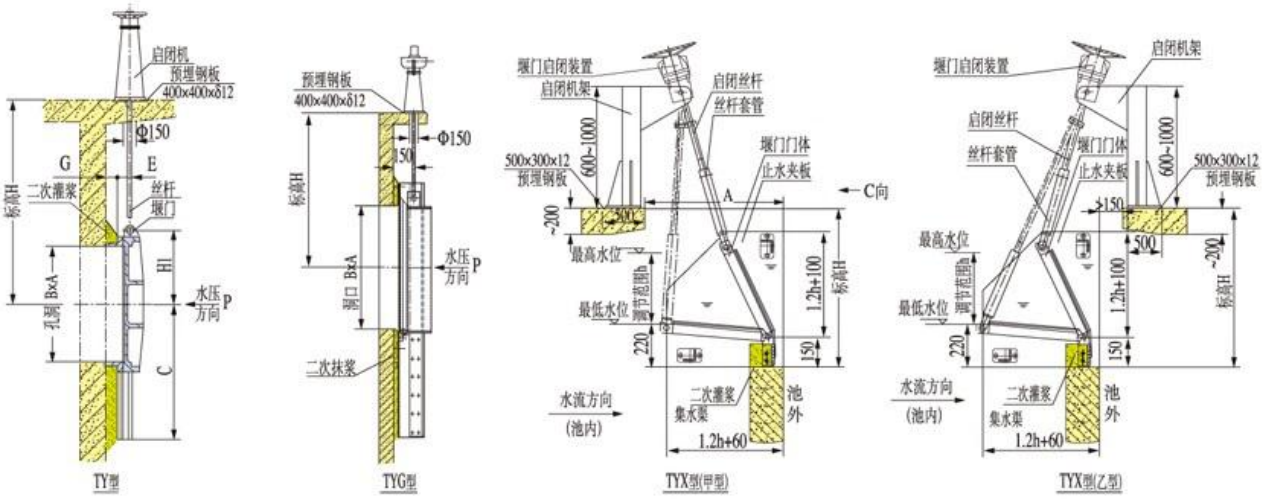
- 标高H （mm） Height mark (mm)
- 洞口：宽B×高A （mm）
  Hole：Width B×Height A (mm)
  TYX型(甲，乙)：宽B×调节水位h （mm）
  TYX-Type(I, II): Width B×Adjustable range h(mm)
- 类别代号： Code of Type
  - Z－铸铁(可省略) Cast-iron (can be omitted)
  - G－钢制直动式 Steel straight
  - X－钢制旋转式 Steel rotary
- 调节堰门 Weir-gate

特点 Features

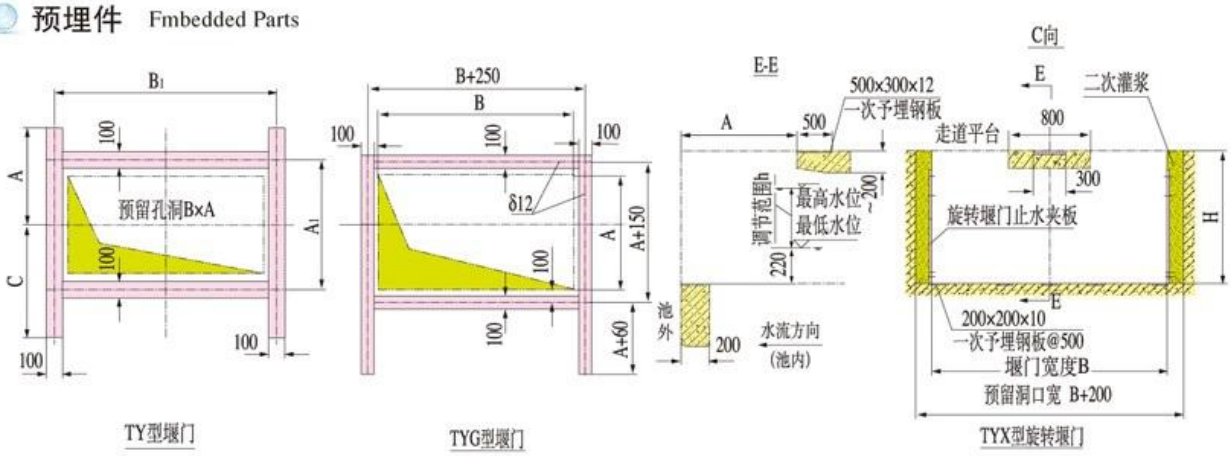
1. TY型铸铁直动式堰门为硬密封止水，特点与铸铁闸门类似，只是结构为下开式。
2. TYG型钢制直动式堰门为软密封止水，前后所需空间小，特点与钢制闸门类似。工作方式同TY型，都为向下为开，向上为关。
3. TYX型旋转堰门为端面软密封止水，特点类似钢制卧倒门；工作方式由传动轴带动连杆，使门板作上下摆动，达到调节水位和流量目的。

1. TY-Type cast-iron straight weir-gate is rigid seal and has features similarto cast-iron gate except downward open style.
2. TYZ-Type steel straight weir-gate is elastic seal, small operating space andhas features similar to steel gate. Just as TY-Type working style, downwardis open and upward is close.
3. TYX-Type rotary weir-gate is elastic seal and has features similar tohorizontal type steel gate. It can adjust water lever and flux when the bodyof gate swing up and down as transmission shaft driving connecting rod.

外形布置 Outline and Layout



预埋件 Fmbedded Parts



TY型堰门　　TYG型堰门　　TYX型旋转堰门

TY型堰门尺寸参数 Type TY Weir-gate Size and Parameters

(mm)

通径BxA	C	H1	G	E	B1	A1
400x300	370	185	65	40	620	
600x300	370	185	65	40	840	
800x300	370	185	75	40	1040	
1000x500	560	285	35	60	1150	650
1200x500	695	315	50	75	1400	645
1500x400	645	270	65	75	1700	545
1500x500	695	300	71	54	1700	645
1600x500	695	285	35	70	1750	645
1800x500	695	320	35	75	1750	650
2000x500	695	365	35	75	2250	650
2000x1000	1240	605	70	75	2250	1150
2000x1500	1250	940	70	75	2250	1650

注：上表对应外形布置图。

TYX型旋转堰门

TYX型旋转堰门 Type TYX Rotary Weir-gate

尺寸	参　数										
H	300	350	400	450	500	550	600	650	700	750	800
A	450	480	520	560	600	640	670	710	750	790	830
B	3000(2000～8000每500一档)										
h	300(200～800每100一档)										
功率	B≤3000mm时，N=0.37kW，B＞3000mm时，N=0.55kW										

订货须知 Ordering Instructions

1. 对照应用场合合理选型，详细注明型号、规格及标高，不注明标高表示：TY、TYG型按A+500，TYX型按1.2h+500订货。
2. TYG型或TYX型应注明材质（碳钢或不锈钢）和防腐要求，不注明表示按碳钢普通防腐订货。
3. 堰门所有配套件或设备[例：启闭机(TYX型旋转式除外)，电控箱，所有一次、二次埋件等]应另外订货。
4. 当堰门用于寒冷结冰地区时，可另订加热器。
5. 特殊规格堰门，可在提供相关技术要求后索要相应资料。

1. Please indicate type, specification and quantity of weir-gate after reading above contents. It is indicated that type TY or TYG is ordered with A+500 and type TYX is ordered with1.2h+500.
2. The material (carbon steel or stainless steel) should be indicated for steel gate and rotary gate, other indication for corrosion-proof demands. It is indicated that material is carbon steel and prevention of corrosion is general for order.
3. Electric cabinet, mating equipment and embedded parts should be ordered extra(exclusive TYX-type rotary weir-gate).
4. Please order self-heating rotary weir-gate developed by our company according to cold areas.
5. Special type weir gate should be ask for data after putting forwared technical requirements.

应用场合 Applications

启闭机主要作为铸铁闸门、平面钢闸门、堰门、平板格栅、阀门等产品的配套件，用来开启或关闭这些工作对象。按吊点数量可分为单吊点和双吊点；按传输力的介质可分为液压启闭和气动启闭；按连接物分刚性启闭（例螺杆）和柔性启闭（例钢丝绳）；按动作方式及自动化程度分手动、电动、整体、智能。

1.手动绳索式启闭机：一般也称为手摇葫芦（或手摇绞车）可用于小型叠梁门起吊，一般与旋转支架配套使用。

2.电动卷扬机：一般用于重力关闭水利闸门的开启或横拉闸门的来回动作。

3.电动葫芦：由于其具备移动性能，故除了能当卷扬机使用外，还能完成一机多孔的功能。一般与抓落机构配套使用，即适用于重力下降，井深较深的场合。

4.螺杆式启闭机：一般分为升杆式（即推力型）和暗杆（即回转式）两种；但按关闭速度可分为速闭启闭机和普通启闭机。普通型可适用于多数场合，速闭型一般作为事故性紧急关闭的工作场合；

5.液压启闭机：一般用于水利工程，动作范围不大，但力度较大的场合（例推转门、卧倒门等），需要配套液压控制系统，且传动件不宜进入水中。

6.气动启闭机：一般作为电动装置的动力源，或用于推力不大的闸门直接快速启闭。适用于有压力气源的场合，需配套气控系统，且传动件不宜进入水中。

As auxiliary equipments to cast-iron gate, steel gate, weir-gate, flat grate and valve etc., the headstock gear is mainly used to open or close them. According to amount of suspension centre, it can be divided to odd point and two points. According to working medium, it can be divided to fluid pressure type and air-operated type. According to joining, it can be divided to rigidity (example: screw) and flexible (example: steel cable). According to operating manner and automatic level, it can be divided to manual, electric, whole and intelligent.

1.Manual-cord type headstock gear: Generally it can be called hand-operated cucurbit (or hand-operated winch). It can be used to lift minitype stop log gate when matched for rotary bracket.

2.Electrical hoist: Generally it is used to open hydro-gate that shut down by its gravity and also can be used to move cross-drawing gate.

3.Electric block: Besides used as electrical hoist, it can be used to have function of one device-multi holes as mobile. It is used in cases that shut down by gravity or deep well when matched for the auto grab go down device.

4.Screw-type headstock gear: Generally it is divided to elevating type and no-rising type, also it can be divided to fast close and ordinary headstock gears according to speed of close. Ordinary headstock gears can be used in many cases and fast close is used as emergency close valve.

5.Fluid pressure headstock gear: Generally it is used in hydraulic engineering and no large movement range but full strength. It should be matched with fluid pressure control system and driving medium should not be put in water.

6.Air-operated headstock gear: Generally it is used as drive source of electrical equipments, or it can be used to fast lift gate with no large elevating force. It adapt to case that has pressure air source and should be matched with air-operated control system and driving medium should not be put in water.

型号表示 Model Designations

□□Q□-□

- 启闭机主参数 Main Parameters of Gears
  - 螺杆式： Screw Type
    - 手轮式：手轮直径（mm）×工作行程（m）
    - Handwheel Type:Diameter of handwheel ×Working stroke
    - 手摇式：伞齿减速比×工作行程（m）
    - Hand-operated Type:Reduction ratio×Working stroke
    - 电动式：工作转矩（×10N·m）×工作行程（m）
    - Dynamic Type:Working torsion×Working stroke
    - 速闭式：工作转矩（×10N·m）×工作行程（m）
    - Fast close Type:Working torsion×Working stroke
    - 其它：启闭力（×10kN）×工作行程（m）
    - Else:Strength×Working stroke
  - 结构形式：Structure Type:
    - SL-手轮式 SL-Handwheel Type
    - SY－手摇式 SY-Hand-operated
    - DA－手电两用式 DA-Manual-electric Combined type
- 启闭机 Headstock gear
- L－螺杆式（可省略）；S－速闭式；Y－液压式；
- L-Screw Type(can be omitted); S-Fast close Type;Y-Fluid pressure Type;
- Q－气动式；J－卷扬式；H－葫芦式
- Q-Air-operated Type;J-Hoist;H-Cucurbit
- 吊点数量：1-单吊点(可省略);2-双吊点
- Number of suspension centre: 1-one suspension centre (can be omitted); 2-Double suspension centre

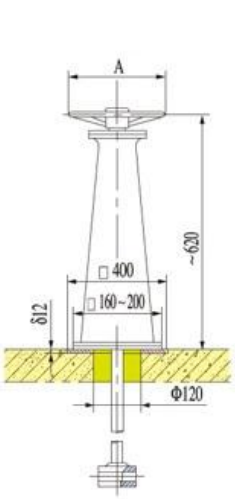
特点 Features

1. **手摇葫芦：**重量轻，结构简单，配滑轮后可任意位置安装，有逆止机构。
2. **卷扬机：**结构简单，动作灵活，经久耐用。
3. **电动葫芦：**移动式结构配合自动控制可实现吊点对中；固定支架结构与卷扬机等效。
4. **螺杆启闭机：**既产生开门力且也可产生闭门力，螺杆、螺母有多种材料可供选择，有力矩、行程双重保护功能；开度显示直观，电动控制形式多样化；户内、户外，防爆等各种环境可选用不同型式。
5. **速闭启闭机：**可当普通启闭机使用，断电迅速关闭（约10～40s）且速度可设定，体积小且外形美观，关闭时无能源消耗。
6. **液压启闭机：**传递平稳，传递力矩大。
7. **气动启闭机：**传递平稳，速度快，环境污染小。

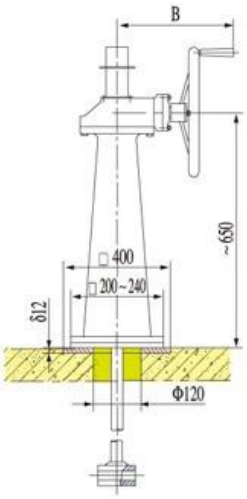
1. **Hand-operated cucurbit:** Light in weight, simple structure, and can be installed in any place with pulley and has inversion-stop structure.
2. **Hoist:** Simple structures, flexible action, wear well.
3. **Electric block:** Mobile structure matched with auto control make it can centre suspension centre. When has supported structures it can be used as electric block.
4. **Screw-type headstock gear:** It brings strength both open gate and close gate and can select many materials for screw and nut. It can be protected by torsion and journey. The open of gate can be seen straight and has multi electric control type. There are indoor, outdoor, explosion-proof and many other types to meet the various needs for environment.
5. **Fast-close headstock gear:** It can be used as ordinary and it can close gate fast (about 10-40s) when electricity is broken. Its volume is small and figure looks fine. There is no source consume when it close gate.
6. **Fluid pressure headstock gear:** Stable transfer force, big torsion.
7. **Air-operated headstock gear:** Stable transfer force, fast speed and little environmental pollution.

QSL、QSY、QDA型螺杆式单吊点启闭机

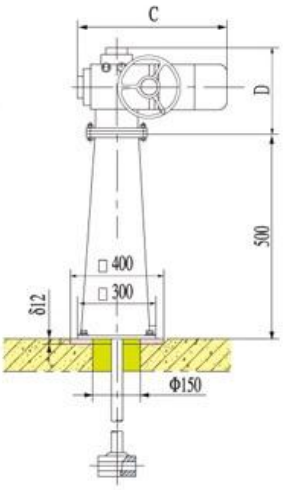
Type QSL, QSY, QDA One Point Screw Headstock Gear



QSL型



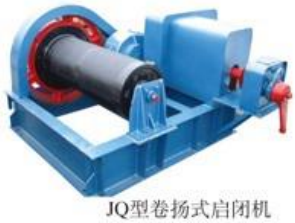
QSY型



QDA型

QSL型

QSY型



JQ型卷扬式启闭机

QDA型

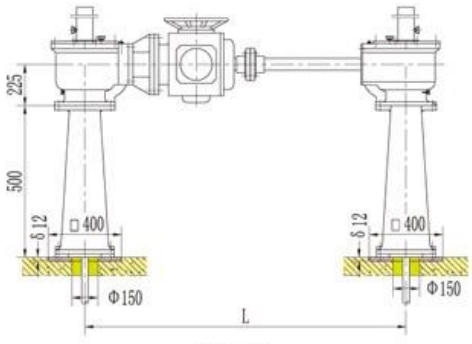
2QDA型

型号	启闭力 (kN)	工作转距 (N·m)	丝杆直径 (mm)	上海自动化十一厂		天津市阀门公司		常州电站辅机总厂		C(A)	D(B)	重量 (Kg)
				型号	功率 (kW)	型号	功率 (kW)	型号	功率 (kW)			
QDA20	≤20	~200	Tr32	16A	0.75	SMC-03	0.4	ZB20	0.37	~676	~381	~140
QDA30	20~30	~300	Tr32	16A	0.75	SMC-00	0.6	ZB30	0.55	~676	~381	~195
QDA45	30~40	~450	Tr44	30A	1.5	SMC-00	0.6	ZC45	0.75	~787	~412	~240
QDA60	40~60	~600	Tr44	30A	1.5	SMC-0	1.1	ZC60	1.1	~787	~412	~250
QDA90	60~80	~800	Tr55	40A	2.2	SMC-0	1.1	ZC90	1.5	~866	~440	~290
QDA120	80~100	~1200	Tr55	40A	2.2	SMC-1	1.5	ZC120	2.2	~866	~440	~310
QDA180	100~140	~1800	Tr60	70A	4.5	SMC-2	2.2	ZC180	3	~676	~557	~390
QDA250	140~250	~2500	Tr80	95A	5.5	SMC-2	3.0	ZC250	4	~676	~557	~430
QSL-320	~10		Tr32							(320)		~60
QSL-400	~15		Tr40							(400)		~90
QSL-600	~30		Tr40							(600)		~125
QSY-2	~20		Tr44							(450)	200 (~290)	~150
QSY-4	~40		Tr44									~170
QSY-8	~80		Tr55									~190

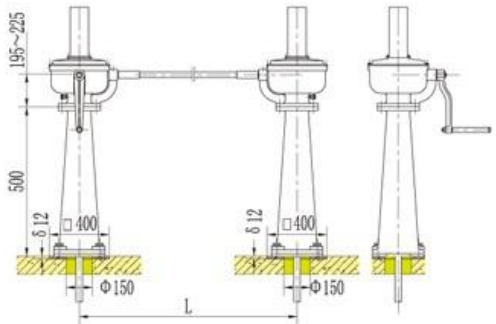
注：1.表中重量不含丝杆重量； 2.括号内尺寸对应A和B； 3.表中丝杆直径对应ZB、ZC型。

2QSY、2QDA型双吊点启闭机

Type 2QSY, 2QDA Two Points Headstock Gear



2QDA型



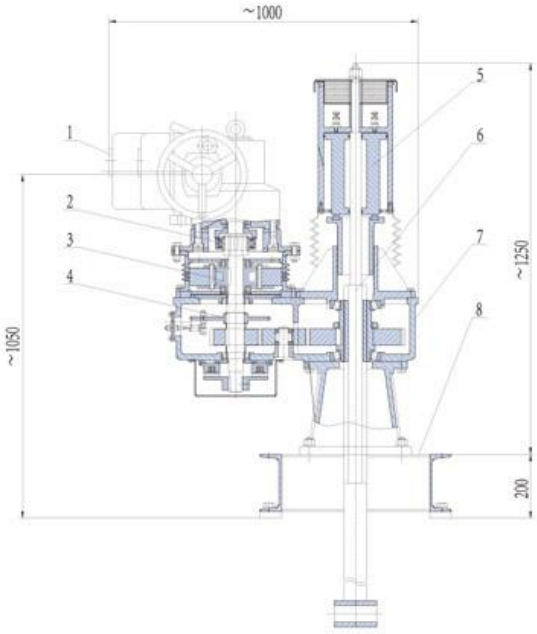
2QSY型

参数 / 型号	启闭力 (T)	电机功率 (kW)	丝杆直径 (mm)	起吊间距 L（mm）	重量 (Kg)
2QSY-2、4、8	2、4、8		Tr44	750～3500	～240、290、460
2QDA-45	5	0.75	Tr44	1200～3000	～870
2QDA-90	10	1.5	Tr55		～920
2QDA-180	18	3	Tr80	1500～3500	～920
2QDA-250	25	4	Tr80		～1020

注：上表重量为理论重量。


2QDA型手电两用双吊点启闭机

SQD型速闭启闭机外形及技术参数
Type SQD Fast Colse Headstock Gear Outline and Technical Parameters



1.电动装置 2.单向离合机构 3.限速机构 4.手制动机构
5.缓冲机构 6.丝杆总成 7.箱体总成 8.启闭机支架

SQDA型速闭启闭机(带机座)

参数 / 型号	最大提升力 (KN)	电动开关闸门速度 (m/min)	电机功率 (kW)	速闭系统	速闭时间 (S)	配套闸门型号
SQDA45	50	~0.36	1.1	滚珠丝杆(大导程滑动丝杆)+限速机构+缓冲机构	≤10	SYZ600-1100 SFZ600-1100
SQDA90	100	~0.36	1.5		≤15	SYZ1200-1500 SFZ1200-1500
SQDA120	140	~0.288	2.2		≤20	SYZ1600-2000 SFZ1600-2000
SQDA180	200	~0.288	3.0		≤30	SYZ2200-2500 SFZ2100-2500
SQDA250	320	~0.288	4.0		≤35	SYZ2600-3000 SFZ2600-3500

订货须知 Ordering Instructions

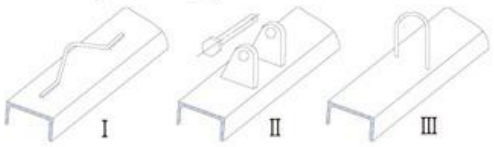
1. 根据应用场合详细注明型号、规格及工作行程(转矩型应确定最大转圈数)和环境要求(室内、室外、防爆等)，不注明工作行程表示按启闭对象高度加150mm（转圈数=工作行程/螺杆导程），环境要求按普通户外型订货。
2. QDA型启闭机不注明电动装置厂商表示按国产知名产品订货(正常转速18rpm短时工作制)。
3. 启闭机与本公司生产的启闭对象(闸门、堰门、泥阀等)配套，只需提供标高、水压、水压方向等参数。若单独订购启闭机，还应注明工作行程、吊点至启闭机底部距离、丝杆端部连接形式(尺寸简图)，双吊点还需注明吊点间距L。
4. 丝杆材质(分碳钢、不锈钢)，不注明表示按碳钢订货，速闭启闭机除外。
5. 配套电控箱，一、二次预埋件、机架、机座(指速闭启闭机)、平台(或称工作桥)、抓落机构等，应另外订货。
6. QDA型不需手动机构或超出样本范围的启闭机，根据用户要求提供相关资料，商量订货。

1. Note type, specification, working stoke (torque-type should be determine the number of turning) and environmental demands (indoor, outdoor and explosion protection etc). It is indicated that the height of gate adds 150mm (Number of turning=working stoke/lead of screw rod) environmental demands is normal outdoor for order.
2. The motor driven device matched for Type QDA is the product from home famous equipment when it is not special ordered.
3. The headstock gear matched with gate will together be ordered, if ordering separately, please note the lifting height, distance from hanging point to bottom of headstock gear, connecting form and size at the end of leading screw, as well as the distance L between two hanging points for two ganging points gear.
4. Lead screw's material has carbon steel and stainless steel. It is indicated that material is carbon steel is general for order if the requirements is not noted.
5. Electric cabinet, the first stage embedded parts and the second stage parts, frame work, frame (i.e. fast close headstock gear), plat form (i.e. work bridge), auto grab and go down device and etc. should be ordered extra.
6. You should ask for the data if the sample book have not content about headstock gear or exceeded the sample book range.

应用场合 Applications

1. 适用于叠梁门、平面钢制闸门、平板格栅（网）等产品的起吊或切换，适用吊耳形状如下：

1. It can be adapted to lift stop log gate, steel gate, flat grate (grip) etc. Below is shapes of lifting eye:



2. 与钢绳和电动葫芦及葫芦移动设施(含轨道、输配电等)配套使用。

2. It can be used to match steel cable and Electric block(including rail, transmission and distribution etc.).

特点 Features

1. 抓落机构可以实现前后、左右方向自动抓落闸门或平板格栅（网）等，适用性强。
2. 可以实现单吊点、双吊点自动抓落。
3. 解决了深井格栅（网）、闸门等设备的起吊脱钩问题。
4. 可在一机多孔和一孔多门等多种场合实现抓落。

1. The Auto Grab and Go Down Device can widely be used to auto grab gate and flat grate (grid) from directions of fore and after, left and right.
2. It can realize auto grabbing by one suspension centre or two suspension centre.
3. It can lift flat grate (grid), gate etc. from deep well.
4. It can be adapted to multi situations that one device-multi holes and one hole-multi gate.

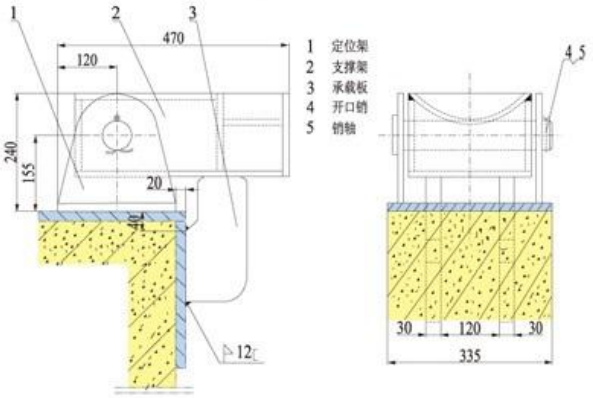
GM型搁门器 Applications and Outline

搁门器是为了放置开启后的钢闸门、格栅、格网等设备而设计的部件，是钢闸门、格栅、格网等设备的配套部件，从5吨开始，每5吨一种规格，图示为10吨(即GM-10)

搁门器的使用限于平面钢闸门(或平板格栅、格网)不完全吊出导槽的场合，全部吊出导槽的场合吊架应考虑足够的高度。

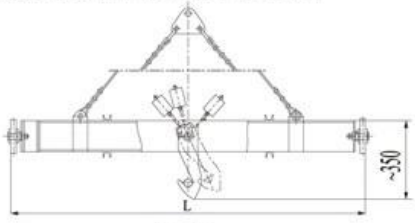
Placer is designed for placing open steel gate, grate, grip etc. It is a mating equipment with steel gate, grate, grip etc. There are various type of GM placer's from 5 ton per 5 ton. The drawing is indicated 10 ton (i.e. type GM-10) .

The application of GM-10 is limited to steel gate, grate, grip incomplete open. You should consider height enough if steel gate, grate, grip is not hanged out guide slot.

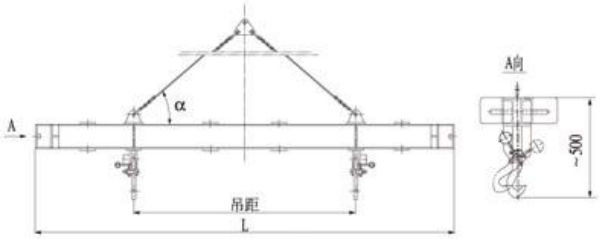


型号表示 Model Designations

抓落机构外形及尺寸参数 Outlines and Parameters



QEZⅠ型



2QEZⅠ型或2QEZⅡ型

2QEZⅠ或2QEZⅡ型

订货须知 Ordering Instructions

1. 单独订购抓落机构应对照上述内容详细注明型号及规格参数，图中索具已配套，不注明α角表示按30°订货。配套订购还需提供各部标高，确定配套范围。
2. 电动葫芦及其移动设施应结合启闭机部分另外商量选配，主要参数：吊高、吊重、吊速、工字梁跨距及梁高。
3. 不注明材质和防腐要求表示按碳钢普通防腐订货。

1. Please note the type and parameter after reading above content. Rigging has suited in the drawing. It is indicated that α is 30°for order. Height mark and scope of suited should be noted when system ordered.
2. The part of electric block or other movable facility and headstock gear should be consulted for order. The main parameter are the height of suspension centre, the weight of suspension centre, the velocity of suspension centre, the span of H beam, the height of beam.
3. It is indicated that material is carbon steel and prevention of corrosion is general for order without noted.