

SKINTOP® ST SKINTOP® STR

Cable gland for fast installation



SKINTOP® ST Standard

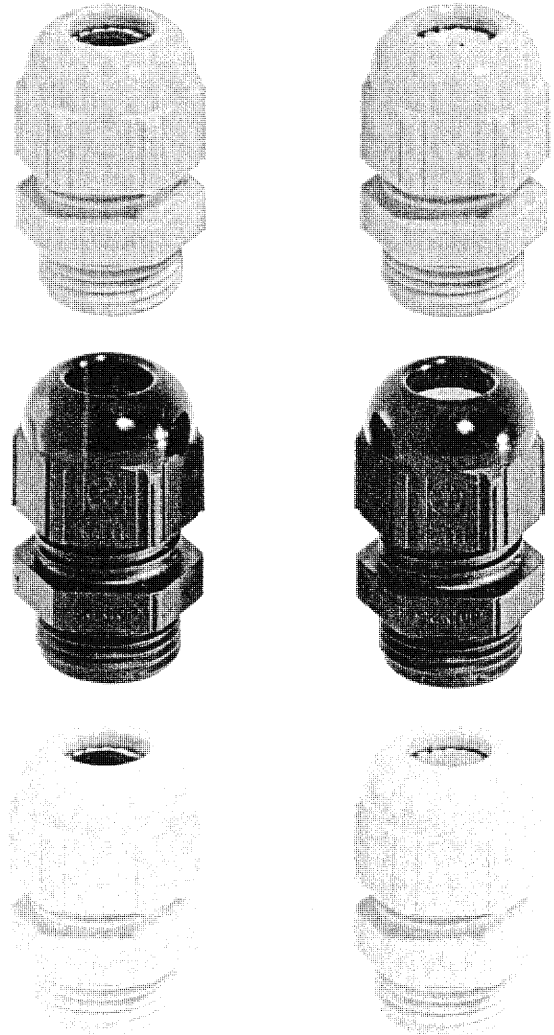
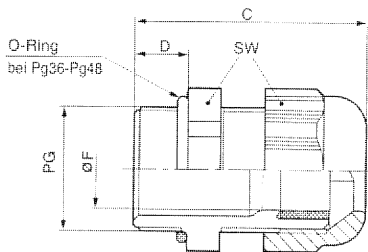
The new cable gland made of polyamide, with metric thread, easy-to-assemble, with the many good features of SKINTOP®.

SKINTOP® ST is suitable for universal application, especially in machinery and equipment manufacture, in measuring and control instrument manufacture, in automation, electrical engineering and robotics.

Suitable accessories see page 412.

SKINTOP® STR With Reducing Seal Insert

This SKINTOP® design is equipped with a reducing seal insert, which enables cables of smaller outside diameter to be sealed.



Technical Data

- Material:
Body: Polyamide
Sealing: Neopren
- Temperature range:
-20°C to +80°C
- RAL 7001 silver grey
RAL 7035 light grey
RAL 9005 black
- Protection class: IP 68 -5 bar
- On request:
Special thread

Part Number	Type- PG-size	Clamping range mm	Wrench size mm	C mm	D mm	Pack size pieces
SKINTOP® ST silver grey						
5301 5000	ST 7	2,5 - 6,5	15	32	8	100
5301 5010	ST 9	3,5 - 8	19	36	8	100
5301 5020	ST 11	4 - 10	22	38	8	100
5301 5030	ST 13,5	6 - 12	24	41	9	100
5301 5040	ST 16	9 - 14	27	44	10	50
5301 5050	ST 21	13 - 18	33	49	11	50
5301 5060	ST 29	14 - 25	42	56	11	25
5301 5070	ST 36	24 - 32	53	66	13	10
5301 5080	ST 42	35 - 38	60	68	13	5
5301 5090	ST 48	39 - 44	65	69	14	5
5301 7010	ST M 16 x 1,5	3,5 - 8	19	40	12	100
5301 7030	ST M 20 x 1,5	5 - 12	24	45	13	100
5301 7040	ST M 25 x 1,5	9 - 14	27	47	13	50

SKINTOP® STR

Cable gland for fast installation

Part Number	Type- PG-size	Clamping range mm	Wrench size mm	C mm	D mm	Pack size pieces
SKINTOP® ST black						
5301 5200	ST 7	2,5 - 6,5	15	32	8	100
5301 5210	ST 9	3,5 - 8	19	36	8	100
5301 5220	ST 11	4 - 10	22	38	8	100
5301 5230	ST 13,5	6 - 12	24	41	9	100
5301 5240	ST 16	9 - 14	27	44	10	50
5301 5250	ST 21	13 - 18	33	49	11	50
5301 5260	ST 29	14 - 25	42	56	11	25
5301 5270	ST 36	24 - 32	53	66	13	10
5301 5280	ST 42	35 - 38	60	68	13	5
5301 5290	ST 48	39 - 44	65	69	14	5
5301 7210	STM 16 x 1,5	3,5 - 8	19	40	12	100
5301 7230	STM 20 x 1,5	5 - 12	24	45	13	100
5301 7240	STM 25 x 1,5	9 - 14	27	47	13	50
SKINTOP® ST light grey						
5301 8000	ST 7	2,5 - 6,5	15	32	8	100
5301 8010	ST 9	3,5 - 8	19	36	8	100
5301 8020	ST 11	4 - 10	22	38	8	100
5301 8030	ST 13,5	6 - 12	24	41	9	100
5301 8040	ST 16	9 - 14	27	44	10	50
5301 8050	ST 21	13 - 18	33	49	11	50
5301 8060	ST 29	14 - 25	42	56	11	25
5301 8070	ST 36	24 - 32	53	66	13	10
5301 8080	ST 42	35 - 38	60	68	13	5
5301 8090	ST 48	39 - 44	65	69	14	5
SKINTOP® STR silver grey						
5301 5100	STR 7	1,5 - 5	15	32	8	100
5301 5110	STR 9	2 - 6	19	36	8	100
5301 5120	STR 11	2 - 7	22	38	8	100
5301 5130	STR 13,5	4 - 9	24	41	9	100
5301 5140	STR 16	6 - 12	27	44	10	50
5301 5150	STR 21	9 - 16	33	49	11	50
5301 5160	STR 29	11 - 20	42	56	11	25
5301 5170	STR 36	17 - 26	53	66	13	10
5301 5180	STR 42	22 - 31	60	68	13	5
5301 5190	STR 48	26 - 35	65	69	14	5
5301 7110	STR M 16 x 1,5	2 - 6	19	40	12	100
5301 7130	STR M 20 x 1,5	4 - 9	24	45	13	100
5301 7140	STR M 25 x 1,5	6 - 12	27	47	13	50
SKINTOP® STR black						
5301 5300	STR 7	1,5 - 5	15	32	8	100
5301 5310	STR 9	2 - 6	19	36	8	100
5301 5320	STR 11	2 - 7	22	38	8	100
5301 5330	STR 13,5	4 - 9	24	41	9	100
5301 5340	STR 16	6 - 12	27	44	10	50
5301 5350	STR 21	9 - 16	38	49	11	50
5301 5360	STR 29	11 - 20	42	56	11	25
5301 5370	STR 36	17 - 26	53	66	13	10
5301 5380	STR 42	22 - 31	60	68	13	5
5301 5390	STR 48	26 - 35	65	69	14	5
5301 7310	STR M16 x 1,5	2 - 6	19	40	12	100
5301 7330	STR M20 x 1,5	4 - 9	24	45	13	100
5301 7340	STR M25 x 1,5	6 - 12	27	47	13	50
SKINTOP® STR light grey						
5301 8100	STR 7	1,5 - 5	15	32	8	100
5301 8110	STR 9	2 - 6	19	36	8	100
5301 8120	STR 11	2 - 7	22	38	8	100
5301 8130	STR 13,5	4 - 9	24	41	9	100
5301 8140	STR 16	6 - 12	27	44	10	50
5301 8150	STR 21	9 - 16	38	49	11	50
5301 8160	STR 29	11 - 20	42	56	11	25
5301 8170	STR 36	17 - 26	53	66	13	10
5301 8180	STR 42	22 - 31	60	68	13	5
5301 8190	STR 48	26 - 35	65	69	14	5

Selection Table Chemical Resistance

T2

The information is given to the best of your knowledge and experience, but must be regarded as being for guidance only. A definite judgement depends in most cases on test under actual working conditions.

Concentration		Halogen free cables and leads UNITRONIC® JH-HSTH, NPK316H, (NHX)H ESD, UNITRONIC® JE-HSTH...80 E90	HITRONIC® LWL-Cable	UNITRONIC® 100 CY, LVCY, twisted pairs, L2ZY, YTP, L2ZY, P4MF, UNITRONIC® Computer cable, LAN, UNITRONIC® LVCY, LVCY, UNITRONIC-FD-CY	GULEX-FD® CLASSIC-810, -810 CY UNITRONIC® LVCY, L2ZY, (TP), UNITRONIC-FD® -FD CY	LYSTY, LFY, STY, LZY, JE, Y, JZY...VIMPF	Coaxial cable (PE) A-2Y(L)2Y A-2Y(F) 2Y	Copper earthing cable E51Y	KRANFLEX® NGHTOU, NSSHOU, NSGAFOU; Welding cable H01N2, D; KRANFLEX®-VS; H05BN-F; H07RN-F	Single cores LV, H05-VK, H07-VK, LFY, UL/CSA wiring leads Multinorm wiring leads	H05 RR-F
Inorganic chemicals	Alums	cs.	○	+	+	+	+	+	+	+	+
	Aluminium salts	a.c.	○	+	+	+	+	+	+	+	+
	Ammonia, aq.	10%	-	+	+	+	+	+	+	+	-
	Ammonium acetate, aq.	a.c.	+	+	+	+	+	+	+	+	+
	Ammonium carbonate, aq.	a.c.	+	+	+	+	+	+	+	+	+
	Ammonium chloride, aq.	a.c.	+	+	+	+	+	+	+	+	+
	Barium salts	a.c.	○	+	+	+	+	+	+	+	+
	Boric acid, aq.		○	+	+	+	+	+	+	+	+
	Calcium chloride, aq.	cs.	○	+	+	+	+	+	+	+	+
	Calcium nitrate, aq.	cs.	○	+	+	+	+	+	+	+	+
	Chromium salts, aq.	cs.	+	+	+	+	+	+	+	+	+
	Potassium carbonate, aq. (potash)		+	+	+	+	+	+	○	+	+
	Potassium chlorate, aq.	cs.		+	+	+	+	○	+	+	+
	Potassium chloride, aq.	cs.	○	+	+	+	+	+	+	+	+
	Potassium dichromate, aq.		+	+	+	+	+	+	+	+	+
	Potassium iodide, aq.		○	+	+	+	+	+	+	+	+
	Potassium nitrate, aq.	cs.	○	+	+	+	+	+	+	+	+
	Potassium permanganate, aq.		○	+	○	○	○	+	○	+	+
	Potassium sulfate, aq.		○	+	+	+	+	+	+	+	+
	Copper salts, aq.	cs.	○	+	+	+	+	+	+	+	+
	Magnesium salts, aq.	cs.	○	+	+	+	+	+	+	+	+
	Sodium bicarbonate, aq. (soda)			+	+	+	+	+	+	+	+
	Sodium bisulphite, aq.			+	+	+	+	+	+	+	+
	Sodium chloride, aq. (cooking salt)		○	+	+	+	+	+	+	+	+
	Sodium thiosulphate, aq. (fixing salt)			+	+	+	+	+	+	+	+
	Nickel salts, aq.	cs.	○	+	+	+	+	+	+	+	+
	Phosphoric acid	50%		+	+	+	+	+	+	+	-
	Mercury	100%	+	+	+	+	+	+	+	+	+
	Mercury salts, aq.	cs.	○	+	+	+	+	+	+	+	+
	Nitric acid	30%	-	-	-	-	-	○	-	-	-
	Hydrochloric acid	conc.	-	-	-	-	-	-	-	-	-
	Sulphur	100%	+	+	+	+	+	+	+	+	-
	Sulphur dioxide, gaseous			+	+	+	+	+	+	+	+
	Carbon disulphide		-	-	-	-	-	-	-	-	-
	Hydrogen sulphide			+	+	+	+	○	+	+	+
	Sea water		○	+	+	+	+	+	+	+	+
	Silver salts, aq.		○	+	+	+	+	+	+	+	+
	Hydrogen peroxide	3%		+	+	+	+	+	+	+	+
	Zinc salts, aq.		○	+	+	+	+	+	+	+	+
	Stannous chloride		○	+	+	+	+	+	+	+	+
	Organic chemicals	Aethyl alcohol	100%	-	-	-	-	+	-	+	+
		Formic acid	30%		-	-	-	+	-	+	+
		Gasoline		-	-	-	-			○	-
		Succinic acid, aq.	cs.		+	+	+	+	+	+	+
		Acetic acid	20%	-	○	○	○	+	○	+	○
Hydraulic oil			-	-	-	-	-	-	-	-	
Isopropyl alcohol		100%		-	-	-		+		+	
Machine oil			-	○	○	○	○	○	○	○	
Methyl alcohol		100%	○	○	○	○	○	+	○	○	
Oxalic acid, aq.		cs.	○	+	+	+	+	+	○	+	
Cutting oil			-	○	○	○	○	○	○	-	
Vegetable oils and fats			-	○	○	○	○	○	○	-	
Tartaric acid, aq.			○	+	+	+	+	+	+	+	
Citric acid			○	+	+	+	+	+	+	+	

- nil to slight reaction
○ slight to average reaction
- average to strong reaction

a.c. = any concentration
aq. = in aqueous solution
cs. = cold saturated

all values are for 20 °C

Selection Table Chemical Resistance

T1

The information is given to the best of your knowledge and experience, but must be regarded as being for guidance only. A definite judgement depends in most cases on test under actual working conditions.

		Concentration	ÖFLEX® CLASSIC 100; -110; ÖUMASS® ÖFLEX-SERVO® 700; -700 CY -710; -720; -730; -730 CY UNITRONIC® 100; FB	ÖFLEX® 90; ÖFLEX® 140 NYSIVÖ ÖFLEX® 150; 150 CY QUATTRO; -190; -190 CY ÖFLEX-HP® 880/890 CY	ÖFLEX® CLASSIC 100 SY; -100 CY ÖFLEX® CLASSIC 110 SY; -110 CY ÖUMASS® SY ÖUMASS® CY	ÖFLEX® CLASSIC 401; -410 CY; -410 P; 500 P; 500 P; -500 P; -500 P ÖFLEX-SERVO® ED; -750; -755; -755 CY; -760; -730; -780; -780 CP; 785; ÖLIFLEX® F0; GLASSIC® F0 P; 810 CP; 855 P; 855 CP; ÖLIFLEX® F0; 860 P; 860 CP; ÖLIFLEX-ROBOT®; 900; ÖLIFLEX-ROBOT® F0 P; KRYANIFLEX® (PUL); UNITRONIC®; UNICITY; UNITRONIC® ED; ELS	NEOFLEX®; round and flat	ÖFLEX® LIFT; LIFT 5 ÖFLEX® TRAGO; 25 ÖFLEX® lat cable; ÖFLEX® 5F Single core LIFY	LAPP THERM® 120	SILIFLEX®; SILIFLEX® EMBK®	ÖFLEX® FEP; PTFE
Inorganic chemicals	Aims	cs	+	+	+	+	+	+	+	+	+
	Aluminium salts	a.c.	+	+	+	+	+	+	+	+	+
	Ammonia, aq.	10%	+	+	+	+	+	+	+	+	+
	Ammonium acetate, aq.	a.c.	+	+	+	+	+	+	+	+	+
	Ammonium carbonate, aq.	a.c.	+	+	+	+	+	+	+	+	+
	Ammonium chloride, aq.	a.c.	+	+	+	+	+	+	+	+	+
	Barium salts	a.c.	+	+	+	+	+	+	+	+	+
	Boric acid, aq.		+	+	+	+	+	+	+	+	+
	Calcium chloride, aq.	cs	+	+	+	+	+	+	+	+	+
	Calcium nitrate, aq.	cs	+	+	+	+	+	+	+	+	+
	Chromium salts, aq.	cs	+	+	+	+	+	+	+	+	+
	Potassium carbonate, aq. (potash)		+	+	+	+	+	+	+	+	+
	Potassium chlorate, aq.	cs	+	+	+	+	+	+	+	+	+
	Potassium chloride, aq.	cs	+	+	+	+	+	+	+	+	+
	Potassium dichromate, aq.		+	+	+	+	+	+	+	+	+
	Potassium iodide, aq.		+	+	+	+	+	+	+	+	+
	Potassium nitrate, aq.	cs	+	+	+	+	+	+	+	+	+
	Potassium permanganate, aq.		○	+	+	+	+	+	+	+	+
	Potassium sulfate, aq.		+	+	+	+	+	+	+	+	+
	Copper salts, aq.	cs	+	+	+	+	+	+	+	+	+
	Magnesium salts, aq.	cs	+	+	+	+	+	+	+	+	+
	Sodium bicarbonate, aq. (soda)		+	+	+	+	+	+	+	+	+
	Sodium bisulphite, aq.		+	+	+	+	+	+	+	+	+
	Sodium chloride, aq. (cooking salt)		+	+	+	+	+	+	+	+	+
	Sodium thiosulphate, aq. (fixing salt)		+	+	+	+	+	+	+	+	+
	Nickel salts, aq.	cs	+	+	+	+	+	+	+	+	+
	Phosphoric acid	50%	+	+	+	+	+	+	+	+	+
	Mercury	100%	+	+	+	+	+	+	+	+	+
	Mercury salts, aq.	cs	+	+	+	+	+	+	+	+	+
	Nitric acid	30%	-	-	-	-	-	-	-	-	-
	Hydrochloric acid	conc.	-	-	-	-	-	-	-	-	-
	Sulphur	100%	+	+	+	+	+	+	+	+	+
Sulphur dioxide, gaseous		+	+	+	+	+	+	+	+	+	
Carbon disulphide		-	-	-	-	-	-	-	-	-	
Hydrogen sulphide		+	+	+	+	+	+	+	+	+	
Sea water		+	+	+	+	+	+	+	+	+	
Silver salts, aq.		+	+	+	+	+	+	+	+	+	
Hydrogen peroxide	3%	+	+	+	+	+	+	+	+	+	
Zinc salts, aq.		+	+	+	+	+	+	+	+	+	
Stannous chloride		+	+	+	+	+	+	+	+	+	
Organic chemicals	Ethyl alcohol	100%	-	-	-	-	-	-	-	-	-
	Formic acid	30%	-	-	-	-	-	-	-	-	-
	Gasoline		-	-	-	-	-	-	-	-	-
	Succinic acid, aq.	cs	+	+	+	+	+	+	+	+	
	Acetic acid	20%	○	○	○	○	○	○	○	○	
	Hydraulic oil		-	-	-	-	-	-	-	-	-
	Isopropyl alcohol	100%	-	-	-	-	-	-	-	-	-
	Machine oil		○	+	○	+	○	+	○	+	+
	Methyl alcohol	100%	○	○	○	○	○	○	○	○	○
	Oxalic acid, aq.	cs	+	+	+	+	+	+	+	+	+
	Cutting oil		○	+	○	+	○	+	○	+	+
	Vegetable oil and fats		○	+	○	+	○	+	○	+	+
Tartaric acid, aq.		+	+	+	+	+	+	+	+	+	
Citric acid		+	+	+	+	+	+	+	+	+	

+ nil to slight reaction
○ slight to average reaction
- average to strong reaction
a.c. = any concentration
aq. = in aqueous solution
cs. = cold saturated

all values are for 20 °C

For information on chemical resistance of the products, please call our technical department

Tel. +49 (0)711/78 38-463/-495

ÖFLEX® 110-160; 114; ÖFLEX® 100; H
ÖFLEX® Natur; 110; NICN; ÖFLEX® FD Natur

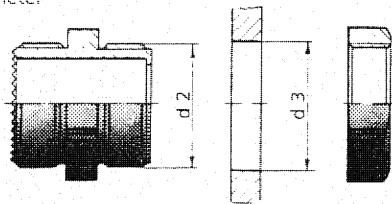
Thread Dimensions and Tightening Torque Values

For screw-type cable glands

T21

Technical data for assembly				
PG-Thread DIN 40430	Nominal thread			
	$\varnothing d_1$	$\varnothing d_2$	p	$\varnothing d_3$
PG 7	11,28	12,50	1,27	$13,0 \pm 0,2$
PG 9	13,86	15,20	1,41	$15,7 \pm 0,2$
PG 11	17,26	18,60	1,41	$19,0 \pm 0,2$
PG 13,5	19,06	20,40	1,41	$21,0 \pm 0,2$
PG 16	21,16	22,50	1,41	$23,0 \pm 0,2$
PG 21	26,78	28,30	1,588	$28,8 \pm 0,2$
PG 29	35,48	37,00	1,588	$37,5 \pm 0,3$
PG 36	45,48	47,00	1,588	$47,5 \pm 0,3$
PG 42	52,48	54,00	1,588	$54,5 \pm 0,3$
PG 48	57,73	59,30	1,588	$59,8 \pm 0,3$

d_1 = core diameter
 d_2 = outside diameter
 d_3 = bore diameter
 p = pitch



Metric thread DIN 46319	Nominal thread			
	$\varnothing d_1$	$\varnothing d_2$	p	$\varnothing d_3$
M 12 x 1,5	10,38	12	1,5	$12,5 \pm 0,2$
M 16 x 1,5	14,38	16	1,5	$16,5 \pm 0,2$
M 20 x 1,5	18,38	20	1,5	$20,5 \pm 0,2$
M 25 x 1,5	23,38	25	1,5	$25,5 \pm 0,2$
M 32 x 1,5	30,38	32	1,5	$32,5 \pm 0,2$
M 40 x 1,5	38,38	40	1,5	$40,5 \pm 0,3$
M 50 x 1,5	48,38	50	1,5	$50,5 \pm 0,3$
M 63 x 1,5	61,38	63	1,5	$64,0 \pm 0,3$

Metric thread DIN 89280	Nominal thread			
	$\varnothing d_1$	$\varnothing d_2$	p	$\varnothing d_3$
M 18 x 1,5	16,38	18	1,5	$18,5 \pm 0,2$
M 24 x 1,5	22,38	24	1,5	$24,5 \pm 0,2$
M 30 x 2,0	27,34	30	2,0	$30,5 \pm 0,2$
M 36 x 2,0	33,34	36	2,0	$36,5 \pm 0,2$
M 45 x 2,0	42,34	45	2,0	$45,5 \pm 0,3$
M 56 x 2,0	53,34	58	2,0	$57,0 \pm 0,3$
M 72 x 2,0	68,82	72	2,0	$73,0 \pm 0,3$

Strain relief to VDE 0619

It must not be possible to push the cable into the specimen with a force of 10 N. Then the cable is pulled without jerking with a tensile force in the axial direction 50 times for 1 s each time.

Cable diameter mm	Tensile force N	Torque Nm
> bis 4	40	0,05
> 4 bis 8	50	0,1
> 8 bis 11	60	0,15
> 11 bis 16	80	0,35
> 16	100	0,42

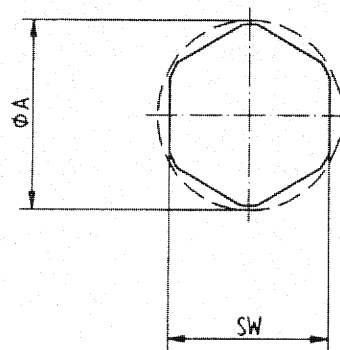
Tightening torque values to DIN/VDE 0619, Point 7.

The tightening torque values to DIN/VDE 0619 are the torque values for tightening the centre sections to achieve Protection Class IP 68-5 bar.

Nominal size	Bushing	
	Metal	Polymer moulding compound torque in Nm
Pg 7	6,25	2,5
Pg 9	6,25	3,75
Pg 11	6,25	3,75
Pg 13,5	6,25	3,75
Pg 16	7,5	5,0
Pg 21	10,0	7,5
Pg 29	10,0	7,5
Pg 36	10,0	7,5
Pg 42	10,0	7,5
Pg 48	10,0	7,5

Fitting dimensions and widths across flats

The diameter A indicates the assembly space required for the relevant hexagon. This diameter corresponds to the width across corner of the hexagon, plus an assembly tolerance.



SW	A
27	30,6
28	31,8
29	32,5
30	34,0
32	36,2
33	37,2
36	40,5
37	41,5
39	44,0
40	45,2
41	46,1
42	47,0
45	51,2
46	52,5
47	52,5
50	58,3
53	60,0
54	61,0
55	62,0
57	64,4
60	67,5
64	72,3
65	73,1
66	74,5
67	74,5

SW	A
9	10,4
11	12,5
13	14,9
14	16,0
15	17,1
16	18,2
17	19,4
19	22,0
20	22,7
21	23,9
22	25,0
24	27,3