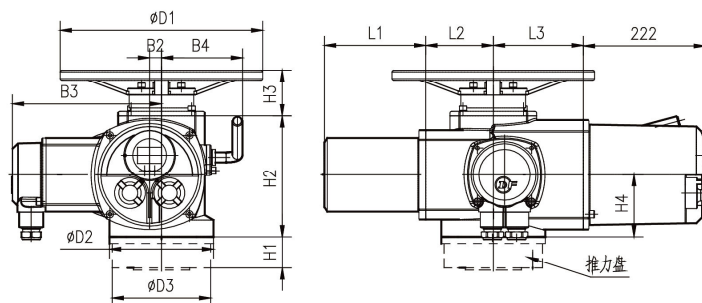


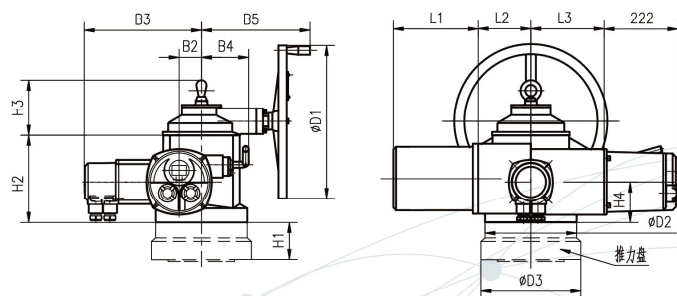
附录二：SND-Z系列外形和连接尺寸

Appendix 2: Overall Size and Connection Dimensions of SND-Z Range



SND-Z5~SND-Z60外形尺寸 Overall Size of SND-Z5~SND-Z60

型号Type	L1	L2	L3	H1	H2	H3	H4	B2	B3	B4	D1	D2	D3
SND-Z ⁵ ₁₅	145,180	110	145	46 (69, 89)	214	80	108	21	288	144	280	145	126
SND-Z ²⁰ ₄₀	180,190	120	160	56 (89, 118)	217	83	111	21	313	144	380	185	175
SND-Z ⁴⁵ ₆₀	200~285	148	239	80 (117,140)	245	100	118	55	325	142	420	225	210



SND-Z90~SND-Z250外形尺寸 Overall Size of SND-Z90~SND-Z180

型号 Type	L1	L2	L3	H1	H2	H3	H4	H5	B2	B3	B4	B5	D1	D2	D3
SND-Z ⁹⁰ ₁₂₀	255~397	158	263	110(151,190)	260	165	121		67	357	142	343	450	275	300

附录二连接尺寸的说明：Note for connection dimension in Appendix 2:

1.图中虚线所示为推力盘，用于推力型电动执行机构，对于转矩型不需推力盘。表格中H1括号内的尺寸分别为中速缓冲推力盘和高速缓冲推力盘的高度尺寸。

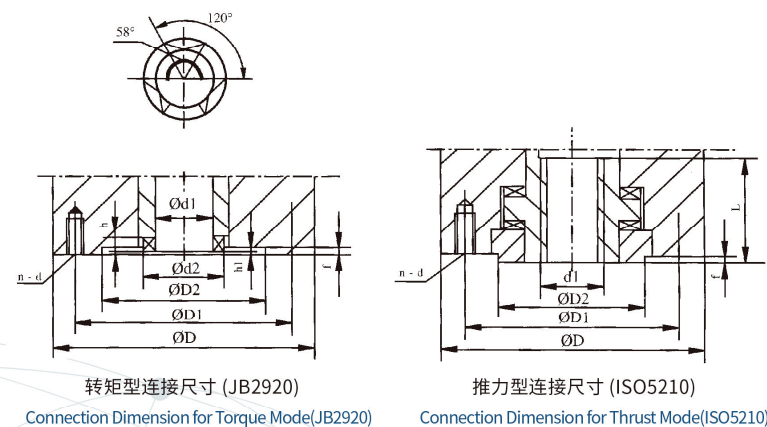
The thrust base in dashed frame is used for thrust mode electric actuator. It is not needed for torque mode actuator. The dimensions in brackets of H1 in the table are the height dimensions of medium speed buffer thrust plate and high speed buffer thrust plate respectively.

2.如果需要保护阀杆用的护罩，其长度尺寸由用户决定。

If protection of valve stem is needed, it's length would be determined by users.

3.高转速电动执行机构存在跨机型的情况，详见附录三：SND-Z系列技术参数表。

High-speed electric actuators exist the situation of cross-model, please refer to Appendix 3: Technical Parameters Table of SND-Z Range.



附录三：SND-Z系列技术参数表 Appendix 3: Technical Parameters Table of SND-Z Range

型号 Type	电机 Motor	功率 Power (kW)	额定电流 Rated Current (A)	额定电压 Rated Voltage (V)	6	9	12	18	24	36	48	72	96	144	192	公称转矩 Nominal torque (N · m)	最大转矩 Max. torque (N · m)	最大转速 Max. rotation (rev)	重量 Weight (kg)
SND-Z ₁₅ ⁵	YVF-800-6-1	0.18	1.1	7.5			100	50											
	YVF-631-4-1	0.09	0.74	4				80	50	50									
	YVF-632-4-1	0.12	0.74	5															
	YVF-633-4-1	0.18	1.0	7				100	80	80	50								
	YVF-800-4-1	0.25	1.4	9.5				150	100	100	80	100							
SND-Z ₂₀ ¹⁰	YVF-801-4-1	0.37	1.9	12															
	YVF-802-4-1	0.55	2.4	16															
	YVF-901-4-1	0.75	2.3	19															
	YVF-802-2-1	0.75	2.4	16															
	YVF-901-2-1	1.1	3.3	23															
SND-Z ₄₅ ⁶⁰	YVF-100M-6-1	0.75	3.1	21			600												
	YVF-100M1-4-1	0.75	2.9	19				450											
	YVF-100M2-4-1	1.1	4	28				600	450	450									
	YVF-100L1-4-1	1.5	5	35															
	YVF-100L2-4-1	2.2	7	49					600	600	450								
SND-Z ₉₀ ¹²⁰	YVF-100L1-2-1	2.2	6.3	44															
	YVF-100L2-2-1	3	7.3	54															
	YVF-112M2-2-1	4	9.7	67															
	YVF-112L1-2-1	5.5	13.3	93															
	YVF-100L1-6-1	1.1	4.2	29			900												
SND-Z ₁₂₀ ⁹⁰	YVF-100L2-6-1	1.5	5.7	39			1200												
	YVF-100L1-4-1	1.5	5	35				900	900	900	900								
	YVF-100L2-4-1	2.2	7	49				1200	1200	1200	1200								
	YVF-112L1-4-1	3	9	63															
	YVF-112L2-4-1	4	11.9	83															
SND-Z ₁₅₀ ¹²⁰	YVF-112M2-2-1	4	9.7	67															
	YVF-112M1-2-1	5.5	13.3	93															
	YVF-132L1-2-1	7.5	17.1	119															
	YVF-132L2-2-1	10	22.8	159															

注：1. 电机的启动电流和最大电流约为额定值的7倍，运行过程中电流偏大是正常现象。
 2. 最大阀杆直径和最大电流在括号内数据用于中速缓冲型推力盘和高速缓冲型推力盘。
 3. 转矩超过1800N·m见附录6参数表。
 Note: 1. The starting current and the maximum current of the motor are about 7 times of the rated value. It is normal that the current is too large during operation.
 2. Data in brackets in the maximum stem diameter column are used for medium speed buffer thrust plate and high speed buffer thrust plate.
 3. Torque exceeding 1800 N · m is shown in Appendix 6 parameter table.

SND-Z系列执行机构连接尺寸表 Connection Dimensions Table OF SND-Z Range Actuators

型号 Type	转矩型 Torque Mode (JB2920-81)										推力型 Torque Mode (ISO5210即GB12222)									
	机座号 Frame size	d1	d2	D2 (H9)	n-d	D1	D	h1	h	f	法兰号 Flange size	D	D1	D2 (f8)	d1	n-d	L	f		
SND-Z ₁₅ ⁵	2	33	44	90	4-M10	120	145	2	8	4	F10	126	102	70	T30 (32)	4-M10	40 (62,75)	3		
	2I	26	39	75	4-M8	95	115	2	7	4										
SND-Z ₂₀ ⁴⁰	3	42	58	125	4-M12	160	185	2	10	4	F14	175	140	100	T44 (40)	4-M16	50 (82,101)	4		
	3I	32	45	90	4-M10	120	145	2	8	4										
SND-Z ₄₅ ⁶⁰	4	52	72	150	4-M16	195	225	2	12	5	F16	210	165	130	T50	4-M20	80 (108,133)	5		
SND-Z ₉₀ ¹²⁰	5	62	82	180	4-M20	235	275	2	14	5	F25	300	254	200	T60	8-M16	114 (140,168)	5		
	5I	52	72	150	4-M16	195	230	2	12	5										

说明：Explanation:

1. 机座号中的I表示电站型；

I in frame size represents power station mode;

2. 螺纹安装孔的位置与电机轴线成错开对称分布；

Screwed holes for mounting are distributed symmetrical and staggered to motor shaft axis;

3. 螺纹安装孔的有效深度≥螺纹公称直径的1.8倍。

Valid depth of screwed holes for mounting ≥ 1.8 times of nominal diameter of screw.

4. 高转速电动执行机构存在跨机型的情况，详见附录三：SND-Z系列技术参数表。

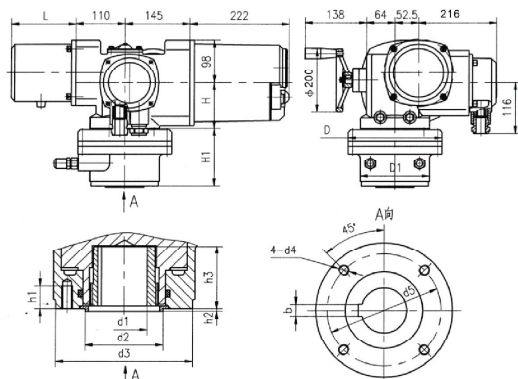
High-speed electric actuators exist the situation of cross-model, please refer to Appendix 3: Technical Parameters Table of SND-Z Range.

5. 表格中推力型d1括号内的尺寸为中速缓冲推力盘和高速缓冲推力盘允许穿过的最大阀杆直径，L为对应的梯形螺纹长度。

The dimensions in brackets of thrust type d1 in the table are the maximum valve stem diameters allowed to be passed through by medium speed buffer thrust plate and high speed buffer thrust plate, and L is the corresponding trapezoidal thread length.

附录四：SND-Q系列外形和连接尺寸及结构特点

Appendix 4: Overall Size, Connection Dimensions and Structural Features of SND-Q Range



SND-Q系列外形和连接尺寸图

Overall Size and Connection Dimensions of SND-Q Range

SND-Q系列外形和连接尺寸表

Overall Size and Connection Dimensions Table of SND-Q Range

型号 Type	L	H	H1	D	D1	d1 H9	d2 F8	d3	d4	d5	h1	h2	h3	b
SND-Q12.5	180	137	0	0	0	22	35	65	M6	50	12	3	62	6
SND-Q25,40	180	122	0	0	0	28	55	90	M8	70	16	3	47	8
SND-Q50	145	104	132	210	155	42	70	125	M10	102	15	3	58	12
SND-Q100	145	104	132	210	155	50	85	150	M12	125	18	3	58	14
SND-Q150,200	145	104	143	285	196	60	100	175	M16	140	30	4	72	18
SND-Q300,400	180	104	165	380	246	80	130	210	M20	165	40	5	80	22

注：SND-Q12.5~40不需要加减速器，所以尺寸表中H1、D、D1均为0。

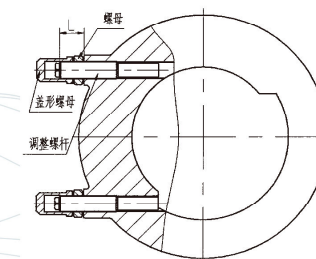
Note: SND-Q12.5~40 need not additional reducer, so sizes of H1,D,D1 are 0.

SND-Q系列结构特点

1. 手、电动切换形式为全自动，无需切换手柄，需要手动时，直接转动手轮即可。
2. 输出轴中装有花键套，可取出转过一微小角度以调整阀门全关位置。花键套在输出轴中不定位，用户可使用紧定螺钉或阀门上的轴肩来定位。
3. 主传动结构有基本型和叠加型两种，叠加不同速比的减速器以得到转矩和转速的扩展。
4. 设有机械限位装置，能起保护和精确定位作用。参见机构限位示意图，拧下盖形螺母，能见到调整螺杆，旋进或旋出调整螺杆，即改变了阀门定位和回转角度，调整范围开、关向各为 $\pm 6^\circ$ 。通常全行程为 90° ，调整螺杆伸出箱体的长度L如下：基本型为24，叠1号减速器为30，叠2号减速器为28，叠3号减速器为28。

Features of SND-Q Range Structure:

1. SNS-Q Range actuators are provided with automatic clutch device. So you may rotate the hand-wheel directly when hand operation is needed.
2. A spline housing is inserted in the output shaft. It may be taken out to rotate a tiny angle to commission full closed position of valve. The spline housing is not fixed in the output shaft and user can orient it with set screw or by shaft shoulder of valve.
3. There are two models of drive structure: essential and combined. The combined model is connected with reducer of different ratio to extend the torque range and speed range.
4. SND-Q Range actuators are provided with mechanical limit device. Refer to the schematic drawing of mechanical limit. Backing off gland nut, you will see the adjusting thread stem. Screw in or out the adjusting thread stem to change valve position and rotation angle. Adjustment range in both opening and closing direction is $\pm 6^\circ$. Full stroke is generally 90° . Various protruding length L of the adjusting thread stem off the housing is as following: 24 for essential model; 30 for combination No 1; 28 for combination No 2; 28 for combination No 3.



机械限位示意图

Schematic drawing of mechanical limit

附录五：SND-Q系列主要技术参数

Appendix 5: Technical Parameters of SND-Q Range

基本型 Essential model

型号 Type	电动机 Motor				输出转速 r/min Output Speed			回转90 度时间 Time for 90 rotate S	手动 速比 Hand ratio	阀杆 直径 Dia. of stem mm	重量 Weight kg
	型号 Type	功率 Power kW	电流 Current A		1	3	5				
			额定 Rated	堵转 Locked	公称转矩 N·m Nominal Torque						
SND-Q ^{12.5} ₄₀	YDF3 802-12 I	0.09	0.91	6.3	125,250,400			1r为15S 3r为5S 5r为3S	83	125N·m 为22, 其余为28 125N·m is 22, the rest is 28.	40
	YDF3 631-4 I	0.09	0.63	4		125,250					
	YDF3 632-4 I	0.12	0.74	5		400	125,250				
	YDF3 633-4 I	0.18	1.0	7			400				

基本型叠1号减速器 Combination No1 Reducer

型号 Type	电动机 Motor				输出转速 r/min Output Speed			回转90 度时间 Time for 90 rotate S	手动 速比 Hand ratio	阀杆 直径 Dia. of stem mm	重量 Weight kg
	型号 Type	功率 Power kW	电流 Current A		0.6	1	1.5				
			额定 Rated	堵转 Locked							
SND-Q ⁵⁰ ₁₀₀	YDF ₃ 631-4 I	0.09	0.63	4	500,1000			0.6r为25S 1r为15S	0.6r和1r 为401,	500N·m 为42,	50
	YDF ₃ 631-4 I	0.09	0.63	4		500		1.5r为10S	1.5r为278	1000N·m 为50	
	YDF ₃ 632-4 I	0.12	0.74	5		1000	500	0.6r是 25S 1r是 15S	0.6r和 1r 是 401,	500N·m 是 42,	
	YDF ₃ 633-4 I	0.18	1.0	7			1000	1.5r是 10S	1.5r是 278	1000N·m 是 50	

基本型叠2号减速器 Combination No2 Reducer

型号 Type	电动机 Motor				输出转速 r/min Output Speed		回转90 度时间 Time for 90 rotate S	手动 速比 Hand ratio	阀杆 直径 Dia. of stem mm	重量 Weight kg
	型号 Type	功率 Power kW	电流 Current A		0.6	1				
			额定 Rated	堵转 Locked	公称转矩 N·m Nominal Torque					
SND-Q ¹⁵⁰ ₂₀₀	YDF ₃ 631-4 I	0.09	0.63	4	1500		0.6r为25S 1r为15S	414	60	70-75
	YDF ₃ 632-4 I	0.12	0.74	5	2000	1500	0.6r is 25S 1r is 15S			
	YDF ₃ 633-4 I	0.18	1.0	7		2000				

基本型叠3号减速器 Combination No3 Reducer

型号 Type	电动机 Motor				输出转速 r/min Output Speed	回转90 度时间 Time for 90 rotate S	手动 速比 Hand ratio	阀杆 直径 Dia. of stem mm	重量 Weight kg
	型号 Type	功率 Power kW	电流 Current A		0.5				
			额定 Rated	堵转 Locked	公称转矩 N·m Nominal Torque				
SND-Q ³⁰⁰ ₄₀₀	YDF ₃ 633-4 I	0.18	1.0	7	3000/4000	30S	830	80	85-95

说明：

- 1号减速器速比有两种，为4.84和3.36，2号减速器速比为5，3号减速器速比为10。
- 电机中YDF₃802-12 I 为12极电机，其余均为4极。电机的起动电流和最大电流约为表格所示的额定值的7倍，运行过程中电流偏大是正常现象。
- 表格中的阀杆直径即尺寸表中的d1，为相应规格的最大值，用户若需要其它值，要在订货时提出。

Explanation:

- There is two kinds of ratio for Combination No 1 Reducer: 4.84 and 3.36. Ratio for Combination No 2 Reducer is 5. Ratio for Combination No 3 Reducer is 10.
- Motor YDF₃802-12 I is of 12 poles and the rest types are of 4 poles. Start current and max. current of motor is approximately 7 times of the value indicating in the table. During operation, the current more than rated value is normal phenomena.
- Dimension of valve stem diameter in tables is d1 in overall size and connection dimension table and is the maximum value of corresponding specifications. If other diameter value is needed, user must make declaration in order list.

附录六：SND系列产品叠加减速器的组成及技术参数

Appendix 6: Composition and Technical Parameters of SND Range Superimposed Reducer

1. 输出转矩为1800N·m和2500N·m的SND系列多回转产品的技术参数表

Technical Parameters Table of SND Range Multi-turn Products with Output Torque of 1800 N·m and 2500 N·m

第一级执行机构 The first stage electric actuator					减速器 Reducer			执行机构叠加减速器 Actuator superimposed reducer		
型号 Type	电机型号 Motor type	功率 Power kW	额定电流 Rated Current A	堵转电流 Locked Current A	型号 Type	组成 Composition	速比 Ratio	输出转速 Output speed r/min	输出转矩 Output torque N·m	
SND-Z90-18D	YDF3100L1-4III	1.5	5	35	Z180	XJ3C	2.67	6	1800	
SND-Z90-24D	YDF3100L1-4III	1.5	5	35				9		
SND-Z90-36D	YDF3100L2-4III	2.2	7	49				14		
SND-Z90-48D	YDF3100L2-4III	2.2	7	49				18		
SND-Z90-72D	YDF3112M1-2III	3	7.8	54				27		
SND-Z90-96D	YDF3112M2-2III	4	9.7	67				36		
SND-Z90-144D	YDF3112L-2III	5.5	13.3	93				54		
SND-Z90-192D	YDF3132L1-2III	7.5	17.1	119				72		
SND-Z120-18D	YDF3100L1-4III	1.5	5	35	Z250		XJ3C	2.67	6	2500
SND-Z120-24D	YDF3100L2-4III	2.2	7	49					9	
SND-Z120-36D	YDF3100L2-4III	2.2	7	49					14	
SND-Z120-48D	YDF3112L1-4III	3	9	63					18	
SND-Z120-72D	YDF3112M2-2III	4	9.7	67					27	
SND-Z120-96D	YDF3112L-2III	5.5	13.3	93					36	
SND-Z120-144D	YDF3132L1-2III	7.5	17.1	119					54	
SND-Z120-192D	YDF3132L2-2III	10	22.8	159					72	

注：

1. 第一级电动执行机构为SND-Z大孔输出轴型电装，D表示大孔。
2. 若为推力型，减速器下可叠加推力型接盘，型号为Z250T。
3. 订货转矩2500N·m，输出转速72r/min，推力型；应表示为SND-Z120-192D+Z250T。

Note:

1. The first stage electric actuator is SND-Z large hole output shaft type, and D stands for large hole.
2. If it is thrust type, the thrust type connector plate can be superimposed under the reducer. The model is Z250T.
3. Ordering torque 2500N·m, output speed 72 r/min, thrust type; it should be expressed as SND-Z120-192D+Z250T.

2. 输出转矩为3500N·m和5000N·m的SND系列多回转产品的技术参数表

Technical Parameters Table of SND Range Multi-turn Products with Output Torque of 3500 N·m and 5000 N·m

第一级执行机构 The first stage electric actuator				减速器 Reducer			执行机构叠加减速器 Actuator superimposed reducer		
型号 Type	功率 Power kW	额定电流 Rated Current A	堵转电流 Locked Current A	型号 Type	组成 Composition	速比 Ratio	输出转速 Output speed r/min	输出转矩 Output torque N·m	
SND-Z90-24	2.2	7	49	Z350	ZJ500	4	6	3500	
SND-Z90-36	2.2	7	49				9		
SND-Z90-48	3	9	63				12		
SND-Z90-72	4	9.7	67				18		
SND-Z90-96	5.5	13.3	93				24		
SND-Z90-144	5.5	13.3	93				36		
SND-Z90-192	7.5	17.1	119				48		
SND-Z120-24	3	9	63	Z500				6	5000
SND-Z120-36	3	9	63					9	
SND-Z120-48	4	11.9	83					12	
SND-Z120-72	5.5	13.3	93					18	
SND-Z120-96	7.5	17.1	119					24	

注：

1. 输出转矩为5000N·m时，第一级电动执行机构开向整定转矩：1250N·m，关向整定转矩：875N·m。
2. 若为推力型，减速器下可叠加推力型接盘，型号为Z500T。
3. 订货转矩5000N·m，输出转速24r/min，推力型；应表示为SND-Z120-96+Z500T。

Note:

1. When the output torque is 5000 N·m, the setting torque in opening direction of the first stage electric actuator is 1250N·m, the setting torque in closing direction is 875 N·m.
2. If it is thrust type, the thrust type connector plate can be superimposed under the reducer. The model is Z500T.
3. Ordering torque 5000N·m, output speed 24 r/min, thrust type; it should be expressed as SND-Z120-96+Z500T.

3.输出转矩为8000N·m和10000N·m的SND系列多回转产品的技术参数表
Technical Parameters Table of SND Range Multi-turn Products with Output Torque of 8000 N·m and 10000N·m

第一级执行机构 The first stage electric actuator				减速器 Reducer			执行机构叠加减速器 Actuator superimposed reducer	
型号 Type	功率 Power kW	额定电流 Rated Current A	堵转电流 Locked Current A	型号 Type	组成 Composition	速比 Ratio	输出转速 Output speed r/min	输出转矩 Output torque N·m
SND-Z100-48	4	11.9	83	Z800	ZJ1000	8.13	6	8000
SND-Z100-72	5.5	13.3	93				9	
SND-Z100-96	7.5	17.1	119				12	
SND-Z100-144	7.5	17.1	119				18	
SND-Z100-192	10	22.8	159				24	
SND-Z120-48	4	11.9	83	Z1000	ZJ1000	8.13	6	10000
SND-Z120-72	5.5	13.3	93				9	
SND-Z120-96	7.5	17.1	119				12	
SND-Z120-144	7.5	17.1	119				18	
SND-Z120-192	10	22.8	159				24	

注：
1.若为推力型，减速器下可叠加推力型接盘，型号为Z1000T。
2.订货转矩10000N·m，输出转速24r/min，推力型；应表示为SND-Z120-192+Z1000T。

Note:
1.If it is thrust type, the thrust type connector plate can be superimposed under the reducer. The model is Z1000T.
2.Ordering torque 10000N·m, output speed 24 r/min, thrust type; it should be expressed as SND-Z120-192+Z1000T.

4. 输出转矩为14000N·m和20000N·m的SND系列多回转产品的技术参数表
Technical Parameters Table of SND Range Multi-turn Products with Output Torque of 14000N·m and 20000N·m

第一级执行机构 The first stage electric actuator				减速器 Reducer			执行机构叠加减速器 Actuator superimposed reducer	
型号 Type	功率 Power kW	额定电流 Rated Current A	堵转电流 Locked Current A	型号 Type	组成 Composition	速比 Ratio	输出转速 Output speed r/min	输出转矩 Output torque N·m
SND-Z180-72G	7.5	17.1	119	Z1800	ZJ2000	10	6	18000
SND-Z180-72G	7.5	17.1	119	Z1400			9	
SND-Z180-96G	10	22.8	159				12	
SND-Z180-144G	12.5	25	175				18	
SND-Z200-192G	18.5	38	266	Z1600			24	
SND-Z250-72G	10	22.8	159	Z2000	ZJ2000	8	9	20000
SND-Z250-96G	12.5	25	175				12	
SND-Z250-144G	18.5	38	266				18	

注：
1.表中第一级电动执行机构为SND-Z高速型电装，G表示高速。
2.若为推力型，减速器下可叠加推力型接盘，型号为Z2000T。
3.订货转矩20000N·m，输出转速18r/min，推力型；应表示为SND-Z250-144G+Z2000T。

Explanation:
1.The first stage electric actuator is SND-Z high-speed type, and G stands for high speed.
2.If it is thrust type, the thrust type connector plate can be superimposed under the reducer. The model is Z2000T.
3.Ordering torque 20000N·m, output speed 18 r/min, thrust type; it should be expressed as SND-Z250-144G+Z2000T.

5.输出转矩为2000N·m和400000N·m的SND系列部分回转产品的技术参数表
Technical Parameters Table of SND Range Part-turn Products with Output Torque of 2000 N·m and 400000 N·m

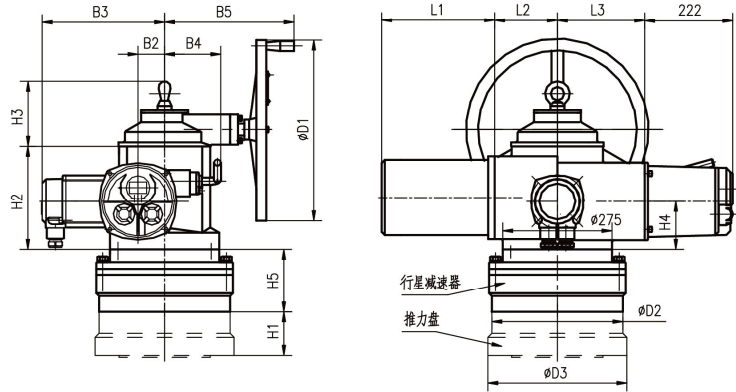
第一级执行机构 The first stage electric actuator				减速器 Reducer			执行机构叠加减速器 Actuator superimposed reducer		
型号 Type	功率 Power kW	额定 电流 Rated Current A	堵转 电流 Locked Current A	型号 Type	组成 Composition	速比 Ratio	输出 转速 Output speed r/min	回转 90°时间 Time for 90° rotate s	输出 转矩 Output torque N·m
SND-Z20-18	0.37	1.8	12	DQ200	DJ1A	37	0.48	30.8	2000
SND-Z30-18	0.37	1.8	12	DQ400	DJ2A	57	0.316	47.5	4000
SND-Z40-18	0.55	2.4	16	DQ600	DJ2A	57	0.316	47.5	6000
SND-Z45-18	0.75	2.8	19	DQ800	DJ3A	55	0.327	45.8	8000
SND-Z60-18	1.1	4.0	28	DQ1000	DJ3A	55	0.327	45.8	10000
SND-Z90-18	1.5	5.0	35	DQ1600	DJ4A	58	0.31	48.3	16000
SND-Z120-18	2.2	7.0	40	DQ2000	DJ4A	58	0.31	48.3	20000
SND-Z120-48D	3.0	9.0	63	DQ ³²⁰⁰ ₄₀₀₀ II	XJ3C+DJ5A	2.67×54	0.333	45	32000 40000
SND-Z120-48D	3.0	9.0	63	DQ6300 II	XJ3C+DJ6A	2.67×69	0.26	57.5	63000
SND-Z90-72	4.0	9.7	67	DQ8000 II	XJ4A+DJ6A	4×69	0.26	57.5	80000
SND-Z90-96D	4.0	9.7	67	DQ12500 III	XJ3C+XJ4B+DJ7A	2.67×2.67×80	0.168	89	125000
SND-Z120-96D	5.5	13.3	93	DQ16500 III	XJ3C+XJ4B+DJ7A	2.67×2.67×80	0.168	89	165000
SND-Z120-96D	5.5	13.3	93	DQ25000 III	XJ3C+XJ5A+DJ8A	2.67×4.138×84	0.104	145	250000
SND-Z120-72	5.5	13.3	93	DQ40000	DJ9A	1312	0.055	273	400000

- 说明:
- 1.减速器中XJ为行星减速器, DJ为蜗轮减速器(蜗轮副均为右旋, 并具自锁性)。
 - 2.订货转矩250000N·m, 输出转速0.104r/min; 应表示为SND-Z120-96D+DQ25000 III。

Explanation:

- 1.XJ means planet reducers, DJ means worm gear reducers (the worm gear pairs are all clockwise and self-locking).
- 2.Ordering torque 250000 N·m, output speed 0.104 r/min; it should be expressed as SND-Z120-96/BD+DQ25000 III.

6.输出转矩为1800N·m和2500N·m的SND系列多回转产品的外形尺寸
Overall Size of SND Range Multi-turn Products with Output Torque of 1800 N·m and 2500 N·m

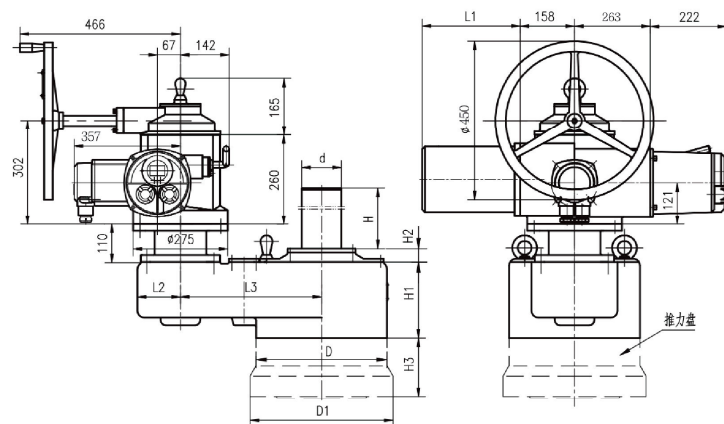


输出转矩为1800N·m和2500N·m的SND系列多回转产品的外形尺寸
Overall Size of SND Range Multi-turn Products with Output Torque of 1800 N·m and 2500 N·m

型号 Type	L1	L2	L3	H1	H2	H3	H4	H5	B2	B3	B4	B5	D1	D2	D3
SND-Z90D+Z180	255~397	158	263	125 (191)	260	165	121	158	67	357	142	343	450	330	350
SND-Z120D+Z250															

7. 输出转矩为3500N·m~10000N·m的SND系列多回转产品的外形尺寸

Overall Size of SND Range Multi-turn Products with Output Torque of 3500 N·m ~ 10000 N·m



输出转矩为3500N·m~10000N·m的SND系列多回转产品的外形尺寸

Overall Size of SND Range Multi-turn Products with Output Torque of 3500 N·m ~ 10000 N·m

型号Type	L1	L2	L3	H	H1	H2	H3	φd	φD	φD1
SND-Z90+Z350	255~397	125	410	用户 自定 Set by user	222	38	169	115	380	415
SND-Z120+Z500										
SND-Z100+Z800	285~397	130	450.5		238	51	195	138	510	510
SND-Z120+Z1000										

连接尺寸的说明:

1) 图中虚线所示为推力盘,用于推力型电动执行机构,对于转矩型不需推力盘。表格中H1括号内的尺寸分别为中速缓冲推力盘和高速缓冲推力盘的高度尺寸。

2) 如果需要保护阀杆用的护罩,其长度尺寸由用户决定。

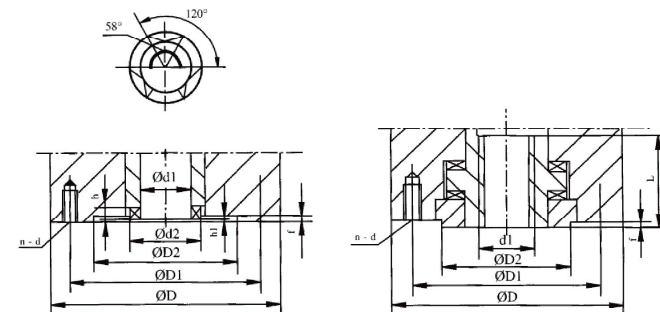
Note for connection dimension:

1) The thrust base in dashed frame is used for thrust mode electric actuator. It is not needed for torque mode actuator. The dimensions in brackets of H1 in the table are the height dimensions of medium speed buffer thrust plate and high speed buffer thrust plate respectively.

2) If protection of valve stem is needed, it's length would be determined by users.

8. 输出转矩为1800N·m~20000N·m的SND系列多回转产品的连接尺寸

Connection Dimensions of SND Range Multi-turn Products with Output Torque of 1800 N·m ~ 20000 N·m



转矩型连接尺寸 (JB2920)

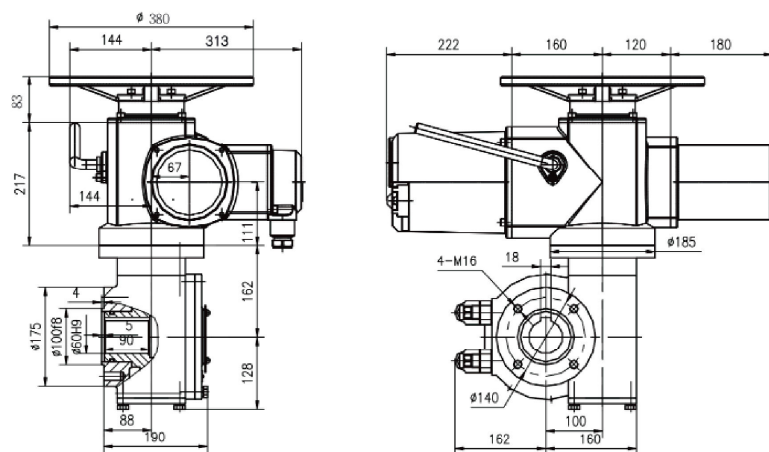
Connection Dimension for Torque Mode (JB2920)

推力型连接尺寸 (ISO5210)

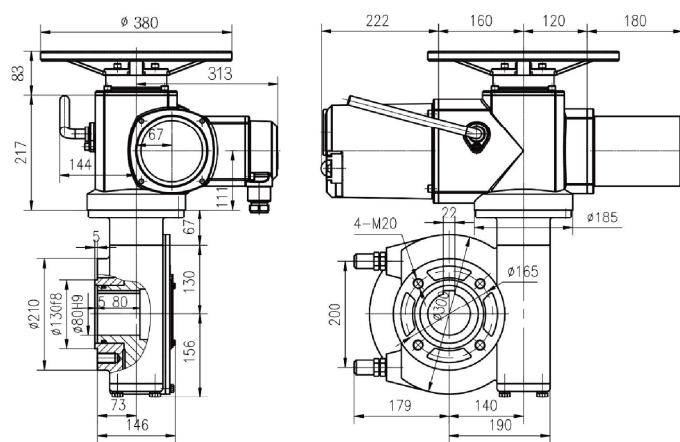
Connection Dimension for Thrust Mode (ISO5210)

型号 Type	转矩型Torque Mode (JB2920-81)										推力型 Thrust Mode (ISO5210即GB12222)							
	机座号 Frame size	d1	d2	D2 (H9)	n-d	D1	D	h1	h	f	法兰号 Flange size	D	D1	D2 (f8)	d1	n-d	L	
Z180 Z250	7	73	98	220	4-M24	285	330	3	16	6	F30	350	298	230	T70	8-M20	130 (179)	
Z350 Z500	8	82	118	280	8-M20	340	380	3	20	6	F35	415	356	260	T100	8-M30	170	
Z800	9	85	128	300	8-M24	380	510	3	25	8	F40	510	406	300	T120	8-M36	230	
Z1000	10	105	158	360	8-M30	450	510	3	30	8								
Z1400~Z2000	10	105	158	360	8-M30	450	510	3	30	8	F48	560	483	370	T120	12-M36	230	

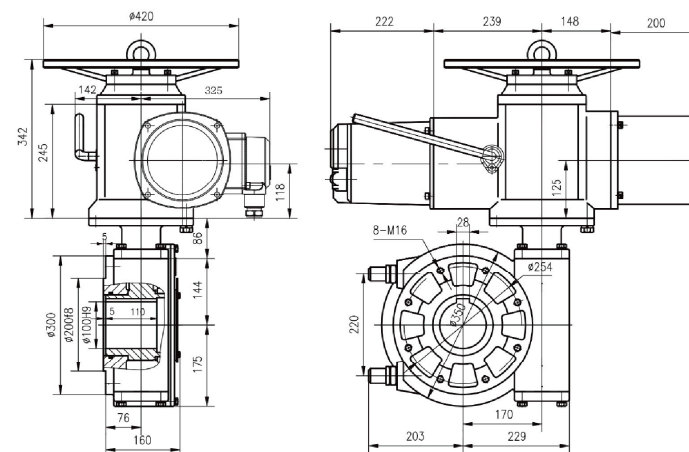
9. 输出转矩为2000N·m和400000N·m的SND系列部分回转产品的外形及连接尺寸
Connection Dimensions of SND Range Part-turn Products with Output Torque of 2000 N·m and 400000 N·m



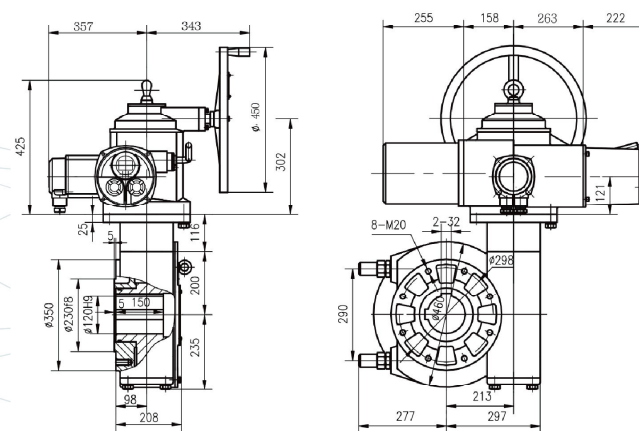
输出转矩为2000N·m的SND系列部分回转产品的外形及连接尺寸
Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 2000 N·m



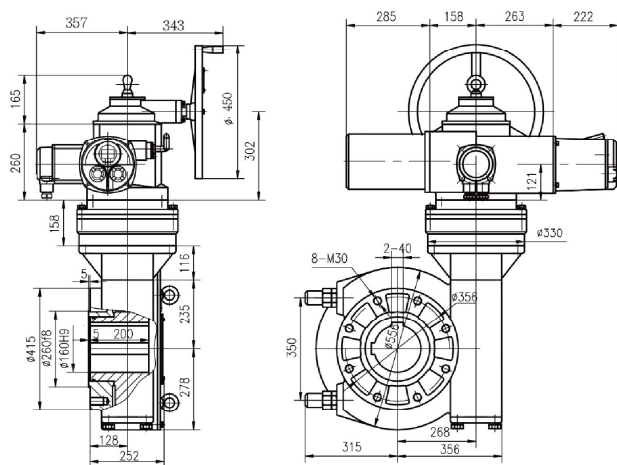
输出转矩为4000N·m和6000N·m的SND系列部分回转产品的外形和连接尺寸
Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 4000 N·m and 6000 N·m



输出转矩为8000N·m和10000N·m的SND系列部分回转产品的外形和连接尺寸
Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 8000 N·m and 10000 N·m

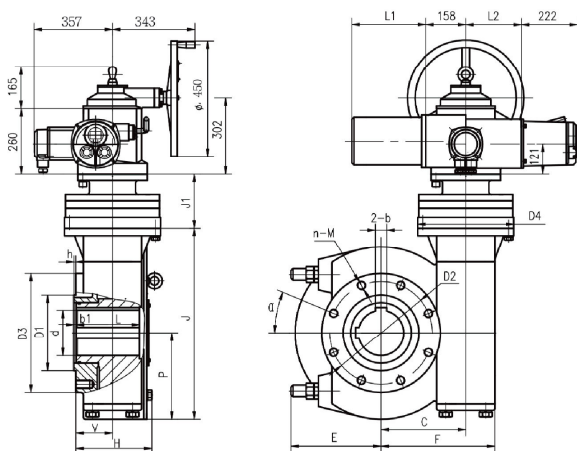


输出转矩为16000N·m和20000N·m的SND系列部分回转产品的外形和连接尺寸
Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 16000 N·m and 20000 N·m



输出转矩为32000N·m和40000N·m的SND系列部分回转产品的外形和连接尺寸

Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 32000 N·m and 40000 N·m



输出转矩为63000N·m~250000N·m的SND系列部分回转产品的外形和连接尺寸

Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 63000 N·m ~ 250000 N·m

型号Type	C	D4	E	F	H	J	J1	L1	L2	P	V
SND-Z120-48D+DQ6300 II	335	330	356	450	301	745	158	285	263	340	145
SND-Z90-72+DQ8000 II	335	380	356	450	301	755	212	240	263	340	145
SND-Z90-96D+DQ12500 III	465	380	480	605	400	946	404	240	263	426	153
SND-Z120-96D+DQ16500 III	465	380	480	605	400	946	404	285	263	426	153
SND-Z120-96D+DQ25000 III	582	510	600	772	424	1198	466	285	263	548	190
型号Type	d (H9)	D1(f8)	D2	D3	h	b1	L	b	n-M	α	
SND-Z120-48D+DQ6300 II	180	300	406	470	8	9	250	45	8-M36	22.5°	
SND-Z90-72+DQ8000 II	180	300	406	470	8	9	250	45	8-M36	22.5°	
SND-Z90-96D+DQ12500 III	220	370	483	560	8	8	285	50	12-M36	15°	
SND-Z120-96D+DQ16500 III	220	370	483	560	8	8	285	50	12-M36	15°	
SND-Z120-96D+DQ25000 III	280	470	603	686	8	8	310	63	20-M36	9°	

说明:图中键槽位置均为阀门全关位置。

Note: The key position in the figure is the valve fully closed position.

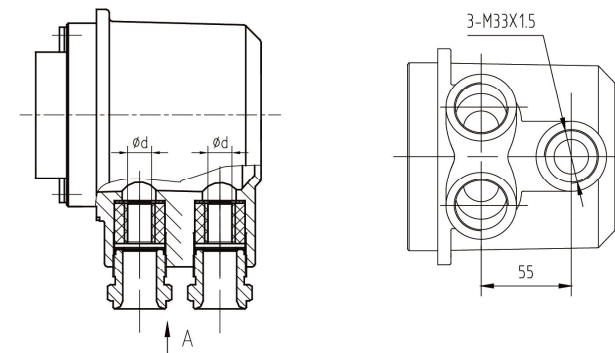


图93 电缆引入装置 Fig 93. Entrance of cable

输出转矩为400000N·m的SND系列部分回转产品的外形和连接尺寸

Overall Size and Connection Dimensions of SND Range Part-turn Products with Output Torque of 400000 N·m

每台执行机构有三个电缆引入装置,引入装置中的密封圈允许通过电缆直径 ϕd 为 $\phi 15\text{mm}$ 和 $\phi 19\text{mm}$ 。

Each actuator has three entrance of cable devices, and cables with diameter of $\Phi 15$ mm or $\Phi 19$ mm is allowed to lead through the seal ring.