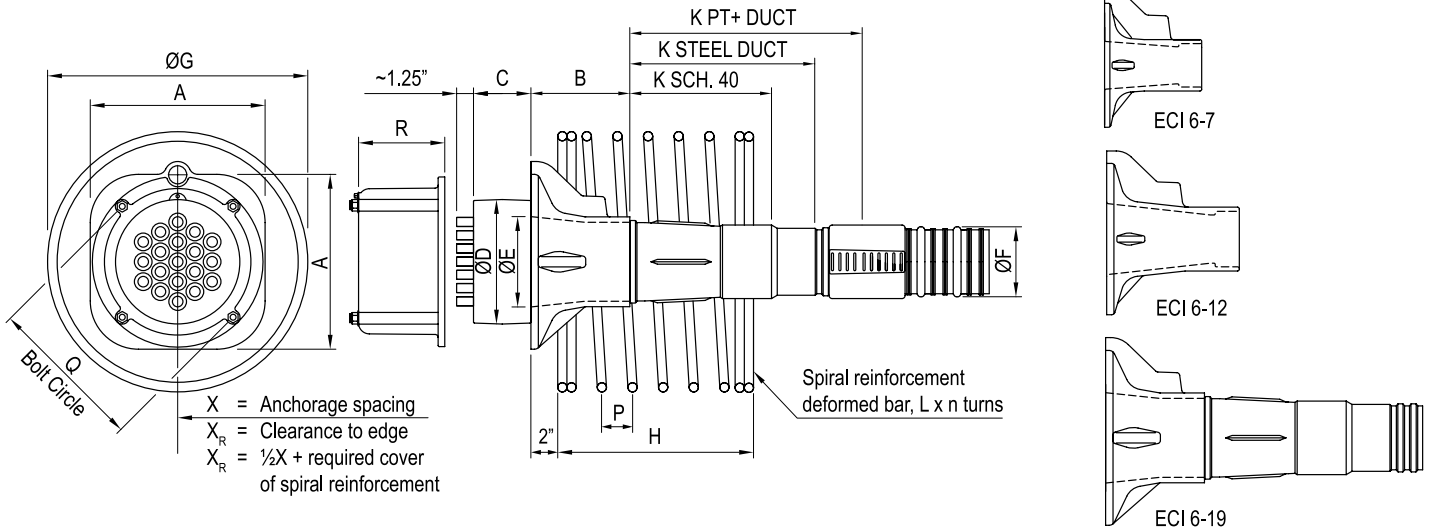


Type ECI Stressing Anchorage



Tendon Unit	f'ci (psi)	Dimensions (Inches)																		
		A	B	C	ØD	ØE	ØF PT+ Duct	ØF Steel Duct	ØF SCH 40 Pipe	ØG	H	K PT+ Duct	K Steel Duct	K SCH 40 Pipe	L	n	P	Q	R	X
6-7	3500	8.54	6.69	2.37	5.33	3.31	2.87	2.88	3.00	11.00	12.00	No Trumpet on 6-7			#4	6.50	3.00	7.40	4.17	13.00
6-7	5500	8.54	6.69	2.37	5.33	3.31	2.87	2.88	3.00	11.00	12.00	No Trumpet on 6-7			#4	6.50	3.00	7.40	4.17	13.00
6-12	3500	9.88	8.66	3.00	6.85	4.62	3.58	3.24	3.50	13.00	14.00	No Trumpet on 6-12			#5	7.00	3.00	8.66	4.90	15.00
6-12	5500	9.88	8.66	3.00	6.85	4.62	3.58	3.24	3.50	13.00	13.50	No Trumpet on 6-12			#4	7.00	3.00	8.66	4.90	15.00
6-19	3500	11.42	6.91	3.75	8.13	5.90	4.57	4.10	4.50	17.00	19.00	15.19	12.09	9.29	#5	11.50	2.00	10.24	5.63	19.00
6-19	5500	11.42	6.91	3.75	8.13	5.90	4.57	4.10	4.50	15.00	17.00	15.19	12.09	9.29	#5	10.50	2.00	10.24	5.63	17.00

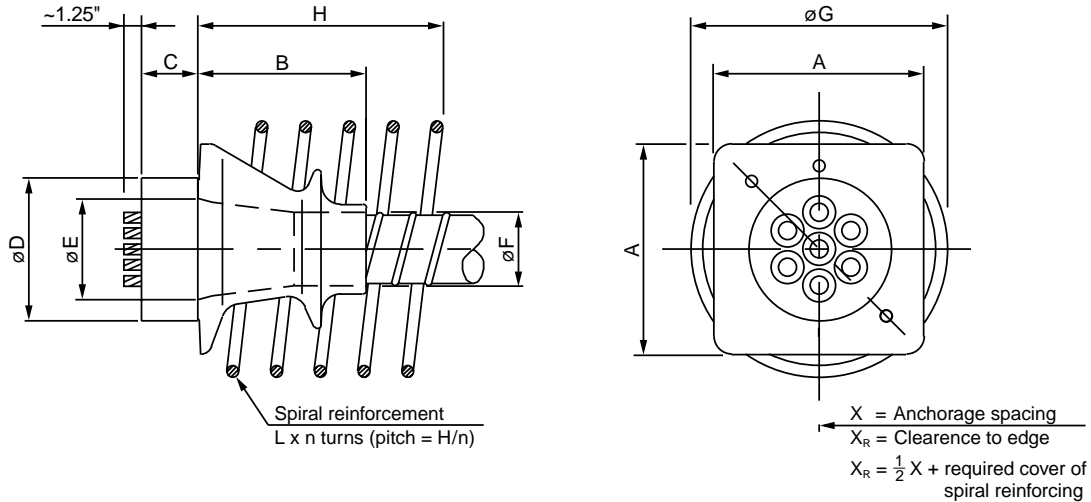


Notes:
 Anchorage spacings are in accordance with test requirement of AASHTO (The Special Anchorage Device Acceptance Test Procedure, AASHTO 2000).
 For proper design and detailing of anchorage zones and related reinforcement, refer to the VSL Publication Detailing for Post-Tensioning.

- Dimensions are valid for:**
- f'ci (psi) is the nominal minimum concrete cylinder strength at the time of stressing.
 - Maximum prestressing force may be applied when concrete reaches a cylinder strength of 3,500 psi (24 MPa) and 5,500 psi (38 MPa) respectively.
 - Temporary overstressing to 80% of Guaranteed Ultimate Tensile Strength.
 - Yield strength of spiral reinforcement: Grade 60 (400 MPa).
 - Tie one and one-half turns of spiral at both ends.
 - Additional orthogonal reinforcement may be required in the local anchorage zone as determined by design.
 - Spirals may be replaced by suitable orthogonal reinforcement.
 - Information for other concrete strengths and conditions is available from your local VSL Representative.
 - Spiral reinforcement shall be centered on the anchorage assembly and be placed directly behind the bearing plate as indicated above.

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Stressing Anchorage VSL Type EC



Tendon Unit		Dimensions Inches										
		A	B	C	øD	øE	øF	øG	H	L	n	X
Strand Type 0.5"	5-7	6.50	5.25	2.38	4.50	2.91	2.50	9.00	12.00	#4	6	9.50
	5-12	8.88	7.06	2.38	6.00	4.31	3.13	11.75	16.00	#4	8	12.50
	5-19	11.00	10.25	3.00	7.00	5.56	3.75	15.00	18.00	#5	8	15.75
	5-27	12.38	13.63	4.00	9.00	7.00	4.75	18.00	18.00	#6	8	18.75
	5-31	14.00	13.63	4.00	9.00	7.00	4.75	19.00	20.25	#6	9	20.00

Other sizes available on request

Subject to modification

Anchorage spacings are in accordance with test requirements of FIP (Recommendations for Acceptance of Post-Tensioning Systems: March 1992). For proper design and detailing of anchorage zones and related reinforcement, refer to the VSL Publication "Detailing for Post-Tensioning".

Dimensions are valid for:

- Nominal concrete cylinder strength at 28 days: 4,000 psi (28 MPa).
- Maximum prestressing force may be applied when concrete reaches a cylinder strength of 3,500 psi (24 MPa).
- Temporary overstressing to 80% of Guaranteed Ultimate Tensile Strength.

- Yield strength of spiral reinforcement: Grade 60 (400 MPa).
- Spirals may be replaced by suitable orthogonal reinforcement.
- Information for other concrete strengths and conditions are available from your local VSL Representative.

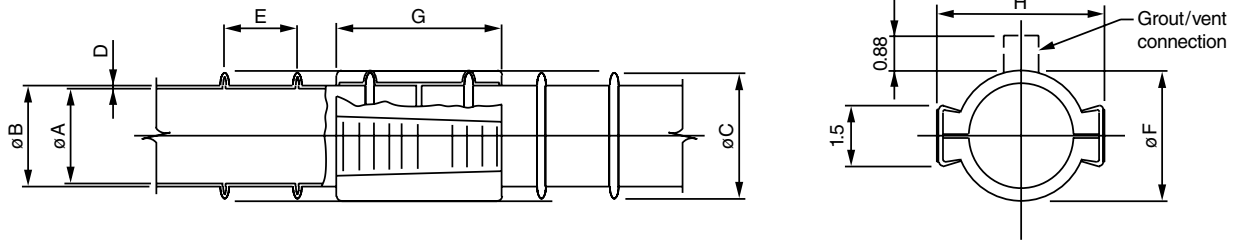
Spiral reinforcement shall be centered on the anchorage assembly and be placed directly behind the bearing plate.

Additional orthogonal reinforcement may be required in the local anchorage zone as determined by design.

Ducts PT-Plus™ System
 Polypropylene (PP) Plastic Duct



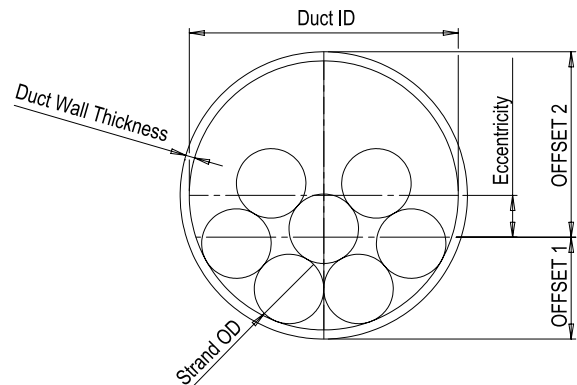
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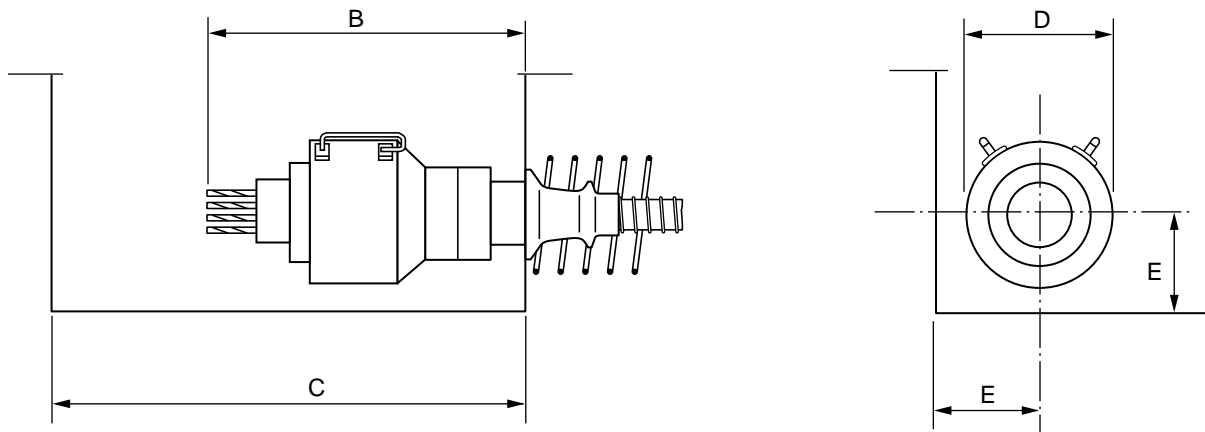
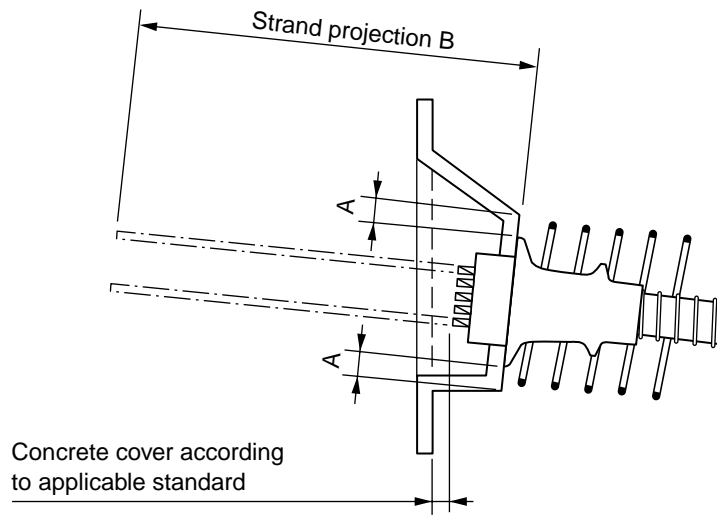
Type	Unit	Dimensions (Inches)							
	0.6"	ØA	ØB	ØC	D	E	F	G	H
59mm	6-7	2.28	2.48	2.87	0.10	1.65	3.23	4.25	4.17
76mm	6-12	2.99	3.19	3.58	0.10	2.00	3.94	4.57	4.88
100mm	6-19 / 22	3.94	4.17	4.57	0.12	2.00	4.84	4.96	5.79
115mm	6-27	4.53	4.76	5.16	0.12	2.36	5.43	5.00	5.83
130mm	6-31 / 37	5.12	5.35	5.75	0.12	2.00	6.14	5.47	6.97
150mm	6-43 / 55	5.91	6.18	6.57	0.14	2.36	6.89	4.96	7.28

Eccentricity of the Center of Gravity of Strands

Duct	System	Eccentricity	Offset 1	Offset 2
59mm	6-7	0.36	0.88	1.60
76mm	6-12	0.48	1.11	2.08
100mm	6-19	0.72	1.37	2.81
100mm	6-22	0.57	1.51	2.66
115mm	6-27	0.75	1.63	3.13
130mm	6-31	0.99	1.73	3.71
130mm	6-37	0.77	1.95	3.48
150mm	6-43	1.11	1.99	4.20
150mm	6-55	0.72	2.37	3.82



Block Out Dimensions and Clearance Requirement



Jack Type	A min.	B	C	D	E
ZPE-23FJ	-	12.00	47.25	4.57	3.50
ZPE-30	1.18	24.00	43.50	5.51	4.00
ZPE-3	1.18	22.00	39.50	7.87	6.00
ZPE-60	1.18	26.00	43.50	7.09	5.50
ZPE-7A	1.18	32.00	47.25	11.81	8.00
ZPE-12St2	1.97	28.00	51.25	12.20	8.00
ZPE-200	1.97	44.00	82.75	12.99	8.25
ZPE-19	1.97	34.00	59.25	15.35	10.00
ZPE-460/31	2.36	28.00	59.25	19.09	12.00
ZPE-500	3.15	46.00	78.75	23.03	13.00
ZPE-750	3.15	54.00	90.75	22.44	14.50
ZPE-1000	3.15	52.00	86.75	31.10	17.75
ZPE-1250	3.54	54.00	88.75	25.98	14.75

Dimensions in inches.

Stressing Jack Data



Type I (ZPE-23FJ)



Type II (ZPE-19)

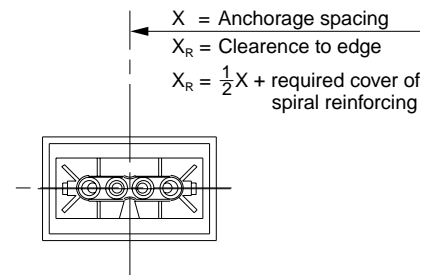
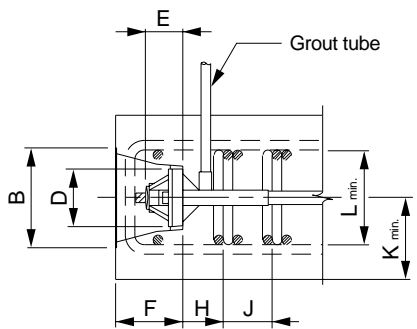
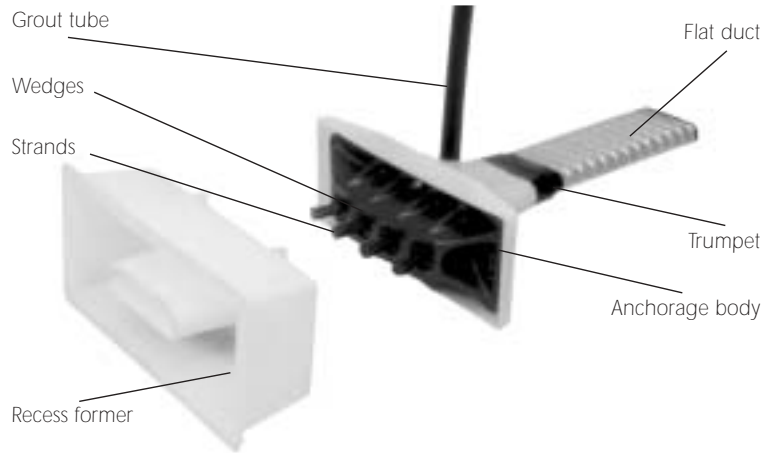


Type III (ZPE-500)

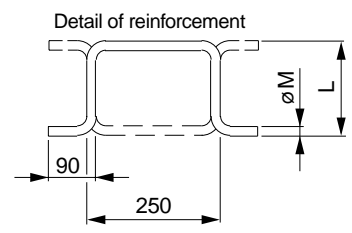
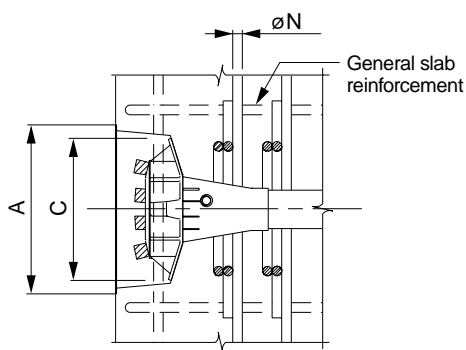
Designation	ZPE-23FJ	ZPE-30	ZPE-3	ZPE-60	ZPE-7A	ZPE-12St2	ZPE-200	ZPE-19	ZPE-460/31	ZPE-500	ZPE-750	ZPE-1000
Type	I	III	III	III	III	II	III	II	II	III	II	III
Length (in)	31.10	28.35	18.70	24.21	27.17	21.65	37.80	29.53	22.83	39.37	46.65	47.24
Diameter (in)	4.57	5.51	7.87	7.09	11.02	12.20	12.40	15.35	19.09	21.65	20.47	31.10
Stroke (in)	7.87	9.84	6.30	9.84	6.30	3.94	11.81	3.94	3.94	7.87	5.91	7.87
Piston area (in ²)	7.30	9.04	16.06	19.59	31.56	47.96	50.48	77.55	124.62	138.66	193.29	280.47
Capacity (kips)	52	72	112	142	239	416	450	652	1048	1124	1686	2248
Pressure (psi)	7078	7963	7005	7252	7585	8673	8905	8412	8412	8108	8717	8021
Weight (lb)	51	62	104	163	254	333	672	648	959	2346	2425	5049
Used for 13 mm (0.5") tendon types	5-1	5-1	5-2, 5-3	5-2 to 5-4	5-6, 5-7	5-12	5-12	5-18 to 5-19	5-22 to 5-31	5-22 to 5-31	5-31 to 5-37	5-37 to 5-55
Used for 15 mm (0.6") tendon types	6-1	6-1	6-2	6-2, 6-3	6-4	6-6, 6-7	6-6, 6-7	6-12	6-18, 6-19	6-18 to 6-22	6-31	6-31 to 6-43

Other sizes available on request

Stressing Anchorage VSL Type SO



For proper design and detailing of anchorage zones and related reinforcement, refer to the VSL Publication "Detailing for Post-Tensioning". The arrangement shown here is common for slabs in buildings.



Type	A	B	C	D	E	F	H ²	J	K _{min}	L _{min} ³	M	N	X
6-4 ¹	13.00	6.62	11.25	4.90	3.00	5.00	K-1.2	3.00	4.75	1.5 x K	#4	#5	13.88

Other sizes available on request

Subject to modification

For proper design and detailing of anchorage zones and related reinforcement, refer to the VSL Publication "Detailing for Post-Tensioning".

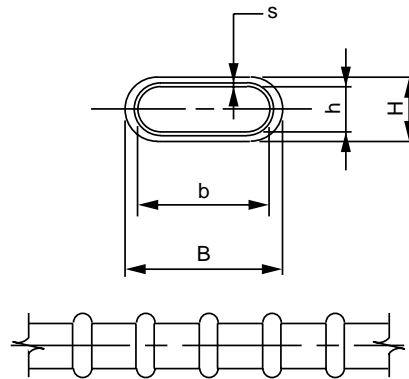
Dimensions in inches.

Dimensions are valid for:

- Nominal concrete cylinder strength at 28 days: 4,000 psi (28 MPa).
- Maximum prestressing force may be applied when concrete reaches a cylinder strength of 80% of its nominal strength or 3,500 psi (24 MPa) whichever is less.

- Temporary overstressing to 80% of Guaranteed Ultimate Tensile Strength.
 - Information for other concrete strengths and conditions are available from your local VSL Representative.
- Anchorage may be used with 0.5" (12.7 mm) or 6" (15.2 mm) strand.
 - Use actual K when calculating H.
 - L shall be the maximum permitted by the slab thickness and cover, whereas $L_{min} = 1.5 \times K$.

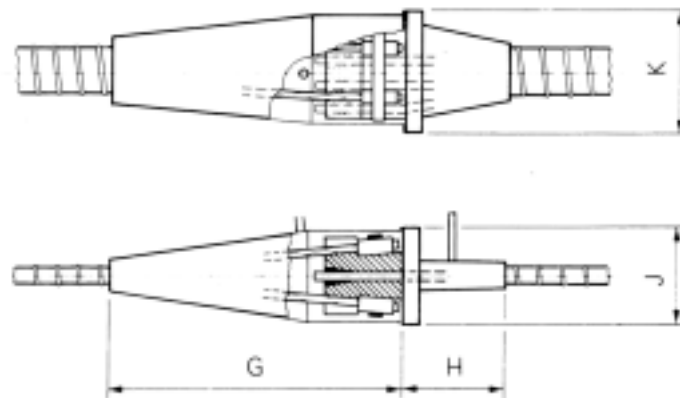
Dimensions of Ducts



	Tendon unit	h	H	b	B	s
Plastic duct PT-PLUS™	5-2, 6-2	0.75	1.18	1.65	2.09	0.08
Plastic duct PT-PLUS™	5-4, 6-4	0.83	1.38	2.83	3.39	0.08
Steel duct	5-4, 6-4	0.71	0.83	2.83	2.95	0.01

Dimensions in inches.

Coupler VSL Type SK

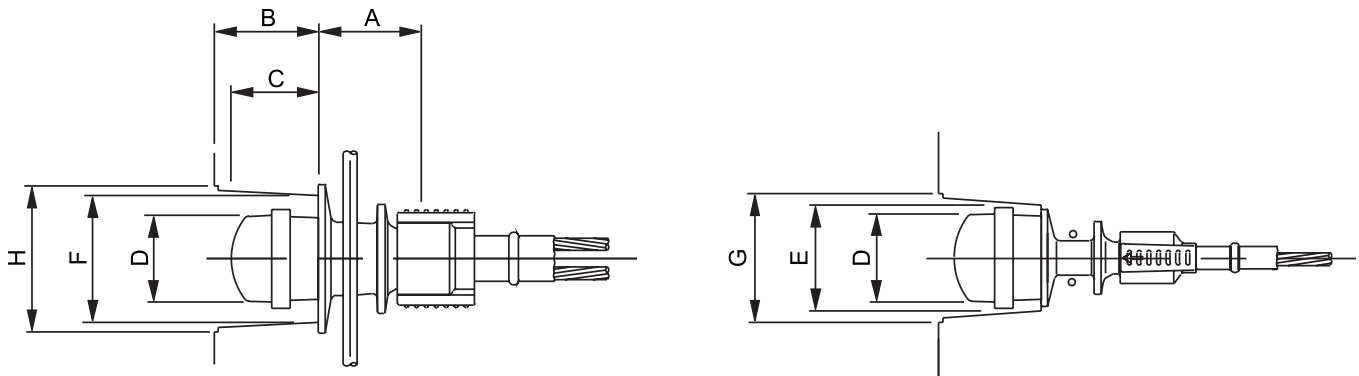


Type	G	H	J	K
SK 5-4	16.06	5.91	5.51	6.69

Dimensions in inches.

Dimensions are valid for nominal concrete strength: 20 MPa (cube), 16 MPa (cylinder), at the time of stressing, for a maximum stressing force of 80% of the tendon breaking load.

VSLAB[®]+ Stressing Anchorage

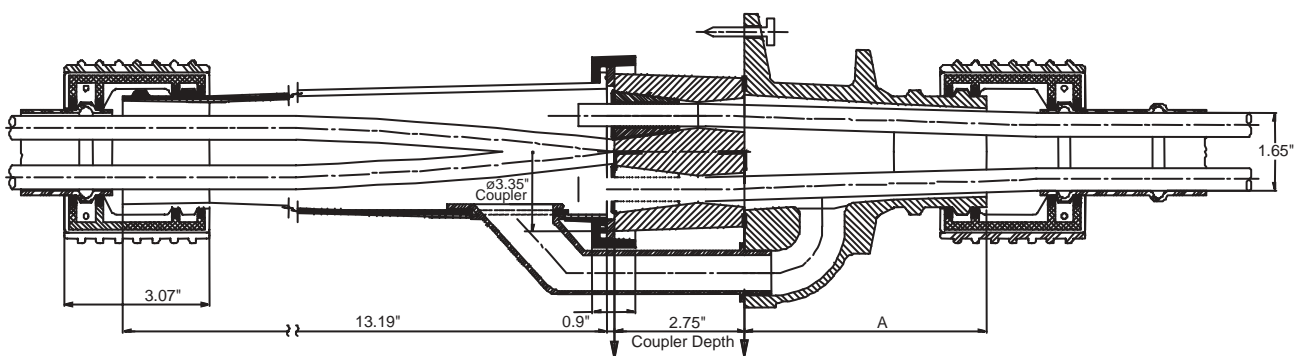


Type	A	B	C	D	E	F	G	H
VSLAB	5.12	4.13	3.27	3.07	4.02	5.63	4.72	6.42

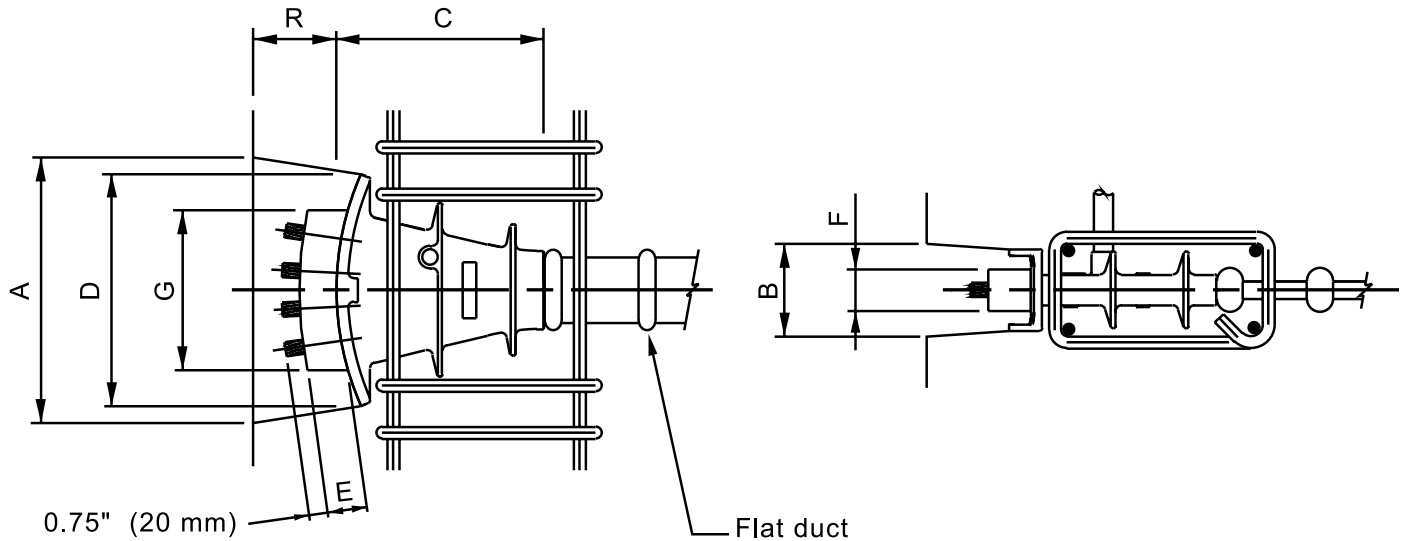
Dimensions in inches.

Dimensions are valid for nominal concrete strength: 3,000 psi (20 MPa) cylindrical strength, at the time of stressing, for a maximum stressing force of 80% of the tendon breaking load.

VSLAB[®]+ Intermediate Anchorage



Stressing Anchorage VSL Type SA



Type	A	B	C	D	E	F	G	R
SA5-4	10.42	3.70	8.50	9.75	1.75	1.96	6.75	4.33
SA5-5	10.42	3.70	8.50	9.75	1.75	1.96	8.25	4.33
SA6-4	10.42	3.70	8.50	9.75	2.24	2.64	7.51	4.33

Other sizes available on request

Subject to modification

For proper design and detailing of anchorage zones and related reinforcement, refer to the VSL Publication "Detailing for Post-Tensioning".

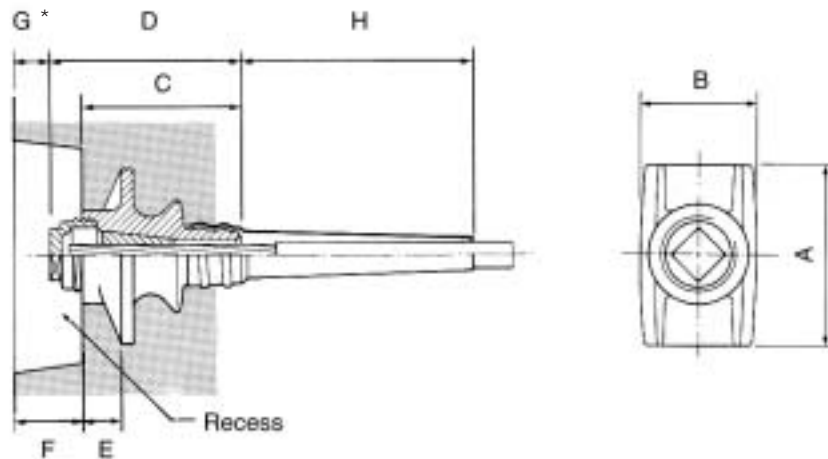
Dimensions in inches.

Dimensions are valid for:

- Nominal concrete cylinder strength at 28 days: 4,000 psi (28 MPa).

- Maximum prestressing force may be applied when concrete reaches a cylinder strength of 80% of its nominal strength or 3,000 psi (20 MPa) whichever is less.
- Temporary overstressing to 80% of Guaranteed Ultimate Tensile Strength.
- Information for other concrete strengths and conditions are available from your local VSL Representative.

Stressing Anchorage VSL Type S-6



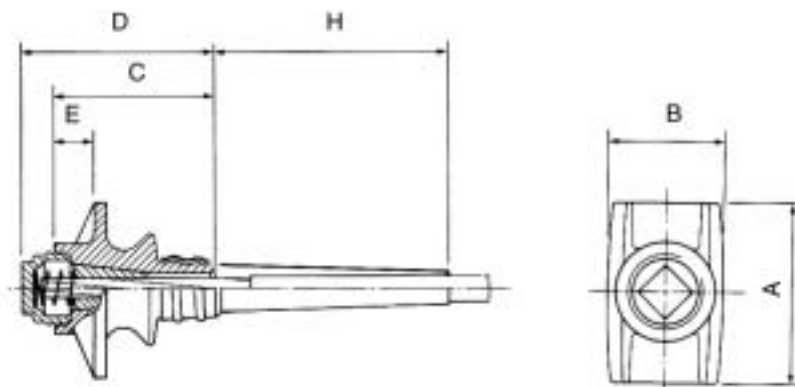
Type	A	B	C	D	E	F	G	H
S-6	4.13	2.95	4.33	4.53	0.91	1.57	0.79	6.25

* for 0.79" cover, to be adjusted for other values as needed.

Dimensions in inches.

Dimensions are valid for nominal concrete strength: 3,000 psi (20 MPa), at the time of stressing, for a maximum stressing force of 80% of the tendon breaking load.

Dead-End Anchorage VSL Type SF-6



Type	A	B	C	D	E	H
SF-6	4.13	2.95	3.74	4.53	0.91	6.25

Dimensions in inches.

Dimensions are valid for nominal concrete strength: 3,000 psi (20 MPa), at the time of stressing, for a maximum stressing force of 80% of the tendon breaking load.