



Technical handbook **ST Range**



Performances **ST Range**

Nominal torque Nm	Type	Output speed rpm	Time/turns sec./turn	Power Kw	Speed rpm	S4 service - D.R. : 30%			
						Curent rated A	Curent start A	Cos φ	Efficiency %
60	ST6	12	5,00	0,10	750	1,8	2,5	0,95	25%
40		16	3,75	0,10	750	1,8	2,5	0,95	25%
60		23	2,61	0,40	1500	6,0	7,0	0,87	33%
45		33	1,82	0,40	1500	6,0	7,0	0,87	33%
45		48	1,25	0,40	1500	6,0	7,0	0,87	33%
35		66	0,91	0,40	3000	4,5	16,0	0,90	43%
35		97	0,62	0,40	3000	4,5	16,0	0,90	43%
140	ST14	11	5,45	0,30	1500	3,5	15,0	0,90	41%
140		16	3,75	0,30	1500	3,5	15,0	0,90	41%
130		23	2,61	0,30	1500	3,5	15,0	0,90	41%
120		29	2,07	0,30	1500	3,5	15,0	0,90	41%
90		46	1,30	0,30	1500	3,5	15,0	0,90	41%
70		61	0,98	0,30	1500	3,5	15,0	0,90	41%
55		82	0,73	0,30	1500	3,5	15,0	0,90	41%
40		121	0,50	0,30	1500	3,5	15,0	0,90	41%

Nominal torque Nm	Type	Output speed rpm	Time/turns sec./turn	Power Kw	Speed rpm	S4 service - D.R. : 30%			
						Curent rated A	Curent start A	Cos φ	Efficiency %
60	ST6	12	5,00	0,10	750	0,8	1,6	0,51	35%
60		16	3,75	0,10	750	0,8	1,6	0,51	35%
60		23	2,61	0,15	1500	0,7	2,1	0,56	55%
60		33	1,82	0,50	1500	1,5	5,0	0,78	62%
60		48	1,25	0,50	1500	1,5	5,0	0,78	62%
60		66	0,91	0,50	3000	1,6	5,0	0,90	50%
60		97	0,62	0,50	3000	1,6	5,0	0,90	50%
140	ST14	11	5,45	0,50	1500	1,5	5,0	0,78	62%
140		16	3,75	0,50	1500	1,5	5,0	0,78	62%
140		23	2,61	0,50	1500	1,5	5,0	0,78	62%
140		29	2,07	0,50	1500	1,5	5,0	0,78	62%
140		46	1,30	0,50	1500	1,5	5,0	0,78	62%
140		61	0,98	0,75	1500	2,0	7,0	0,70	77%
110		82	0,73	0,75	1500	2,0	7,0	0,70	77%
75		121	0,50	0,75	1500	2,0	7,0	0,70	77%
300	ST30	14	4,29	0,75	1500	2,0	7,0	0,70	77%
300		23	2,61	0,90	1500	2,7	14,0	0,76	63%
300		30	1,28	1,50	1500	3,7	21,0	0,80	73%
300		47	1,28	1,50	1500	3,7	21,0	0,80	73%
250		61	0,98	1,50	1500	3,7	21,0	0,80	73%
200		84	0,71	1,50	1500	3,7	21,0	0,80	73%
130		126	0,48	1,50	1500	3,7	21,0	0,80	73%
700	ST70	15	4,00	1,50	1500	3,7	21,0	0,80	73%
700		24	2,50	2,20	1500	5,2	33,0	0,79	77%
700		31	1,94	3,00	1500	7,1	45,0	0,79	77%
600		50	1,20	3,00	1500	7,1	45,0	0,79	77%
500		64	0,94	3,00	1500	7,1	45,0	0,79	77%
340		94	0,64	3,00	1500	7,1	45,0	0,79	77%
250		129	0,47	3,00	1500	7,1	45,0	0,79	77%

Nominal torque Nm	Type	Output speed rpm	Time/turns sec./turn	Power Kw	Speed rpm	S4 service - D.R. : 30%			
						Curent rated A	Curent start A	Cos φ	Efficiency %
60	ST6	14	4,29	0,10	900	5,0	9,0	0,90	19%
40		19	3,16	0,10	900	5,0	9,0	0,90	19%
60		28	2,14	0,35	1700	6,2	8,0	0,85	58%
45		40	1,50	0,35	1700	6,2	8,0	0,85	58%
45		58	1,03	0,35	1700	6,2	8,0	0,85	58%
35		79	0,76	0,40	3600	14,0	32,0	0,90	28%
35		116	0,52	0,40	3600	14,0	32,0	0,90	28%
140	ST14	13	4,62	0,37	1800	5,6	43,0	0,90	64%
140		19	3,16	0,37	1800	5,6	43,0	0,90	64%
140		28	2,14	0,37	1800	5,6	43,0	0,90	64%
130		35	1,71	0,37	1800	5,6	43,0	0,90	64%
100		55	1,09	0,37	1800	5,6	43,0	0,90	64%
80		73	0,82	0,37	1800	5,6	43,0	0,90	64%
60		98	0,61	0,37	1800	5,6	43,0	0,90	64%
40		145	0,41	0,37	1800	5,6	43,0	0,90	64%

Nominal torque Nm	Type	Output speed rpm	Time/turns sec./turn	Power Kw	Speed rpm	S4 service - D.R. : 30%			
						Curent rated A	Curent start A	Cos φ	Efficiency %
60	ST6	14	4,29	0,12	900	0,8	1,6	0,51	37%
60		19	3,16	0,12	900	0,8	1,6	0,51	37%
60		28	2,14	0,18	1800	0,7	2,1	0,56	58%
60		40	1,50	0,60	1800	1,5	5,0	0,78	64%
60		58	1,03	0,60	1800	1,5	5,0	0,78	64%
60		79	0,76	0,60	3600	1,6	5,0	0,90	52%
60		116	0,52	0,60	3600	1,6	5,0	0,90	52%
140	ST14	13	4,62	0,60	1800	1,5	5,0	0,78	64%
140		19	3,16	0,60	1800	1,5	5,0	0,78	64%
140		28	2,22	0,60	1800	1,5	5,0	0,78	64%
140		35	1,71	0,60	1800	1,5	5,0	0,78	64%
140		55	1,09	0,60	1800	1,5	5,0	0,78	64%
140		73	0,82	0,90	1800	2,0	7,0	0,75	75%
110		98	0,60	0,90	1800	2,0	7,0	0,75	75%
75		145	0,41	0,90	1800	2,0	7,0	0,75	75%
300	ST30	17	3,53	0,9	1800	2,0	7,0	0,70	81%
300		27	2,22	1,1	1800	2,7	14,0	0,75	67%
300		36	1,67	1,8	1800	3,7	21,0	0,82	74%
300		57	1,05	1,8	1800	3,7	21,0	0,82	74%
250		73	0,82	1,8	1800	3,7	21,0	0,82	74%
200		100	0,60	1,8	1800	3,7	21,0	0,82	74%
130		151	0,40	1,8	1800	3,7	21,0	0,82	74%
700	ST70	18	3,33	1,8	1800	3,7	21,0	0,80	74%
700		29	2,07	2,64	1800	5,2	33,0	0,79	81%
700		38	1,58	3,6	1800	7,1	45,0	0,79	81%
600		60	1,00	3,6	1800	7,1	45,0	0,79	81%
500		77	0,78	3,6	1800	7,1	45,0	0,79	81%
340		113	0,53	3,6	1800	7,1	45,0	0,79	81%
250		154	0,39	3,6	1800	7,1	45,0	0,79	81%

Permanent torque Nm	Nominal torque Nm	Type	Output speed rpm	Minimum number of turns ⁽¹⁾	S4 service - D.R. : 50%					
					Power Kw	Speed rpm	Curent rated A	Curent start A	Cos φ	Efficiency %
30	35	ST6	23	12	0,15	1500	2,0	3,0	0,93	35%
20	20		33	17	0,15	1500	2,0	3,0	0,93	35%
20	20		48	24	0,15	1500	2,0	3,0	0,93	35%
70	140	ST14	11	11	0,30	1500	3,5	15,0	0,90	41%
70	140		16	16	0,30	1500	3,5	15,0	0,90	41%
70	130		23	23	0,30	1500	3,5	15,0	0,90	41%
70	120		29	29	0,30	1500	3,5	15,0	0,90	41%
70	90		46	46	0,30	1500	3,5	15,0	0,90	41%
70	70		61	61	0,30	1500	3,5	15,0	0,90	41%
50	55		82	82	0,30	1500	3,5	15,0	0,90	41%
40	40		121	121	0,30	1500	3,5	15,0	0,90	41%

⁽¹⁾ : minimum number of turns required to gain the operating time that guaranty Class III precision. If the number of turns for a full travel is less than that number, the precision will not be as accurate.

1 PH 115 V 60 Hz Class III

Permanent torque Nm	Nominal torque Nm	Type	Output speed rpm	Minimum number of turns ⁽¹⁾	S4 service - D.R. : 50%					
					Power Kw	Speed rpm	Curent rated A	Curent start A	Cos φ	Efficiency %
30	50	ST6	28	21	0,20	1700	3,0	17,0	0,90	64%
30	30		40	30	0,20	1700	3,0	17,0	0,90	64%
30	30		58	44	0,20	1700	3,0	17,0	0,90	64%
70	140	ST14	13	13	0,37	1800	5,6	43,0	0,90	64%
70	140		19	19	0,37	1800	5,6	43,0	0,90	64%
70	140		28	28	0,37	1800	5,6	43,0	0,90	64%
70	130		35	35	0,37	1800	5,6	43,0	0,90	64%
70	100		55	55	0,37	1800	5,6	43,0	0,90	64%
70	80		73	73	0,37	1800	5,6	43,0	0,90	64%
50	60		98	98	0,37	1800	5,6	43,0	0,90	64%
40	40		145	145	0,37	1800	5,6	43,0	0,90	64%

⁽¹⁾ : minimum number of turns required to gain the operating time that guaranty Class III precision. If the number of turns for a full travel is less than that number, the precision will not be as accurate.

Permanent torque Nm	Nominal torque Nm	Type	Output speed rpm	Minimum number of turns ⁽¹⁾	S4 service - D.R. : 50%					
					Power Kw	Speed rpm	Curent rated A	Curent start A	Cos φ	Efficiency %
30	60	ST6	12	4	0,10	750	0,8	1,6	0,51	35%
30	60		16	5	0,10	750	0,8	1,6	0,51	35%
30	60		23	12	0,15	1500	0,7	2,1	0,56	55%
30	60		33	22	0,50	1500	1,5	5,0	0,78	62%
30	60		48	32	0,50	1500	1,5	5,0	0,78	62%
70	140	ST14	11	7	0,50	1500	1,5	5,0	0,78	62%
70	140		16	10	0,50	1500	1,5	5,0	0,78	62%
70	140		23	15	0,50	1500	1,5	5,0	0,78	62%
70	140		29	19	0,50	1500	1,5	5,0	0,78	62%
70	140		46	30	0,50	1500	1,5	5,0	0,78	62%
70	140		61	51	0,75	1500	2,0	7,0	0,70	77%
60	110		82	69	0,75	1500	2,0	7,0	0,70	77%
50	75		121	101	0,75	1500	2,0	7,0	0,70	77%
150	300	ST30	14	12	0,75	1500	2,0	7,0	0,70	77%
150	300		23	23	0,90	1500	2,7	14,0	0,76	63%
150	300		30	39	1,50	1500	3,7	21,0	0,80	73%
150	300		47	63	1,50	1500	3,7	21,0	0,80	73%
150	250		61	81	1,50	1500	3,7	21,0	0,80	73%
120	200		84	111	1,50	1500	3,7	21,0	0,80	73%
100	130		126	168	1,50	1500	3,7	21,0	0,80	73%
350	700	ST70	15	20	1,50	1500	3,7	21,0	0,80	73%
350	700		24	36	2,20	1500	5,2	33,0	0,79	77%
350	700		31	52	3,00	1500	7,1	45,0	0,79	77%
350	600		50	83	3,00	1500	7,1	45,0	0,79	77%
350	500		64	106	3,00	1500	7,1	45,0	0,79	77%
250	340		94	156	3,00	1500	7,1	45,0	0,79	77%
200	250		129	214	3,00	1500	7,1	45,0	0,79	77%

⁽¹⁾ : minimum number of turns required to gain the operating time that guaranty Class III precision. If the number of turns for a full travel is less than that number, the precision will not be as accurate.

Permanent torque Nm	Nominal torque Nm	Type	Output speed rpm	Minimum number of turns ⁽¹⁾	Power Kw	Speed rpm	S4 service - D.R. : 50% Current rated A	Current start A	Cos φ	Efficiency %
30	60	ST6	14	5	0,12	900	0,8	1,6	0,51	37%
30	60		19	6	0,12	900	0,8	1,6	0,51	37%
30	60		28	14	0,18	1800	0,7	2,1	0,56	58%
30	60		40	27	0,60	1800	1,5	5,0	0,78	64%
30	60		58	39	0,60	1800	1,5	5,0	0,78	64%
70	140	ST14	13	9	0,60	1800	1,5	5,0	0,78	64%
70	140		19	12	0,60	1800	1,5	5,0	0,78	64%
70	140		28	19	0,60	1800	1,5	5,0	0,78	64%
70	140		35	23	0,60	1800	1,5	5,0	0,78	64%
70	140		55	37	0,60	1800	1,5	5,0	0,78	64%
70	140		73	61	0,90	1800	2,0	7,0	0,75	75%
60	110		98	82	0,90	1800	2,0	7,0	0,75	75%
50	75		145	121	0,90	1800	2,0	7,0	0,75	75%
150	300	ST30	17	14	0,9	1800	2,0	7,0	0,70	81%
150	300		27	27	1,1	1800	2,7	14,0	0,75	67%
150	300		36	47	1,8	1800	3,7	21,0	0,82	74%
150	300		57	76	1,8	1800	3,7	21,0	0,82	74%
150	250		73	98	1,8	1800	3,7	21,0	0,82	74%
120	200		100	134	1,8	1800	3,7	21,0	0,82	74%
100	130		151	201	1,8	1800	3,7	21,0	0,82	74%
350	700	ST70	18	24	1,8	1800	3,7	21,0	0,80	74%
350	700		29	44	2,64	1800	5,2	33,0	0,79	81%
350	700		38	63	3,6	1800	7,1	45,0	0,79	81%
350	600		60	100	3,6	1800	7,1	45,0	0,79	81%
350	500		77	128	3,6	1800	7,1	45,0	0,79	81%
250	340		113	188	3,6	1800	7,1	45,0	0,79	81%
200	250		154	257	3,6	1800	7,1	45,0	0,79	81%

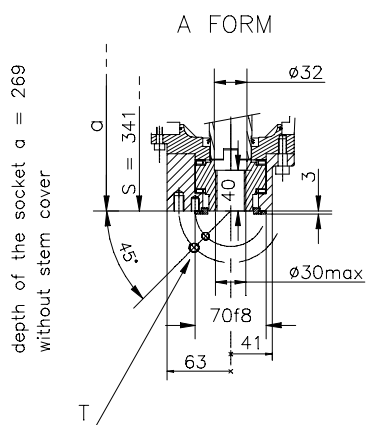
⁽¹⁾ : minimum number of turns required to gain the operating time that guaranty Class III precision. If the number of turns for a full travel is less than that number, the precision will not be as accurate.



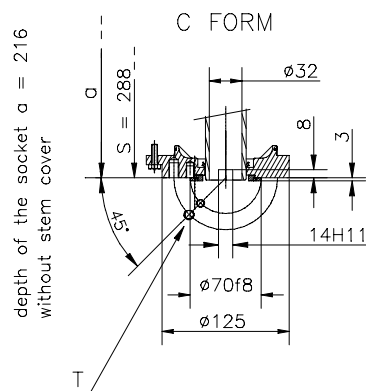
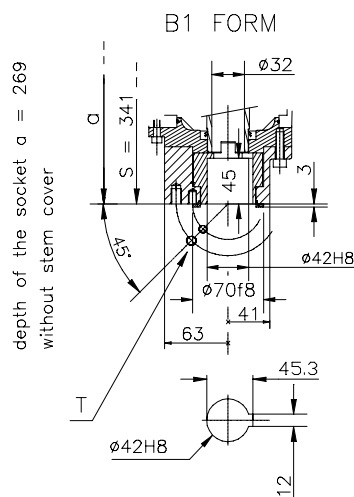
Dimensional drawings

ST Range

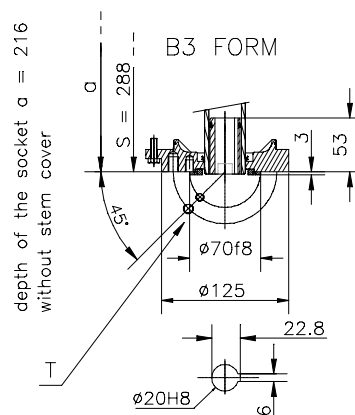
ST6



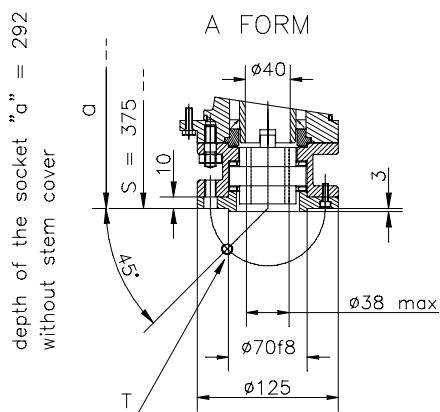
— ISO 5210 —



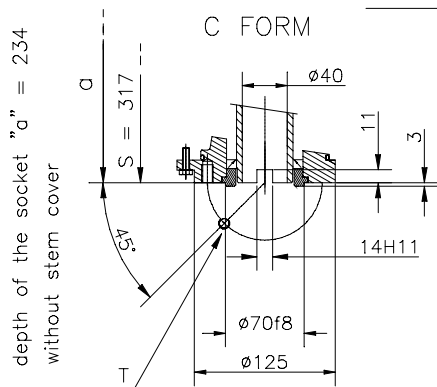
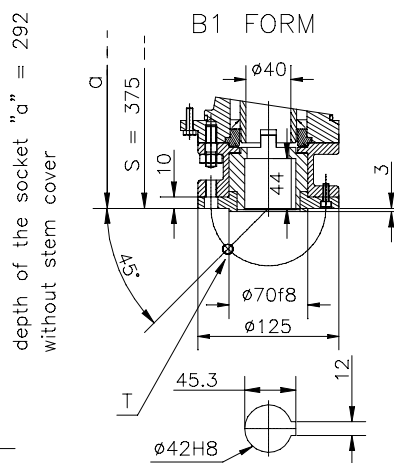
T: 4xM10 depth:15
on 102 .p.c.d.(F10)
(F07 optional)



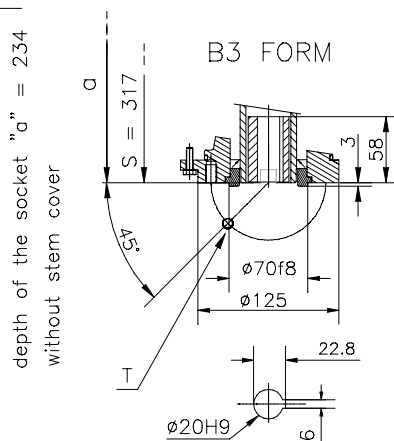
ST14



— ISO 5210 —

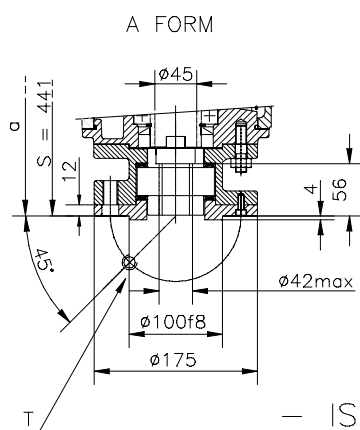


T: 4xM10 depth:15
on 102 P.C.D.(F10)



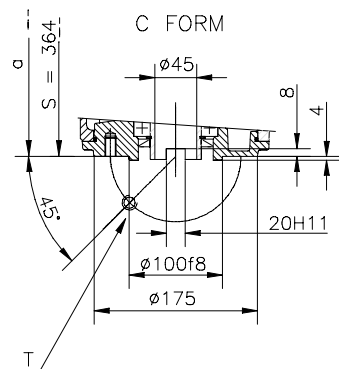
ST30

depth of the socket: "a" = 351
without stem cover



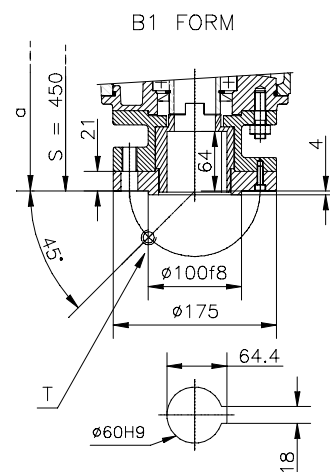
— ISO 5210 —

depth of the socket "a" = 274
without stem cover

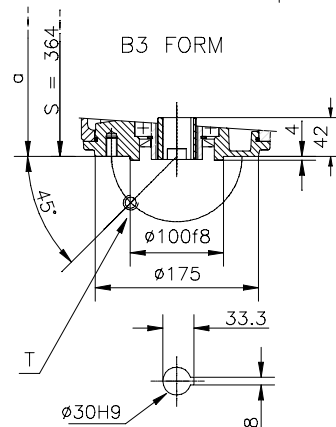


T: 4xM16 depth:25
on 140.p.c.d.(F14)

depth of the socket "a" = 360
without stem cover

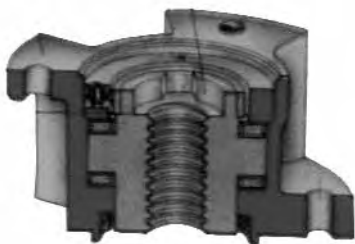


depth of the socket "a" = 274
without stem cover



A Form

INCORPORATED DRIVE BUSH



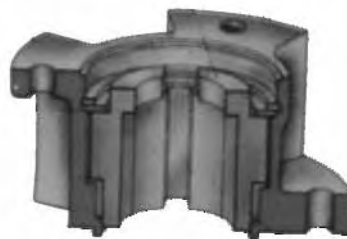
With thrust acceptance



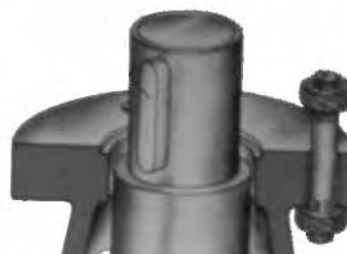
For valve with rising stem and without drive bush.

B1 Form

ENLARGED LEEVE



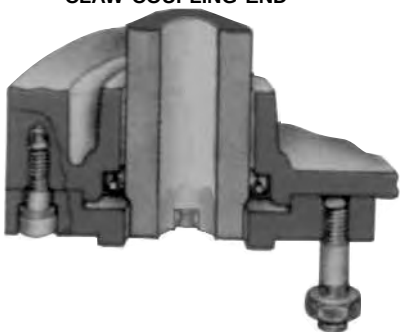
Without thrust acceptance



For valve with incorporated bush.

C Form

CLAW COUPLING END



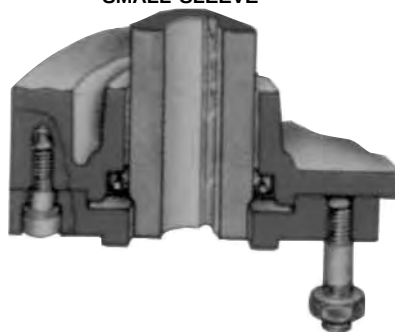
Without thrust acceptance



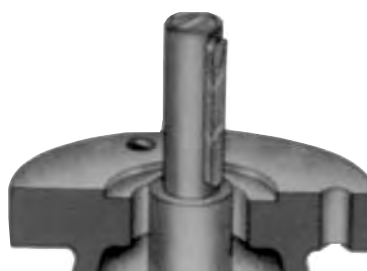
For valve with rising stem only.

B3 Form

SMALL SLEEVE

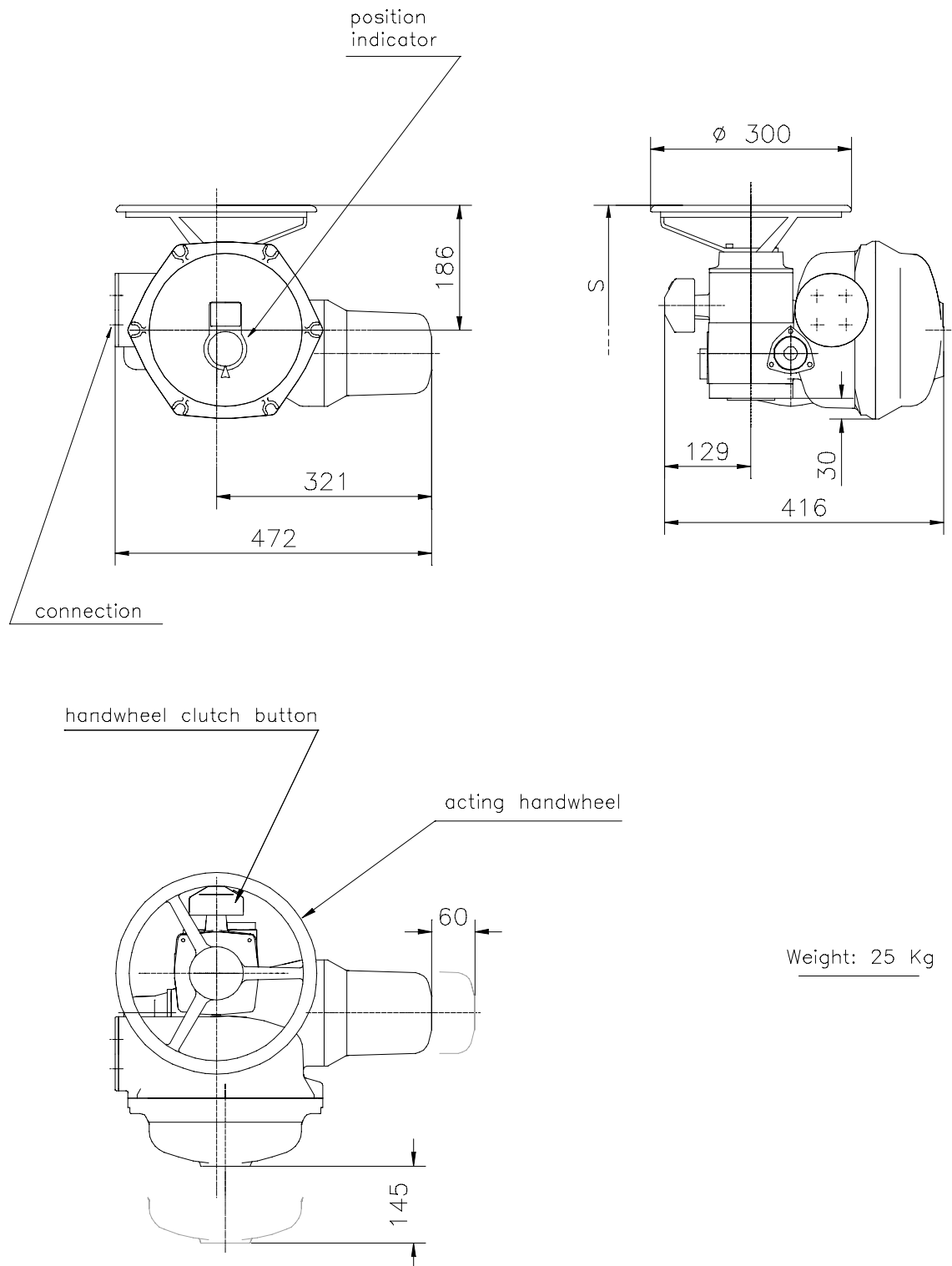


Without thrust acceptance



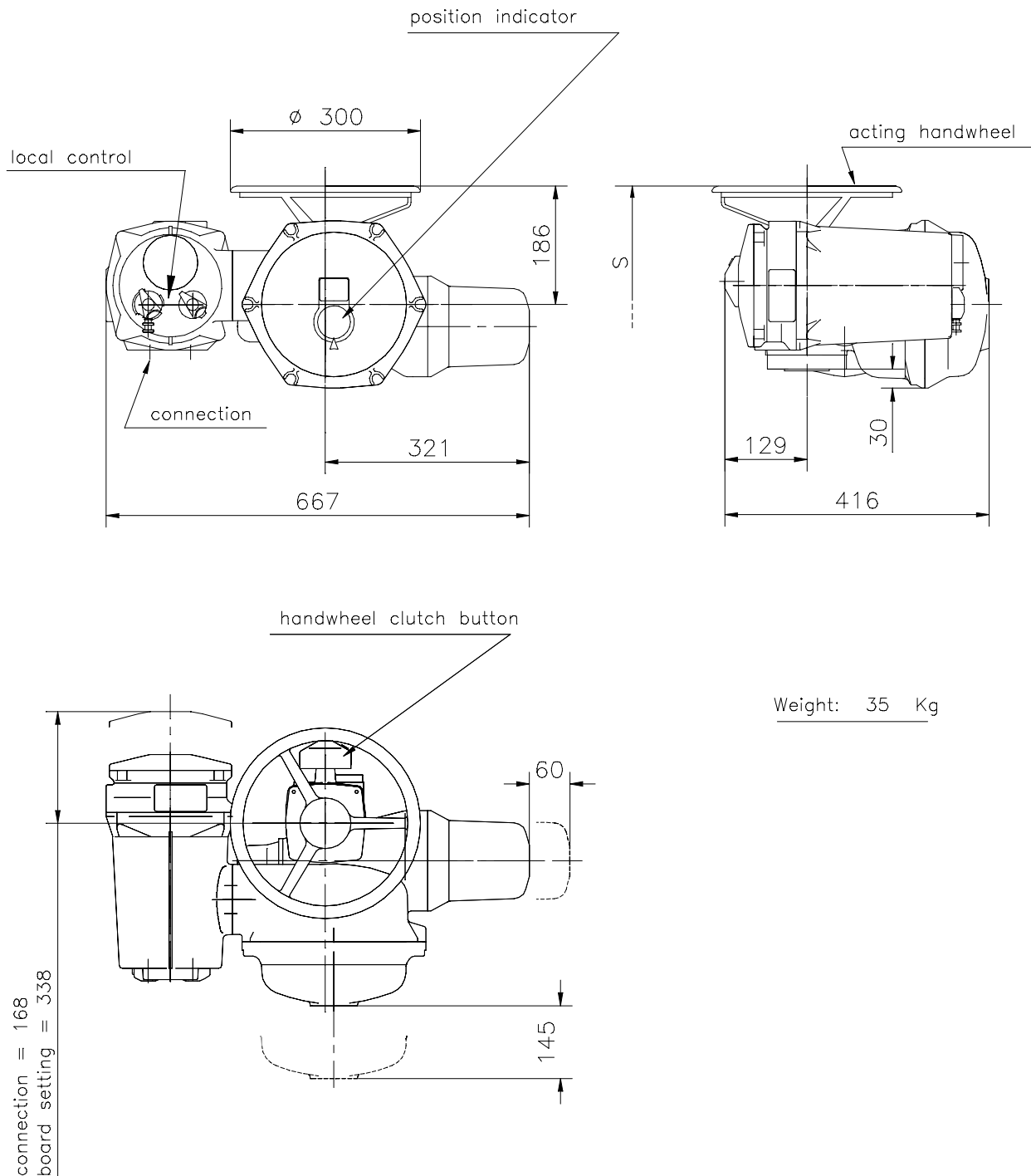
For valve with non-rising stem.

standard ST6

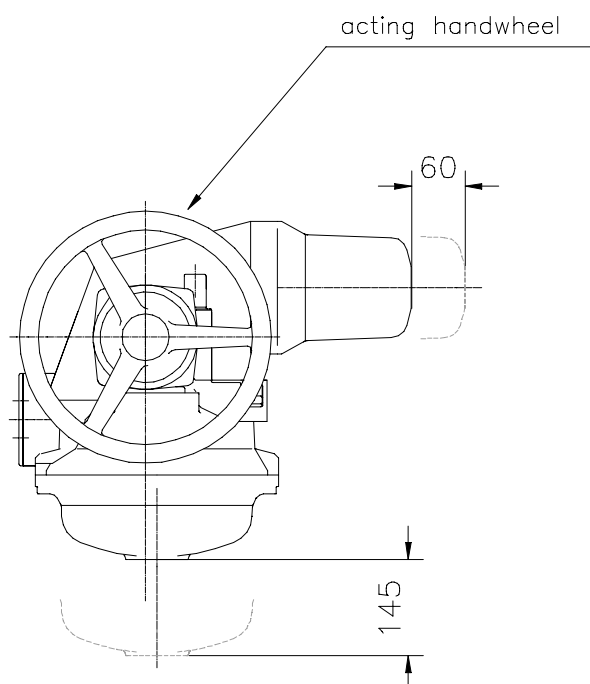
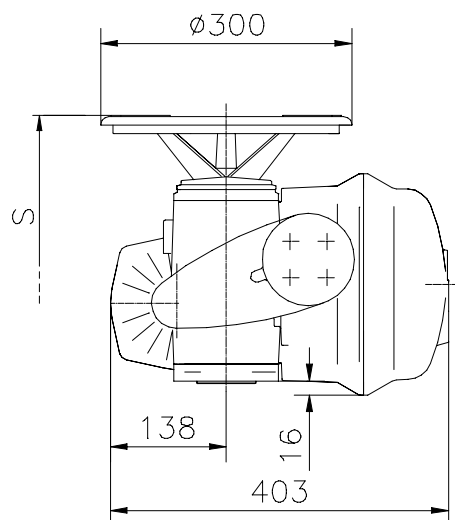
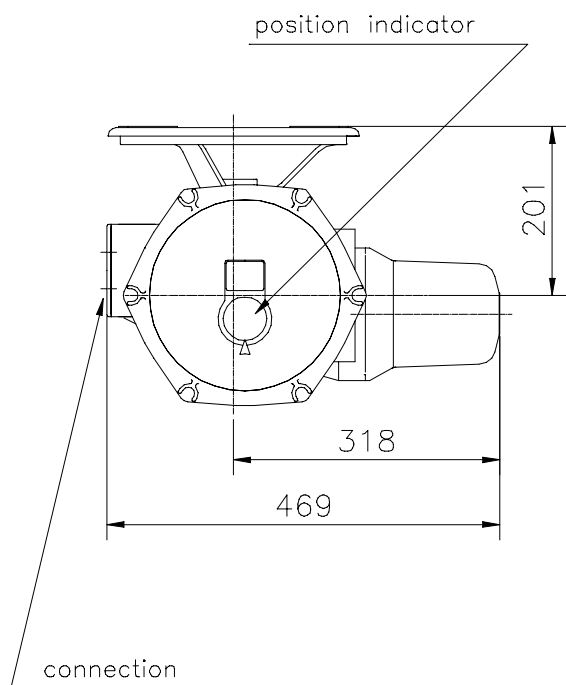


Weight: 25 Kg

ST6 + FPX box

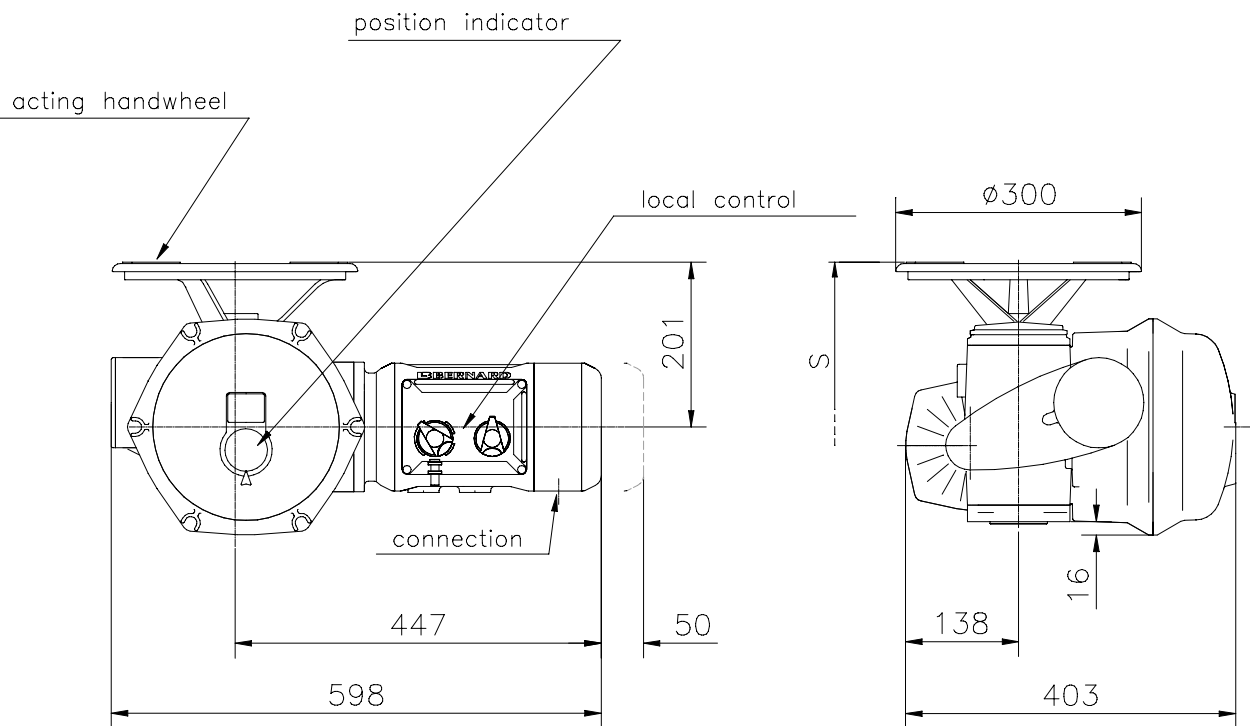


standard ST14



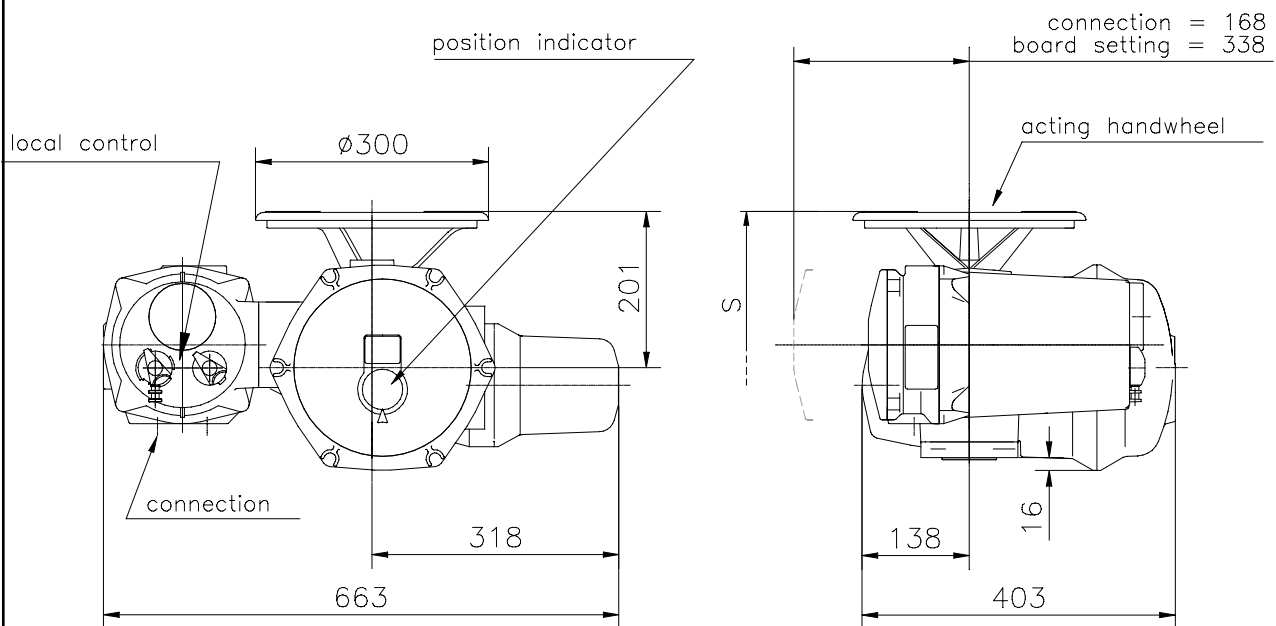
Weight: 31Kg

ST14 + FP box



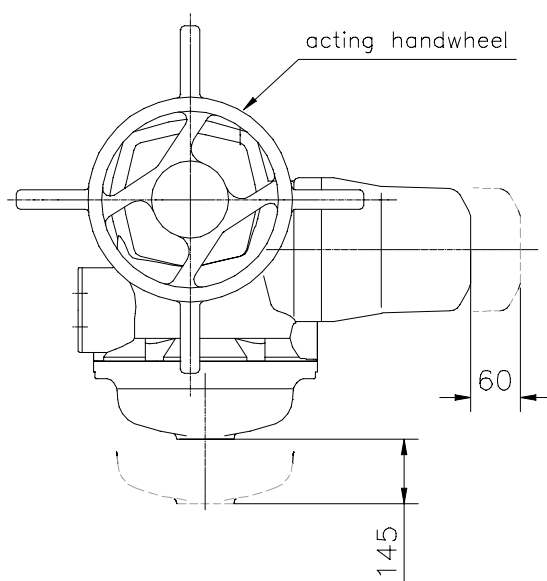
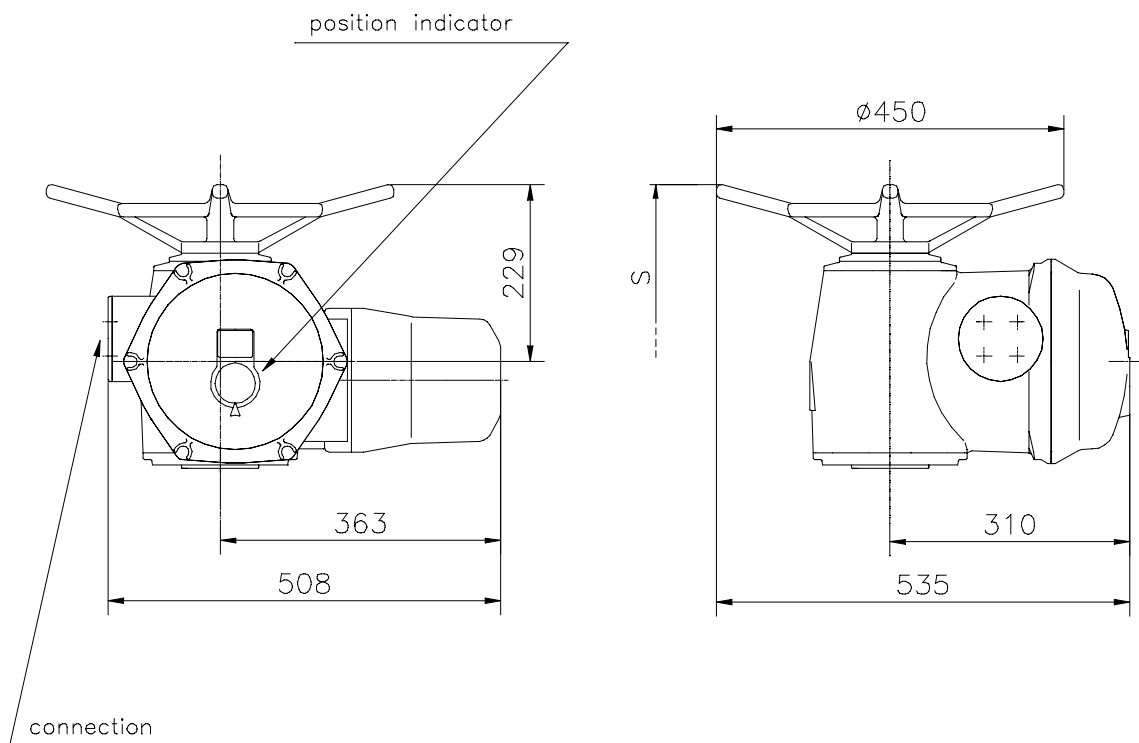
Weight: 37 Kg

ST14 + FPX box



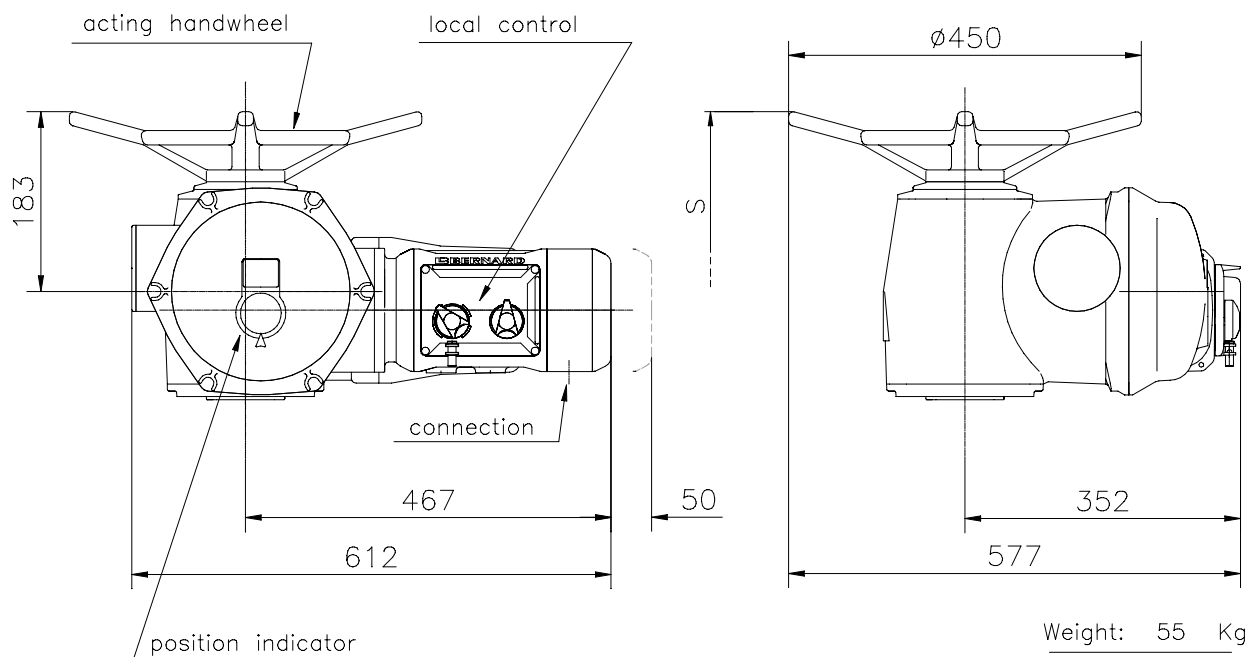
Weight: 41 Kg

standard ST30

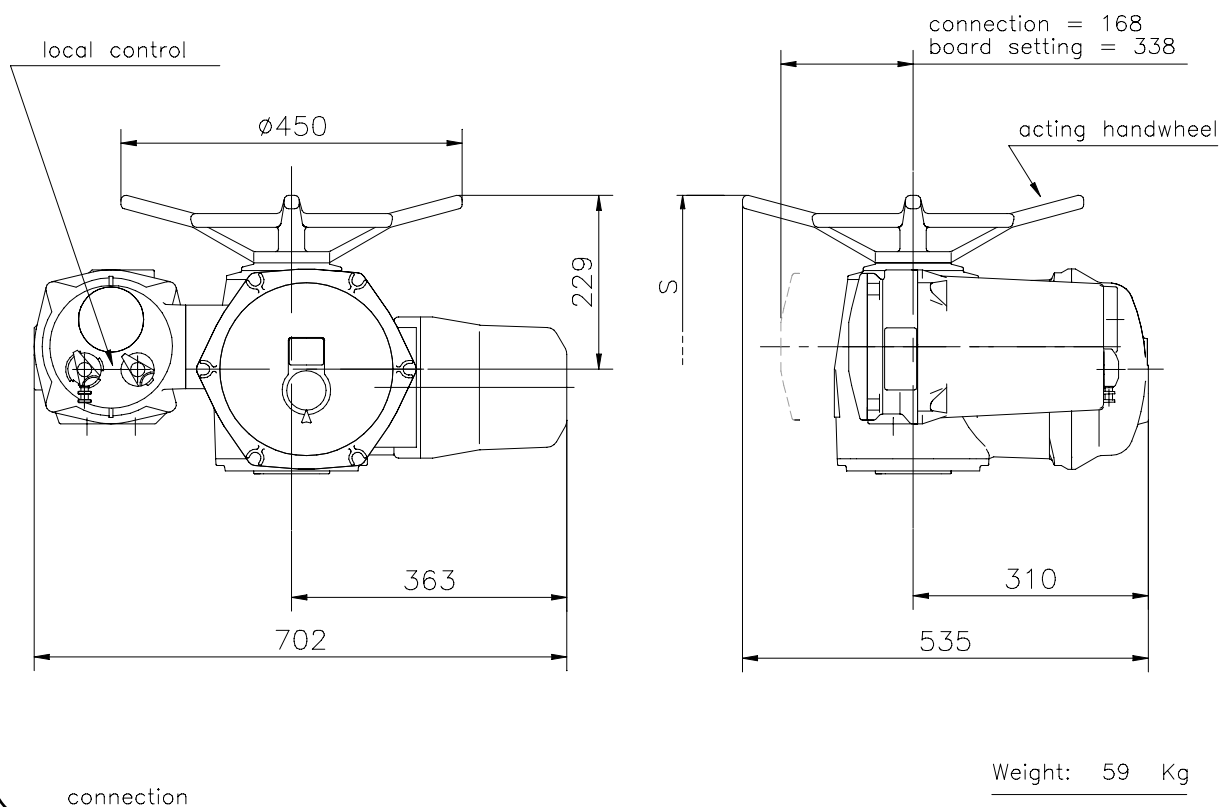


Weight: 49 Kg

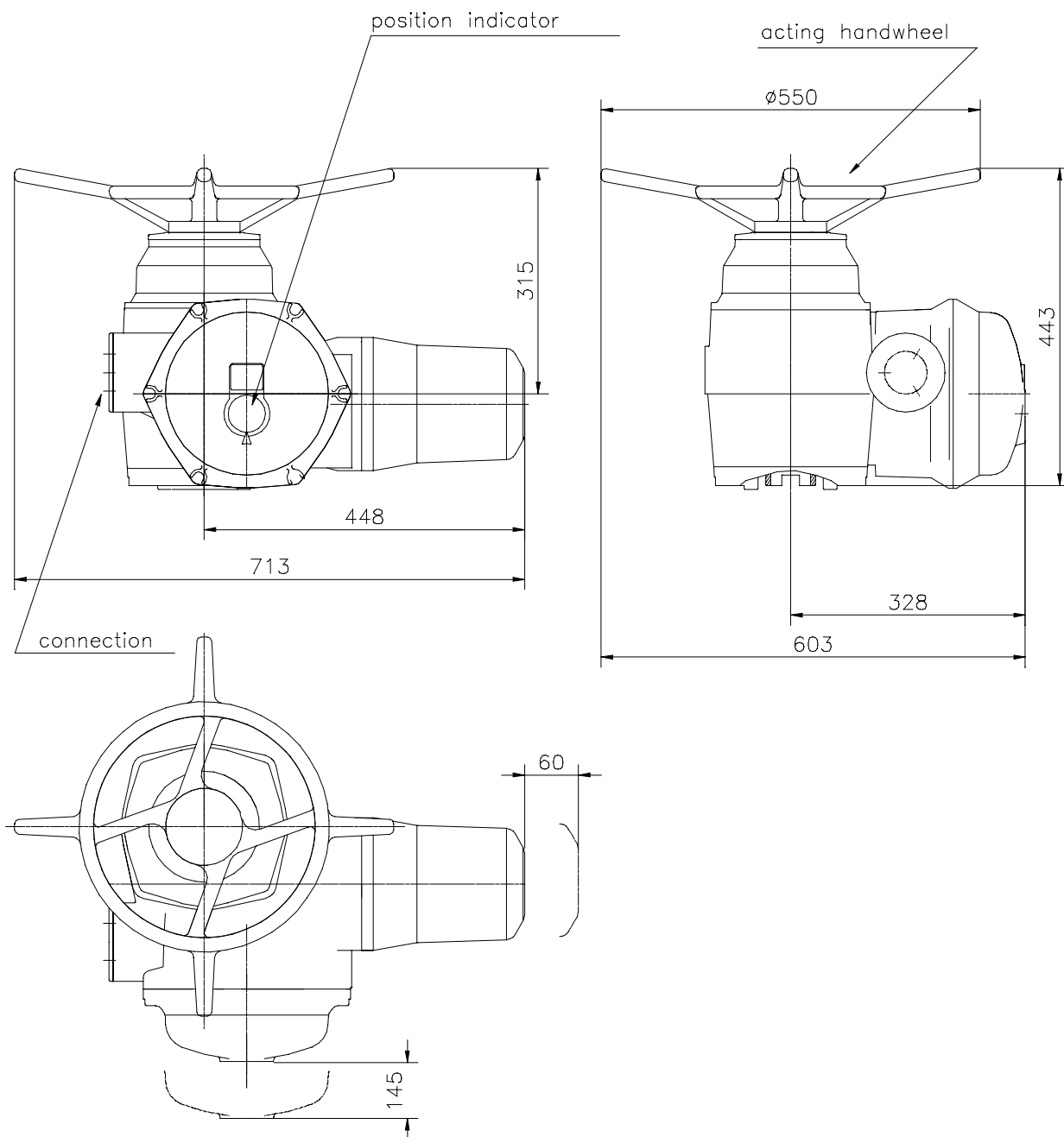
ST30 + FP box



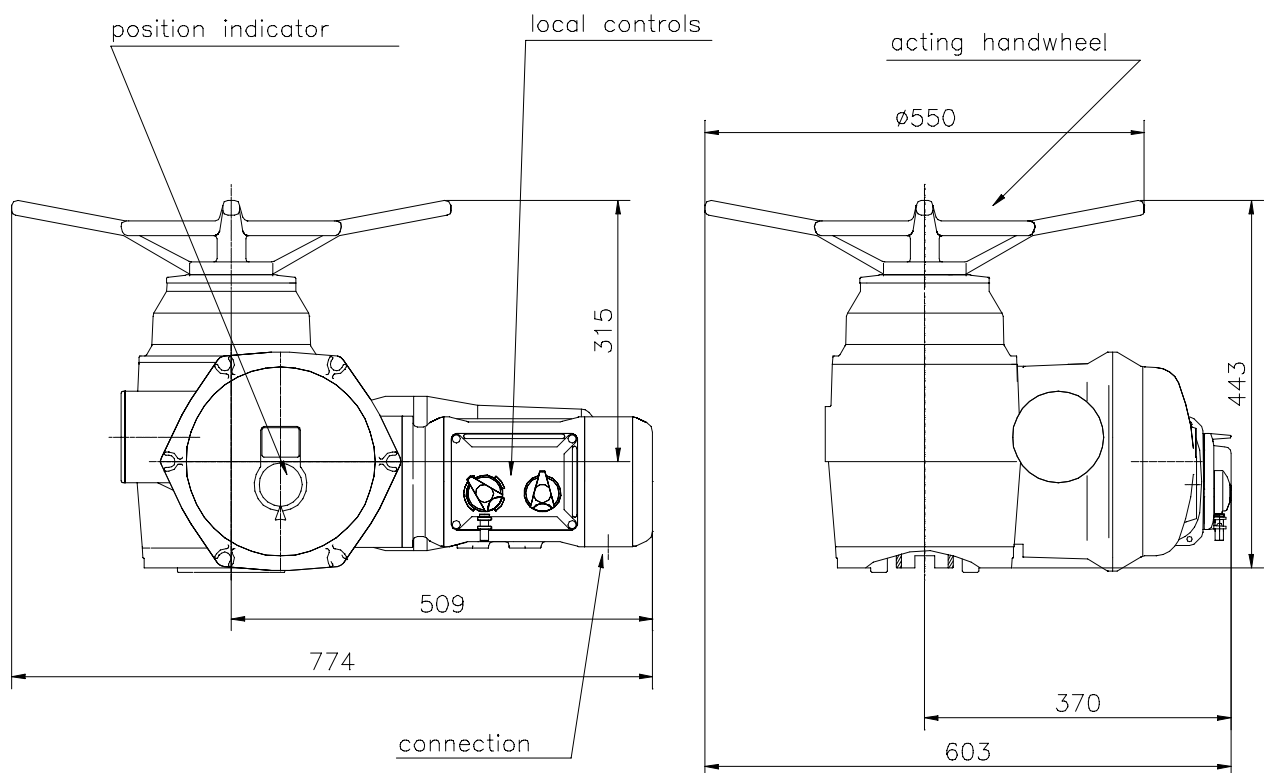
ST30 + FPX box



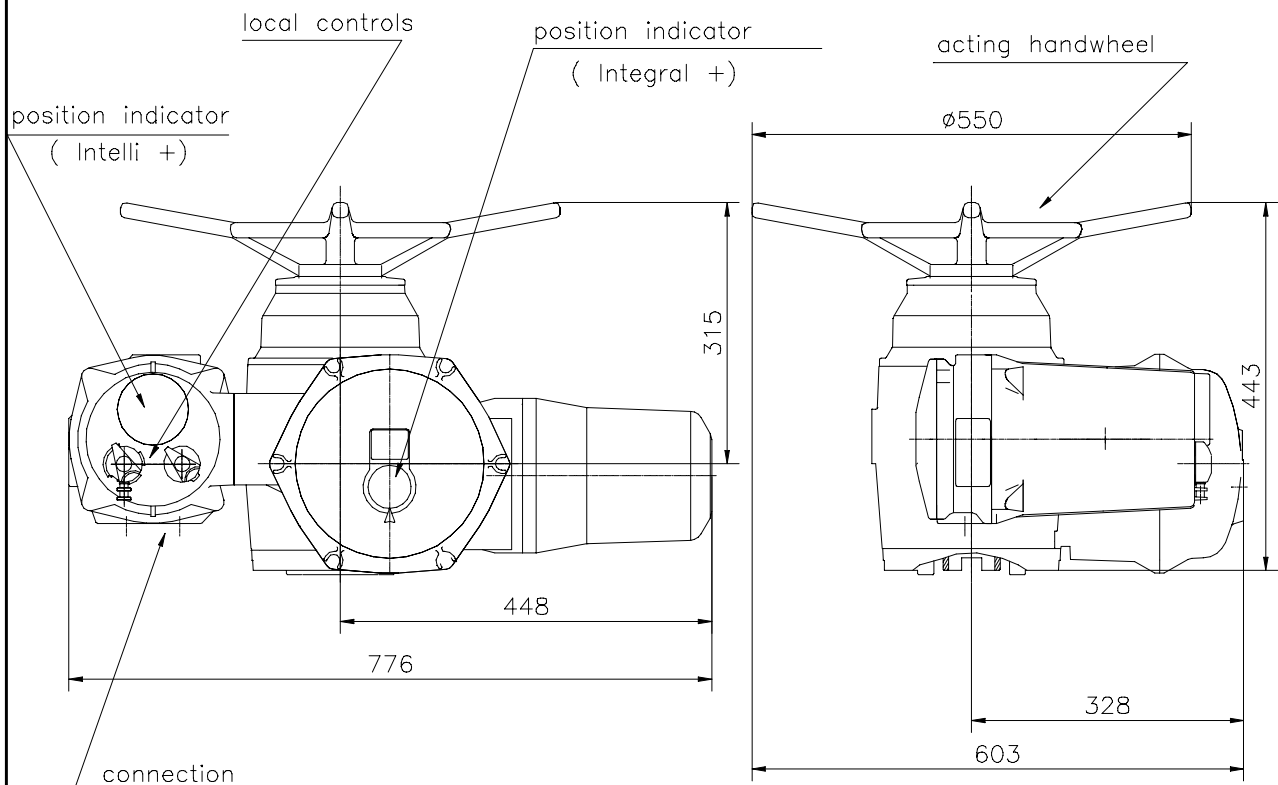
standard ST70



ST70 + FP box



ST70 + FPX box

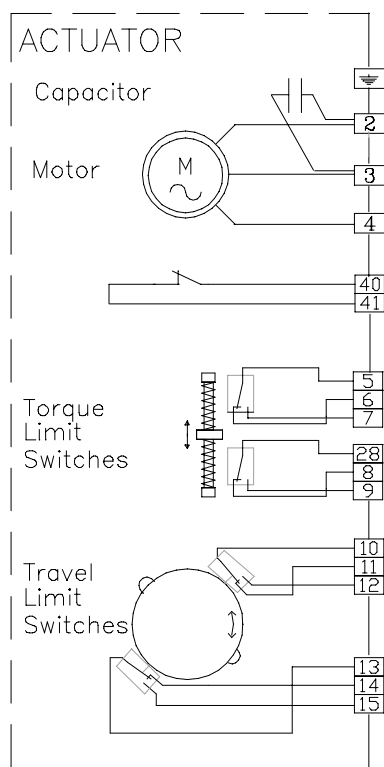




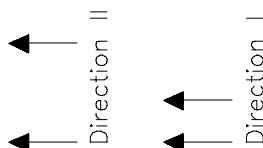
Wiring diagrams

ST Range

S81200/00



Single phase supply



Thermal cut-out in motor

Torque limit switch Direction of rotation I

Torque limit switch Direction of rotation II

Travel limit switch Direction of rotation I

Travel limit switch Direction of rotation II

Function of Switches

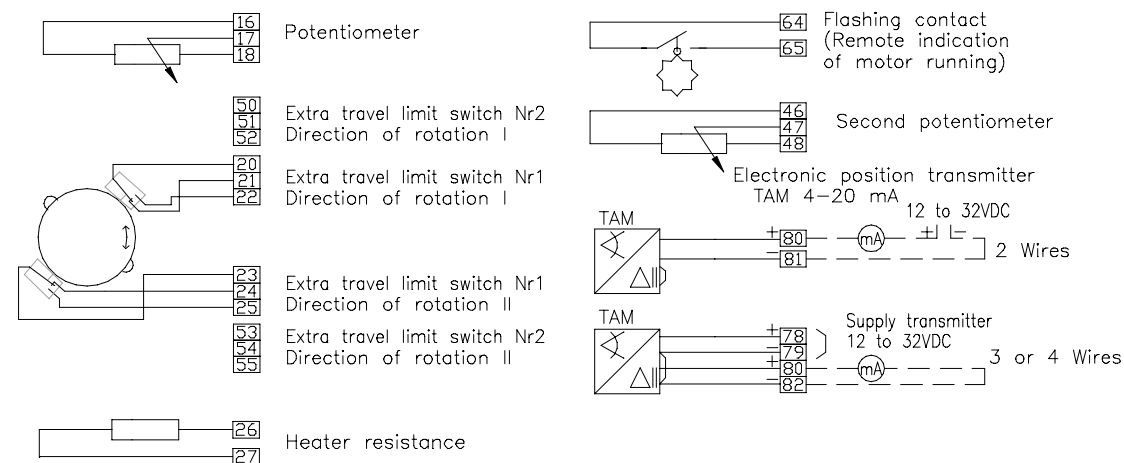
Direction of rotation :

I) Anti-clockwise (normally opening)

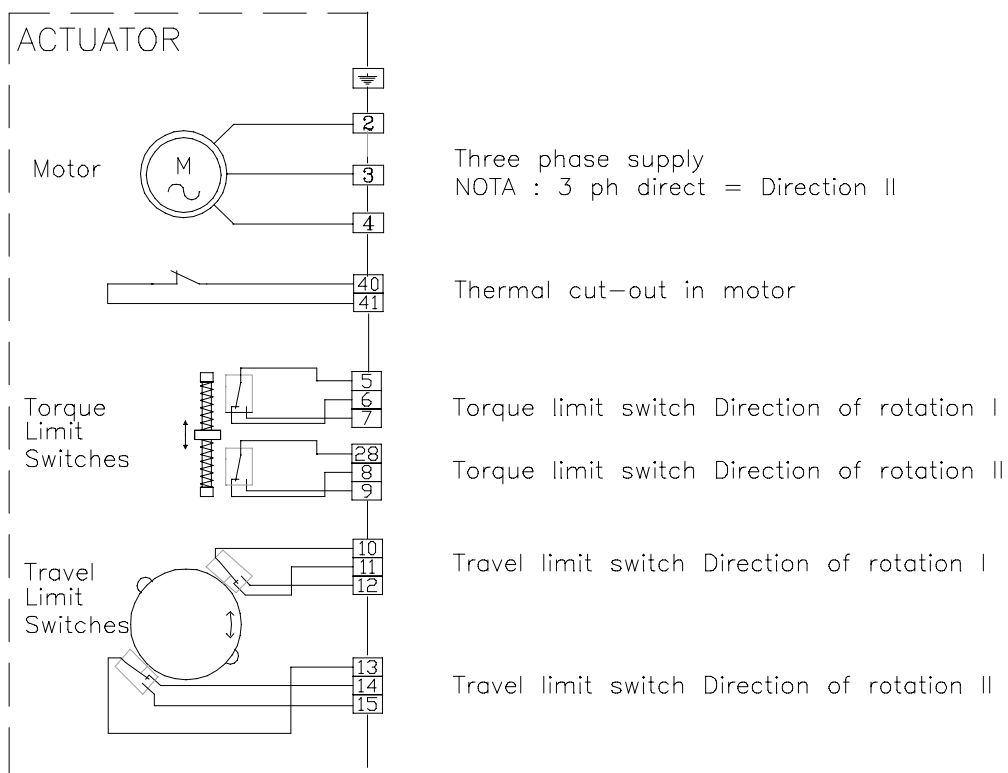
II) Clockwise (normally closing)

Direction of rotation seen on opposite side of fixing flange of actuator

OPTIONS



S81100/00



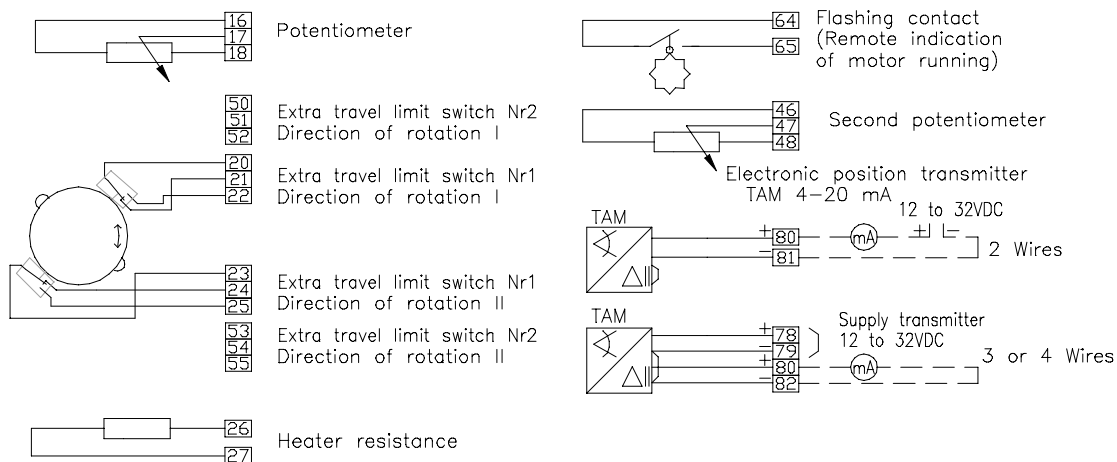
Function of Switches

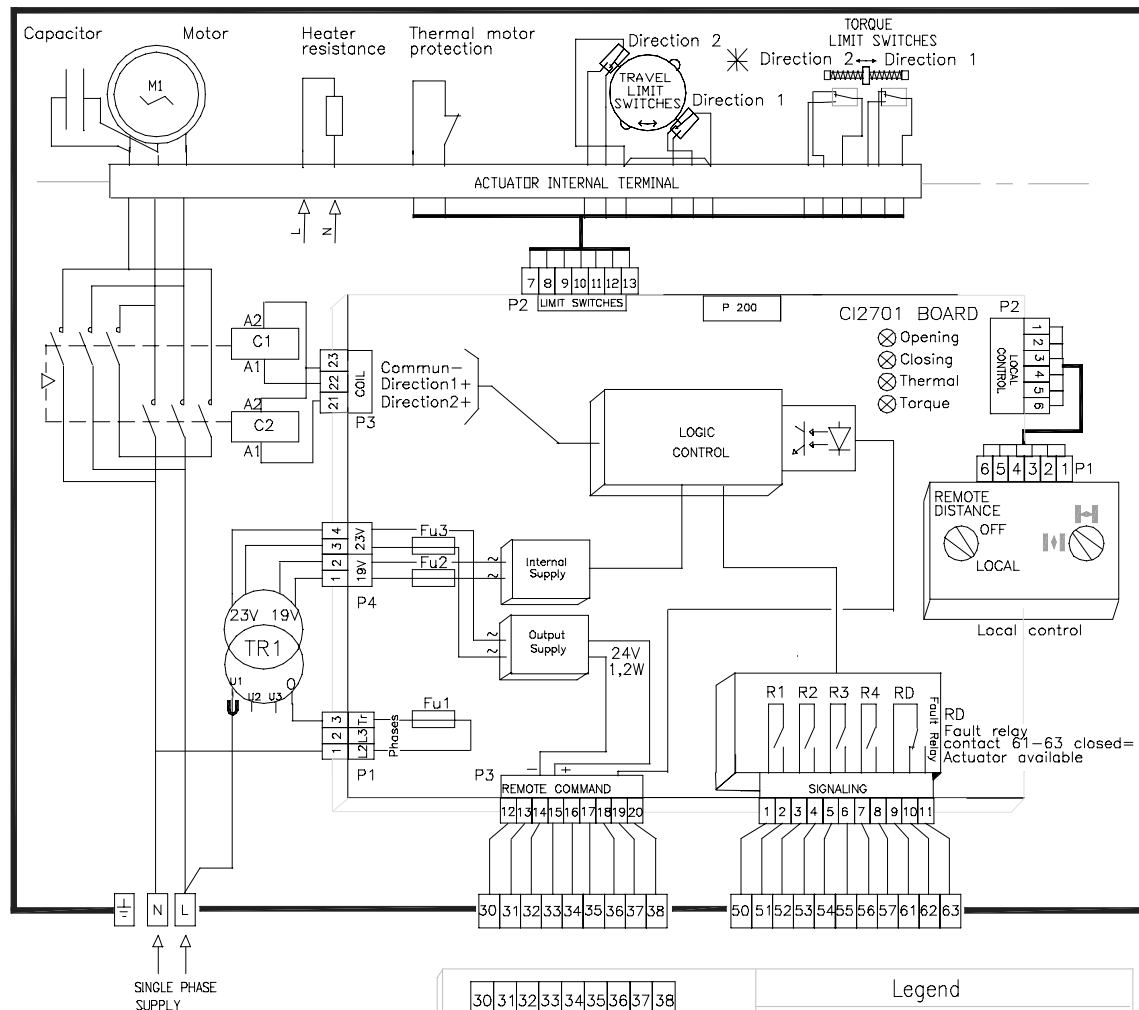
Direction of rotation :

- I) Anti-clockwise (normally opening)
- II) Clockwise (normally closing)

Direction of rotation seen on opposite side of fixing flange of actuator

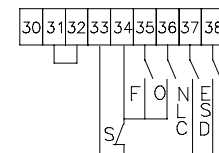
OPTIONS



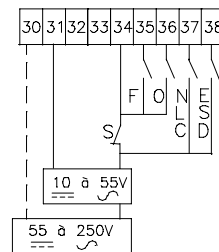


The order in phase is not important.
If one phase is missing, the actuator will not start
and gives a signal (fault relay)

configuration	7A	7B
Direction1	Opening	Closing
Direction2	Closing	Opening



Connection for control
by contact



Connection for control
by voltage

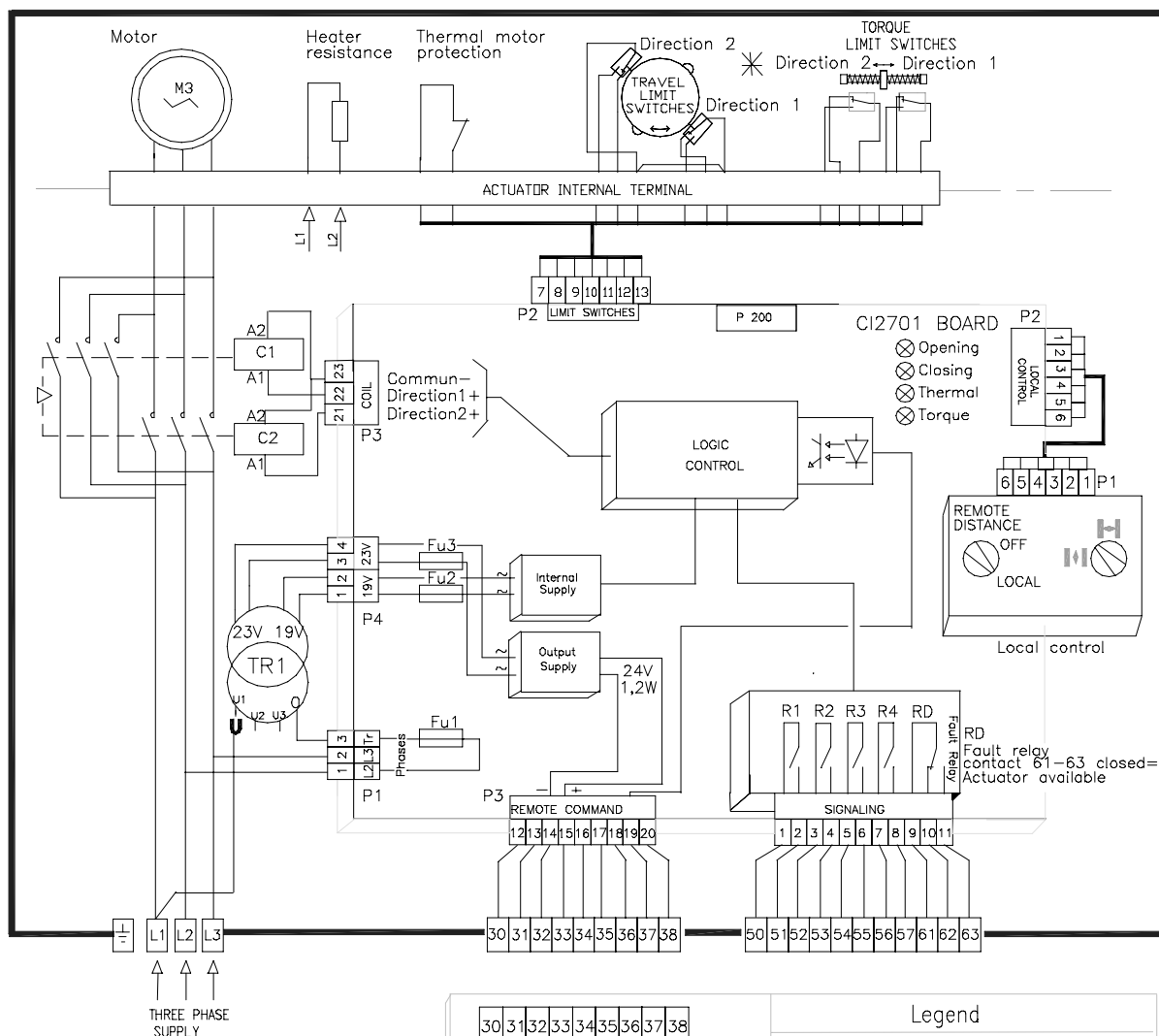
Legend

ESD	Emergency shut down
NLC	Local inhibition
F	Closing
O	Opening
S	Stop
Fu	Fuse
TR	Transformer
R1	} Signaling Relay To be configured (Indication assignment See configuration table.)
R2	
R3	
R4	
RD	

Note:

To cancel self holding
do not connect terminal 34

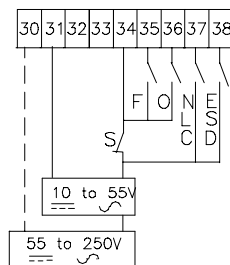
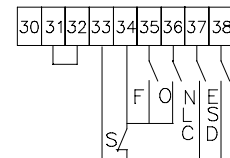
S20100/00



The order in phase is not important.
If one phase is missing, the actuator will not start and gives a signal (fault relay)

✱

configuration	7A	7B
Direction1	Opening	Closing
Direction2	Closing	Opening



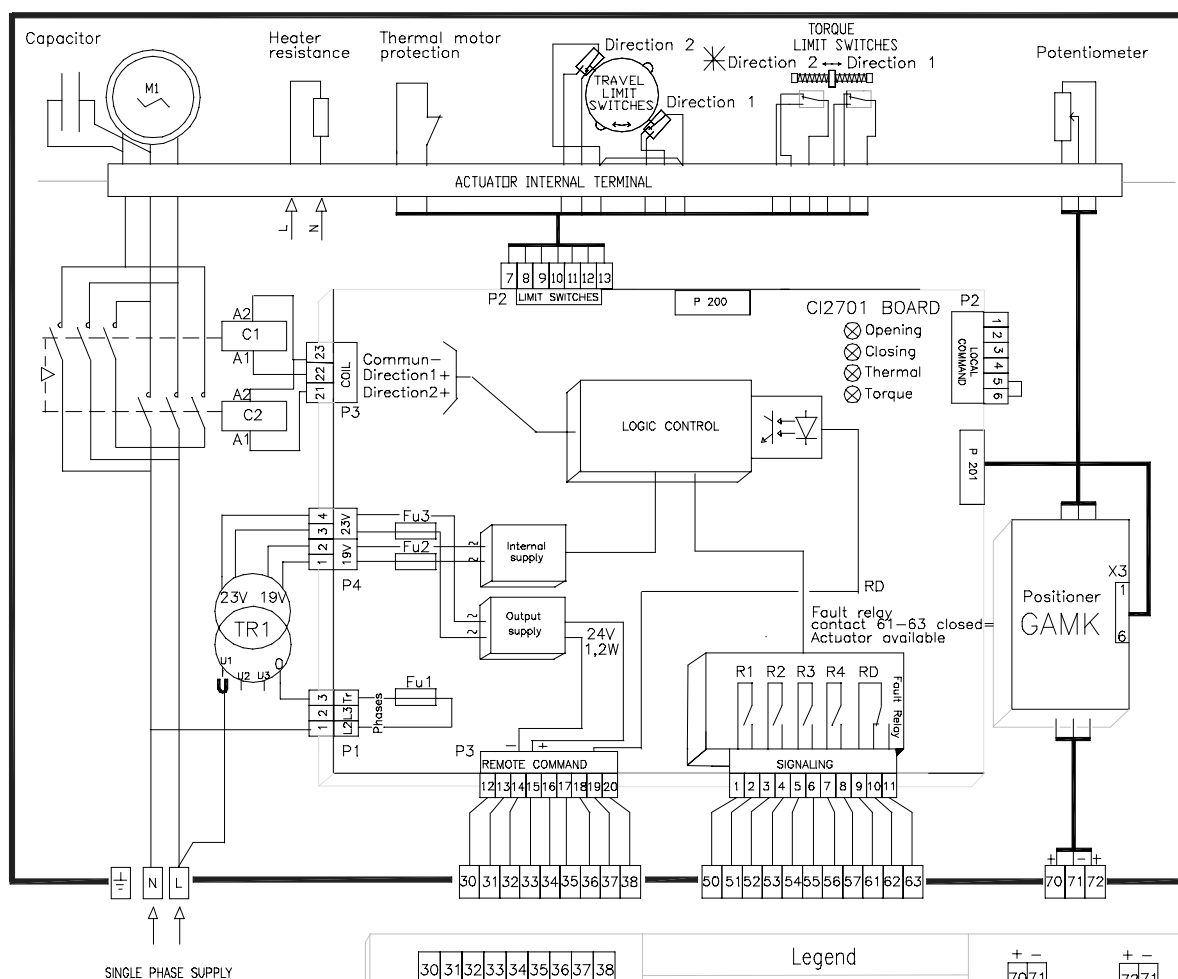
Legend

ESD	Emergency shut down
NLC	Local inhibition
F	Closing
O	Opening
S	Stop
Fu	Fuse
TR	Transformer
R1	Signaling Relay To be configurated (Indication assignment See configuration table.)
R2	
R3	
R4	
RD	Fault relay contact 61-63 closed= Actuator available

Note:

To cancel self holding
do not connect terminal 34

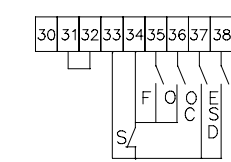
S25200/00



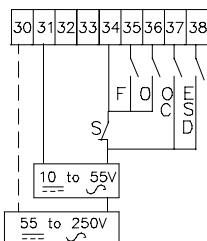
The order in phase is not important.
If one phase is missing, the actuator will not start and gives a signal (fault relay)



configuration	7A	7B
Direction1	Opening	Closing
Direction2	Closing	Opening



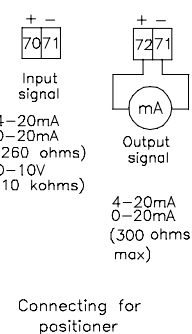
Connection for control by contact



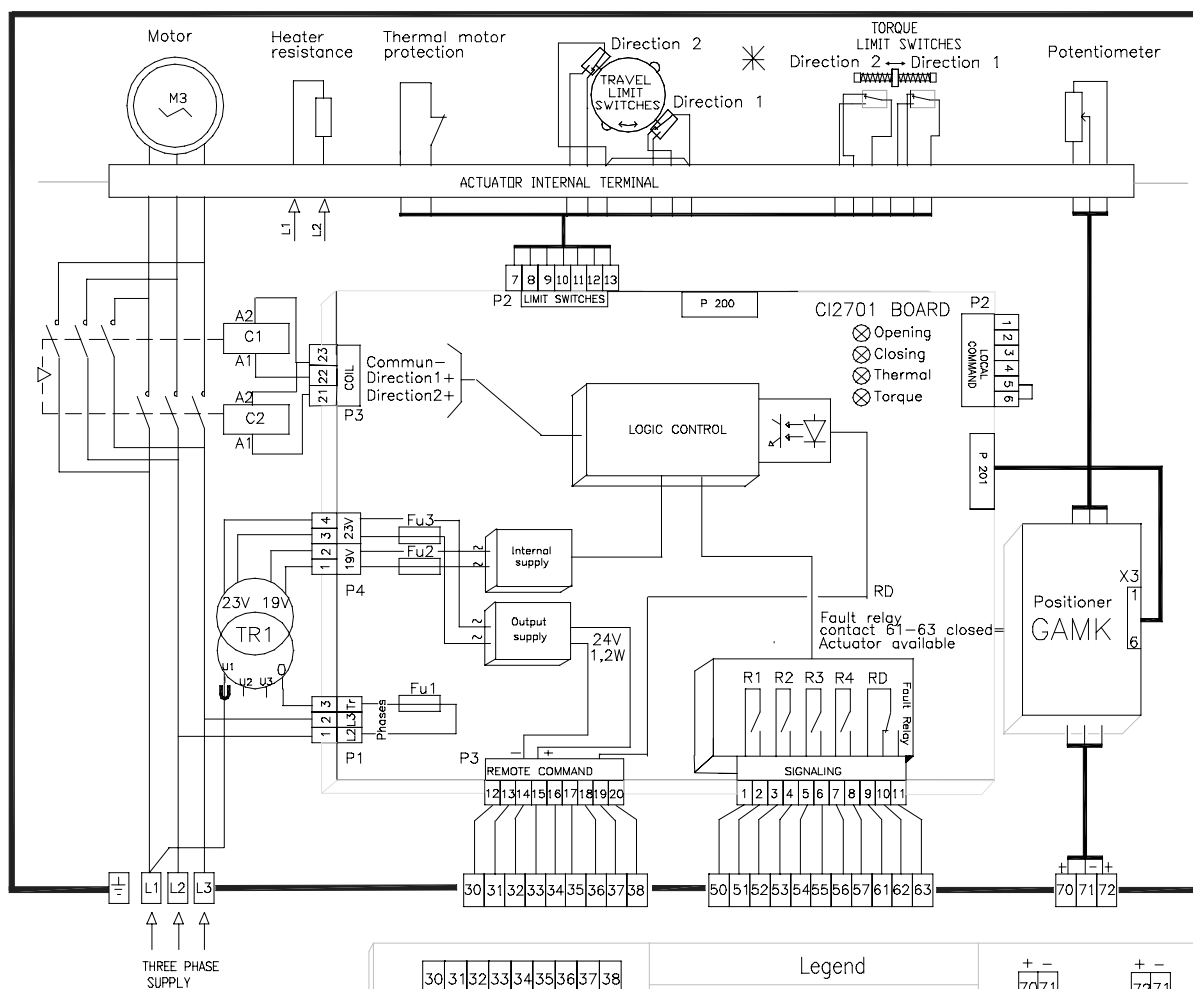
Connection for control by voltage

Legend	
ESD	Emergency shut down
OC	Closed contact= ON-OFF control
F	Closing
O	Opening
S	Stop
Fu	Fuse
TR	Transformer
R1	Signaling Relay
R2	
R3	
R4	
RD	To be configured (Indication assignment See configuration table.)

Note:
To cancel self holding do not connect terminal 34



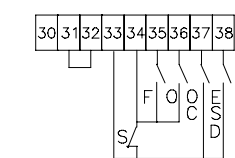
S25100/00



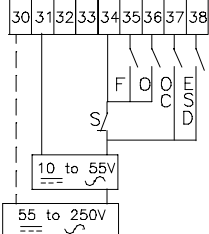
The order in phase is not important. If one phase is missing, the actuator will not start and gives a signal (fault relay)



configuration	7A	7B
Direction1	Opening	Closing
Direction2	Closing	Opening



Connection for control by contact

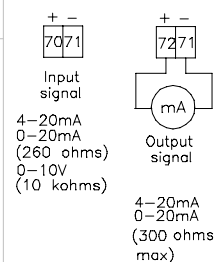


Connection for control by voltage

Legend

ESD	Emergency shut down
OC	Closed contact= ON-OFF control
F	Closing
O	Opening
S	Stop
Fu	Fuse
TR	Transformer
R1	Signaling Relay
R2	
R3	
R4	
RD	To be configured (Indication assignment See configuration table.)

Note:
To cancel self holding do not connect terminal 34

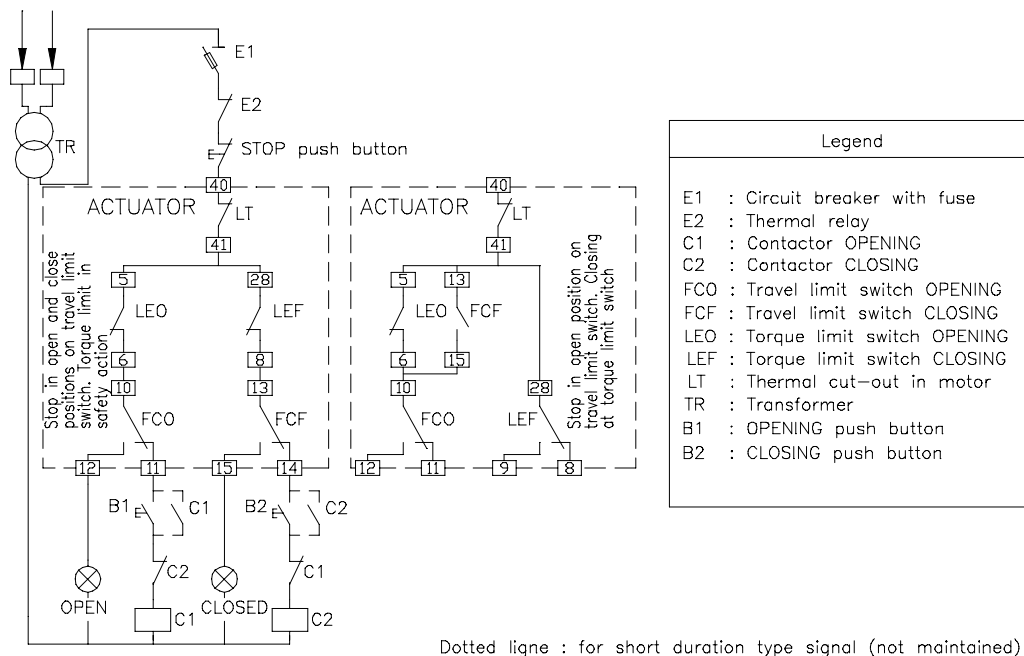


Connecting for positioner

EXAMPLE OF WIRING DIAGRAM FOR ST ACTUATOR

This diagram illustrates Actuator in intermediate position

CONTROL CIRCUIT



SUPPLY CIRCUIT

