

Anlage C
Annexe C
Appendix C

Diagrammsammlung zur Beurteilung der Fahrsicherheit
 von Güterwagen mit Drehgestellen mit zwei Radsätzen

Recueil de diagrammes permettant d'apprécier la sécurité
 de circulation des wagons à deux bogies de 2 essieux

Set of diagrams enabling the running safety of wagons
 fitted with two 2-axle to be assessed

Anlagenbauarten Type of bogie Types of bogie	Nr. - No.	vom - du date	Nr. - No.
Drehgestellbauarten Type de bogies Types of bogie			
Teil 1: Standarddrehgestell Y 25 L Partie 1: Bogie Y 25 L, standard Part 1: Type Y 25 L bogie, standard			
Teil 2: Standarddrehgestell 65 Partie 2: Bogie 65, standard Part 2: Type 65 bogie, standard			
Teil 3: DB-Drehgestell 661 Partie 3: Bogie DB 661 Part 3: Bogie DB 661			
Teil 4: Standarddrehgestell Y 25 L für Wagen mit 9 mm Gleitstückspiel Partie 4: Bogie Y 25 L, standard, pour wagons avec jeu aux lisoirs de 9 mm Part 4: Type Y 25 L bogie, standard for a wagon with 9 mm side bearer clearance			



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Änderungen - Mises a jour - Revisions

Änderungsanzeige - Modificatif - Amendment

Nr. - N° No.	vom - du date	Nr. - N° No.	vom - du date



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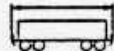
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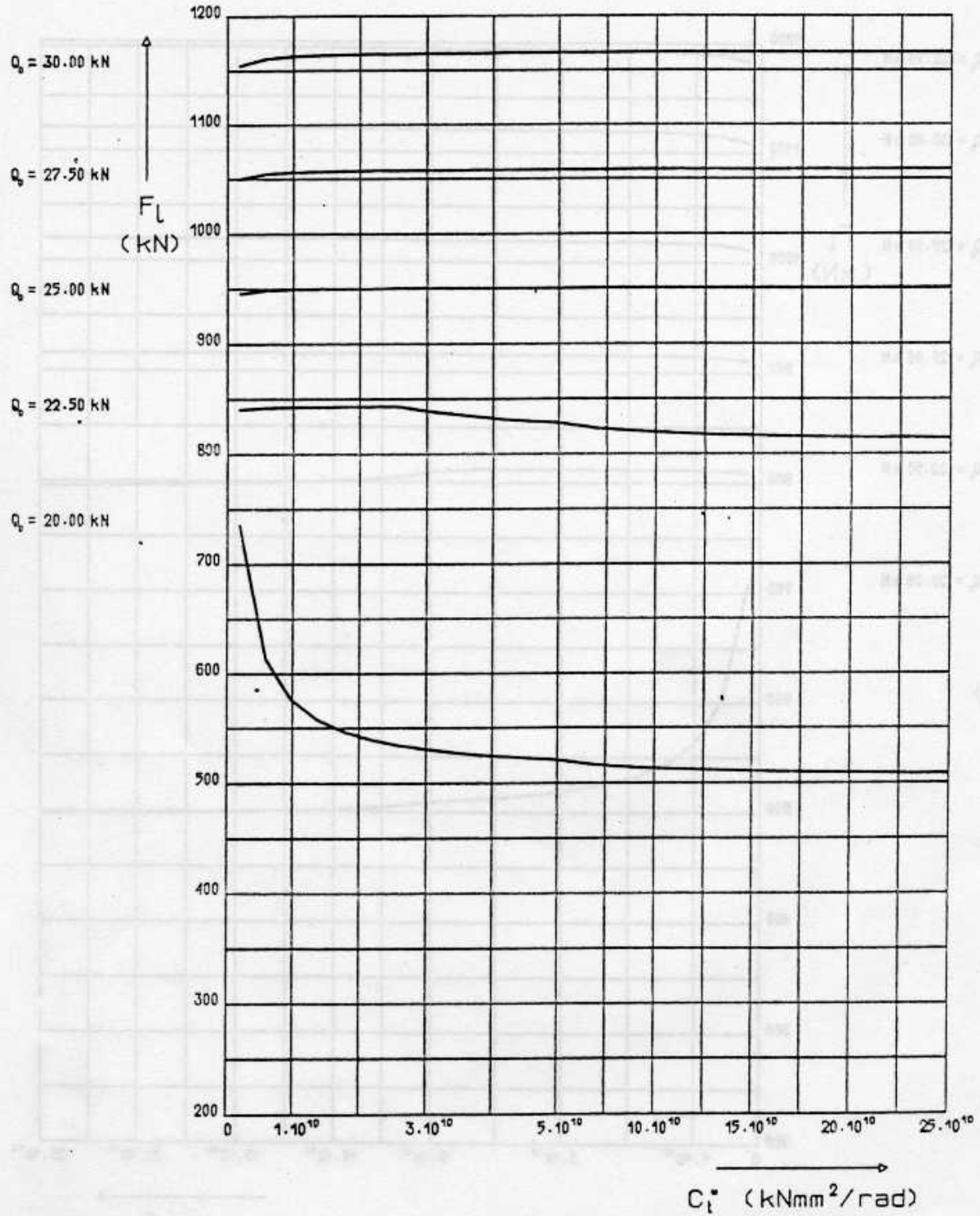


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Teil 1
Partie 1
Part 1

Standarddrehgestell Y 25 L
Bogie Y 25 L, standard
Type Y 25 L bogie, standard

 = 10040 . mm
 $2a^* = 5000 . mm$
 Y 25 L
 $\Delta q_0 = 0.20$

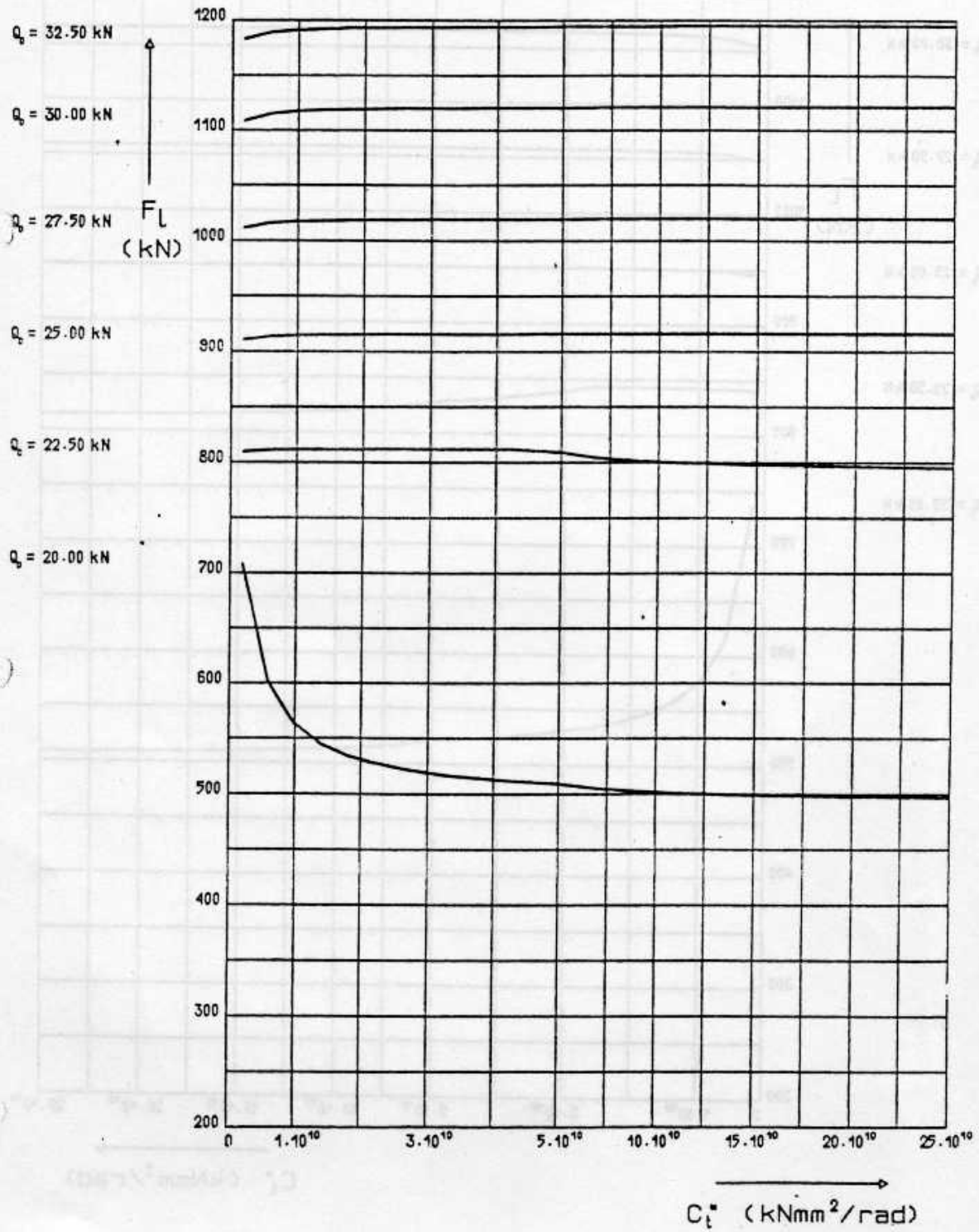


$$\boxed{\quad\quad} = 10540 \cdot \text{mm}$$

$$2a^* = 5000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

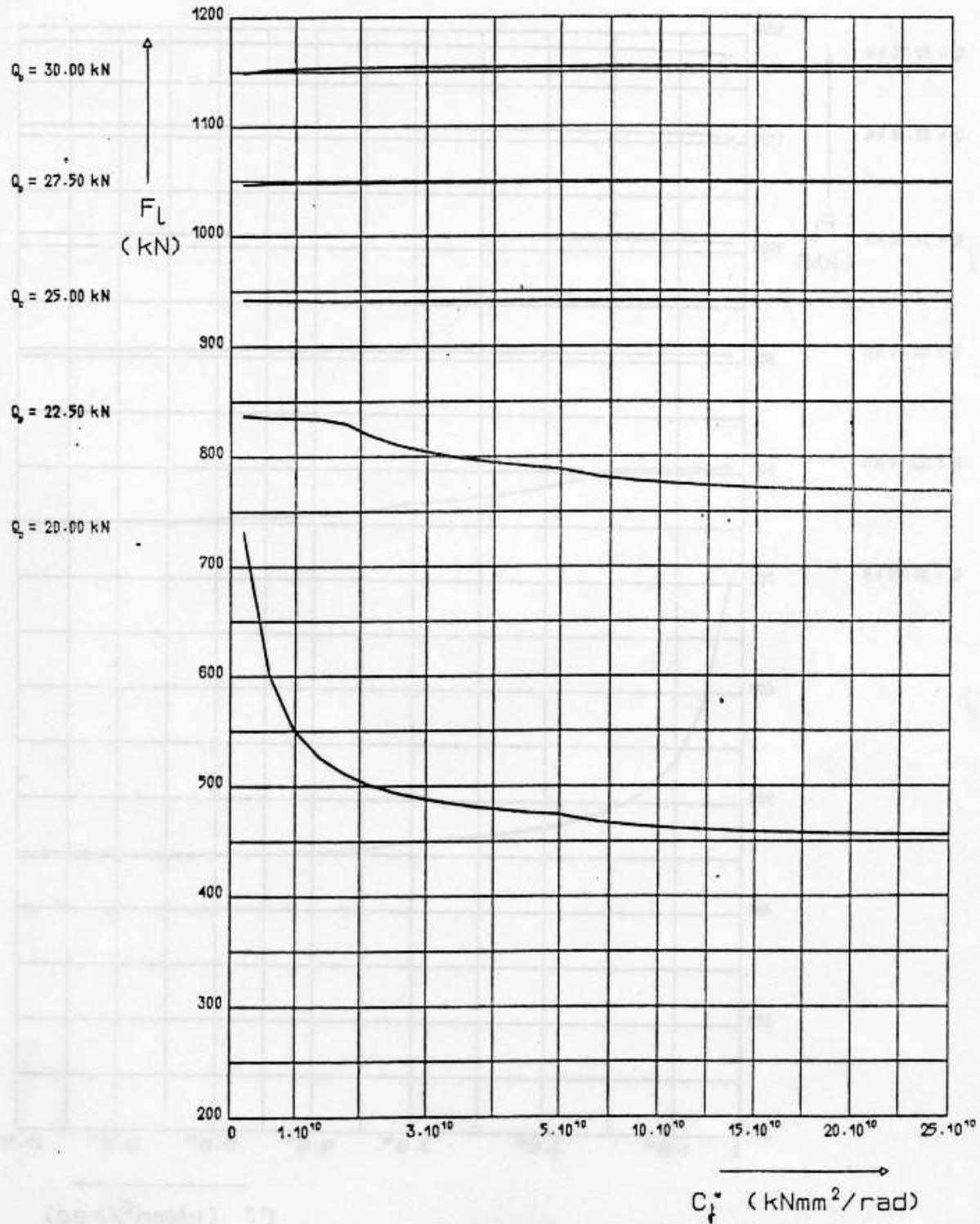


$$\text{---} = 11540 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

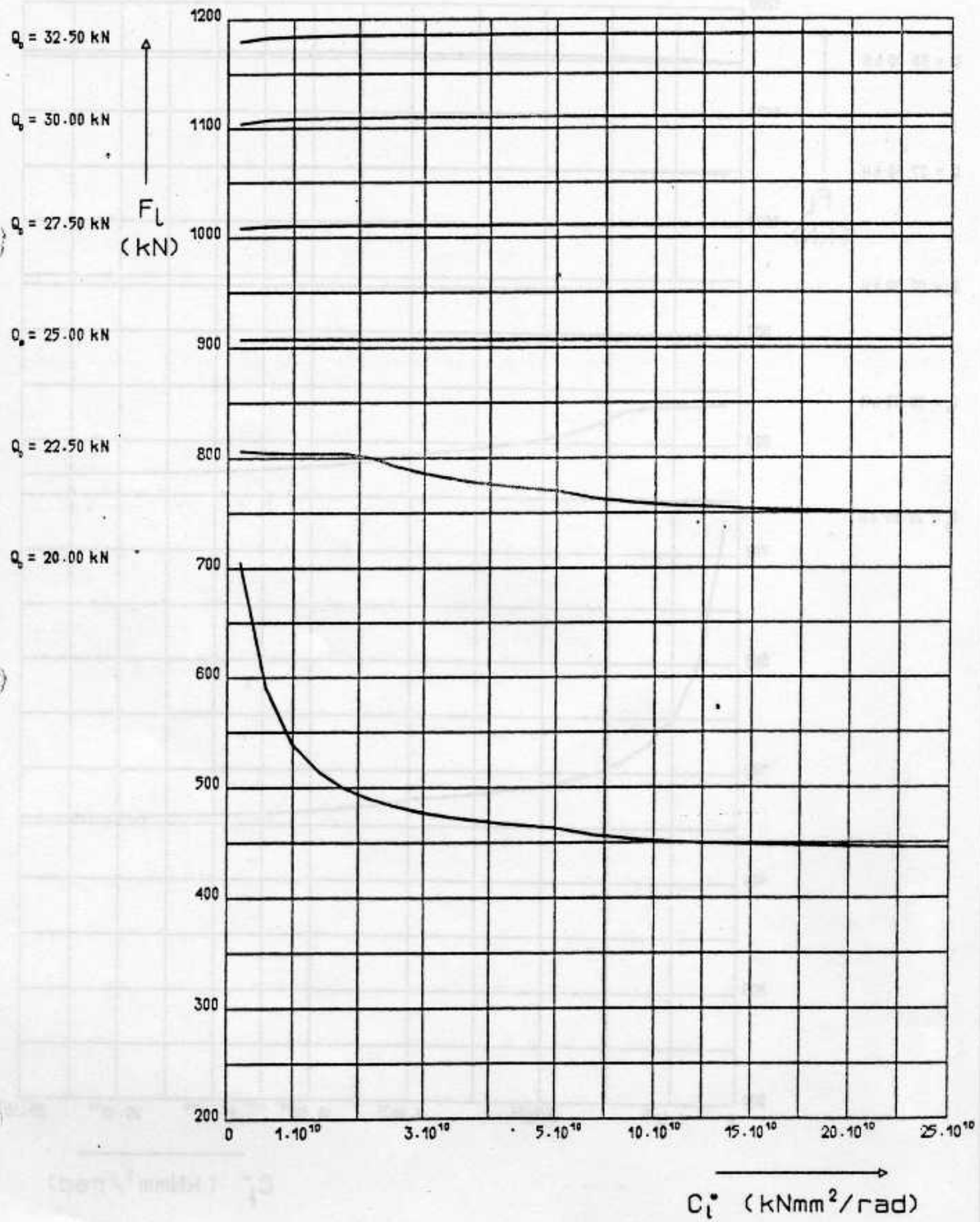


$$\text{---} = 12040 \text{ . mm}$$

$$2a^* = 6500 \text{ . mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

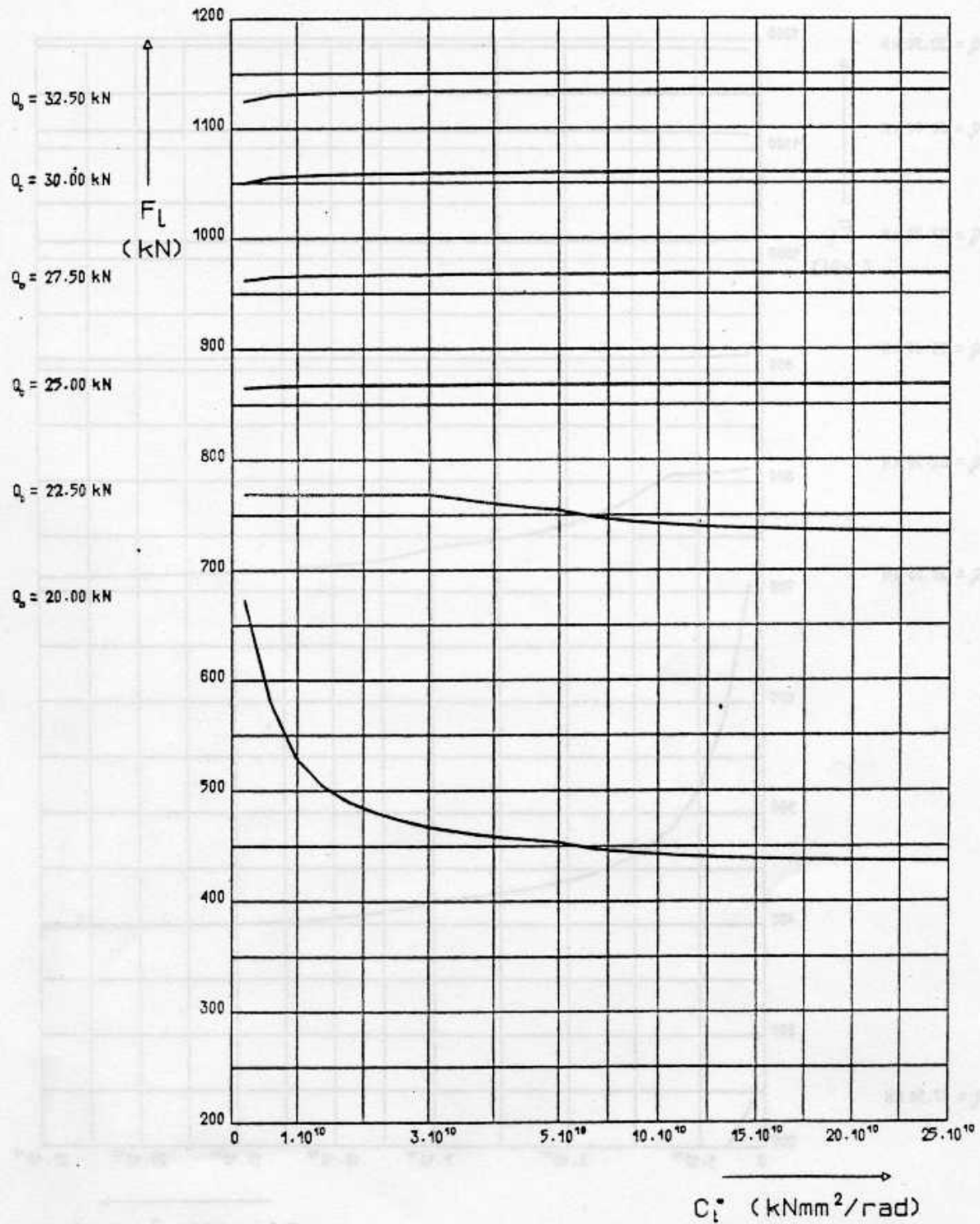


$$\text{---} = 12450 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

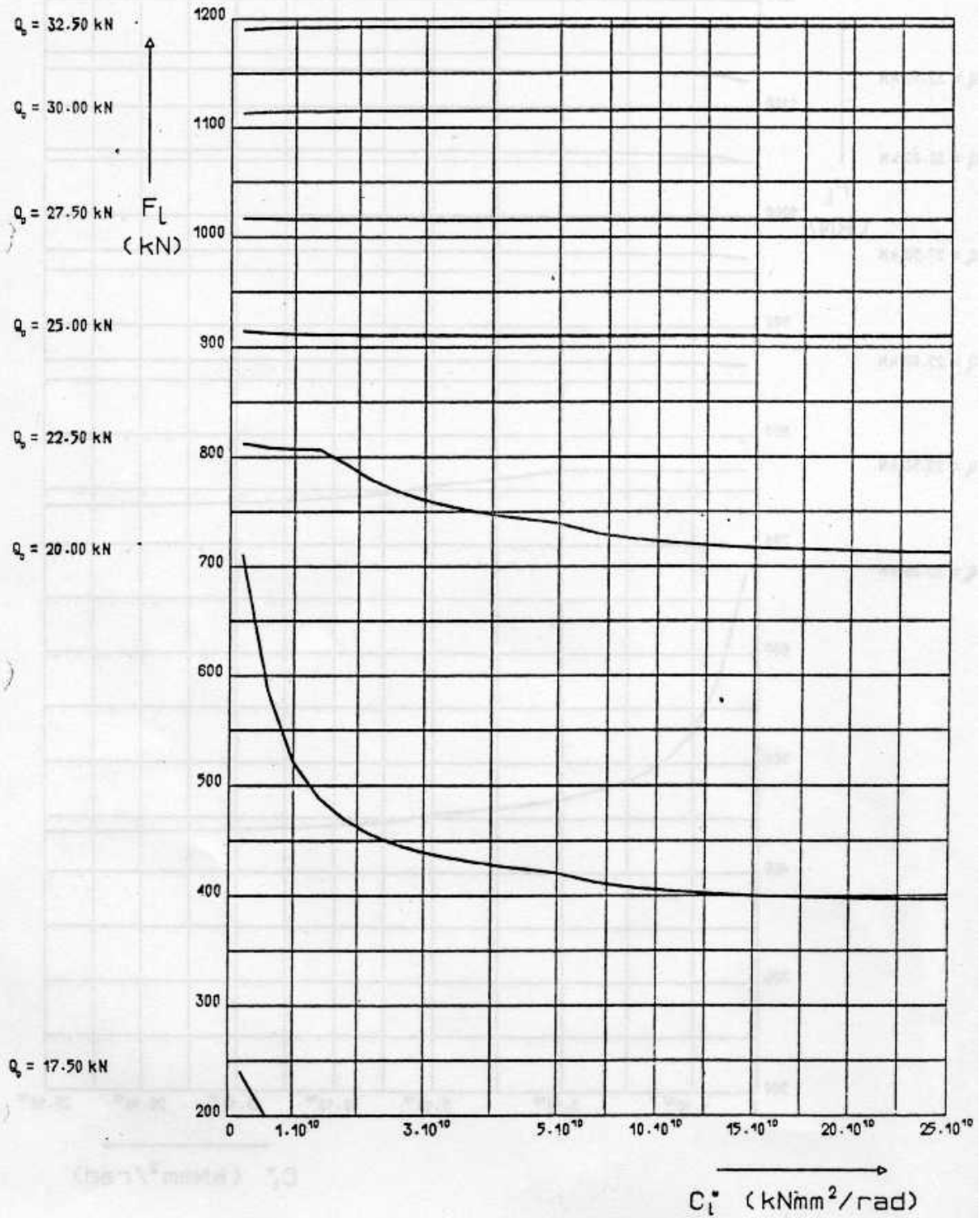


$$\text{---} = 13040 \cdot \text{mm}$$

$$2a^* = 8000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

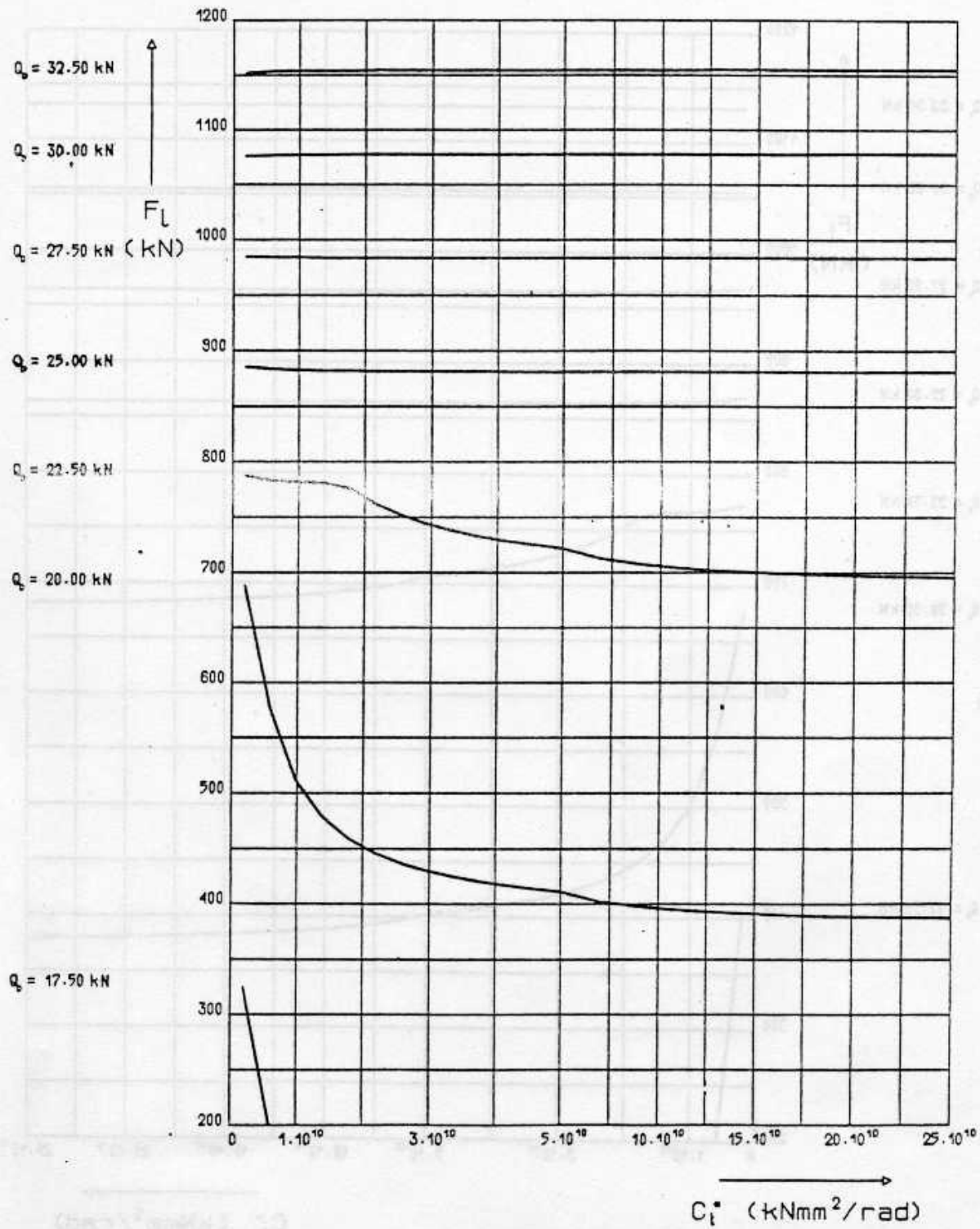


$$\text{---} = 13540 \cdot \text{mm}$$

$$2a^* = 8000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

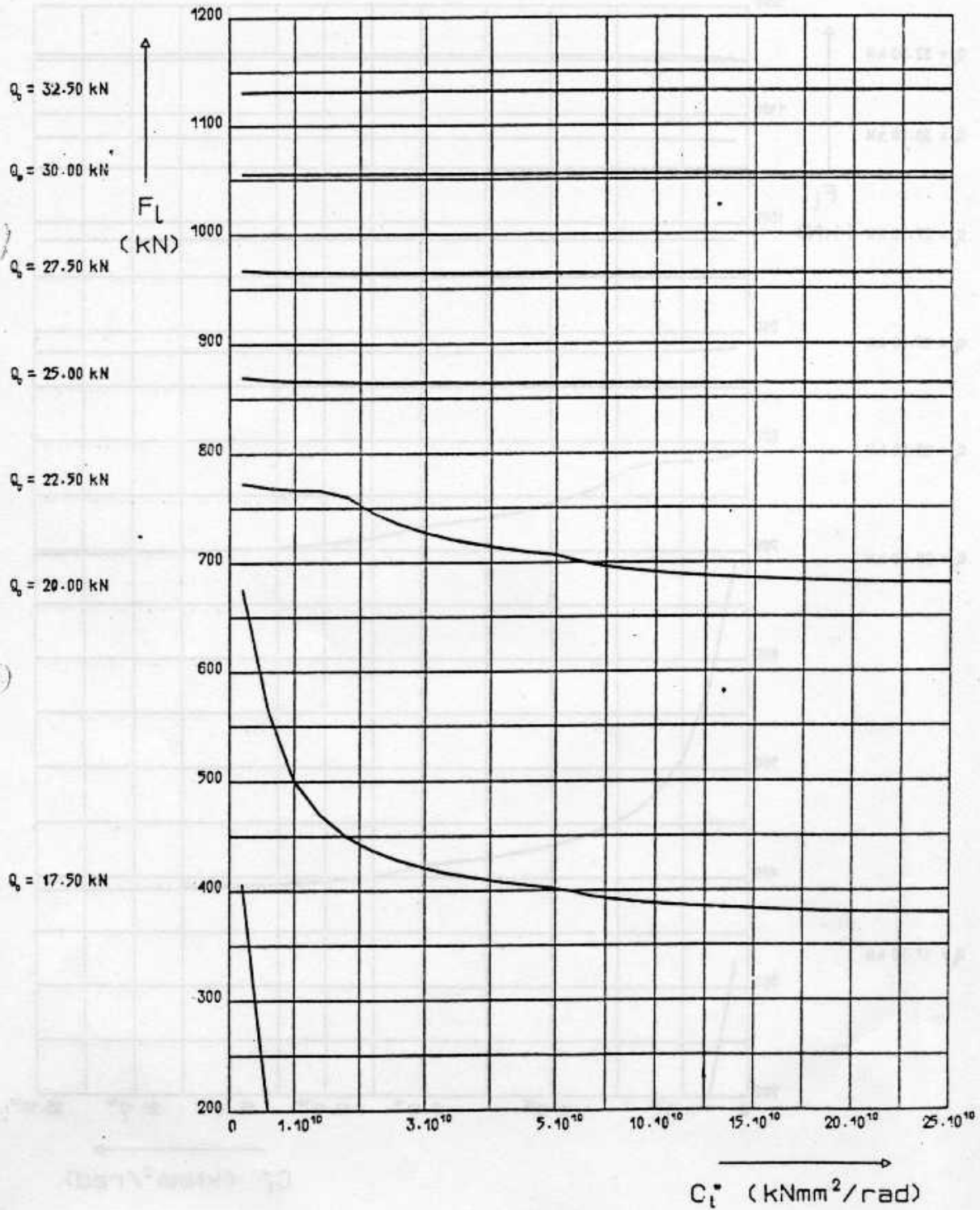


$$\text{---} = 13950 \cdot \text{mm}$$

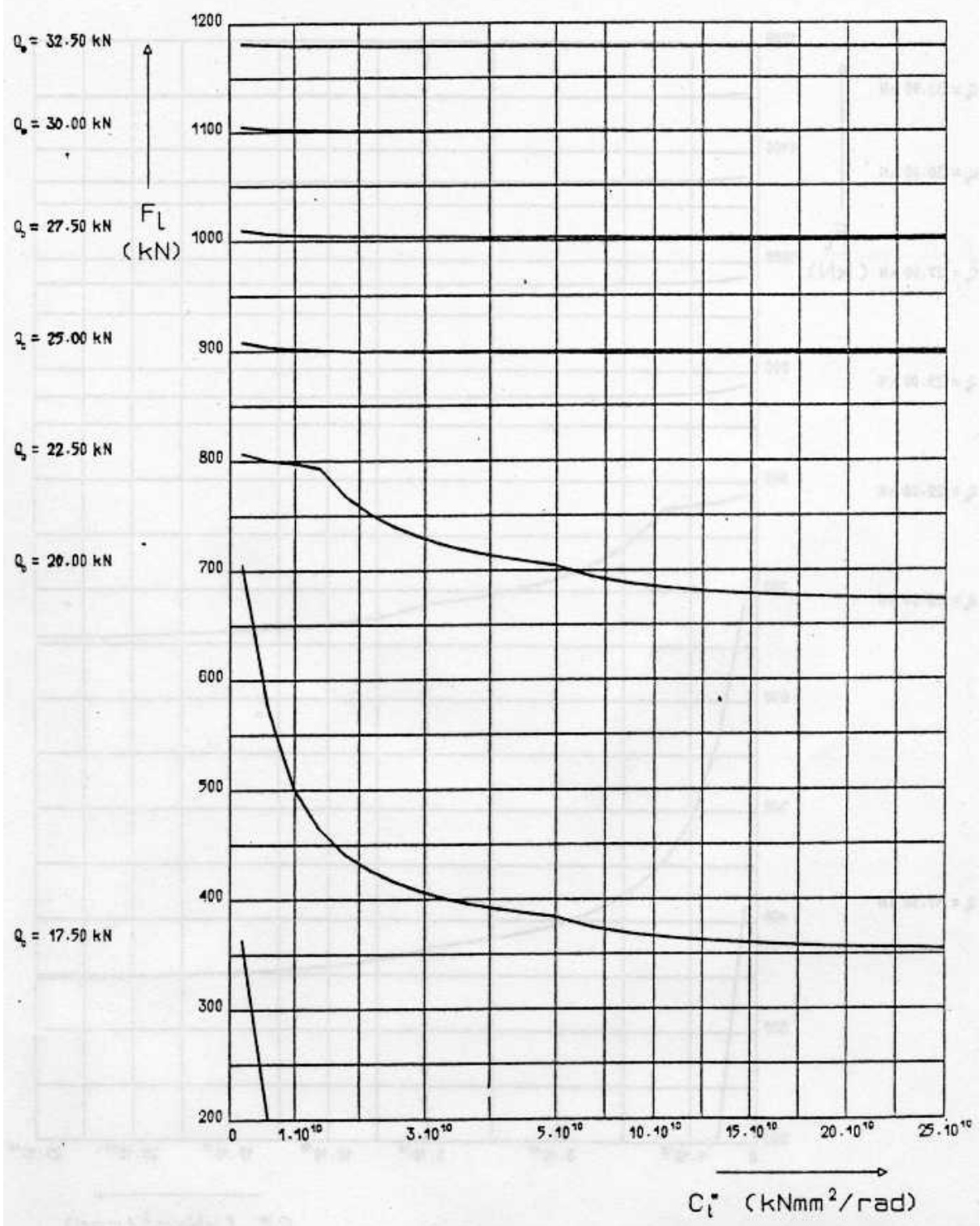
$$2a^* = 8000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$



$b = 14040 \text{ mm}$
 $2a^* = 9000 \text{ mm}$
 Y 25 L
 $\Delta q_0 = 0.20$

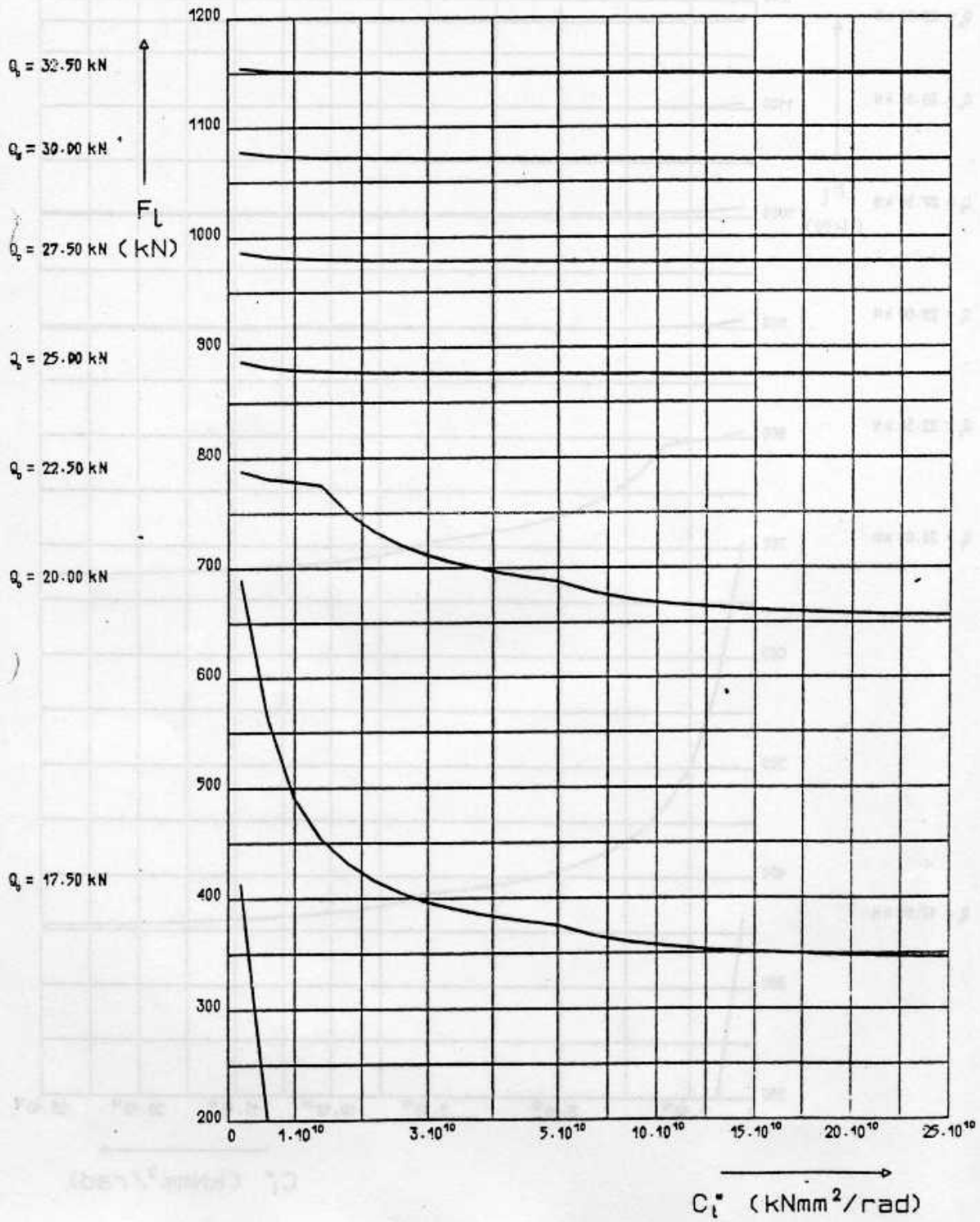


$$\boxed{\quad\quad} = 14540 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

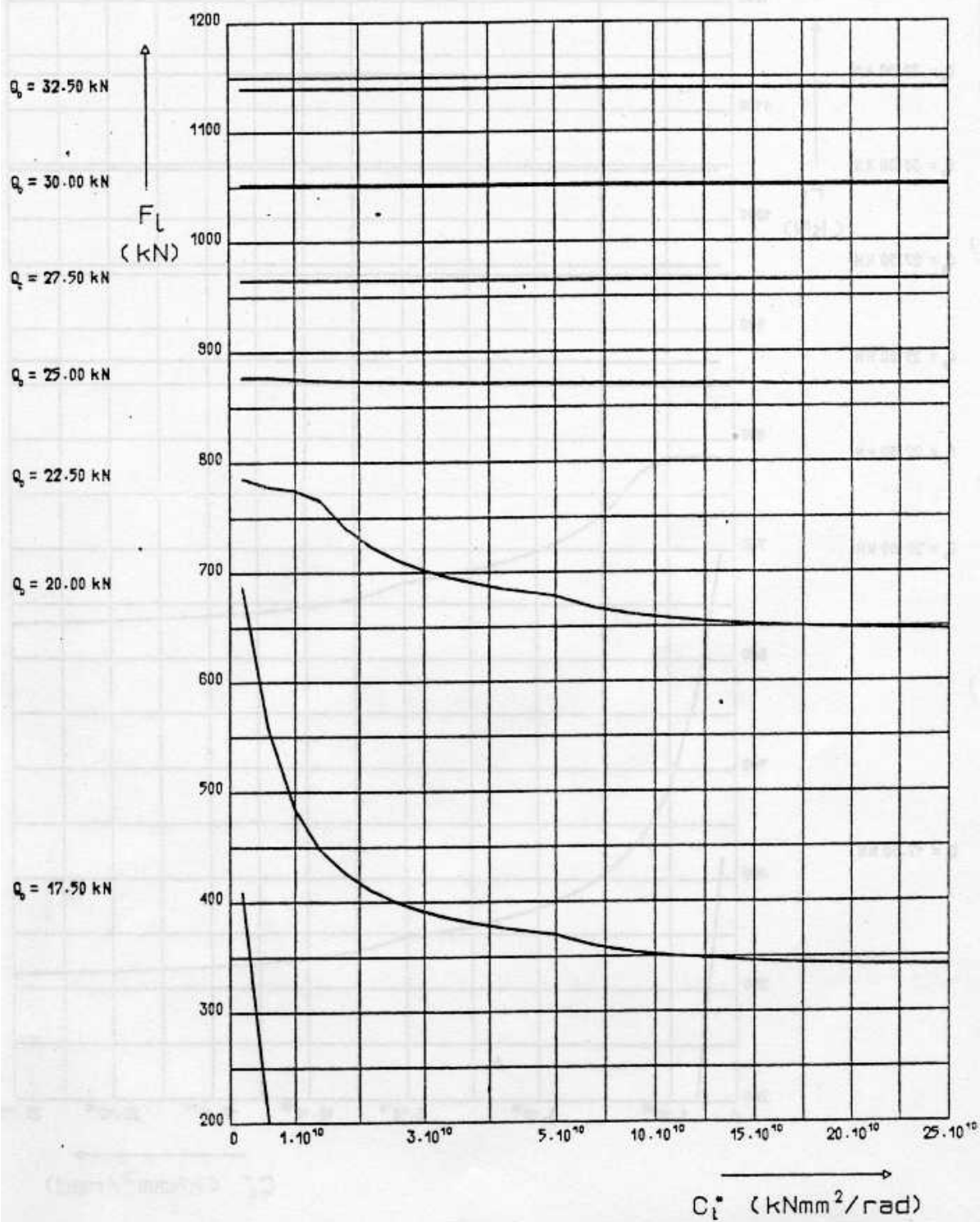


$$\text{---} = 14950 \text{ . mm}$$

$$2a^* = 9000 \text{ . mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

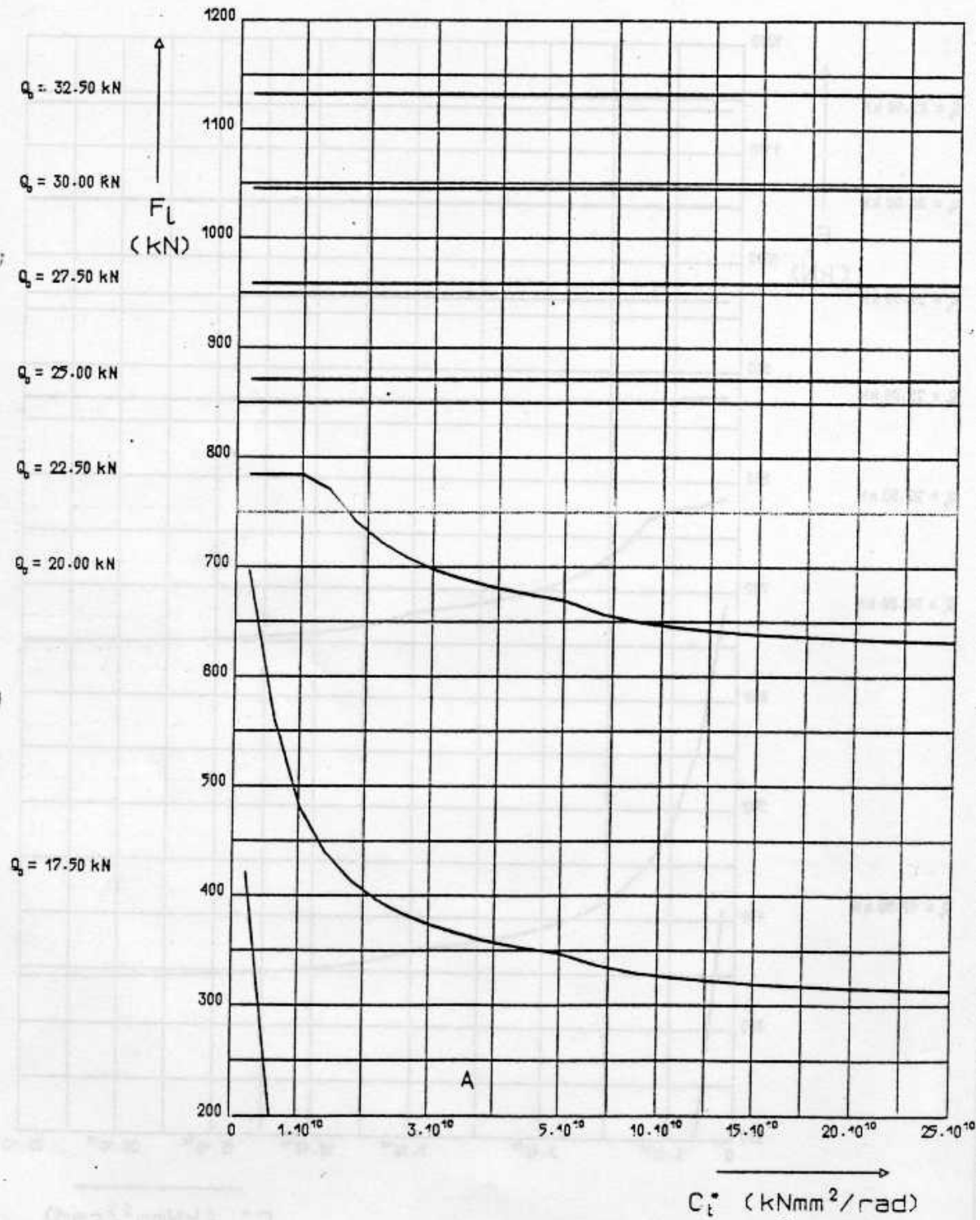


$$\text{---} = 15040 \cdot \text{mm}$$

$$2a^* = 10000 \cdot \text{mm}$$

Y. 25 L

$$\Delta q_0 = 0.20$$

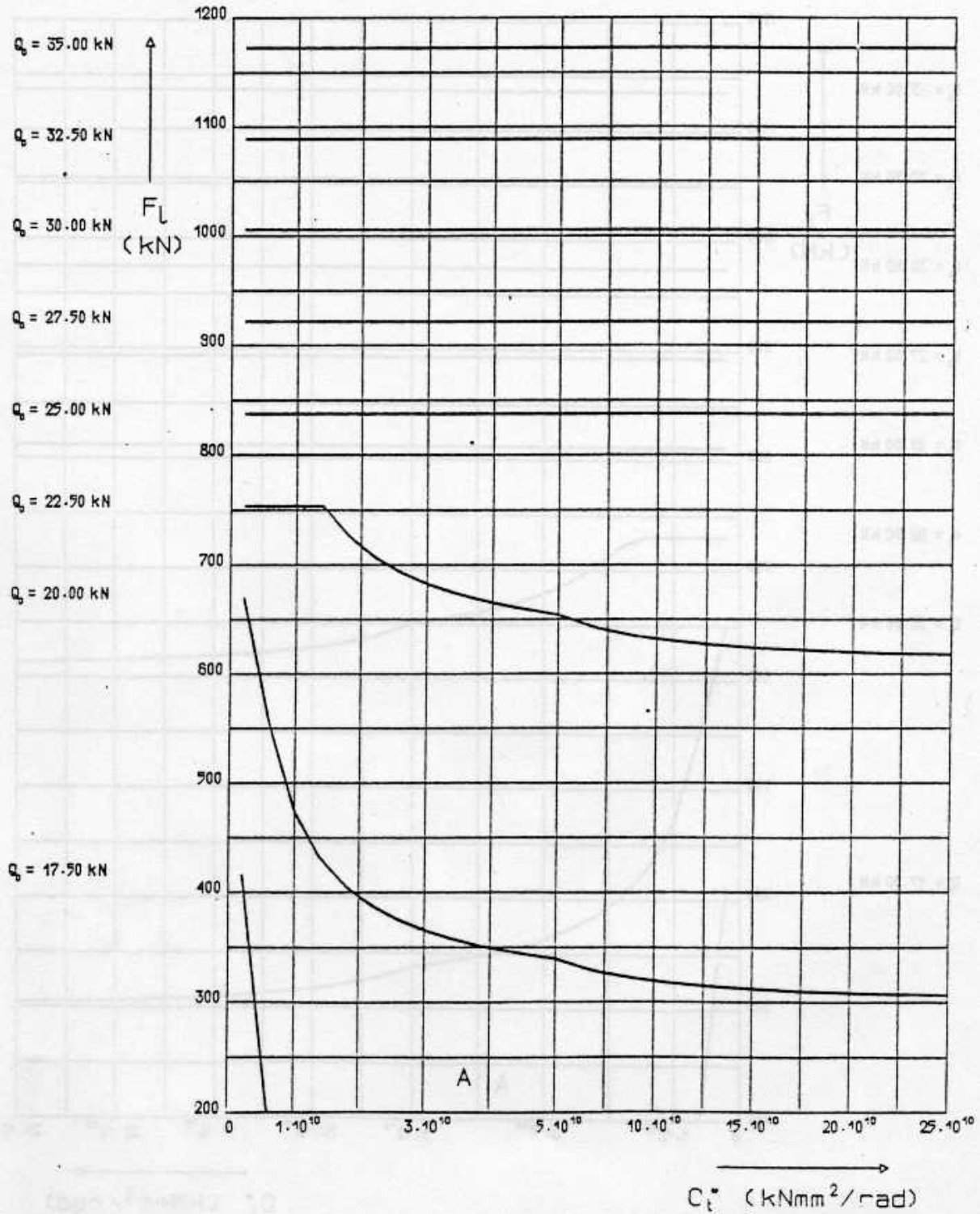


$$l = 15540 \text{ mm}$$

$$2a^* = 10000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

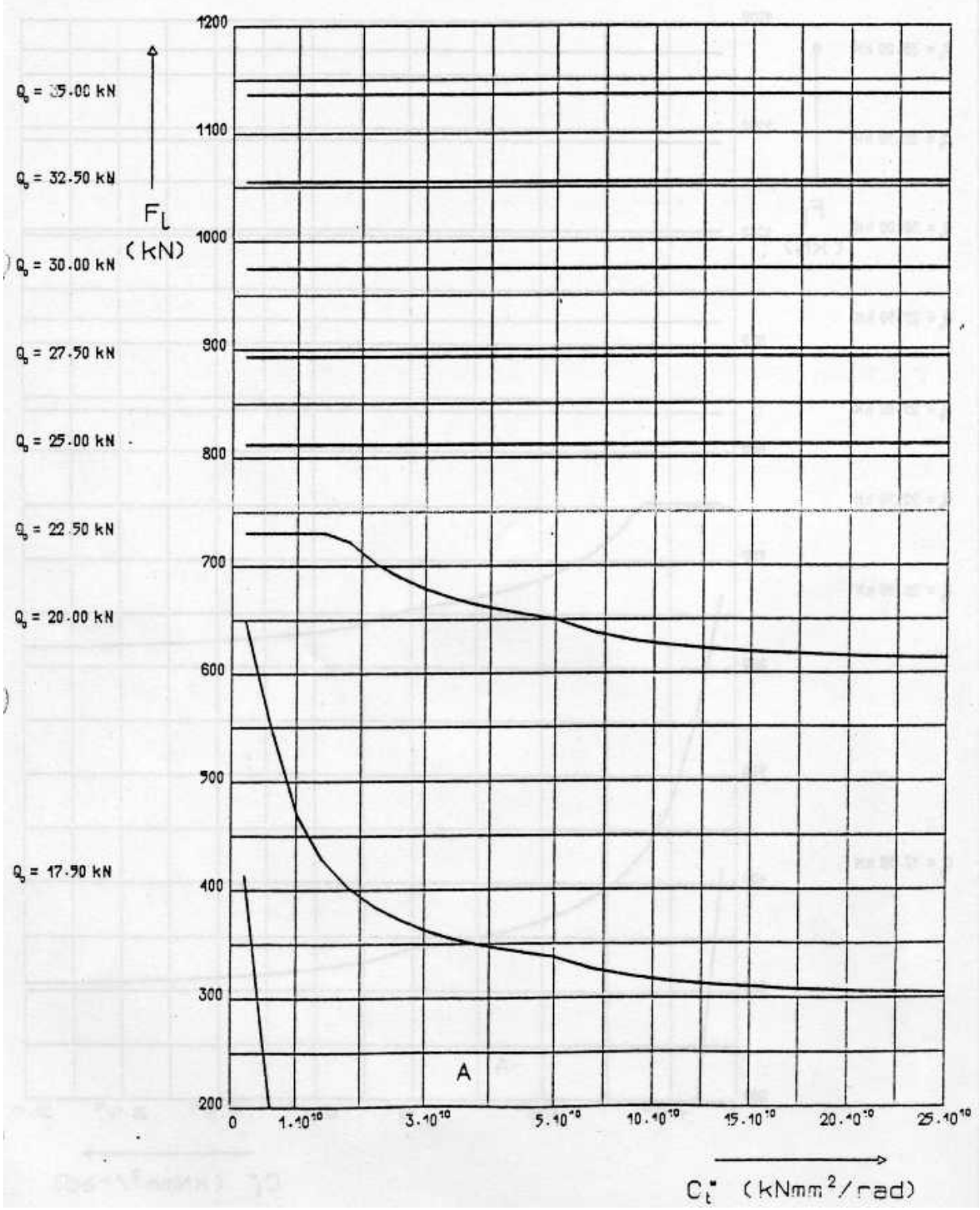


$$l = 15950 \text{ mm}$$

$$2a^* = 10000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

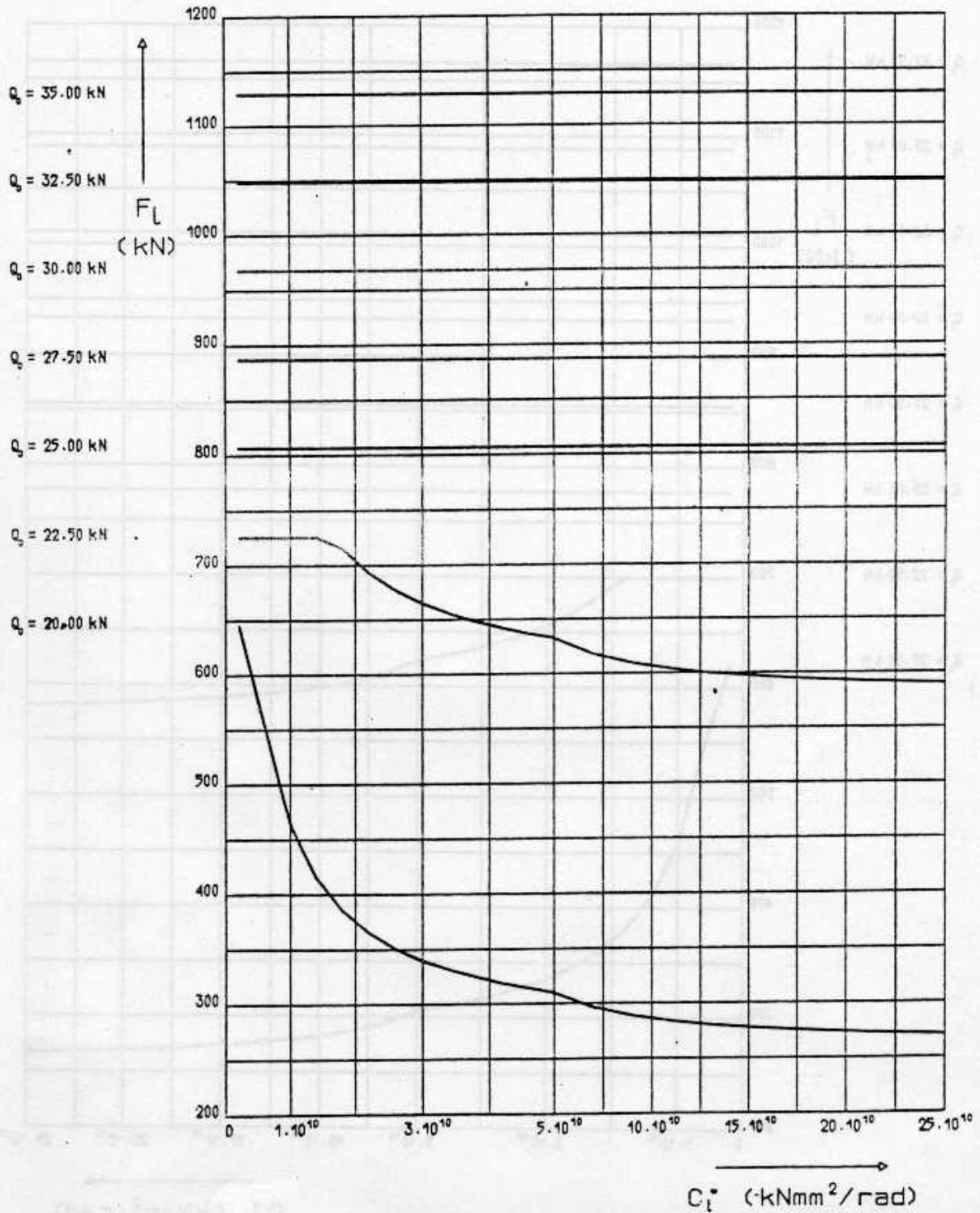


$$l = 16040 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

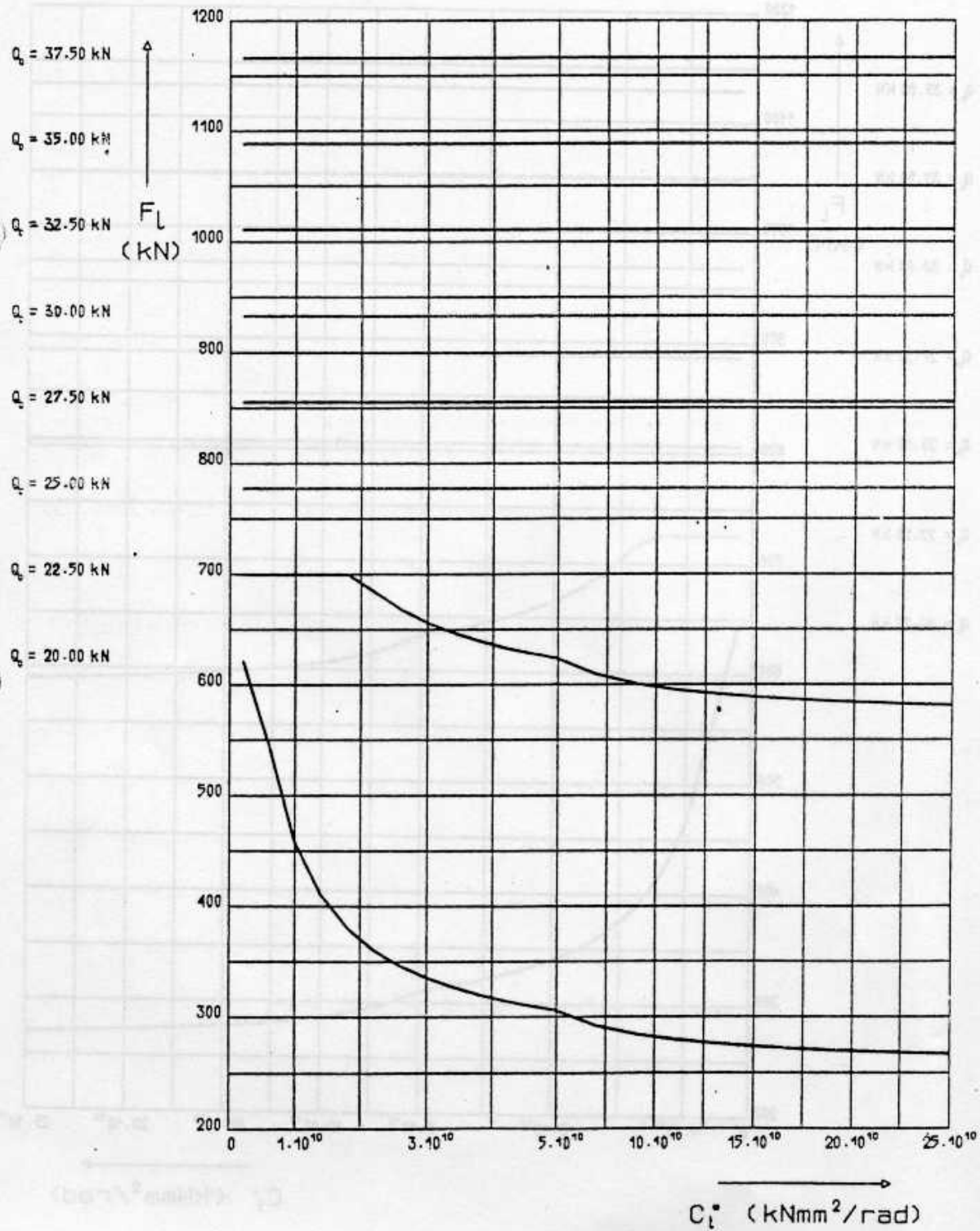


$$l = 16540 \text{ mm}$$

$$2a^* = 11000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

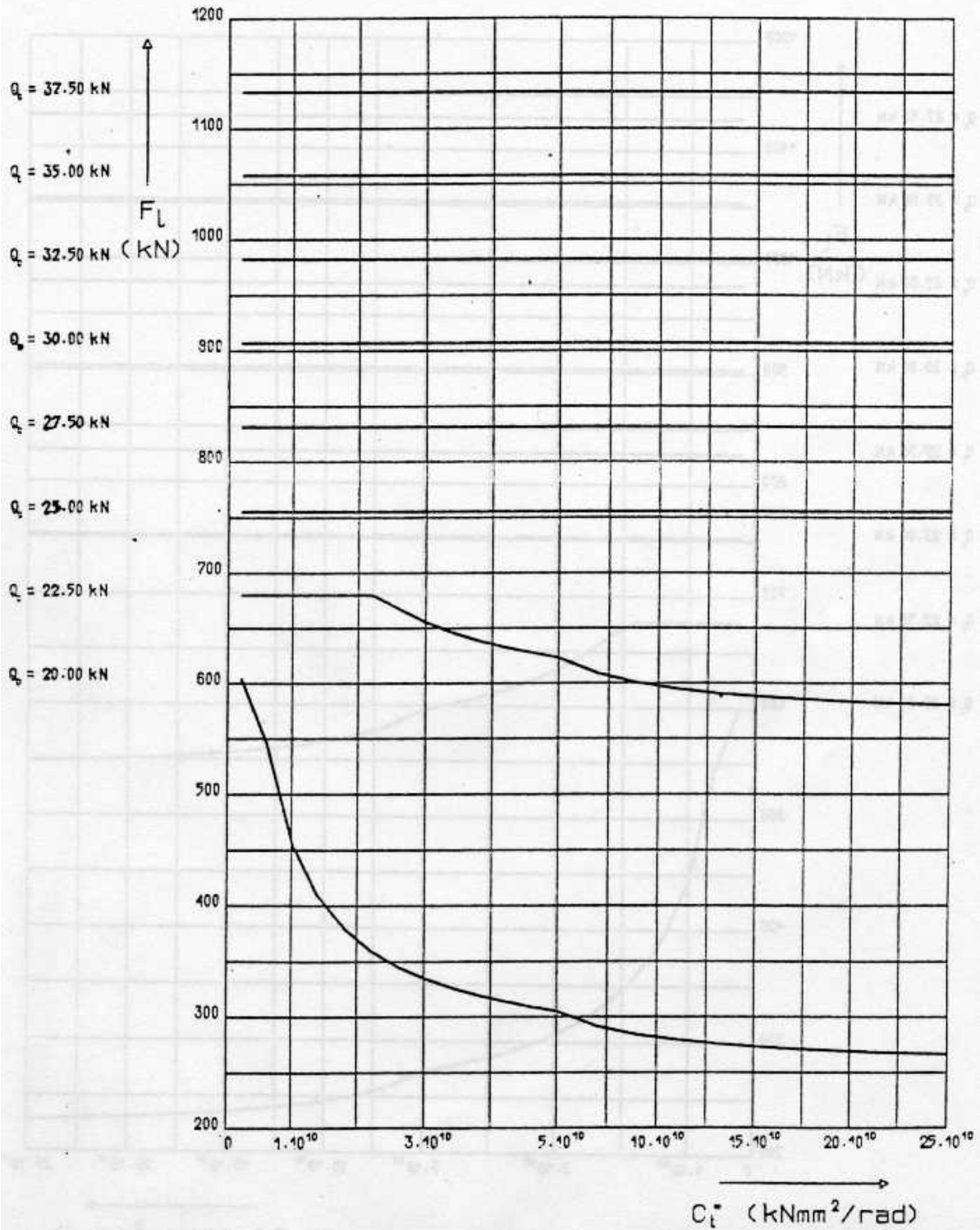


$$\text{---} = 16950 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

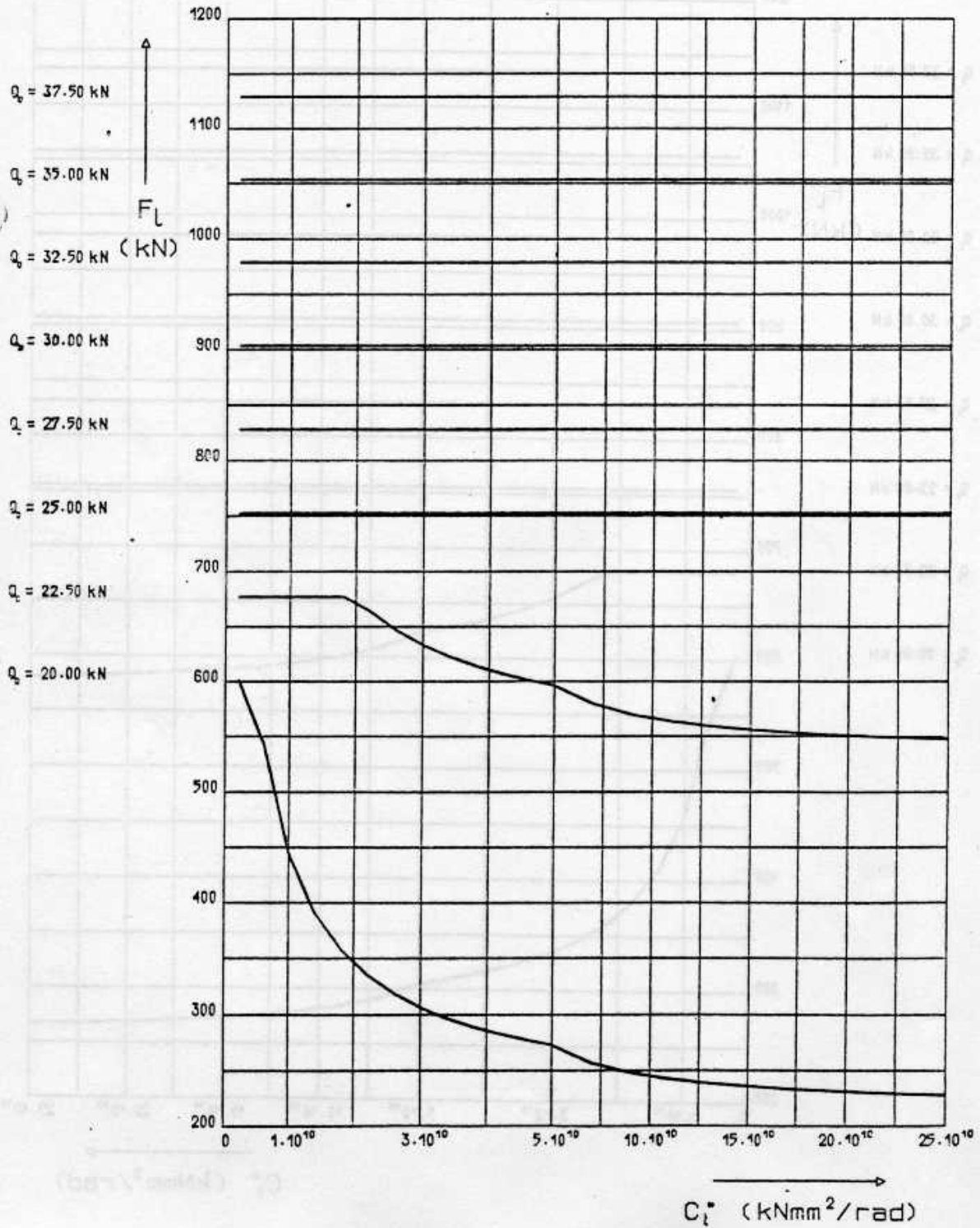


$$\omega = 17040 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

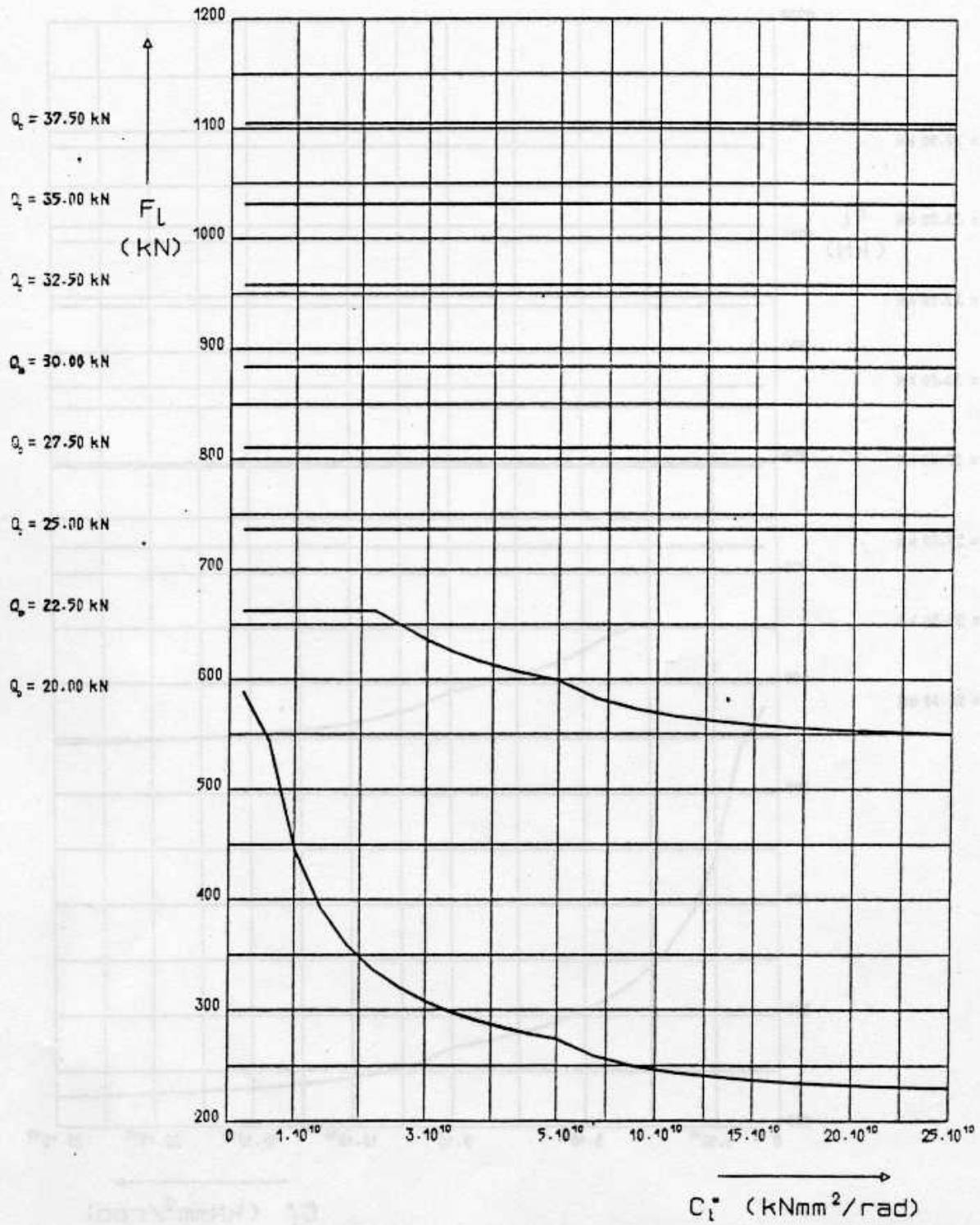


$$\overline{a_0} = 17540 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

Y 25 L

$$\Delta Q_0 = 0.20$$

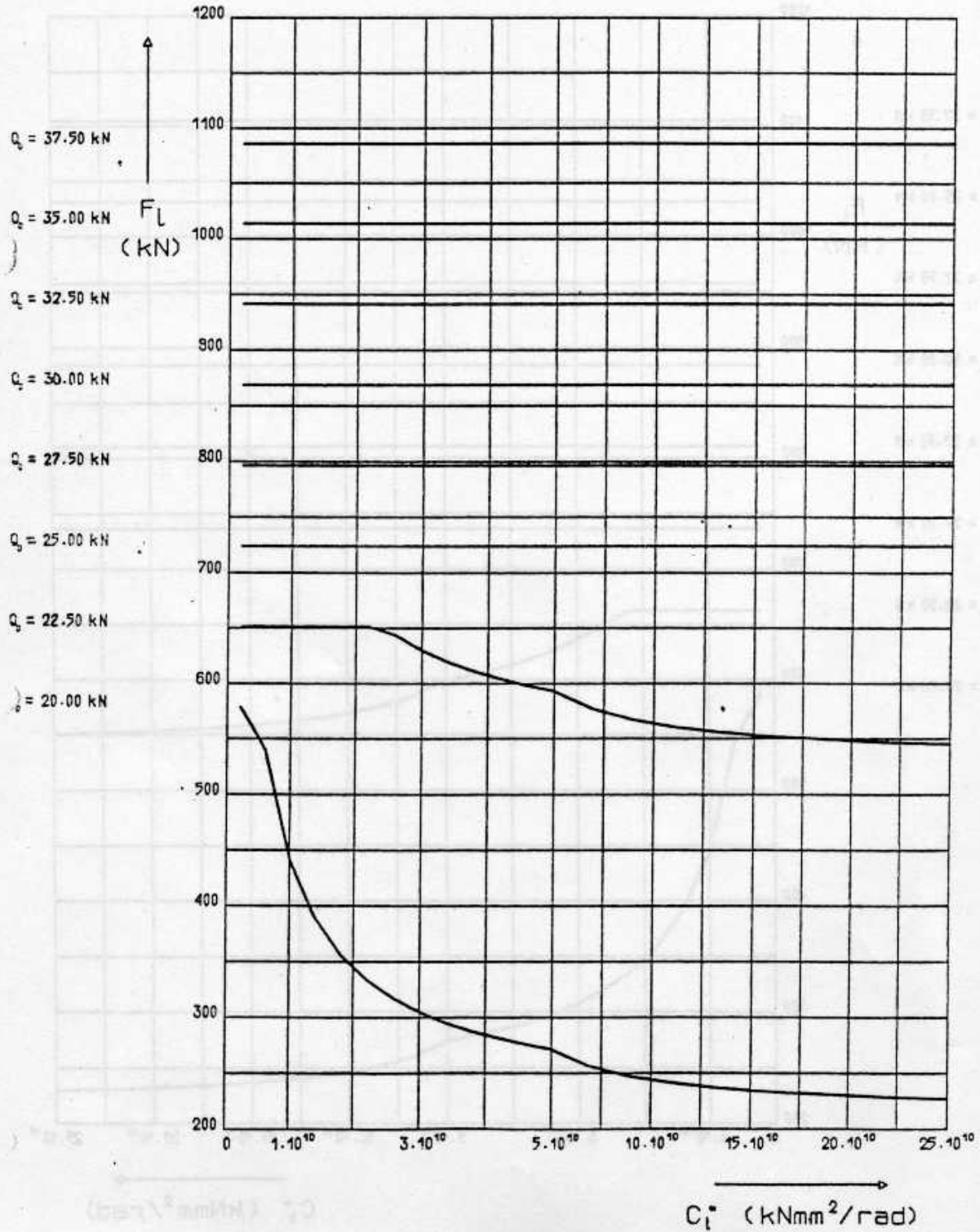


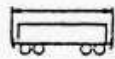
$$b = 17950 \text{ mm}$$

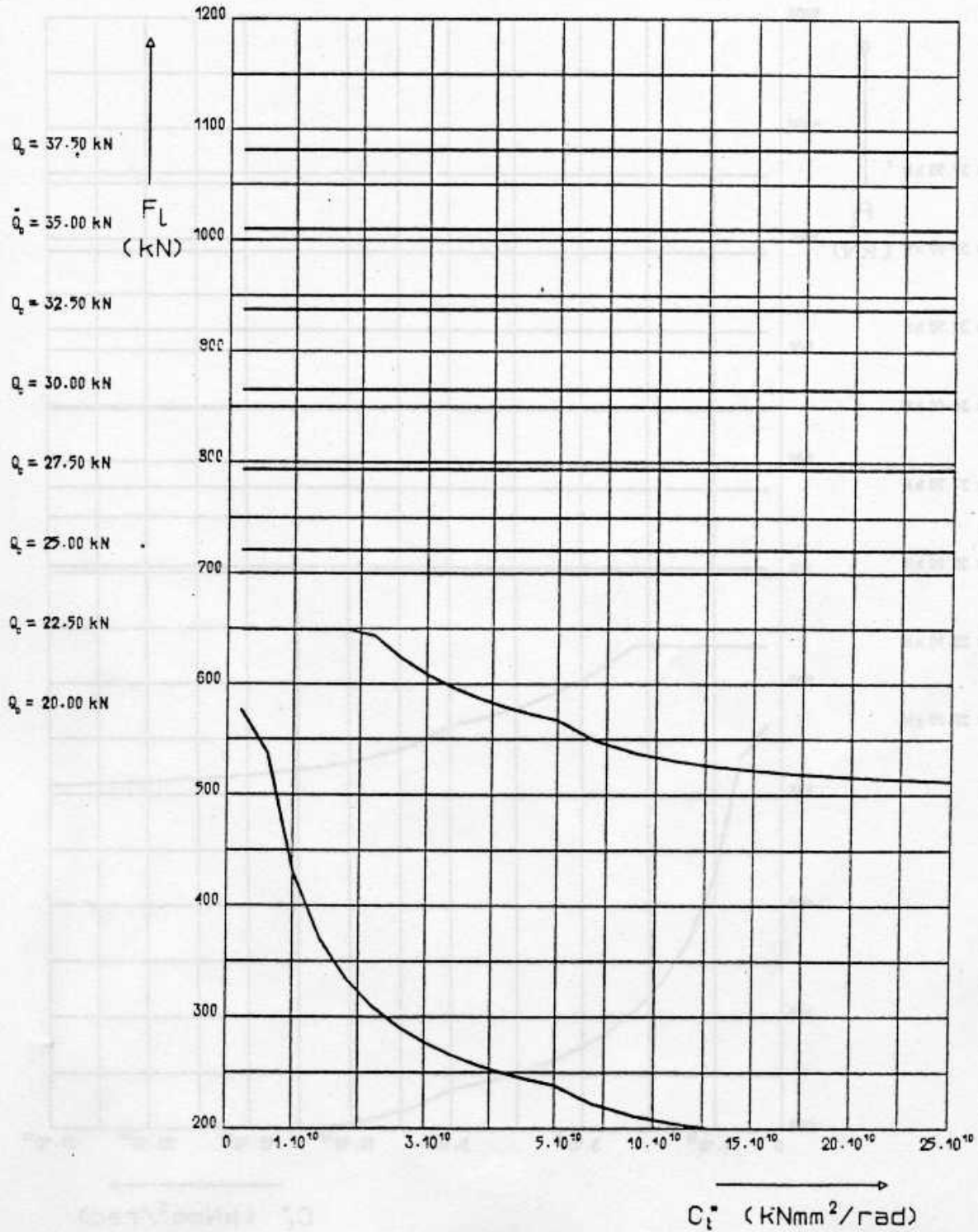
$$2a^* = 12000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$



 = 18040 . mm
 $2a^* = 13000 . mm$
 Y 25 L
 $\Delta q_0 = 0.20$

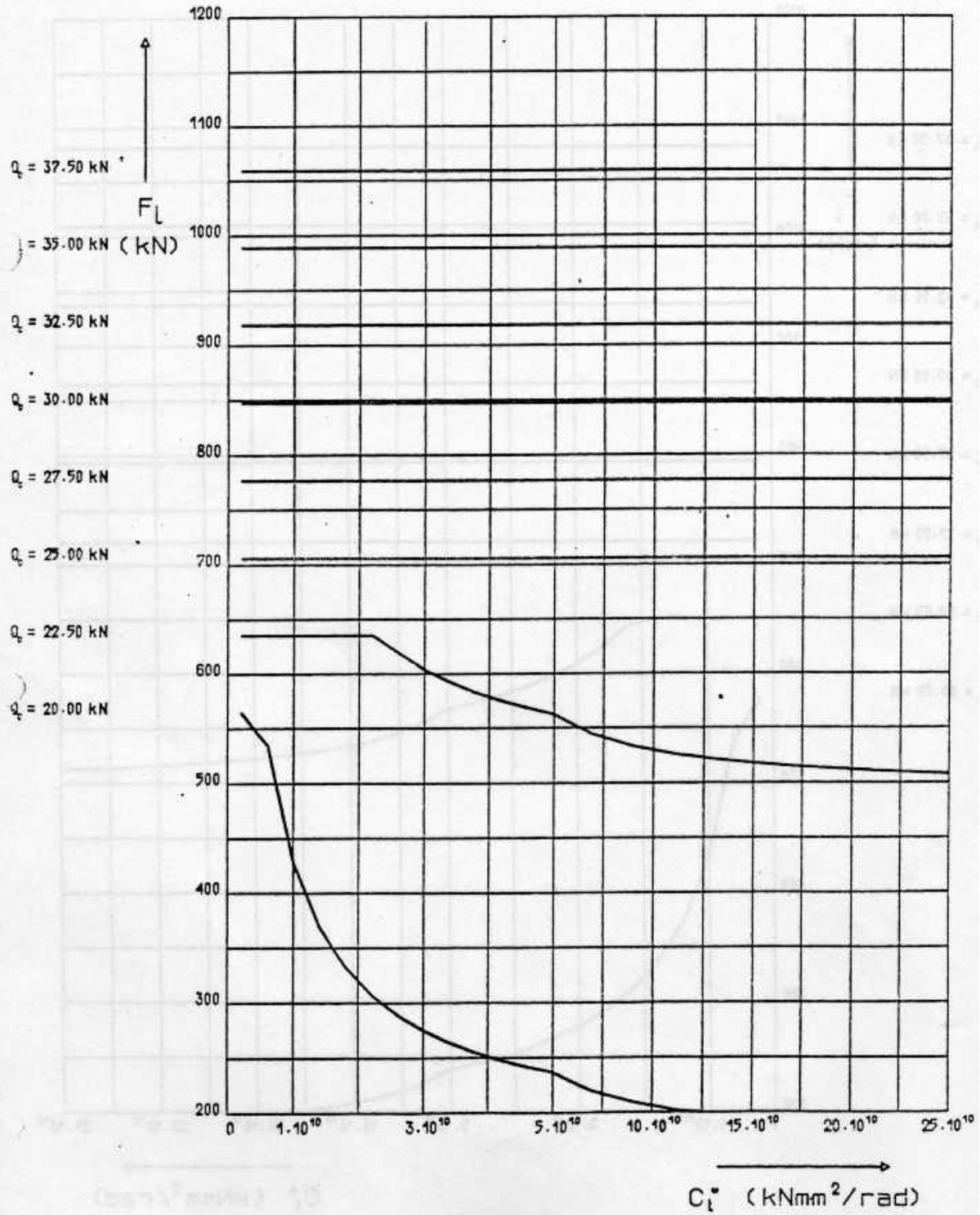


$$\text{---} = 18540 \cdot \text{mm}$$

$$2a^* = 13000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

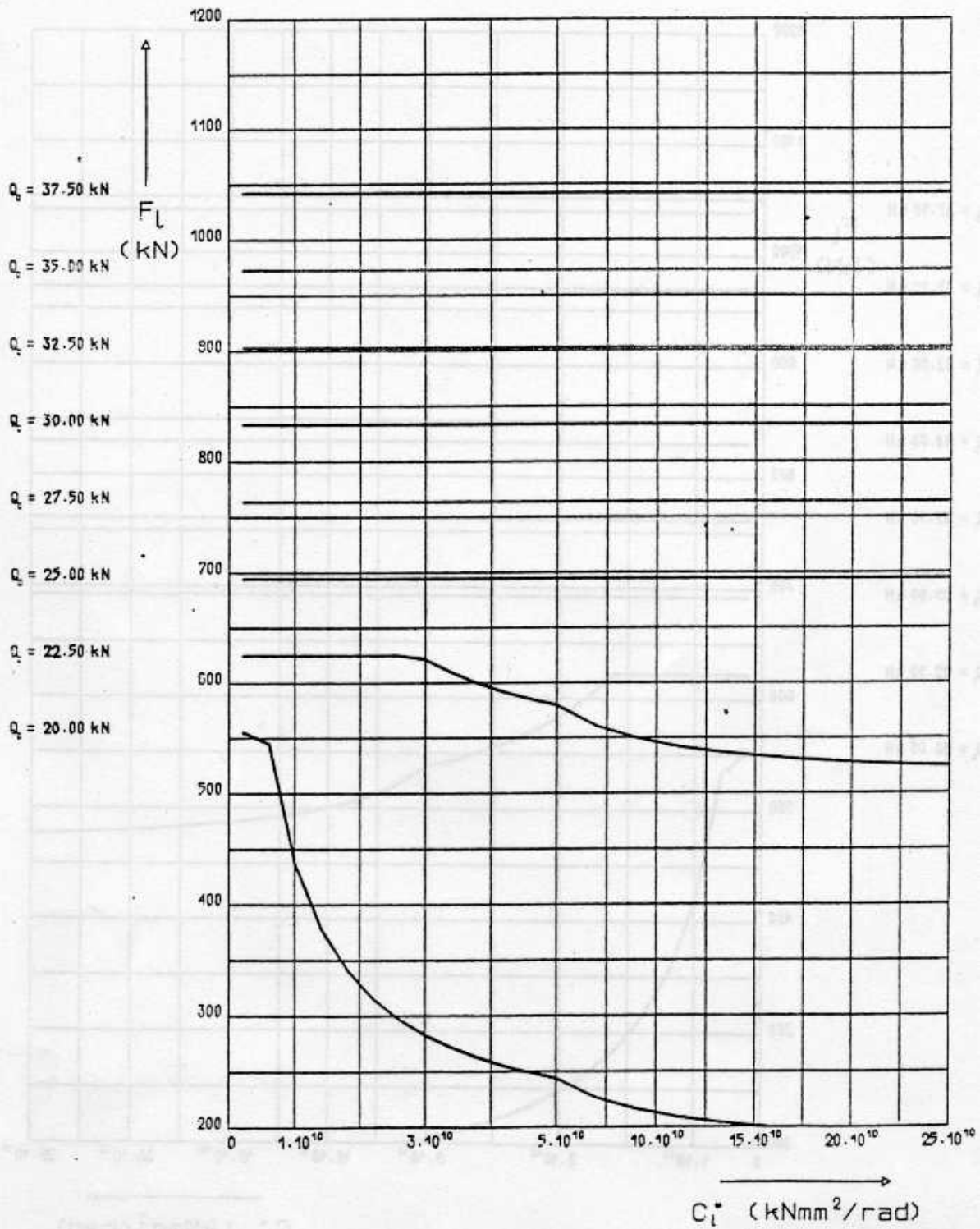


$$b = 18950 \cdot \text{mm}$$

$$2a^* = 13000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

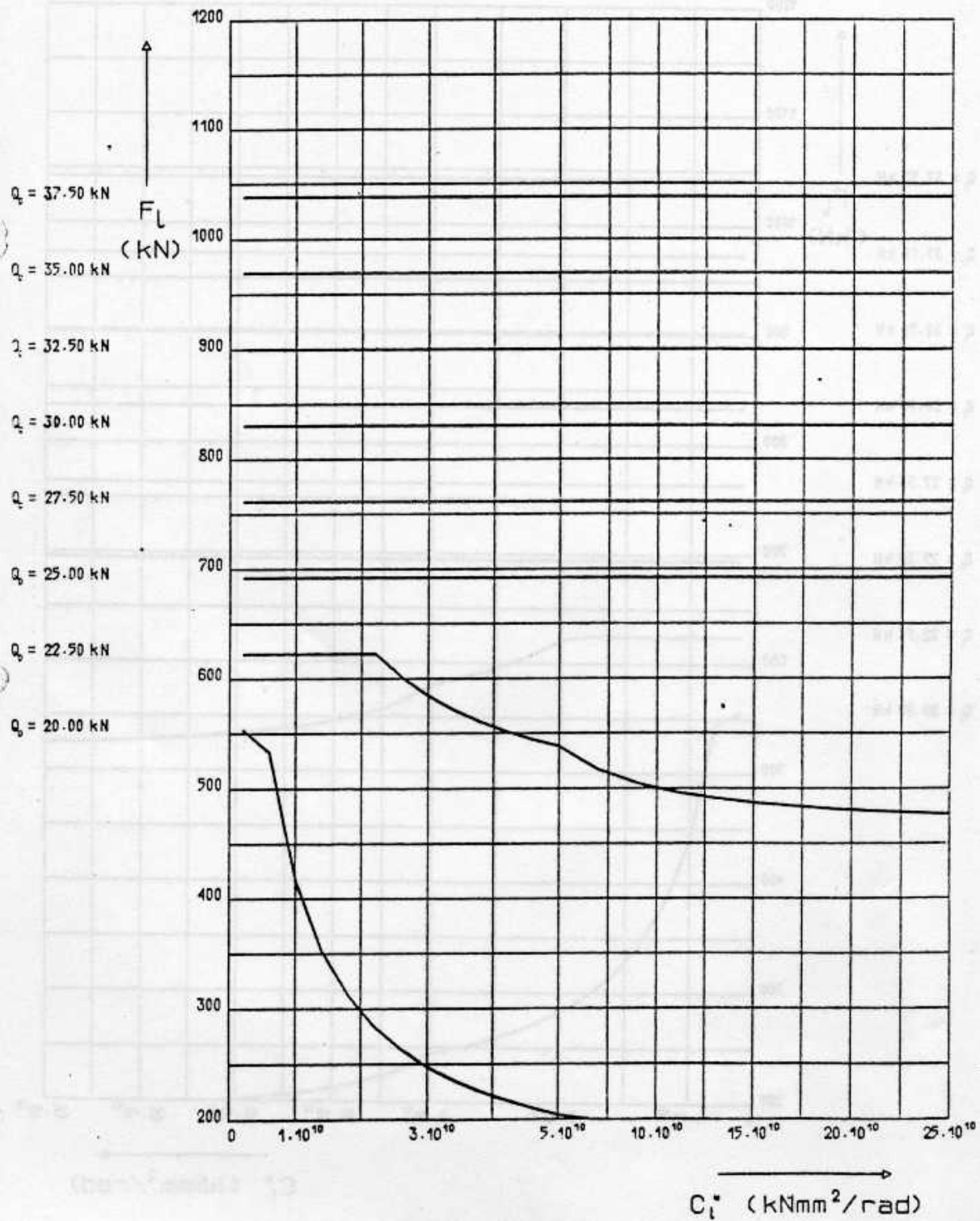


$$\overline{a} = 19040 \cdot \text{mm}$$

$$2\overline{a}^* = 14000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

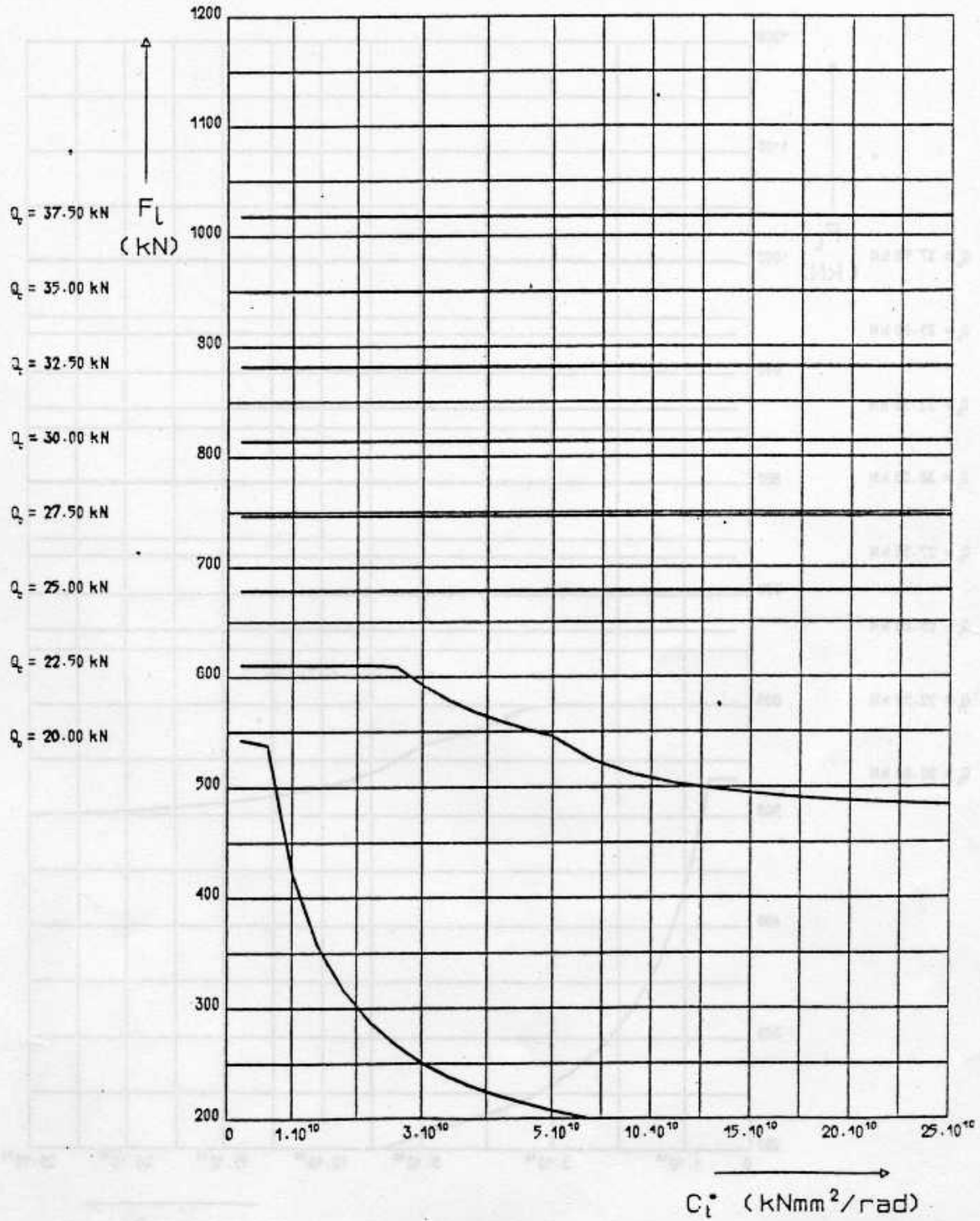


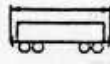
$$\text{---} = 19540 \cdot \text{mm}$$

$$2a^* = 14000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

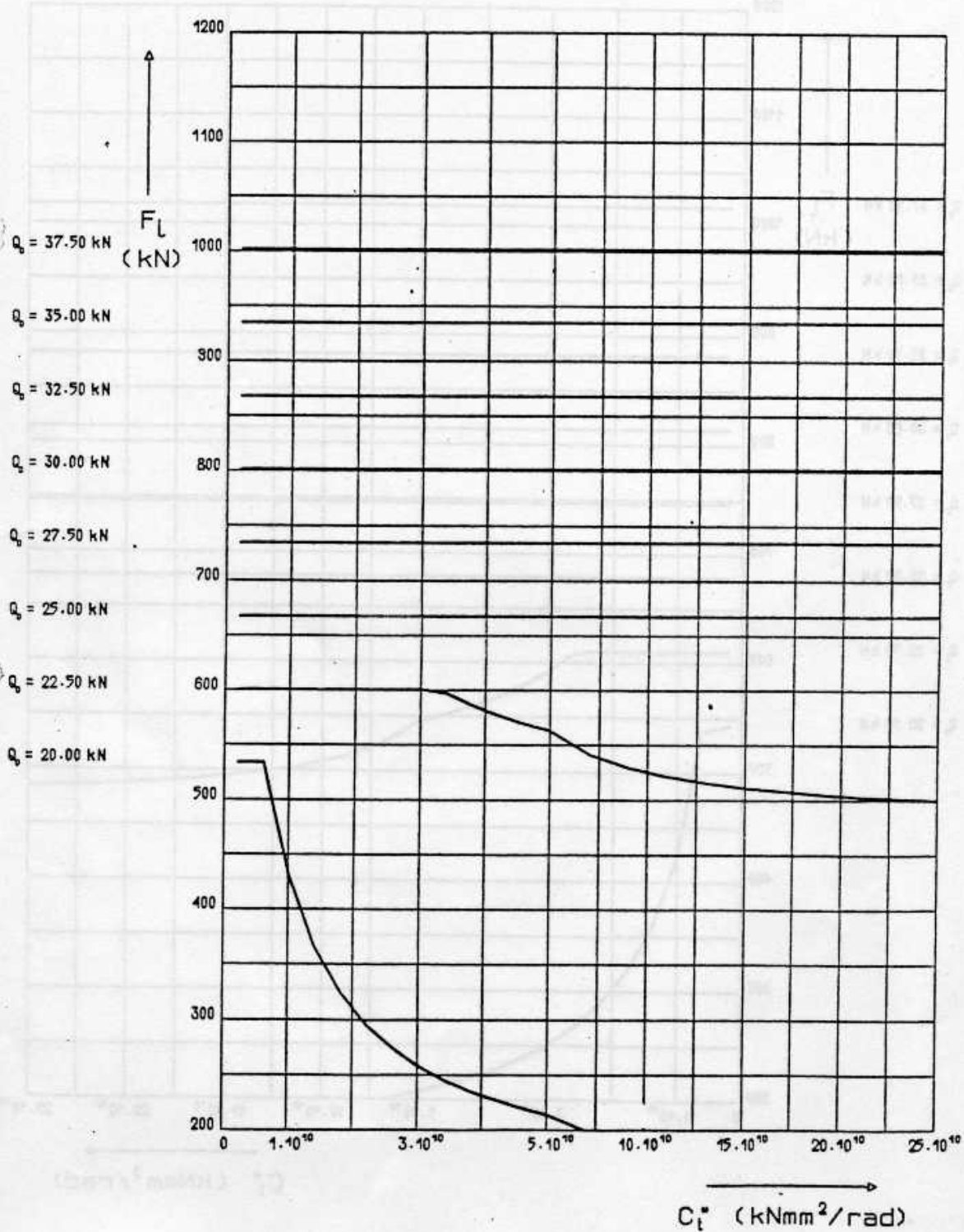


 = 19950 . mm

$2a^* = 14000 . mm$

Y 25 L

$\Delta q_0 = 0.20$

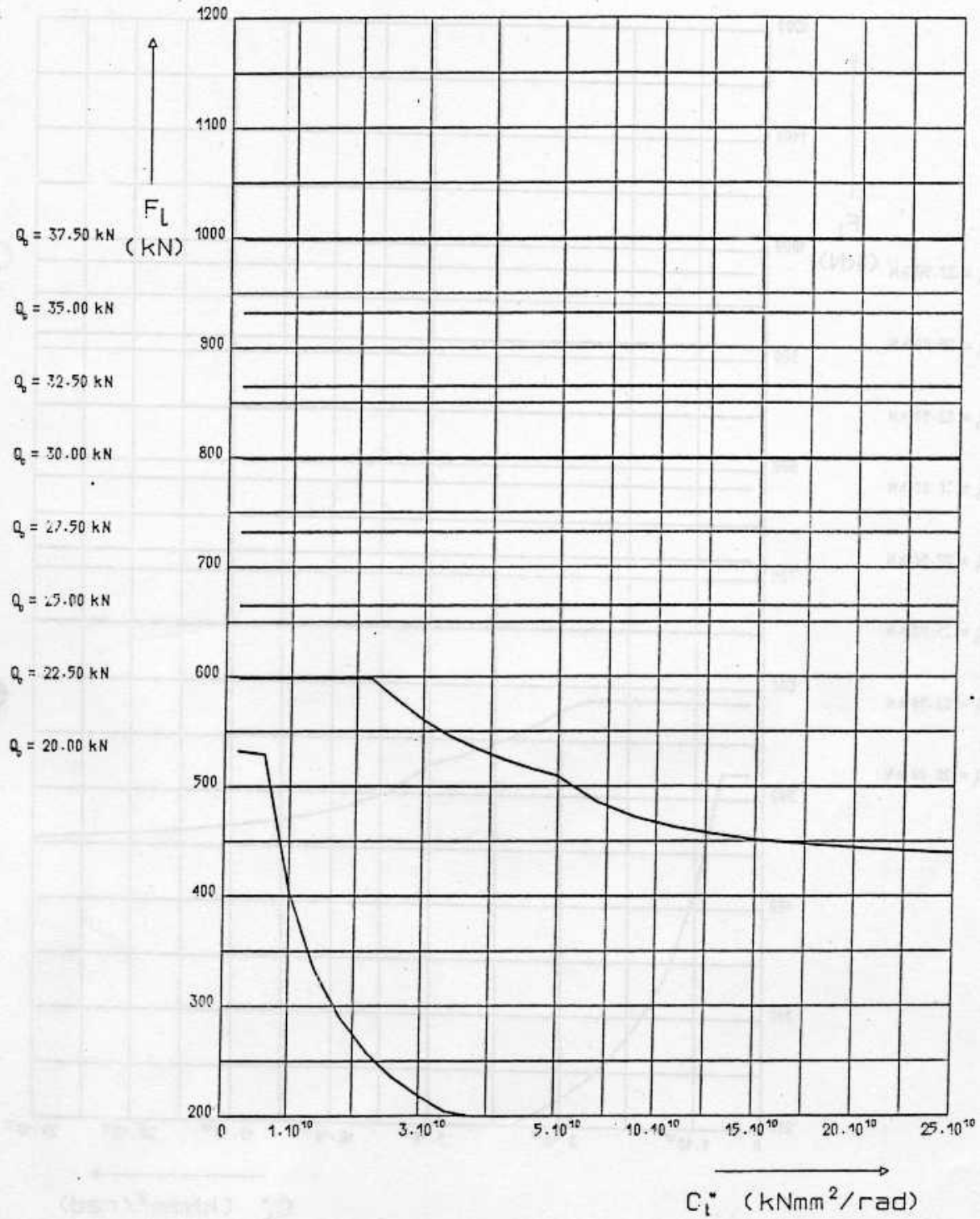


$$b = 20040 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

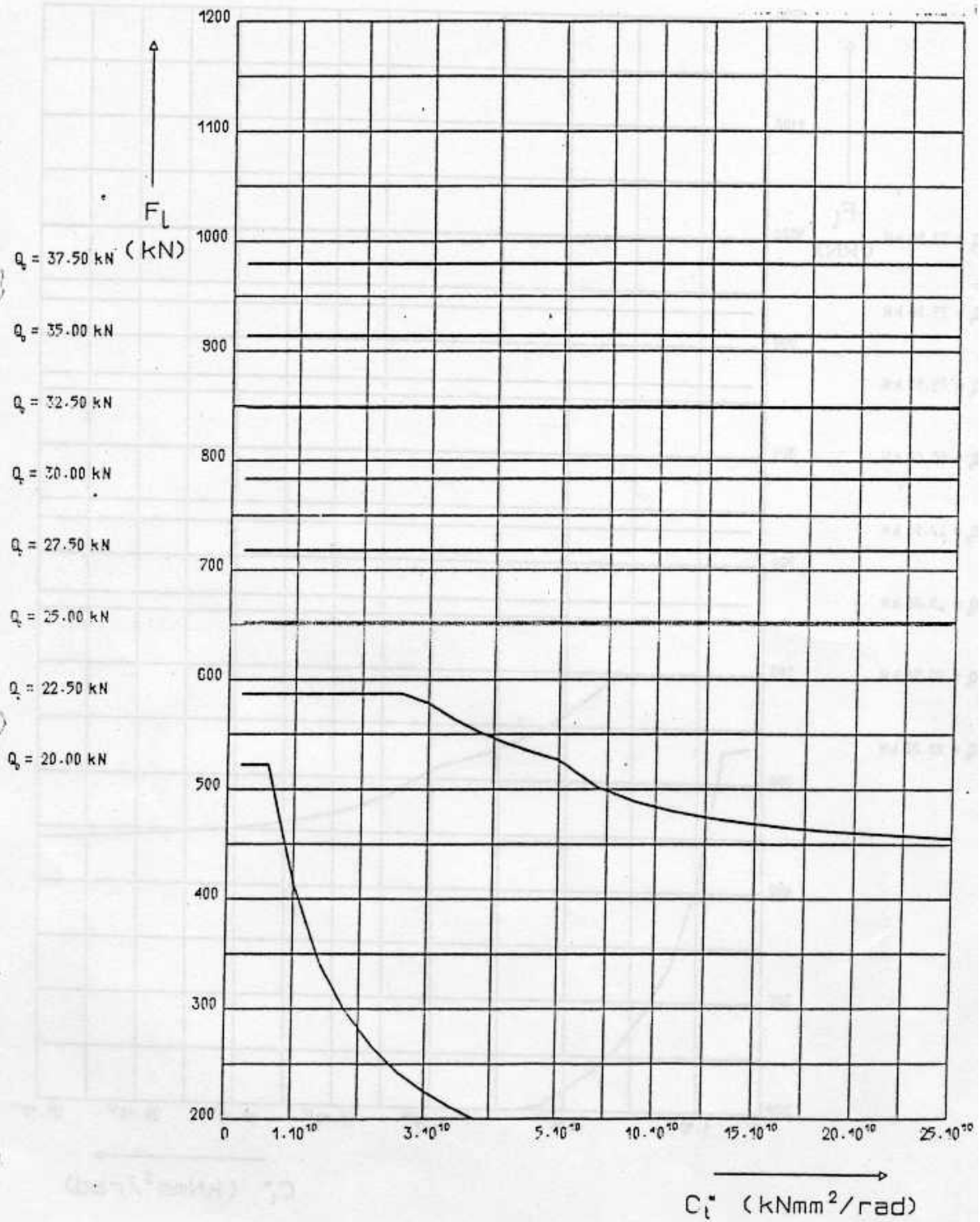


$$b = 20540 \text{ mm}$$

$$2a^* = 15000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

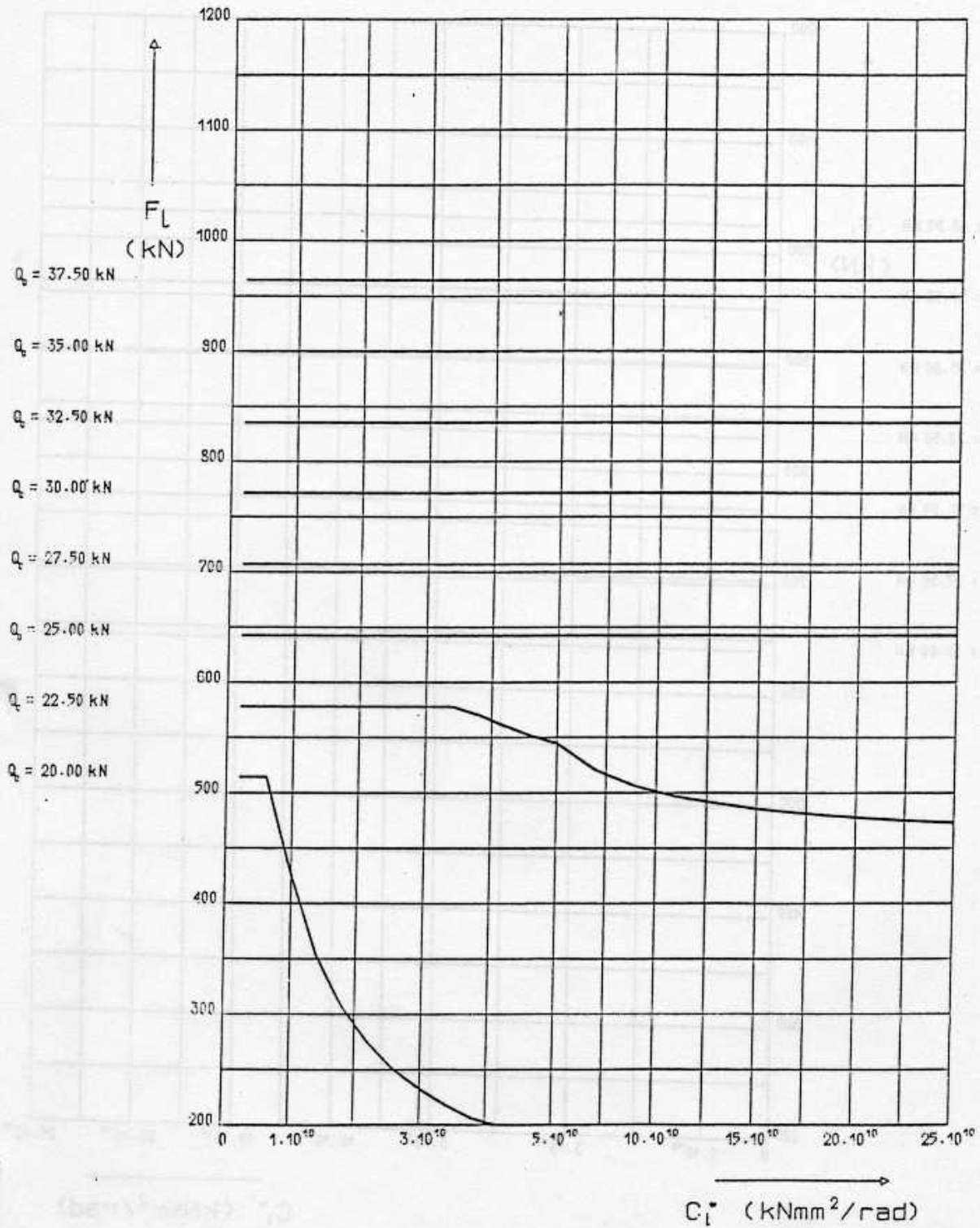


$$b_0 = 20950 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

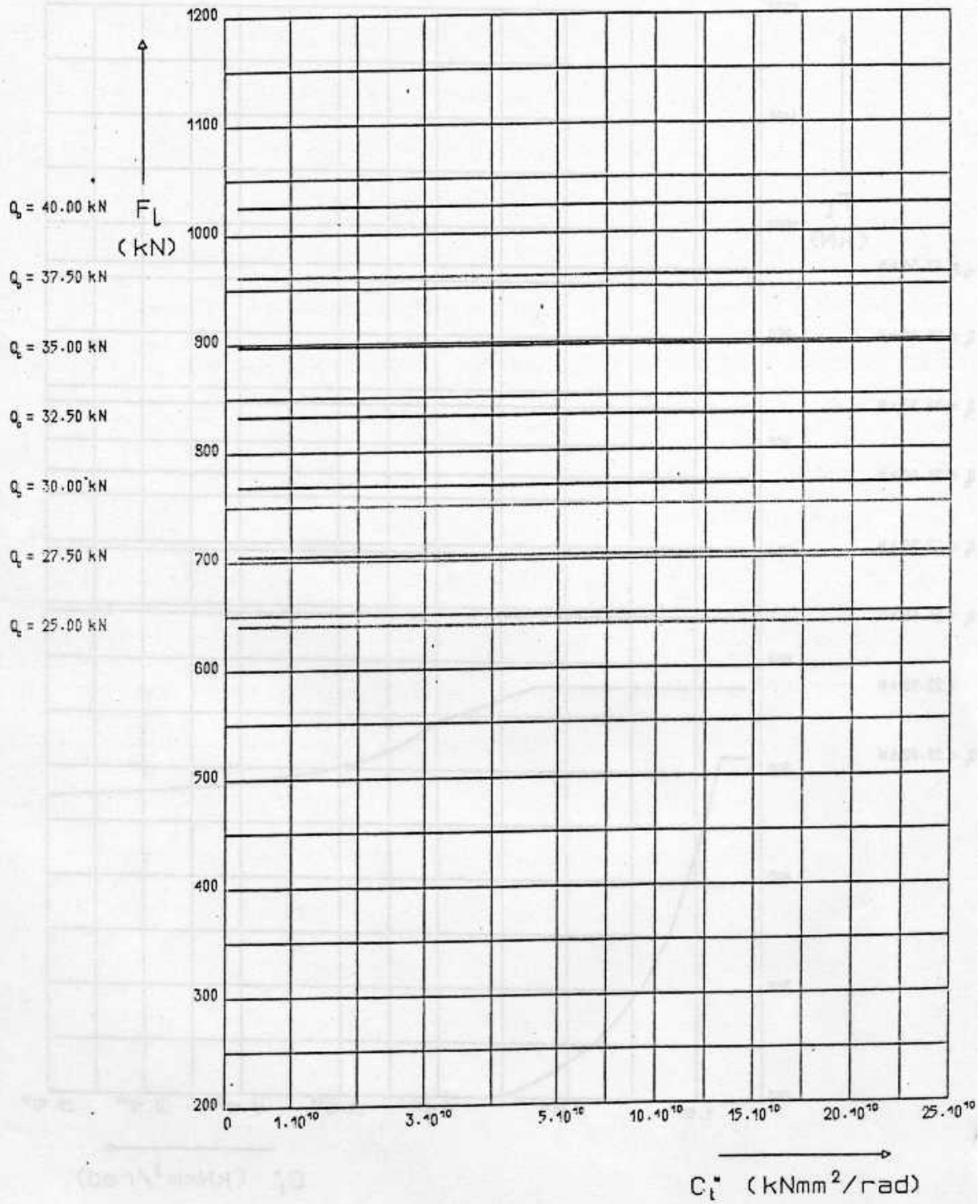


$$\overline{c_0} = 21040 \cdot \text{mm}$$

$$2\overline{a}^* = 16000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

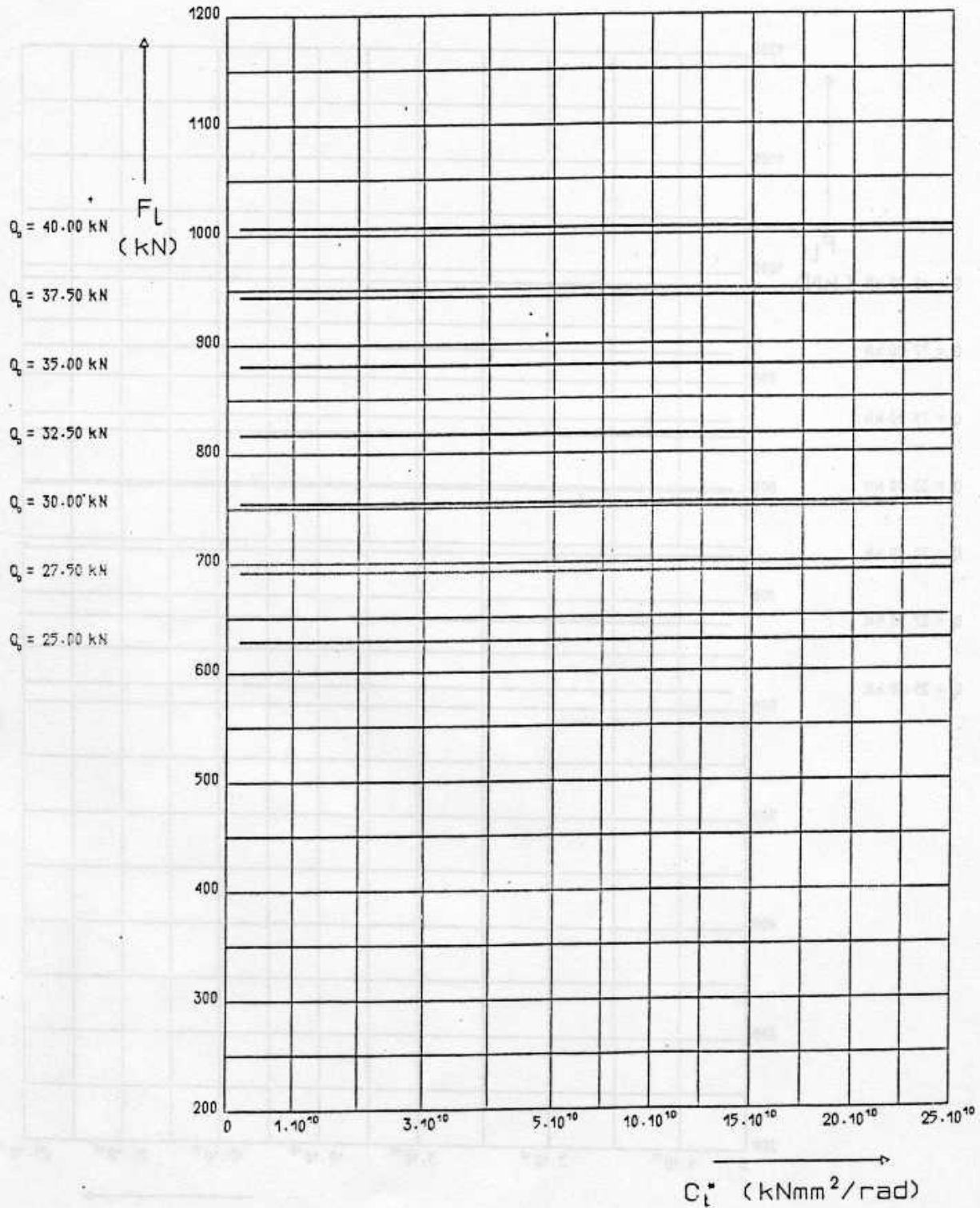


$$\overline{a} = 21540 \cdot \text{mm}$$

$$2\dot{a}^* = 16000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

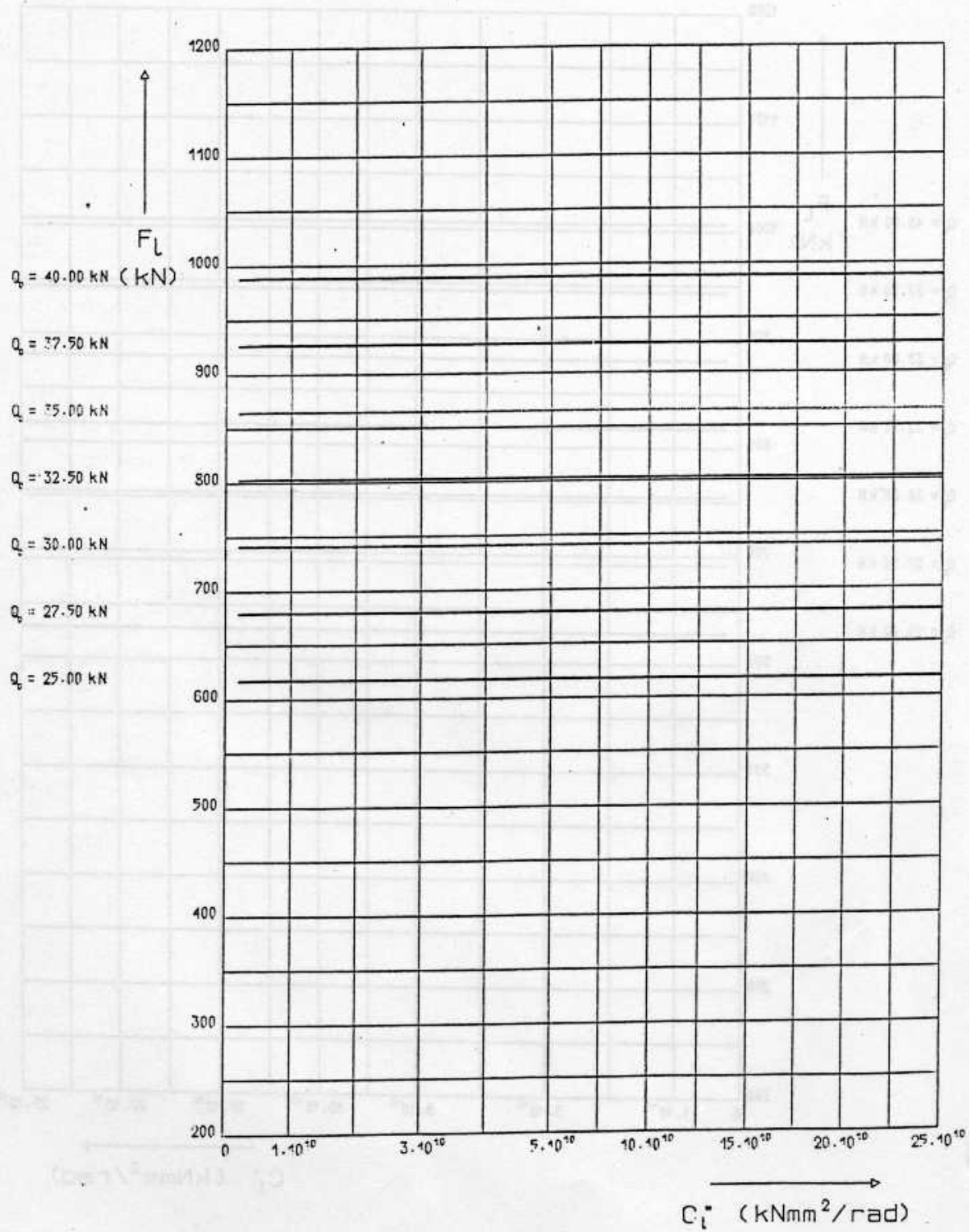


$$\text{---} = 21950 \cdot \text{mm}$$

$$2a^* = 16000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

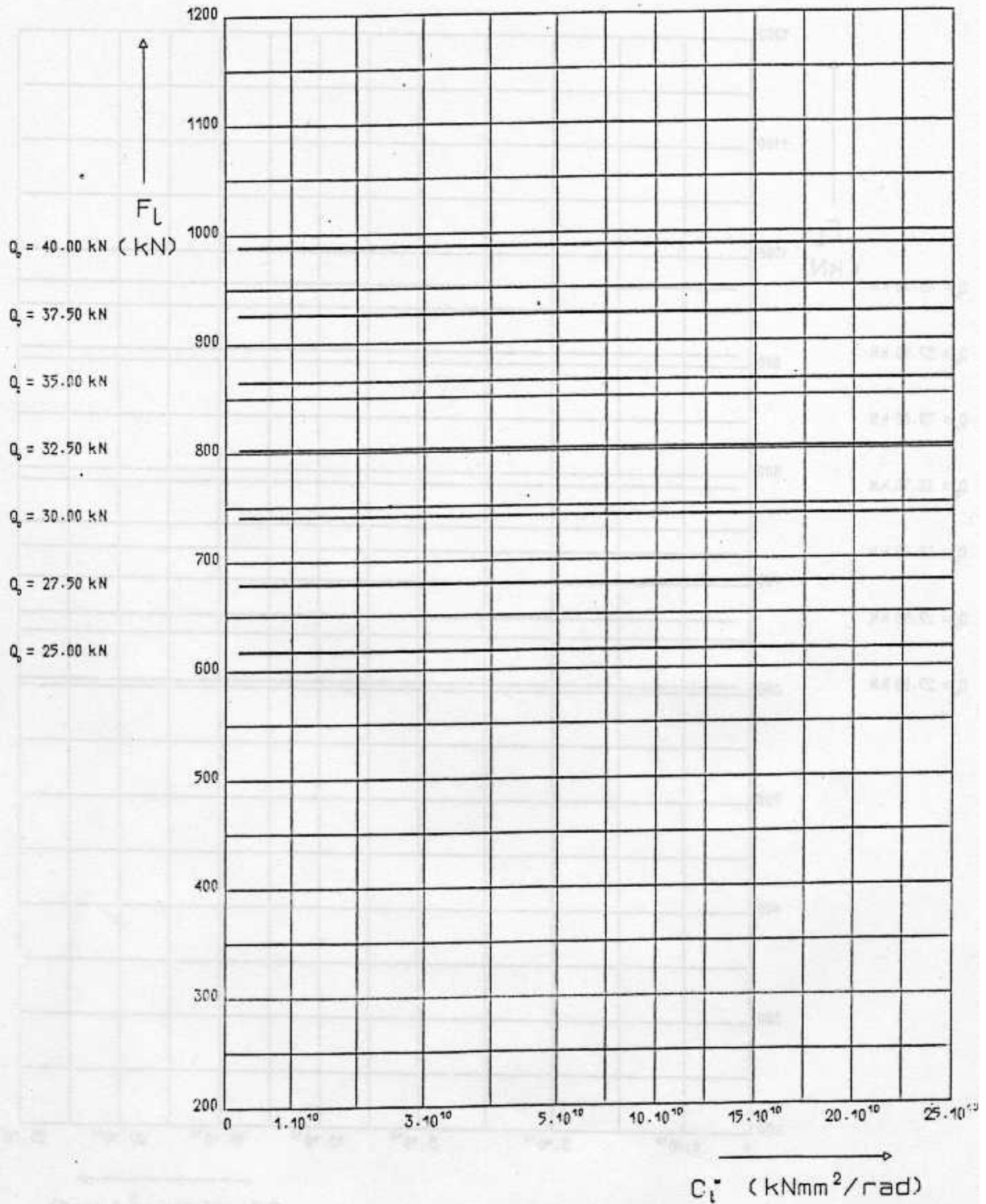


$$b = 22040 \text{ mm}$$

$$2a^* = 17000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

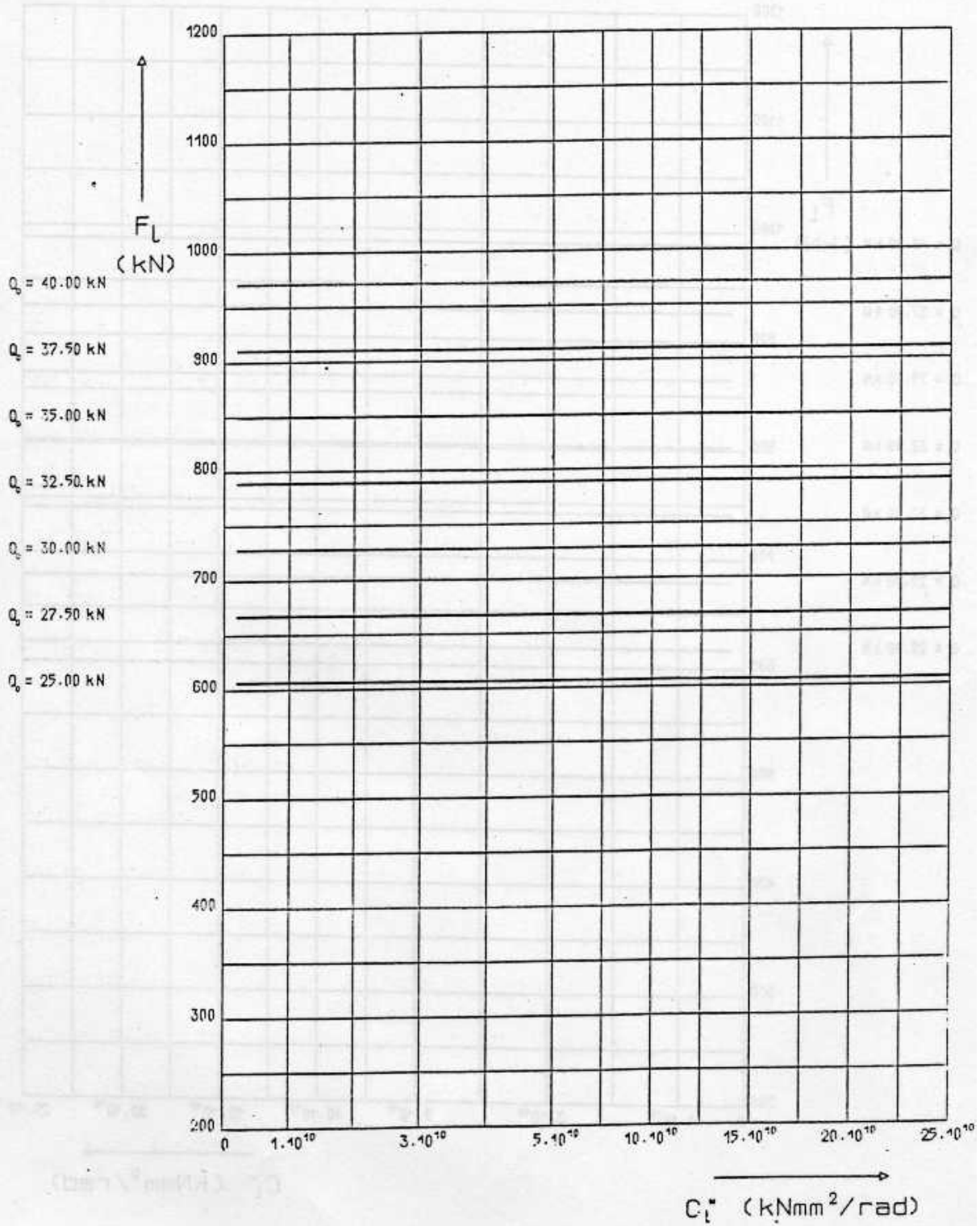


$$\overline{a_0} = 22540 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

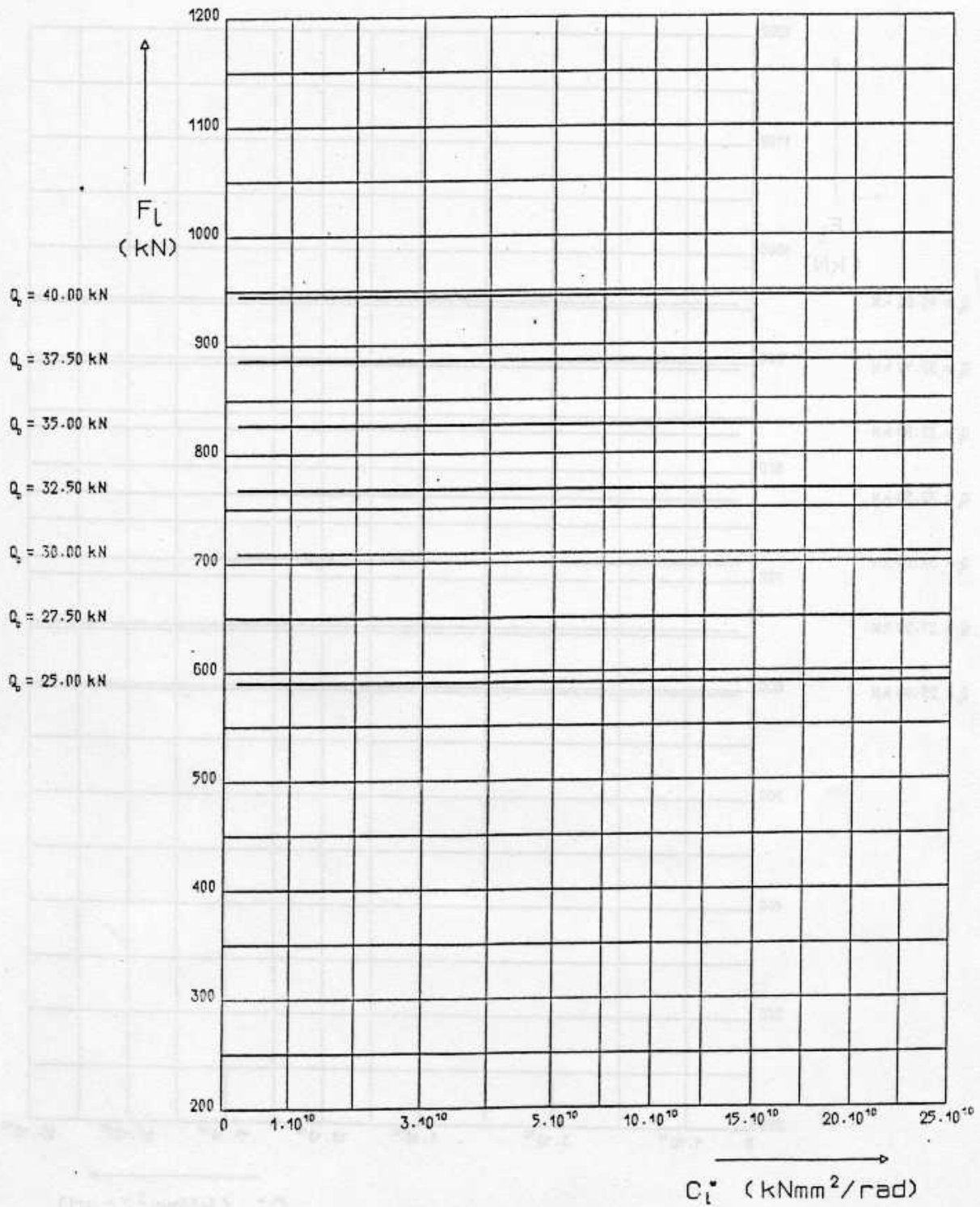


$$\overline{a} = 22950 \text{ mm}$$

$$2\overline{a}^* = 17000 \text{ mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

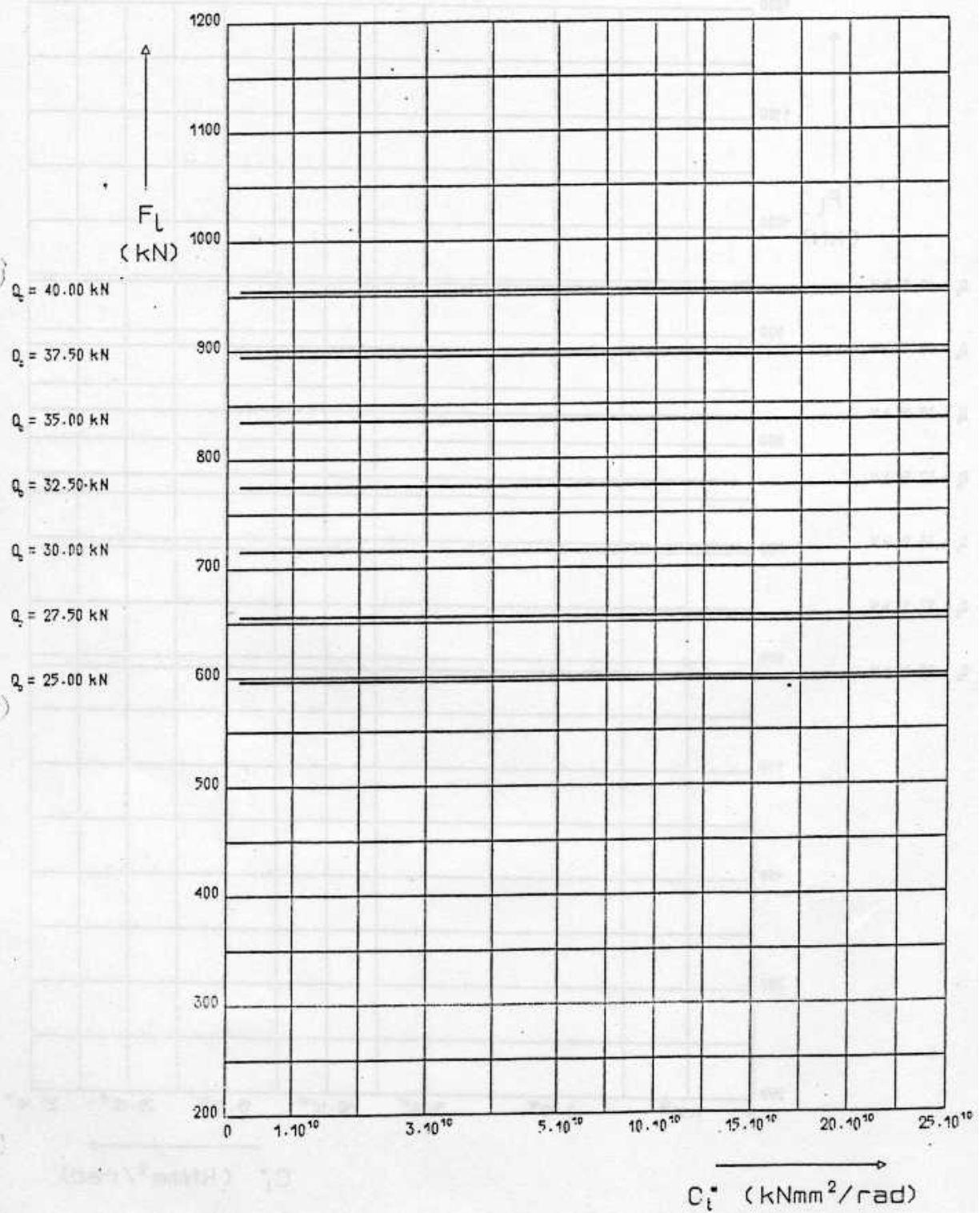


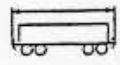
$$\overline{a_0} = 23040 \cdot \text{mm}$$

$$2\overline{a}^* = 18000 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

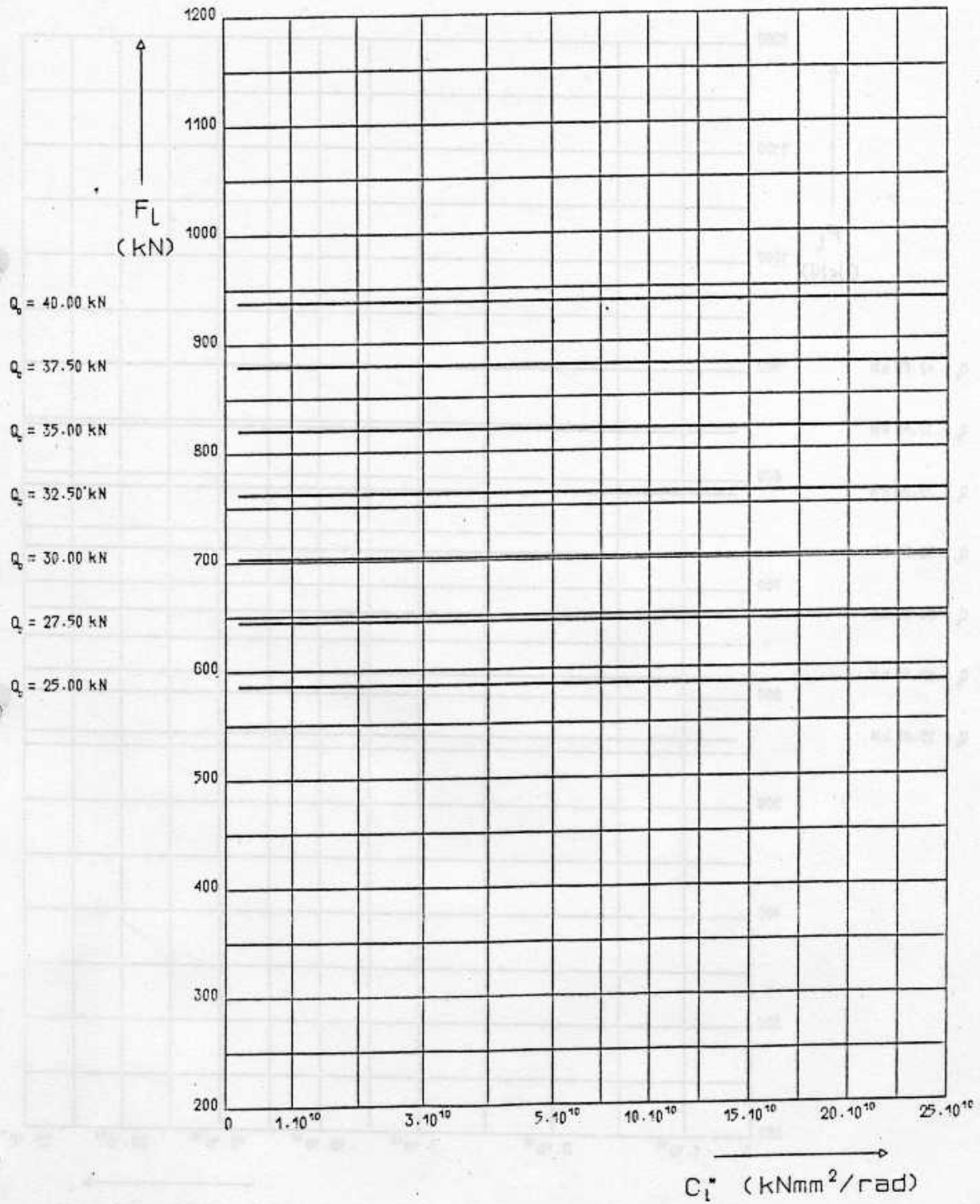


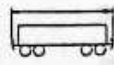
 = 23540 . mm

$2a^* = 18000 . mm$

Y 25 L

$\Delta q_0 = 0.20$

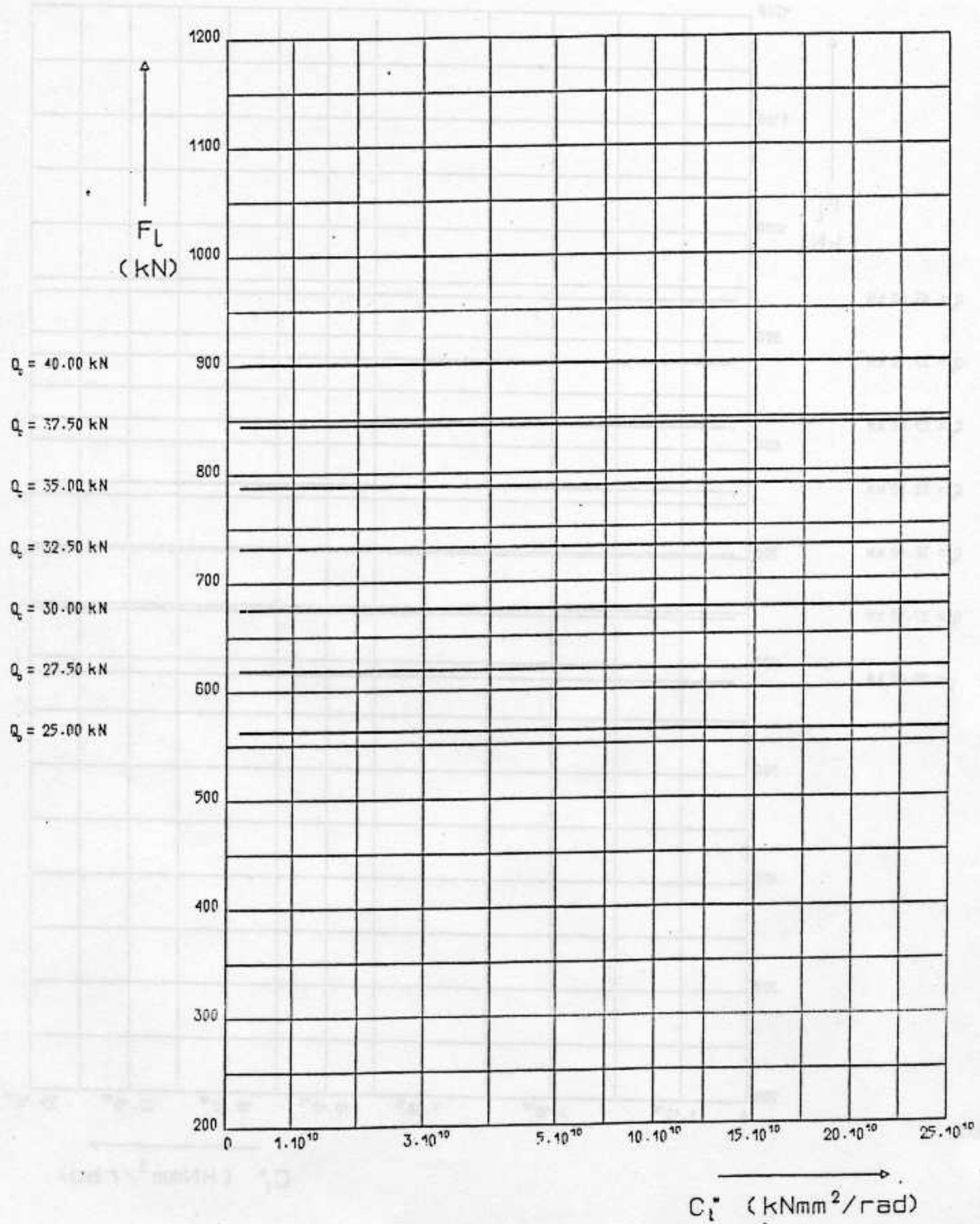


 = 23950 . mm

$2a^* = 18000 . \text{ mm}$

Y 25 L

$\Delta q_0 = 0.20$

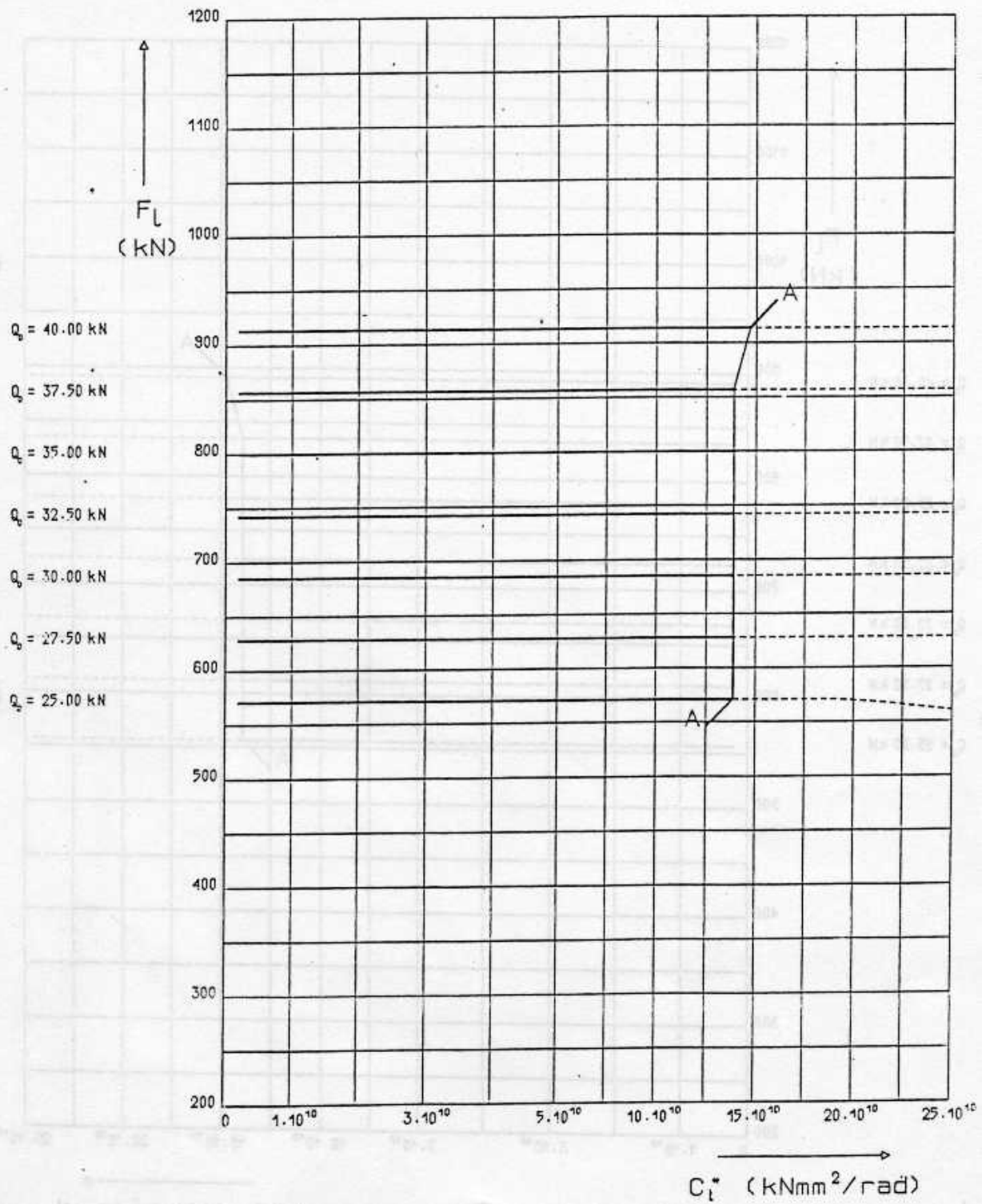


$$\overline{a_0} = 24340 \cdot \text{mm}$$

$$2a^* = 19300 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

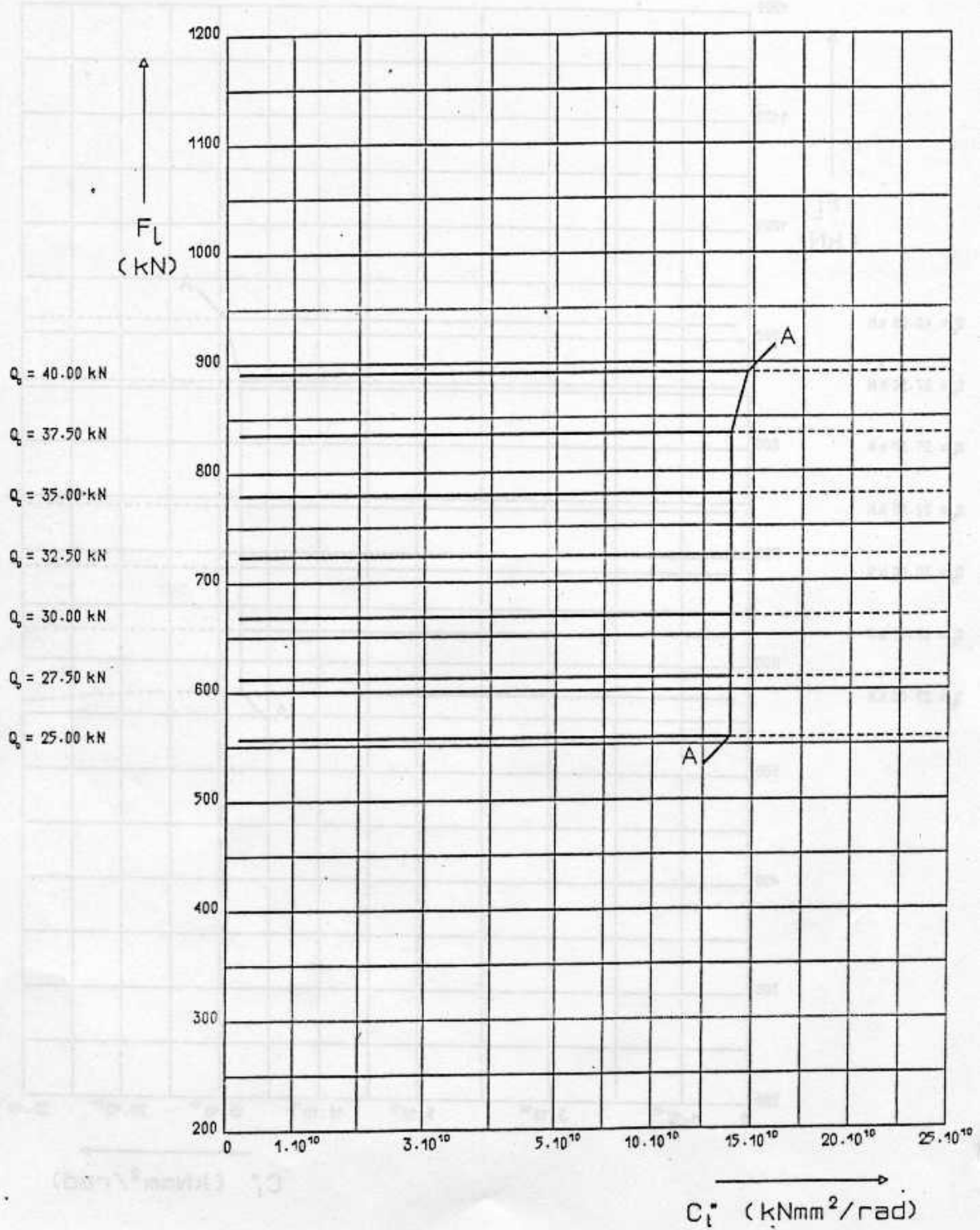


$$\text{---} = 24840 \cdot \text{mm}$$

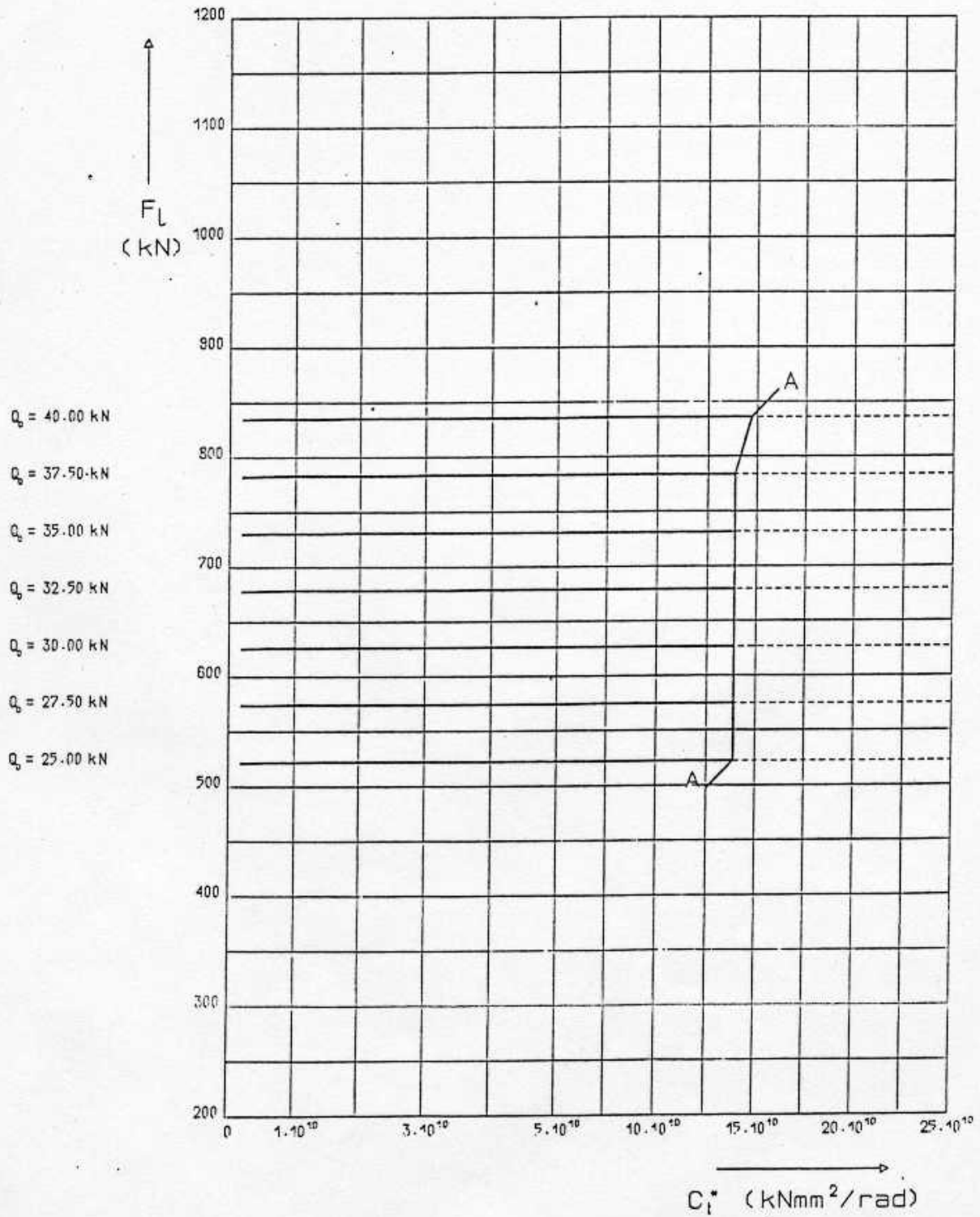
$$2a^* = 19300 \cdot \text{mm}$$

Y 25 L

$$\Delta q_0 = 0.20$$

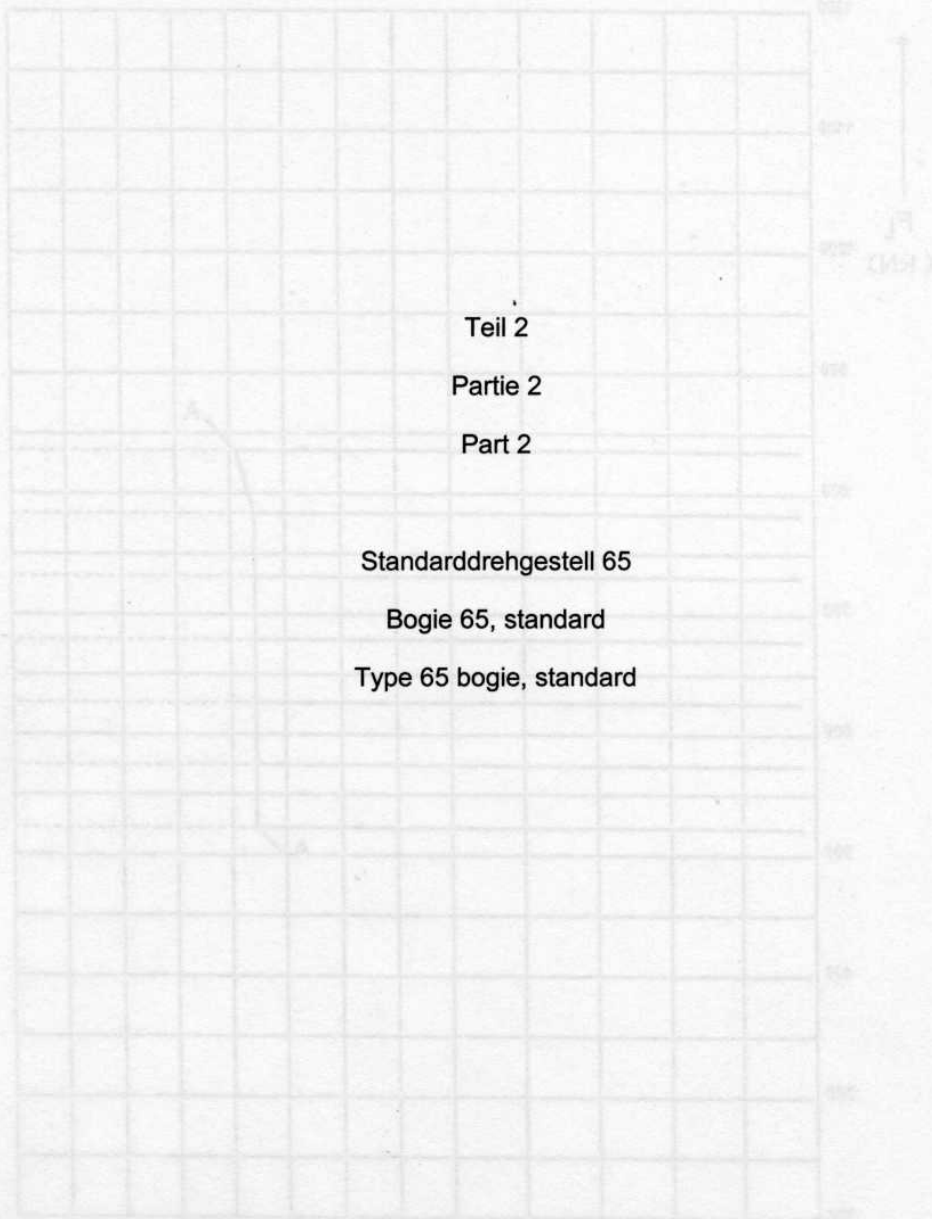


$b = 25250 \cdot \text{mm}$
 $2a^* = 19300 \cdot \text{mm}$
 $\gamma 25 \text{ L}$
 $\Delta q_0 = 0.20$





Anlage C
Annexe C
Appendix C

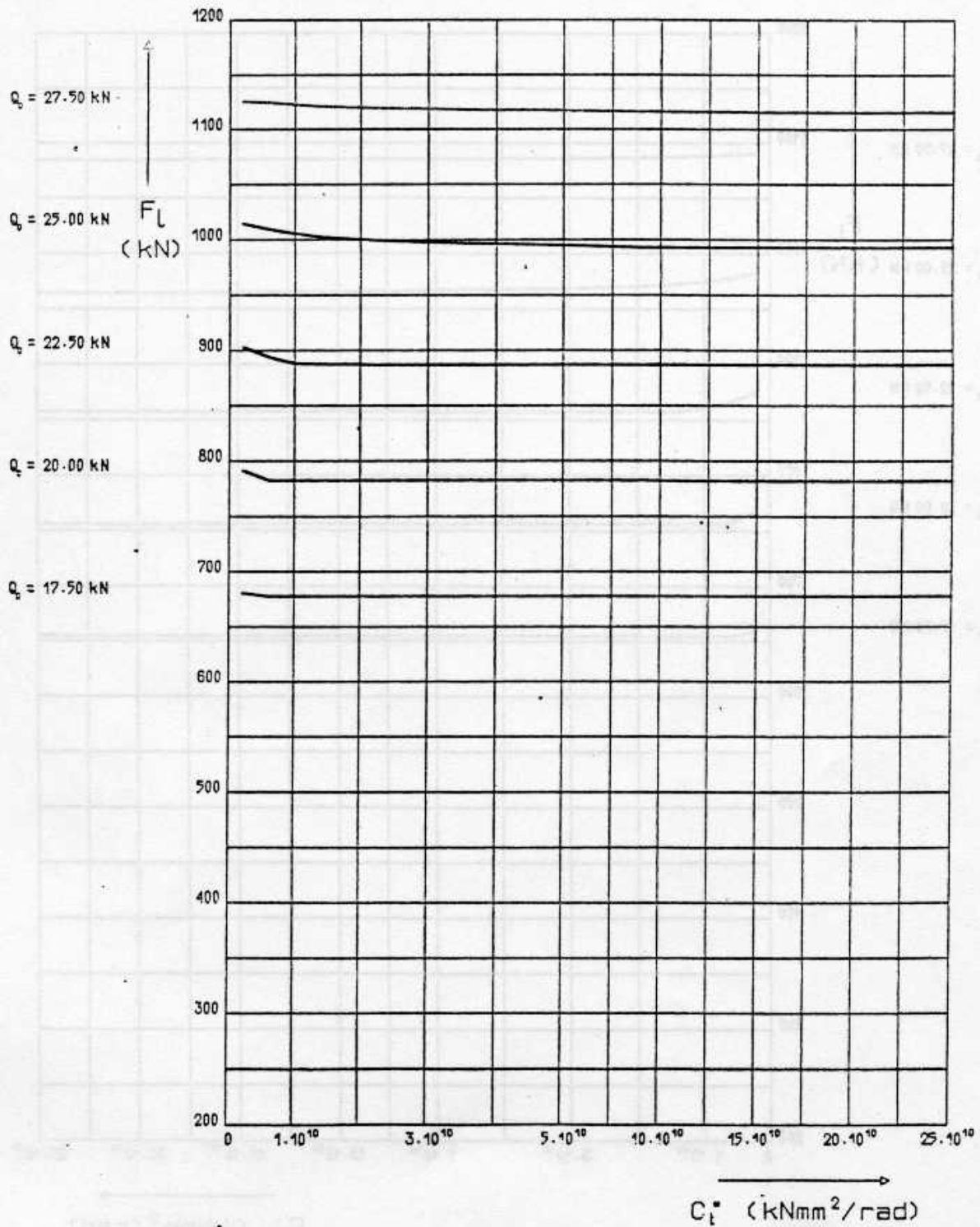


$$\text{[Diagram of a rectangular load with two wheels]} = 10040 \cdot \text{mm}$$

$$2a^* = 5000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

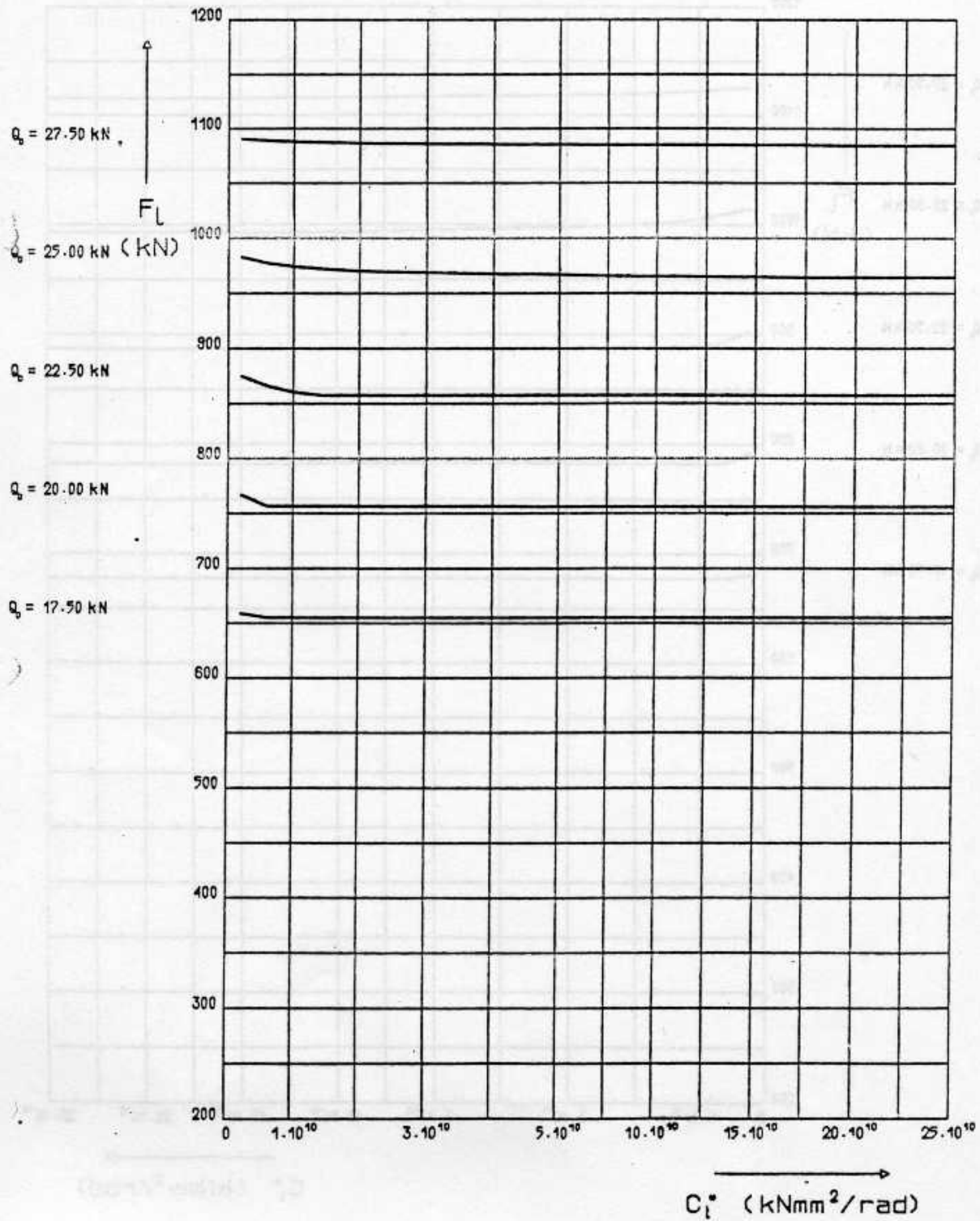


$$\text{---} = 10540 \cdot \text{mm}$$

$$2a^* = 5000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

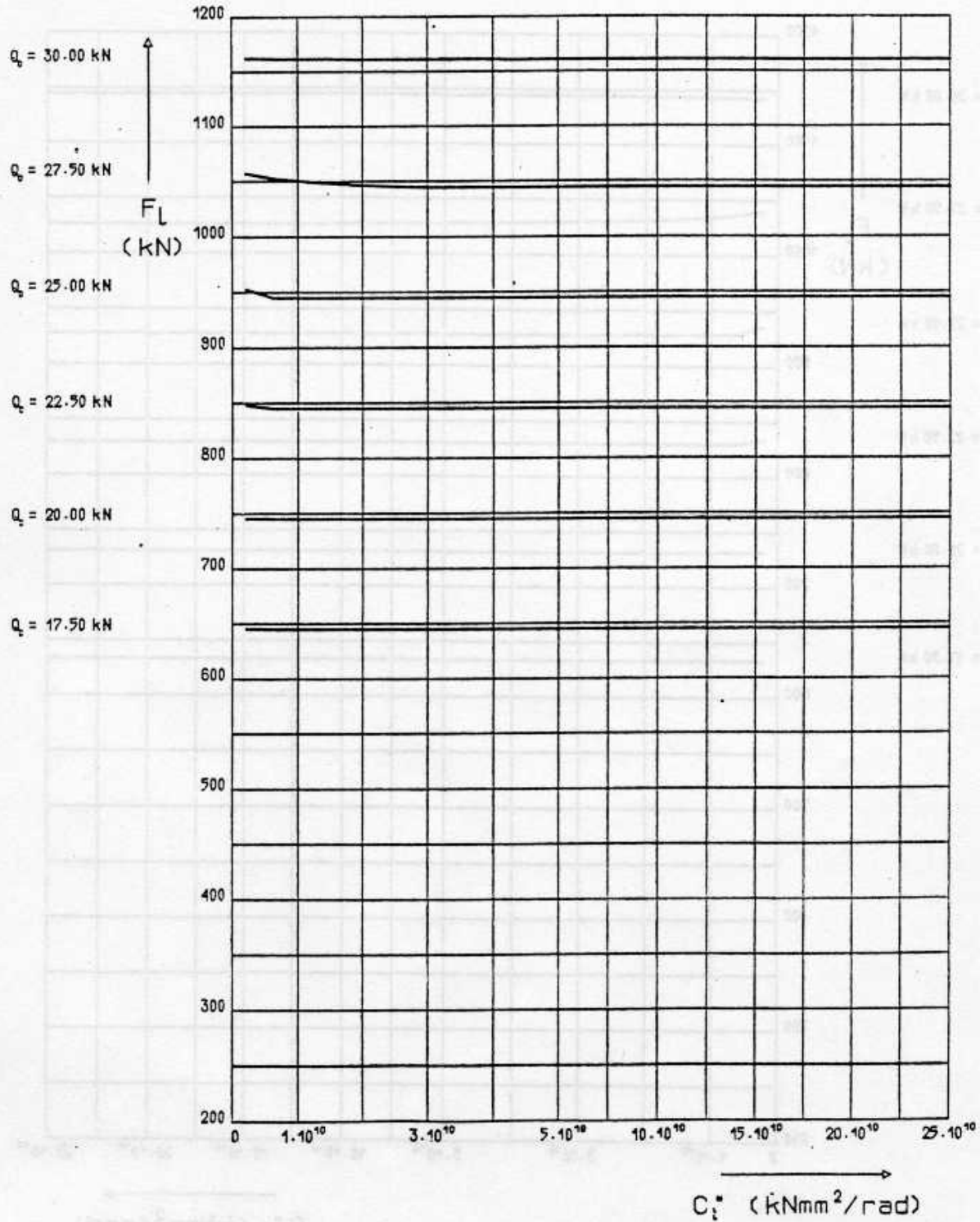


$$\text{---} = 11540. \text{ mm}$$

$$2a^* = 6500. \text{ mm}$$

65

$$\Delta q_0 = 0.15$$

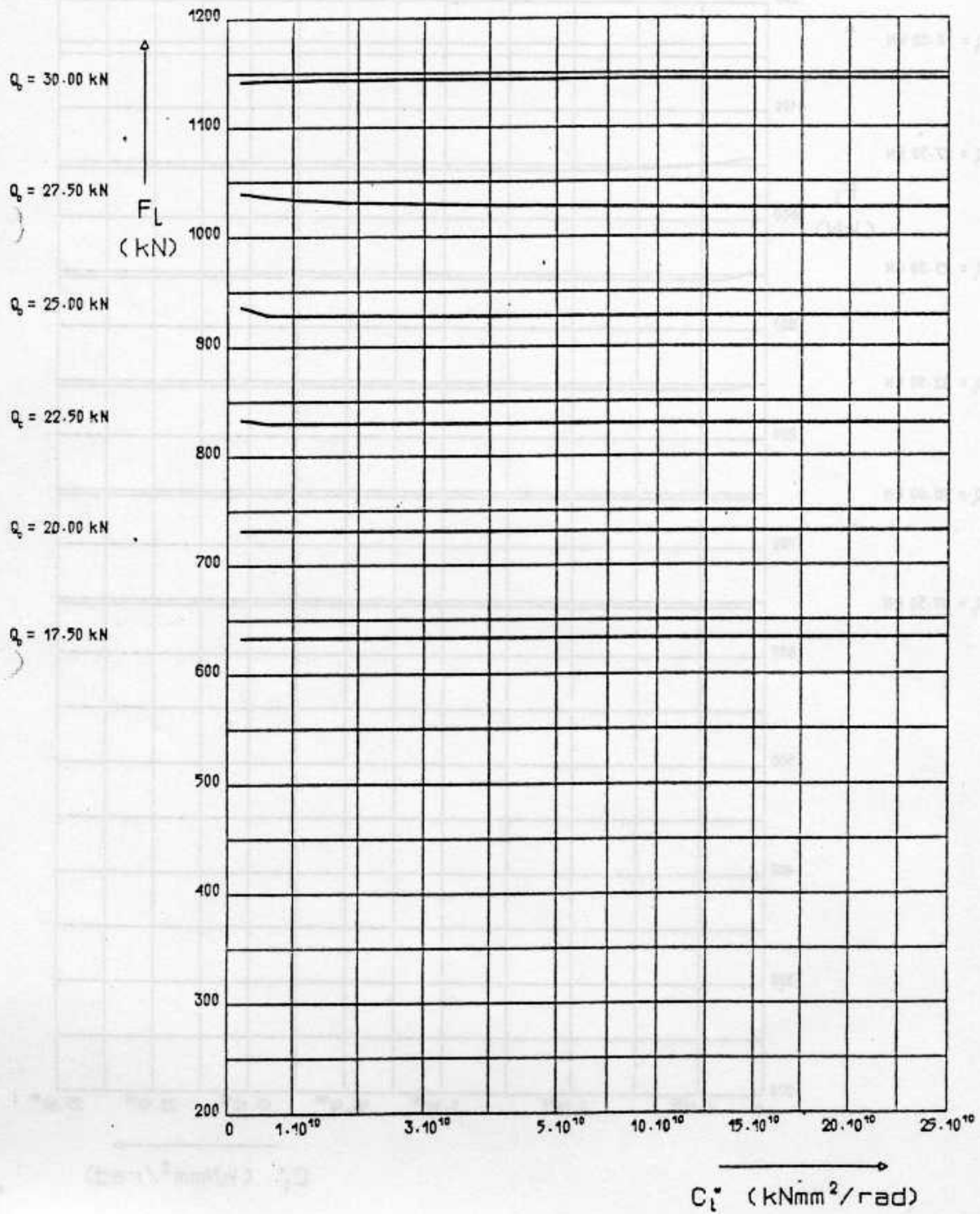


$$\text{---} = 12040 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

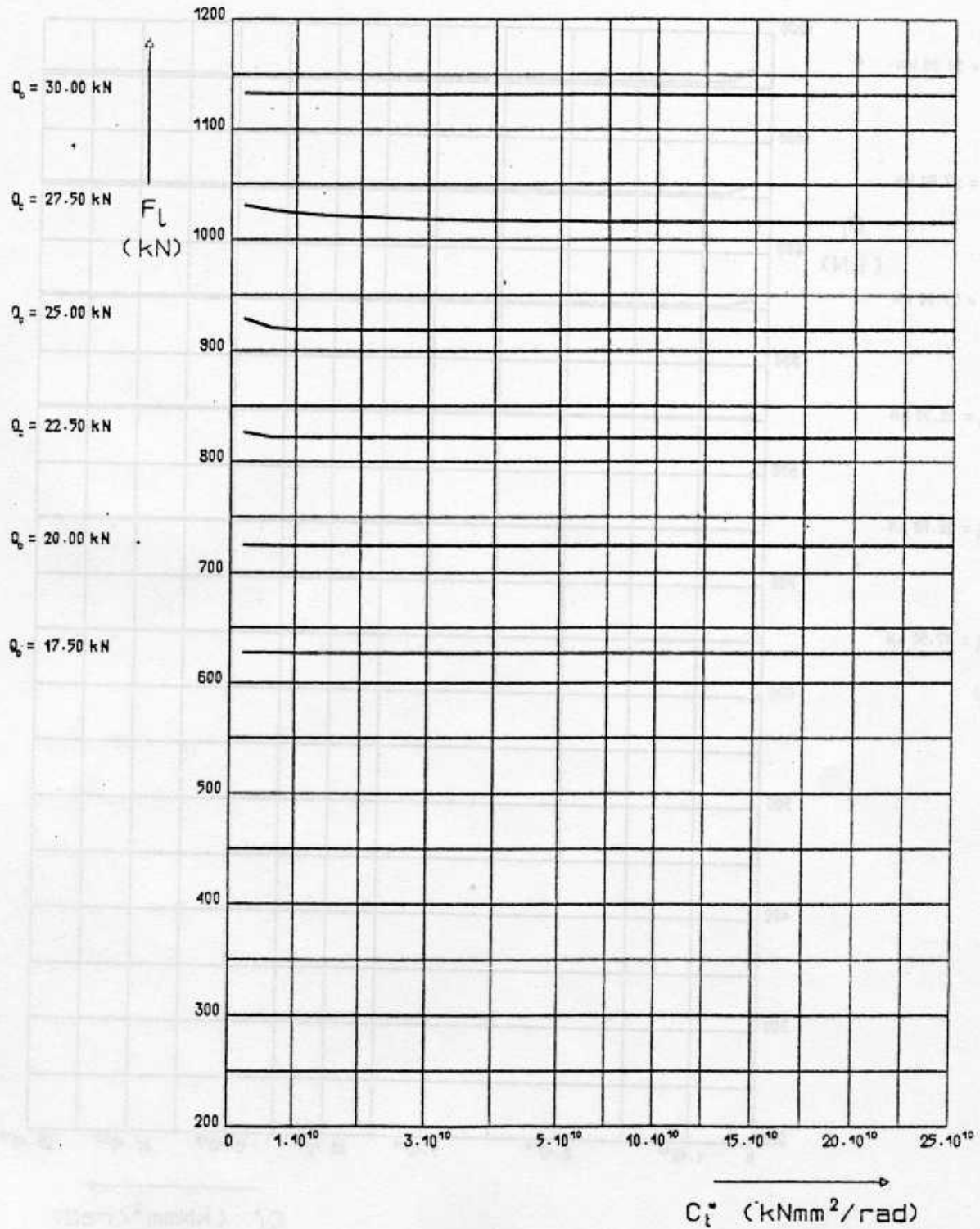


$$\overline{b} = 12450 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

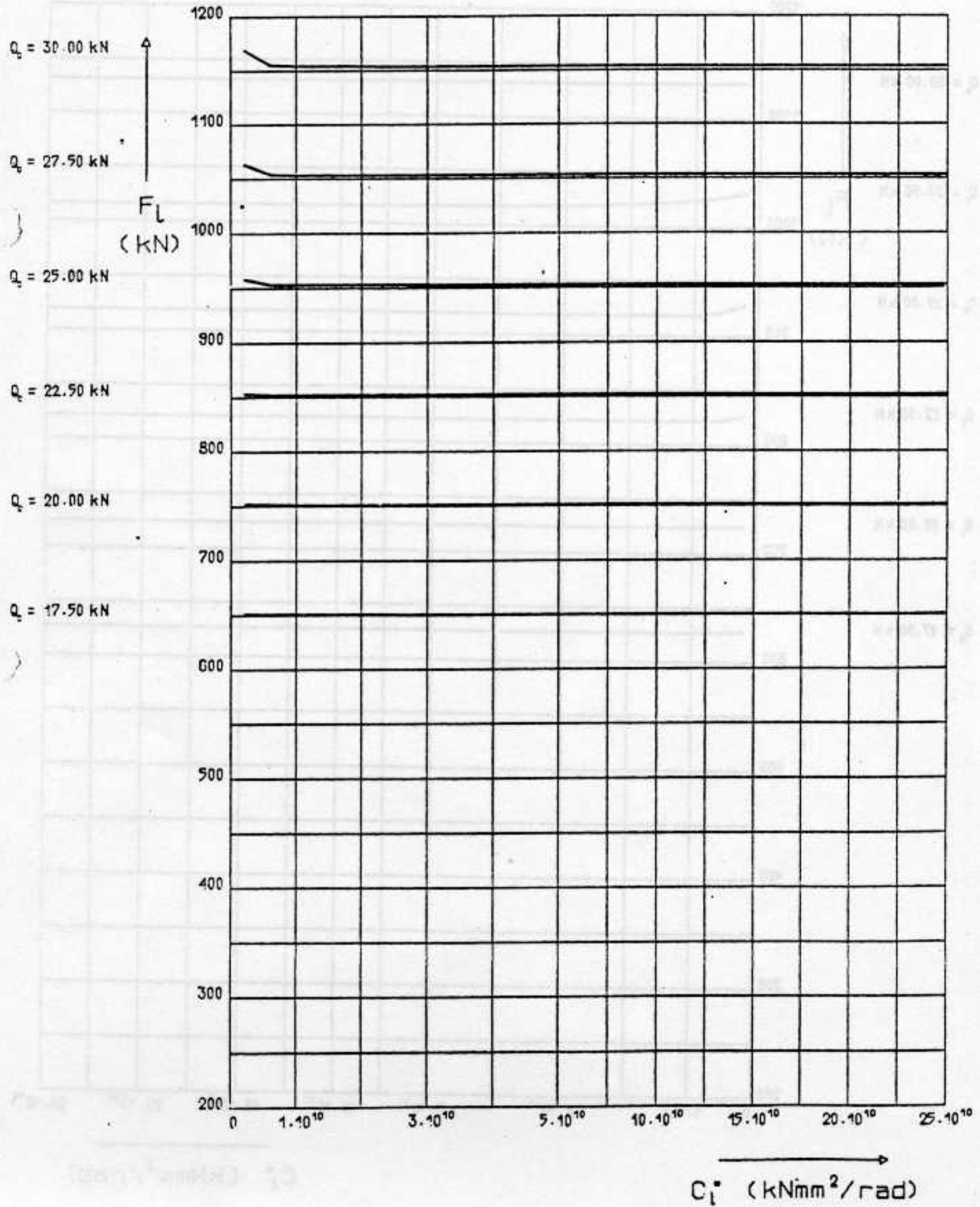


$$\overline{b_0} = 13040 \text{ mm}$$

$$2a^* = 8000 \text{ mm}$$

65

$$\Delta q_0 = 0.15$$

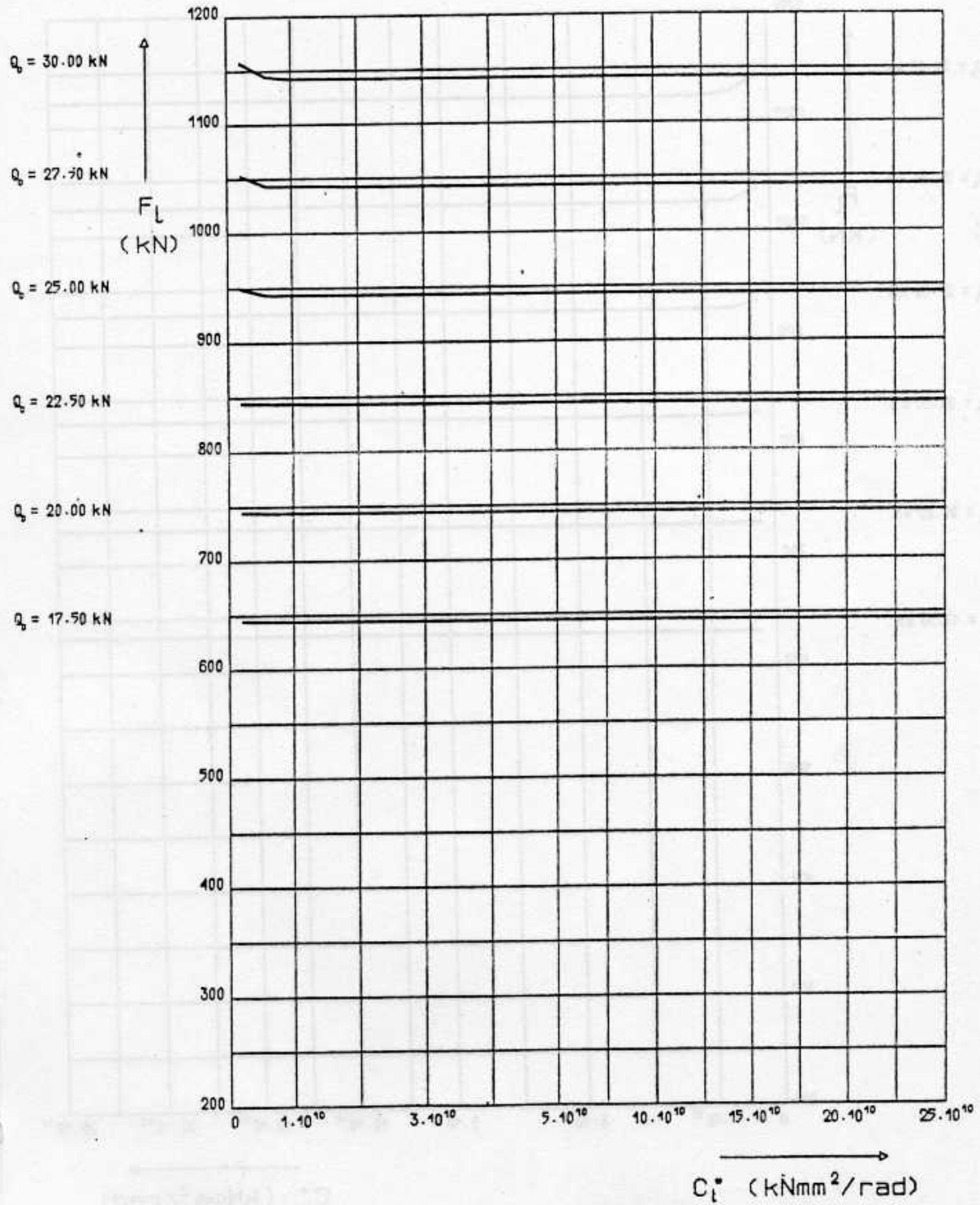


$$\boxed{\quad\quad} = 13540 \cdot \text{mm}$$

$$2a^* = 8000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

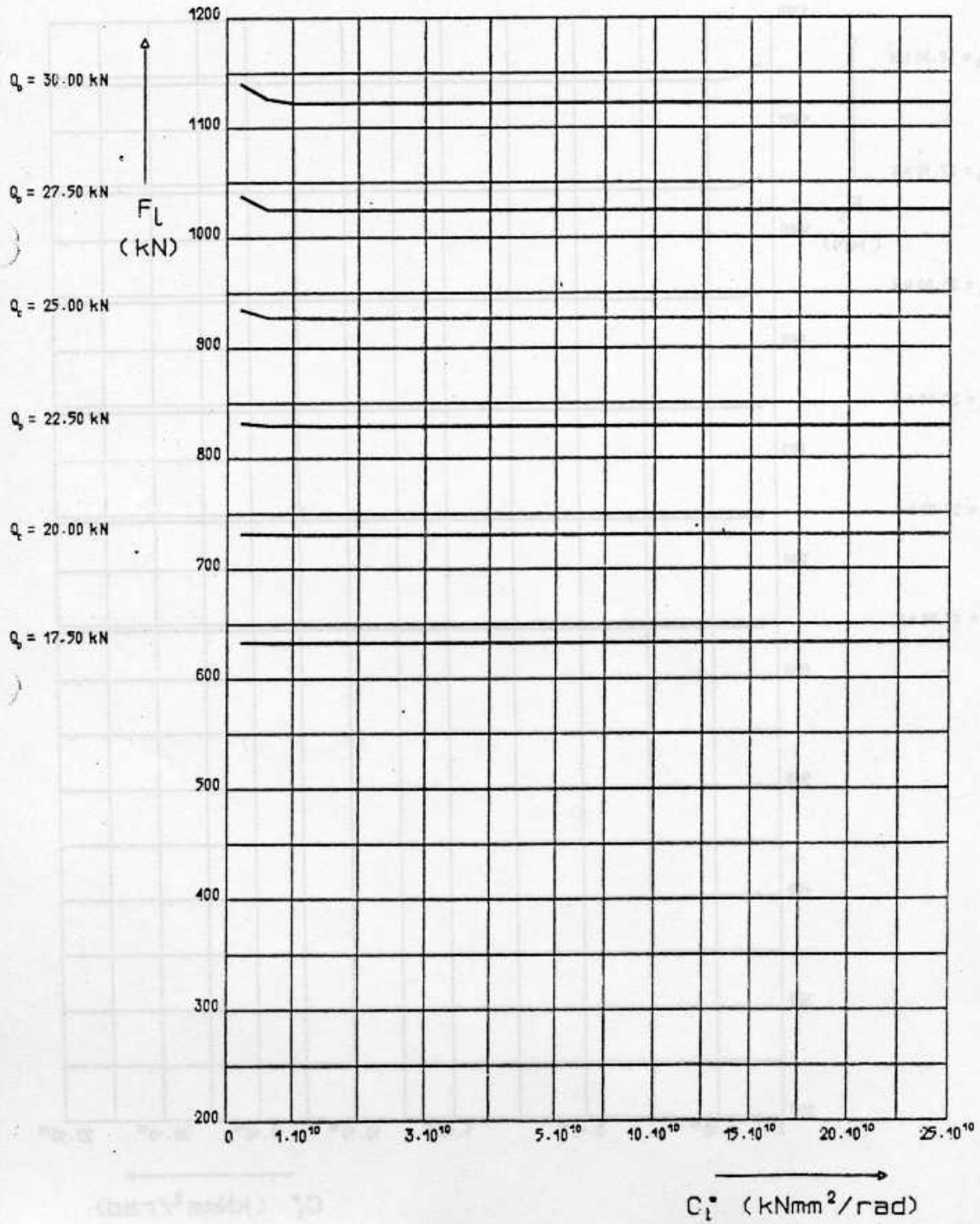


$$\overline{c_0} = 13950 \cdot \text{mm}$$

$$2a^* = 8000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

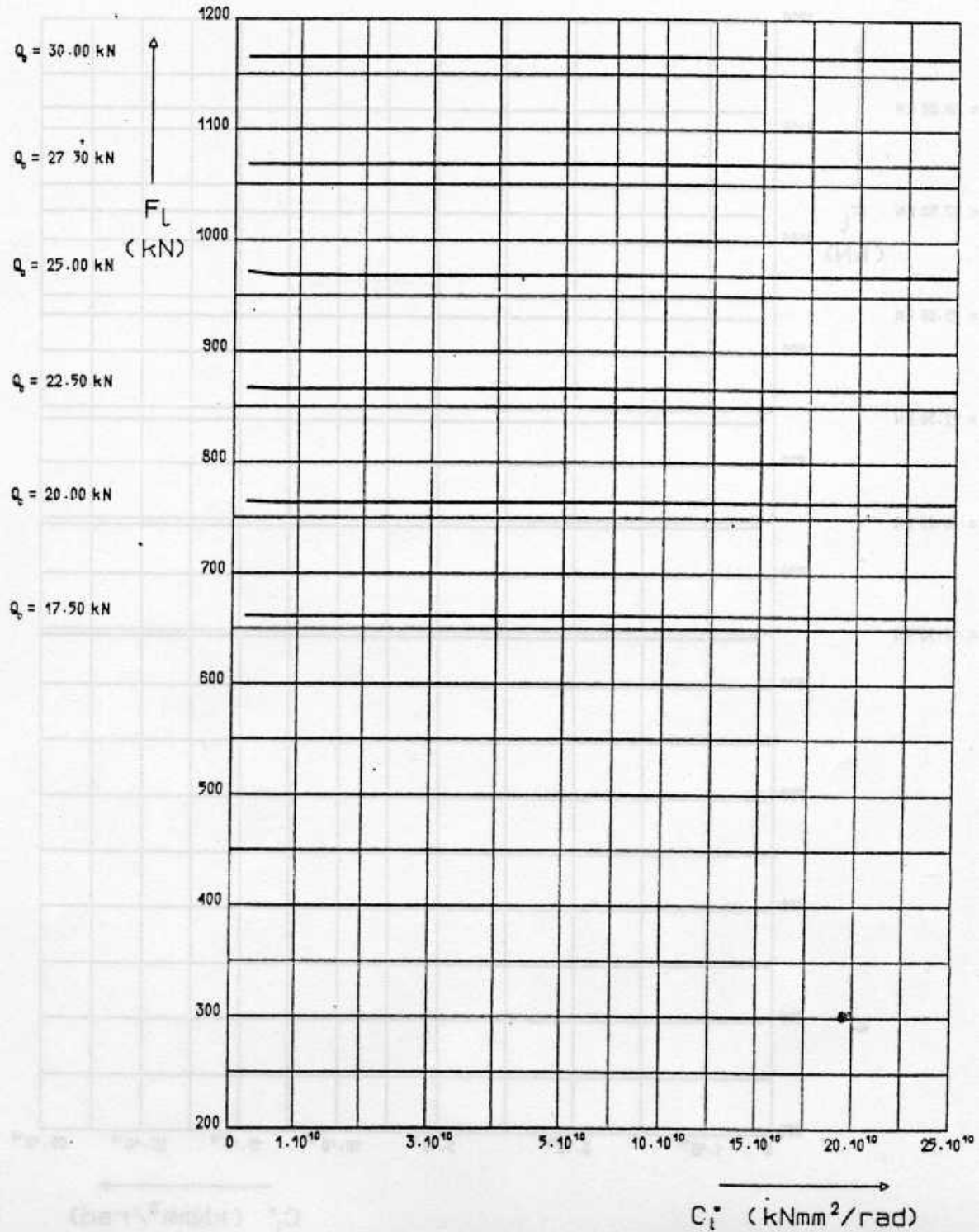


$$\overline{a} = 14040 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15 \text{ MPa}$$

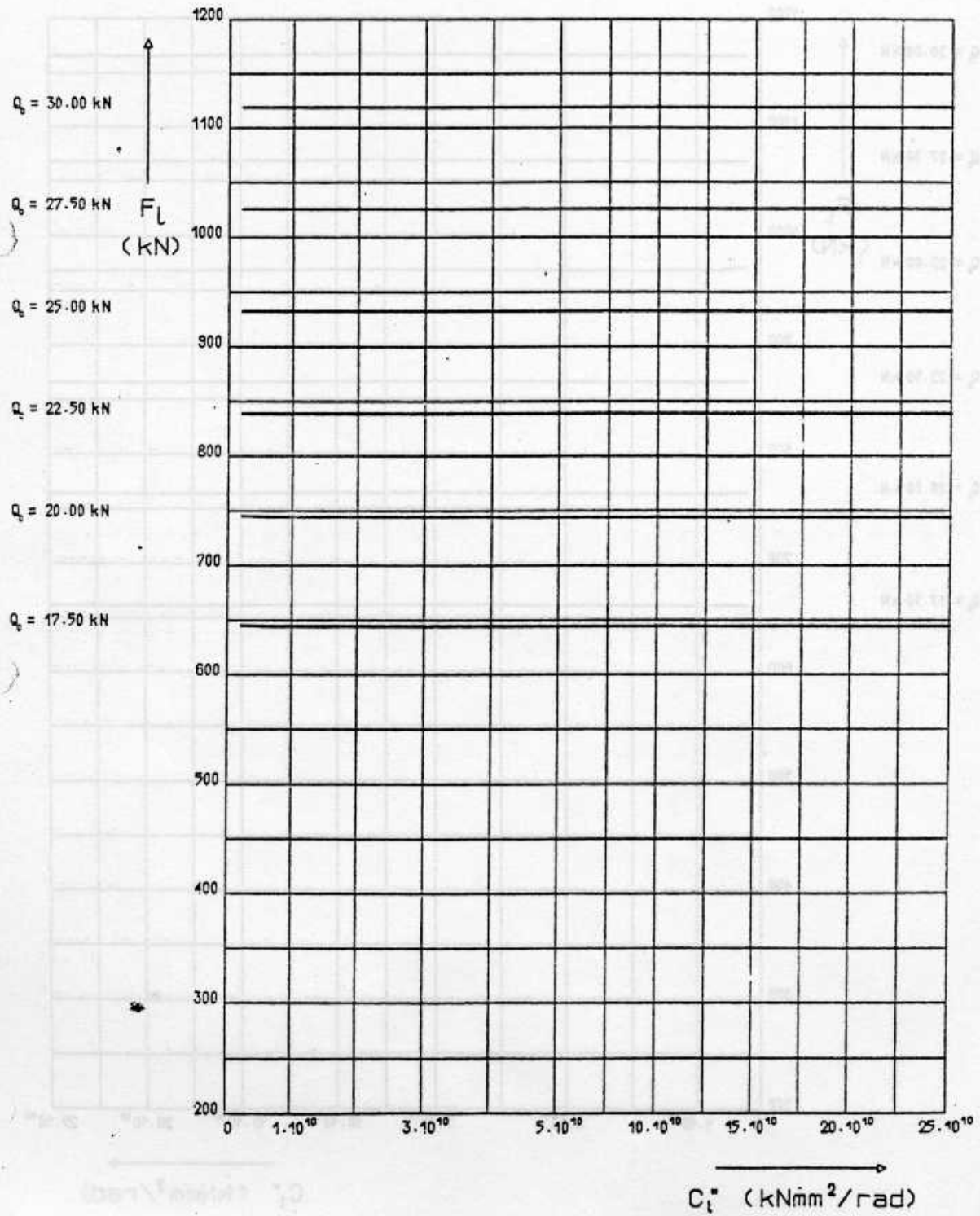


$$\text{---} = 14540 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

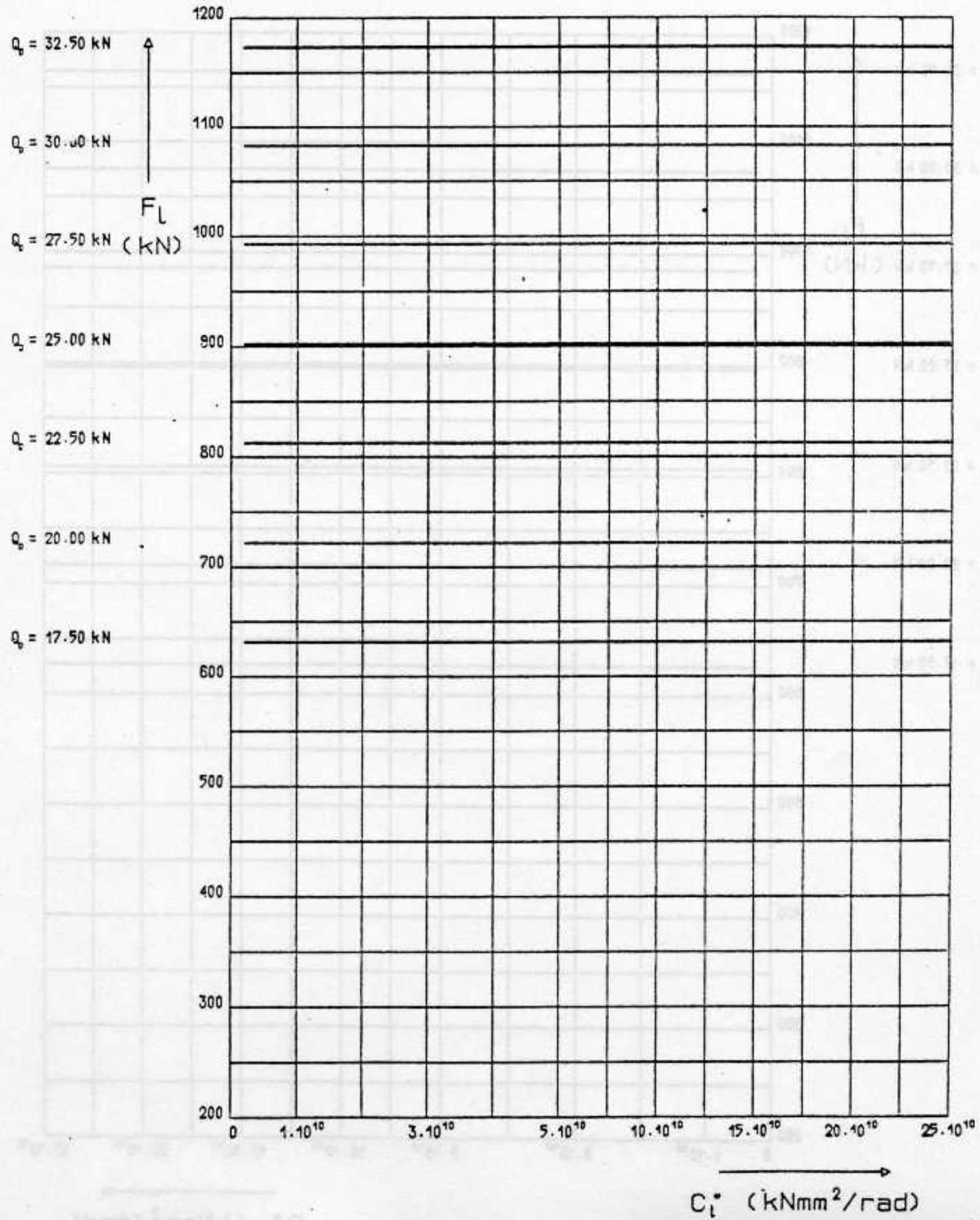


$$\text{---} = 14950 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

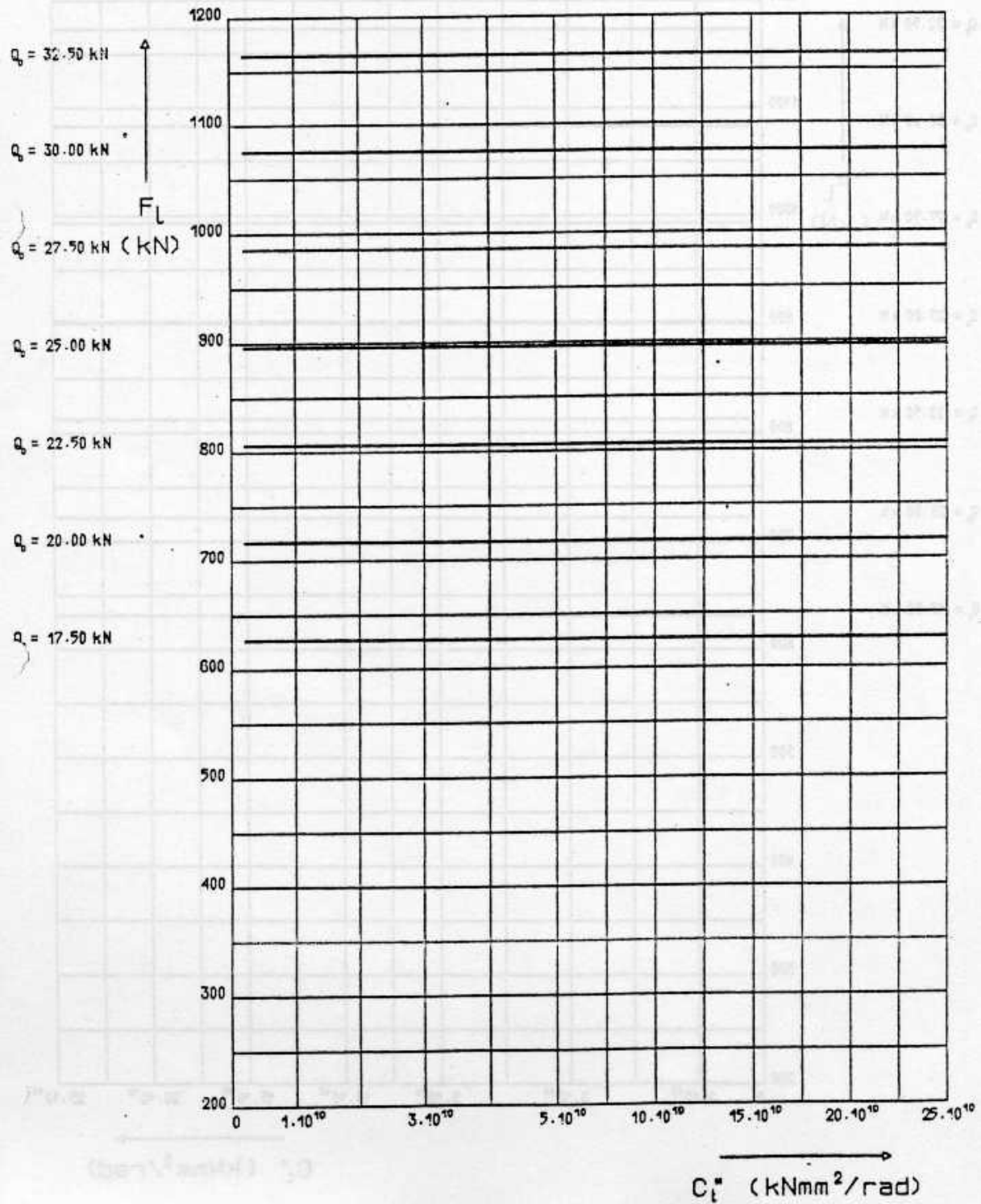


$$\text{---} = 15040 \cdot \text{mm}$$

$$2a^* = 10000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

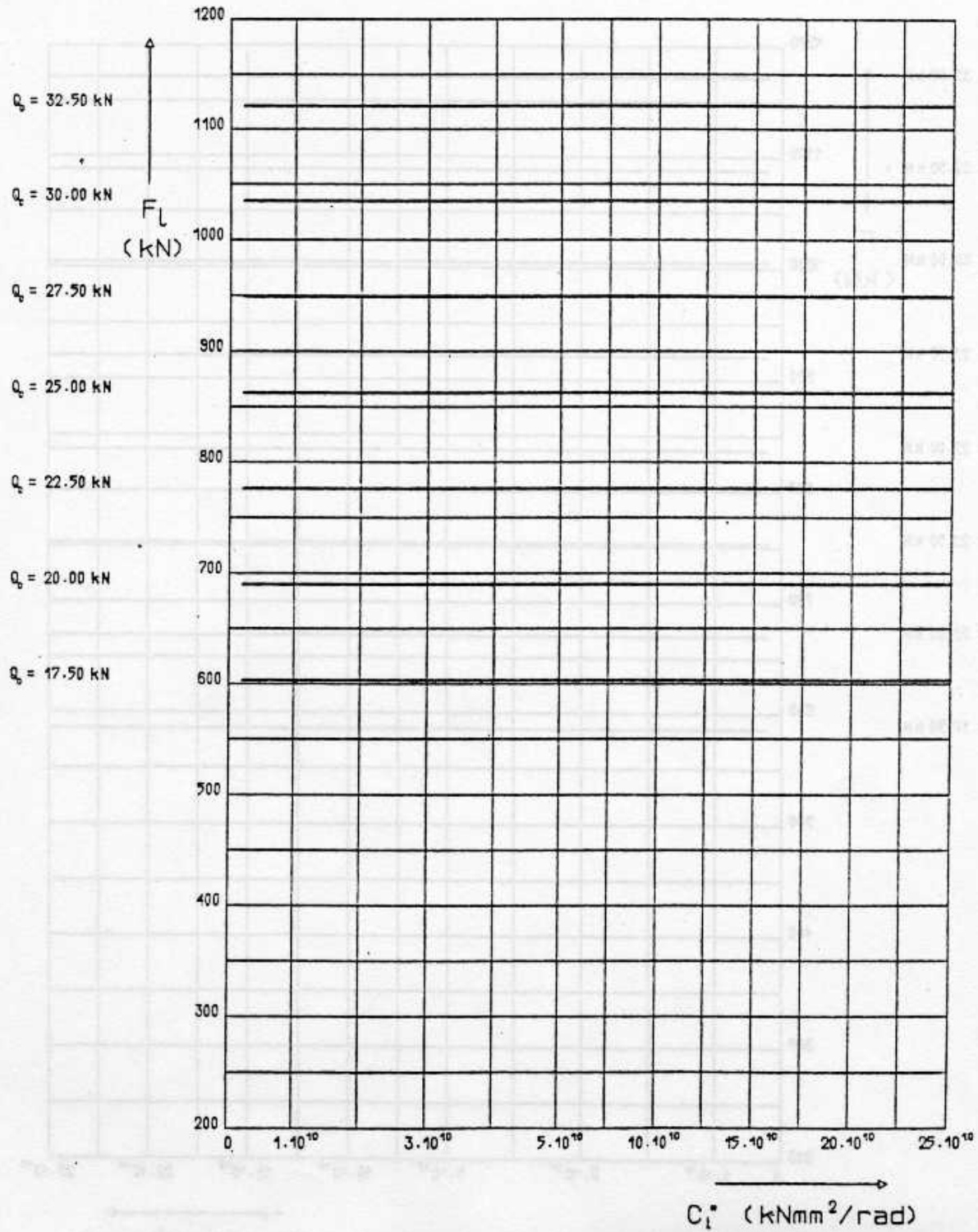


$$b = 15540 \cdot \text{mm}$$

$$2a^* = 10000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

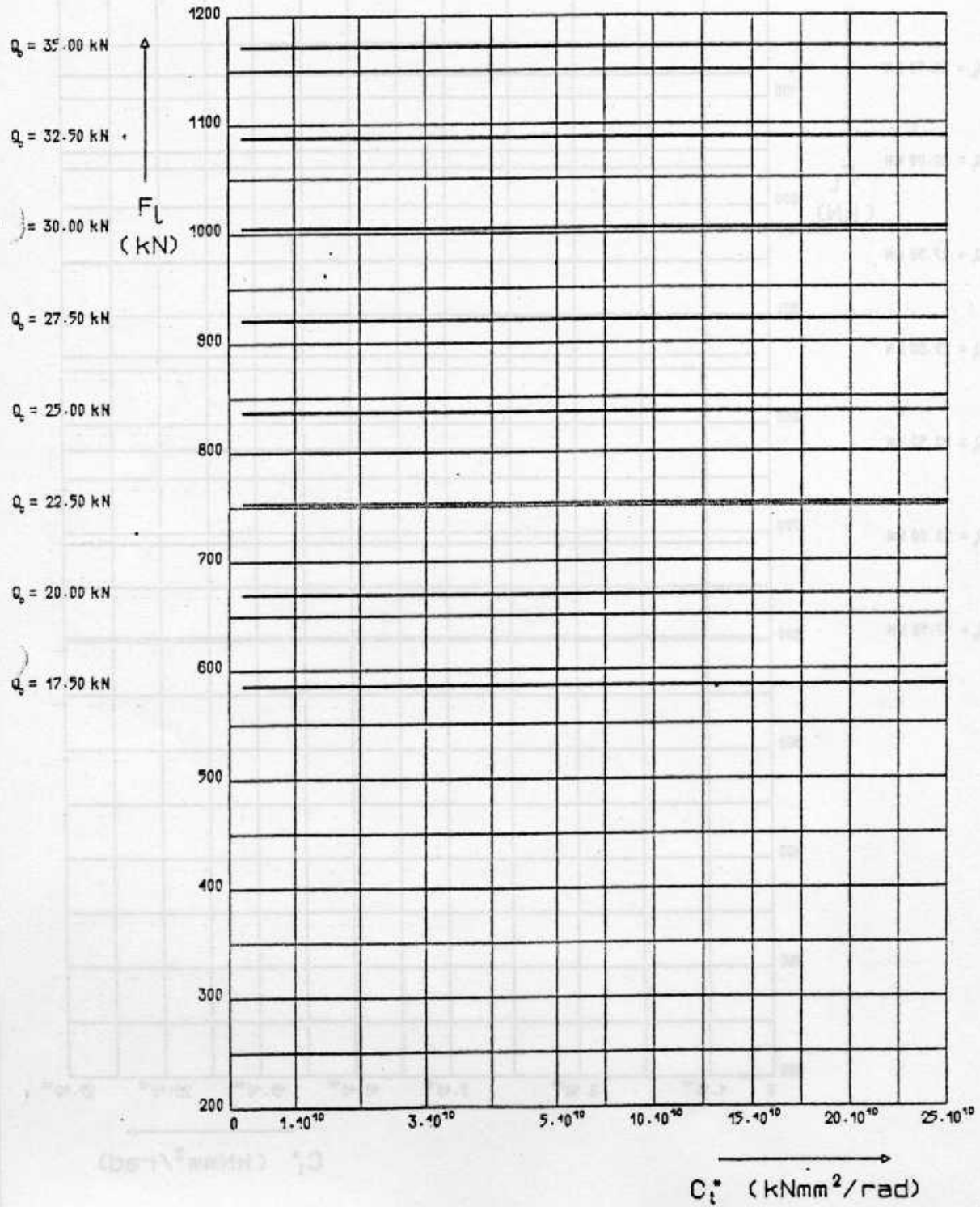


$$\text{Diagram} = 15950 \cdot \text{mm}$$

$$2a^* = 10000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

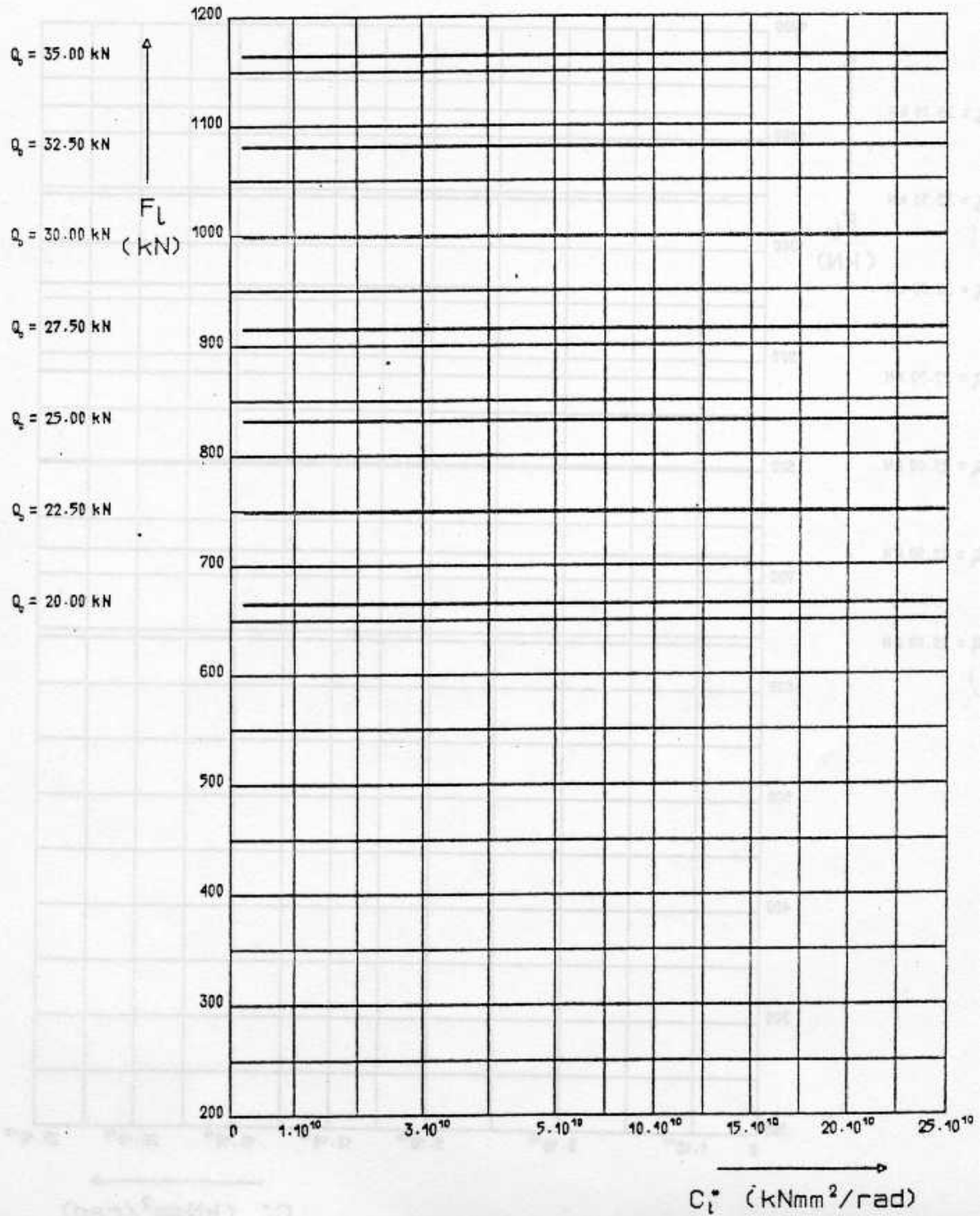


$$\boxed{\quad} = 16040 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

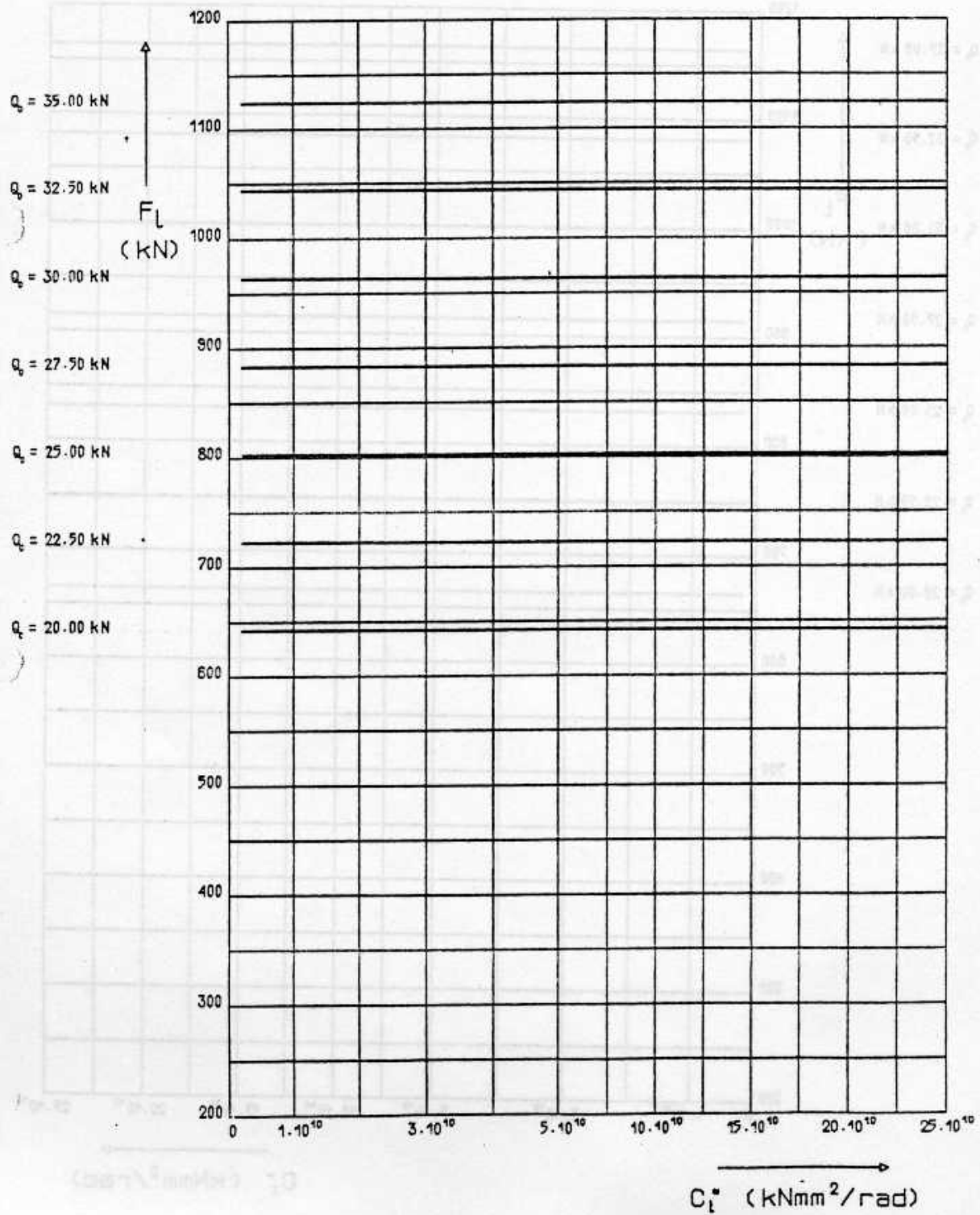


$$\text{---} = 16540 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

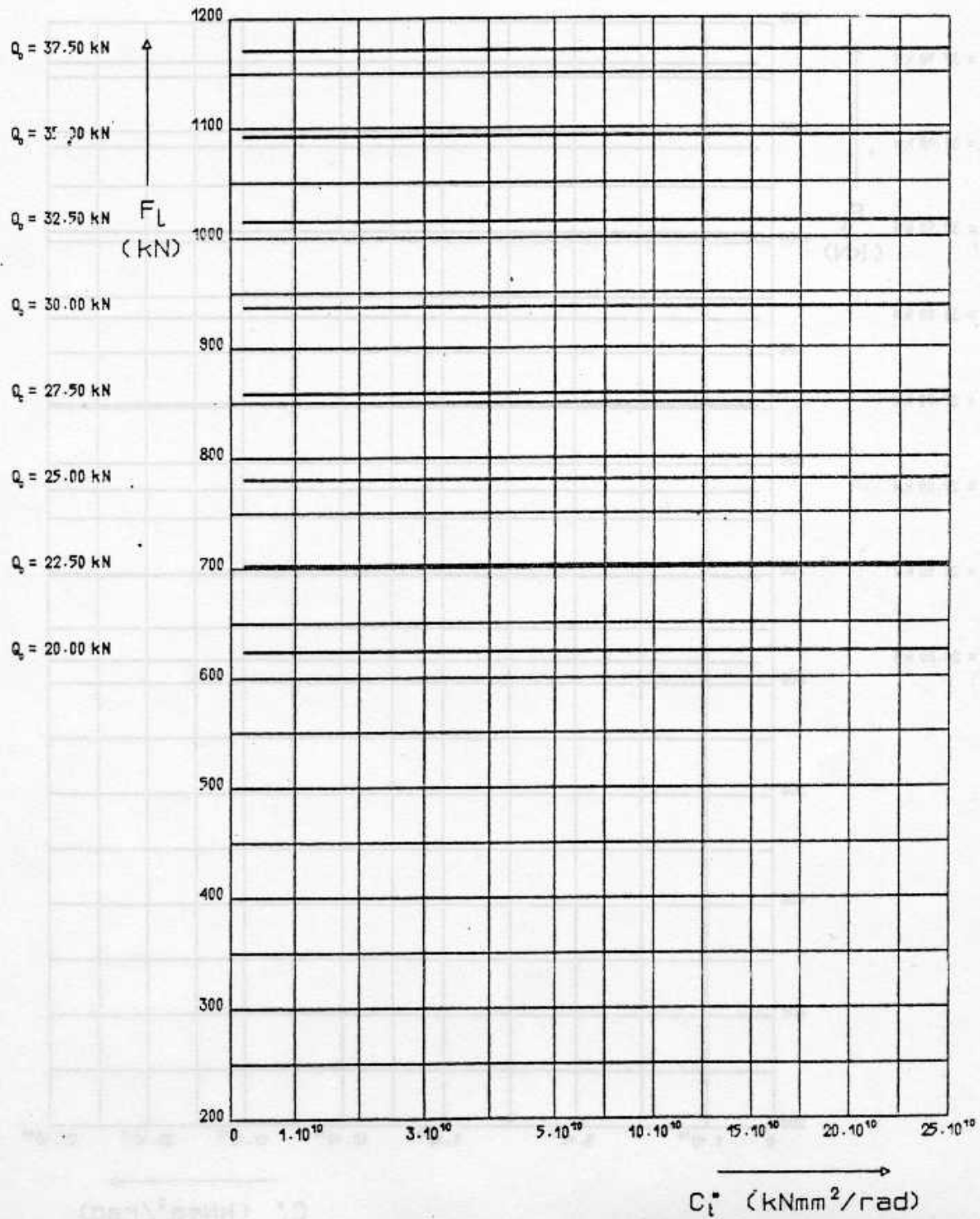


$$\text{---} = 16950 \cdot \text{mm}$$

$$\cdot 2a^* = 11000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

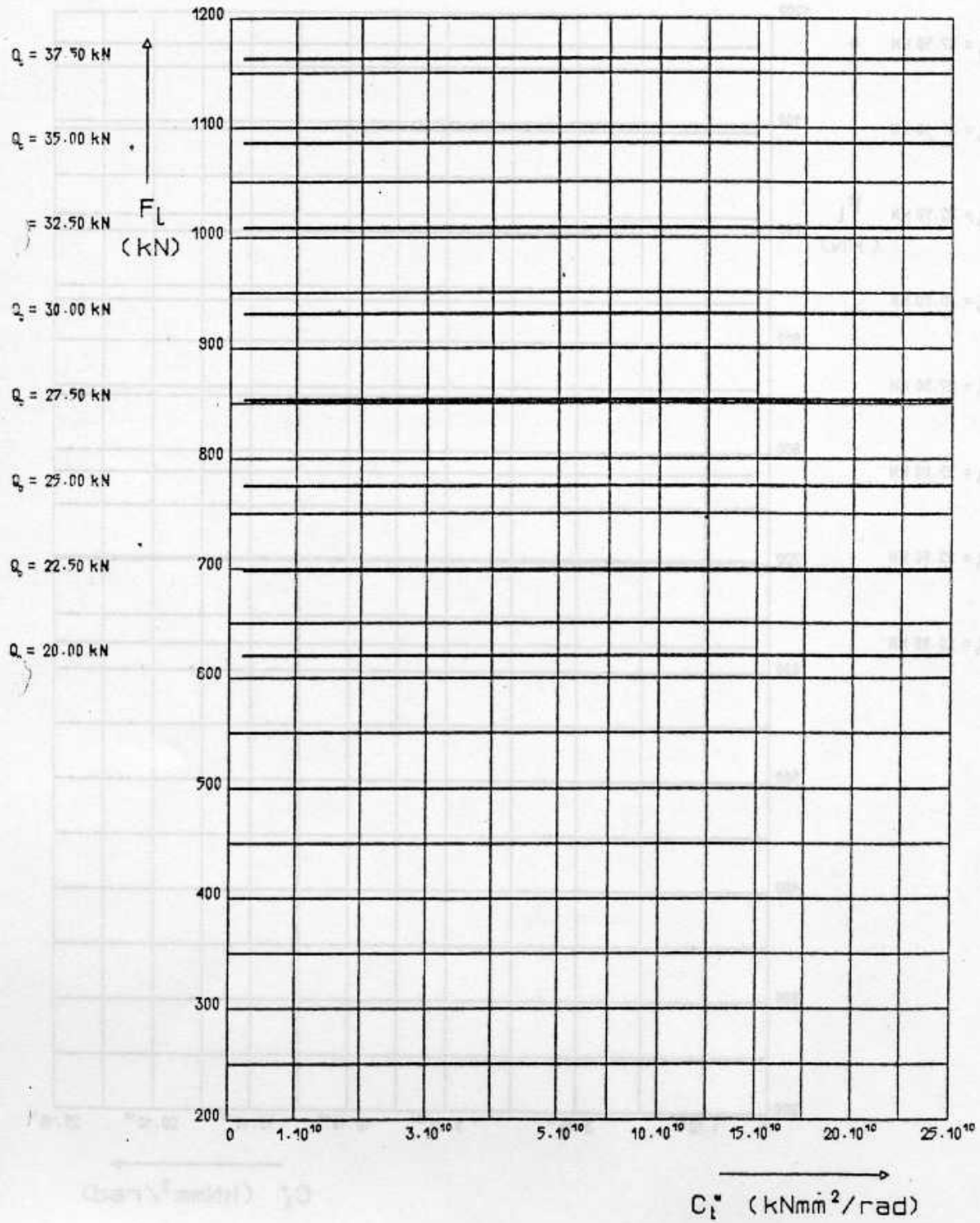


$$\text{---} = 17040 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

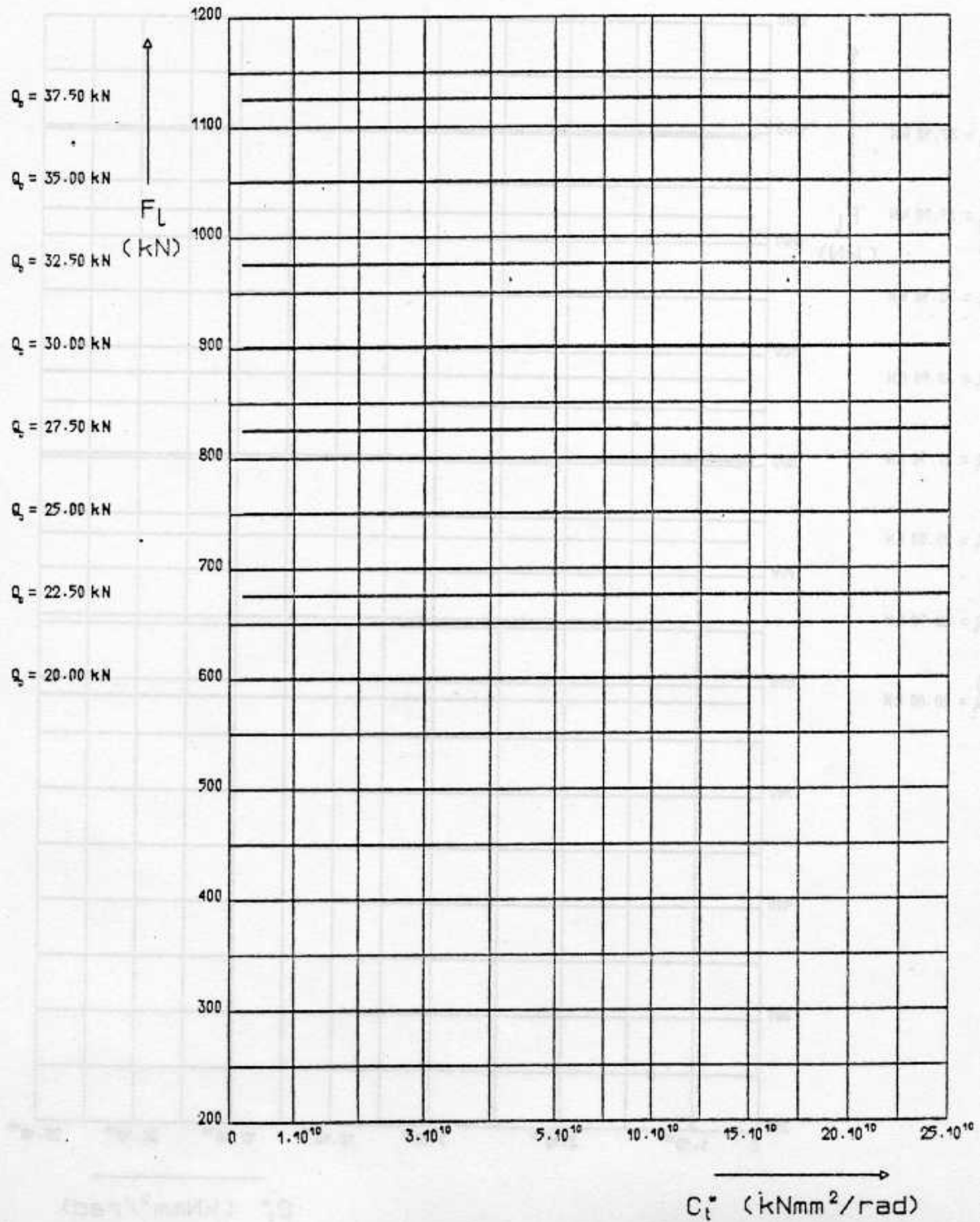


$$\overline{b_0} = 17540 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

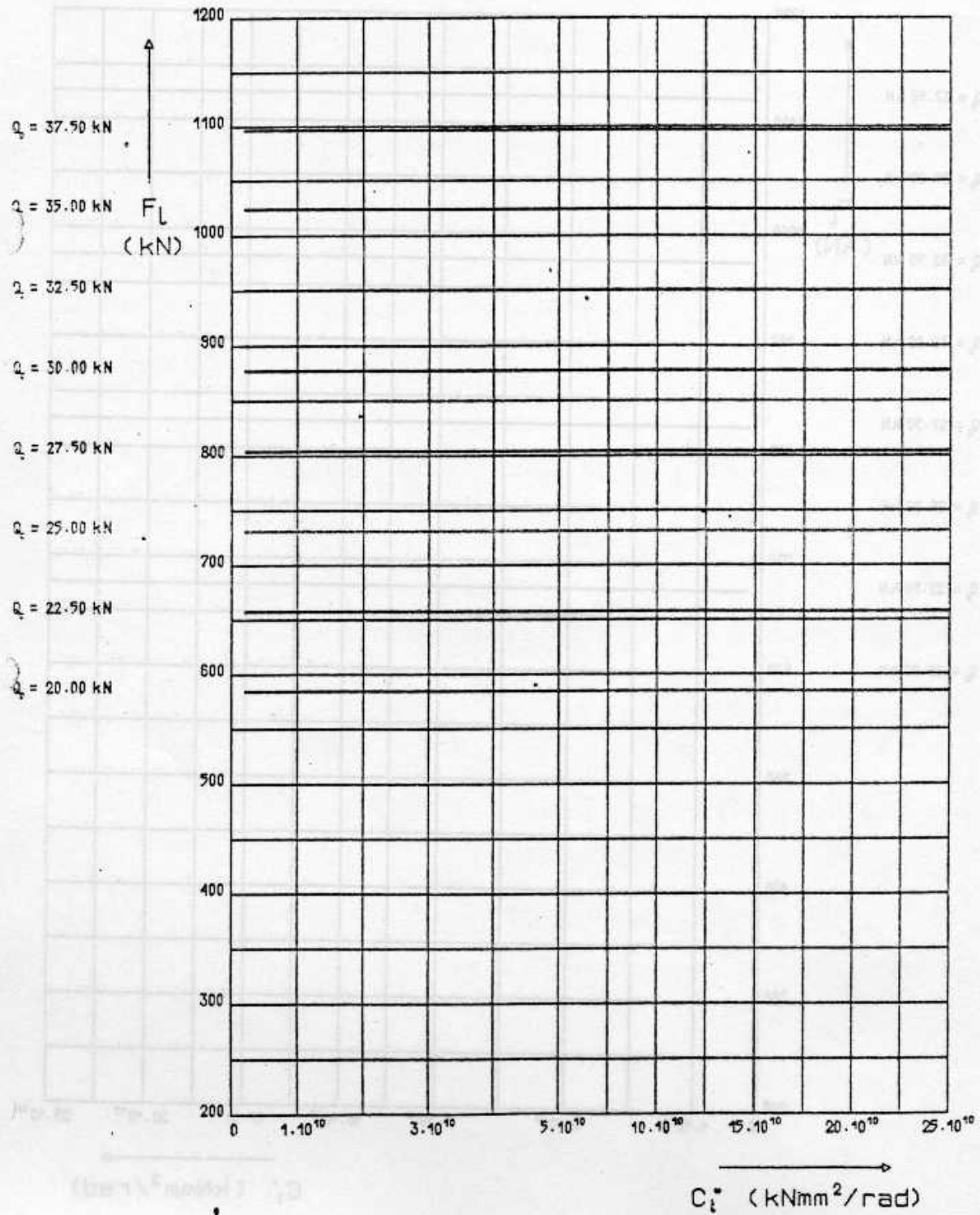


$$\text{Diagram} = 17950 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

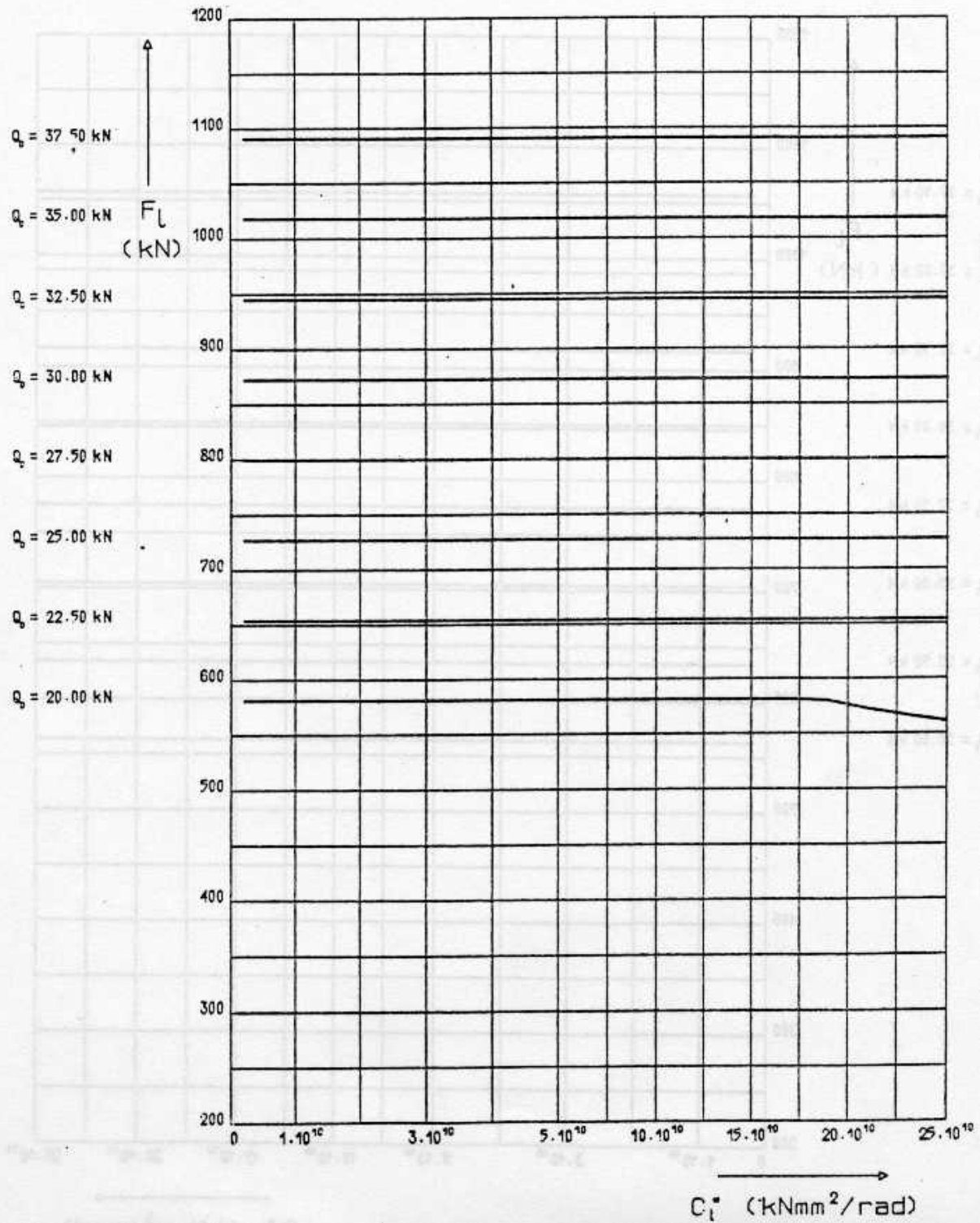


$$\text{---} = 18040 \cdot \text{mm}$$

$$2a^* = 13000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

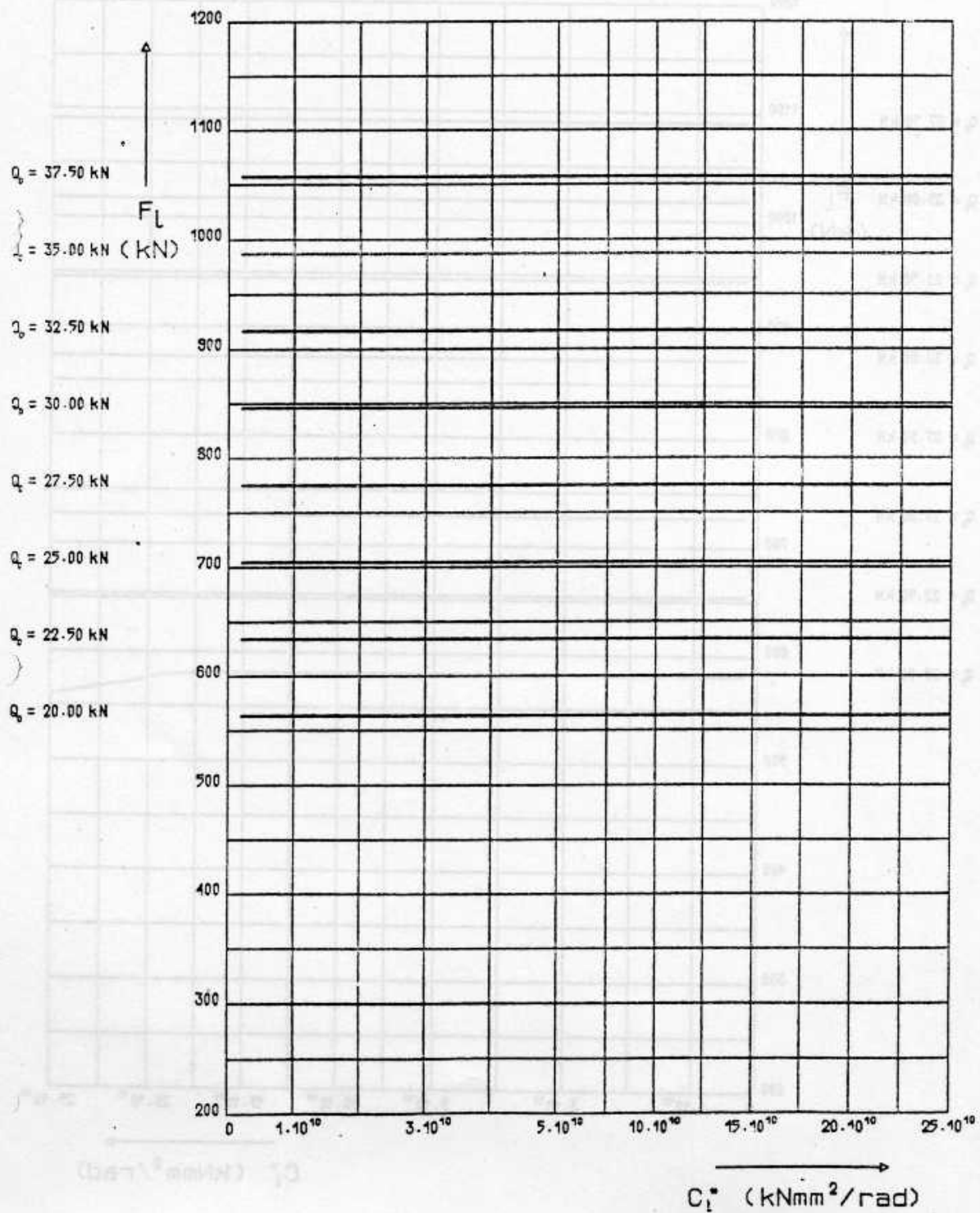


$$\text{---} = 18540 \text{ . mm}$$

$$2a^* = 13000 \text{ . mm}$$

65

$$\Delta q_0 = 0.15$$

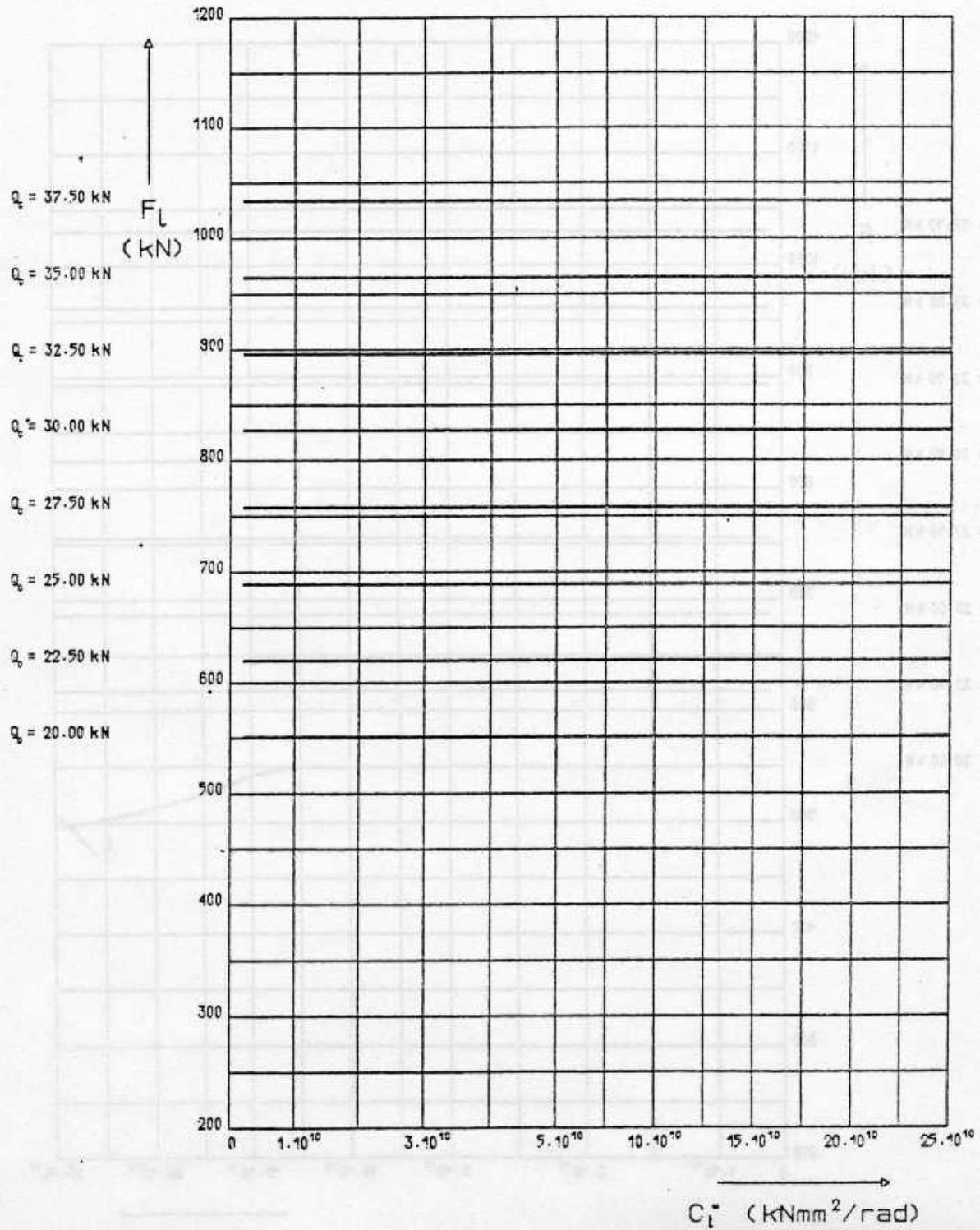


$$2a = 18950 \text{ mm}$$

$$2a^* = 13000 \text{ mm}$$

65

$$\Delta q_0 = 0.15$$

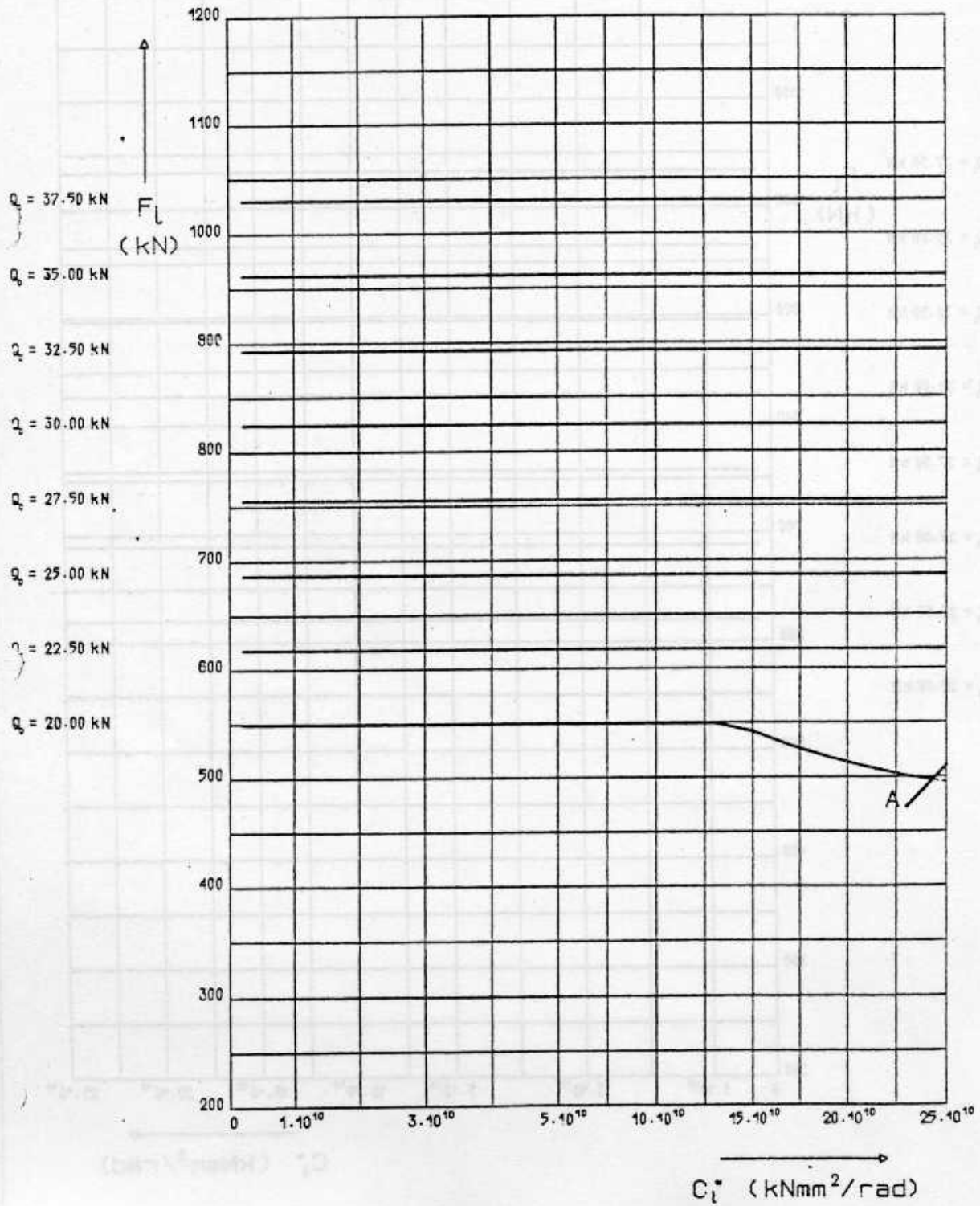


$$\omega = 19040 \cdot \text{mm}$$

$$2a^* = 14000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

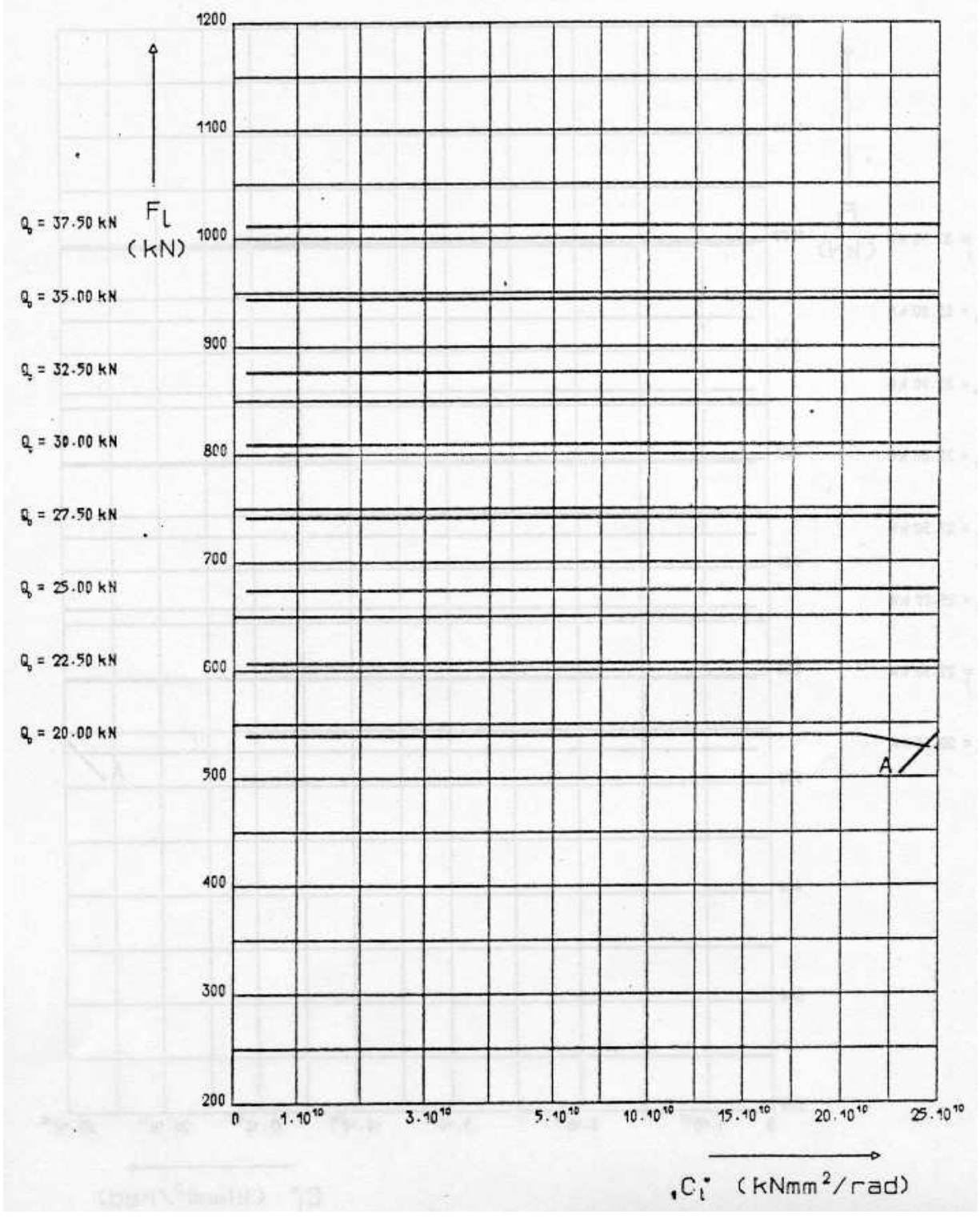


$$\omega = 19540 \cdot \text{mm}$$

$$2a^* = 14000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15 \text{ MPa}$$

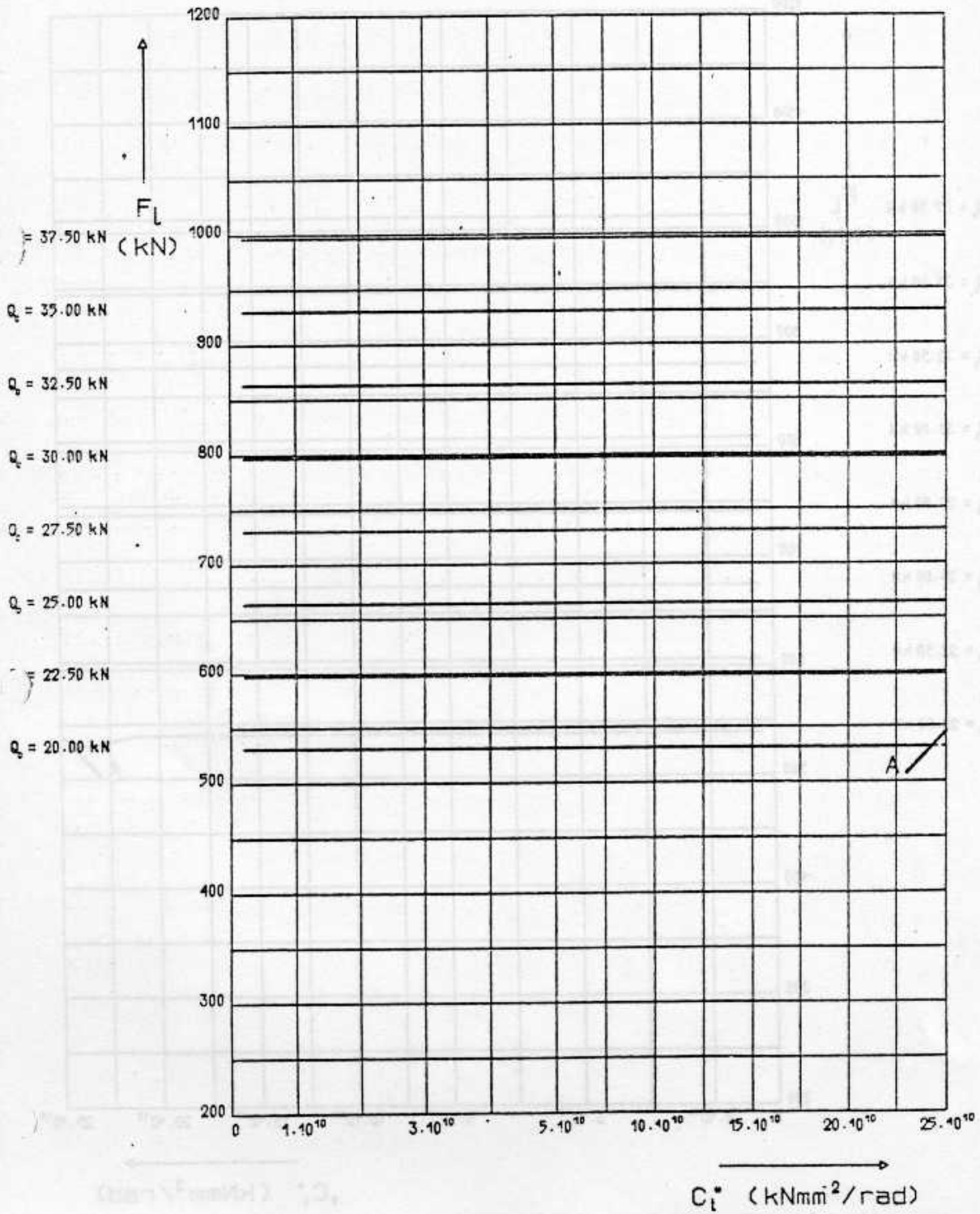


$$2a = 19950 \text{ mm}$$

$$2a^* = 14000 \text{ mm}$$

65

$$\Delta q_0 = 0.15$$

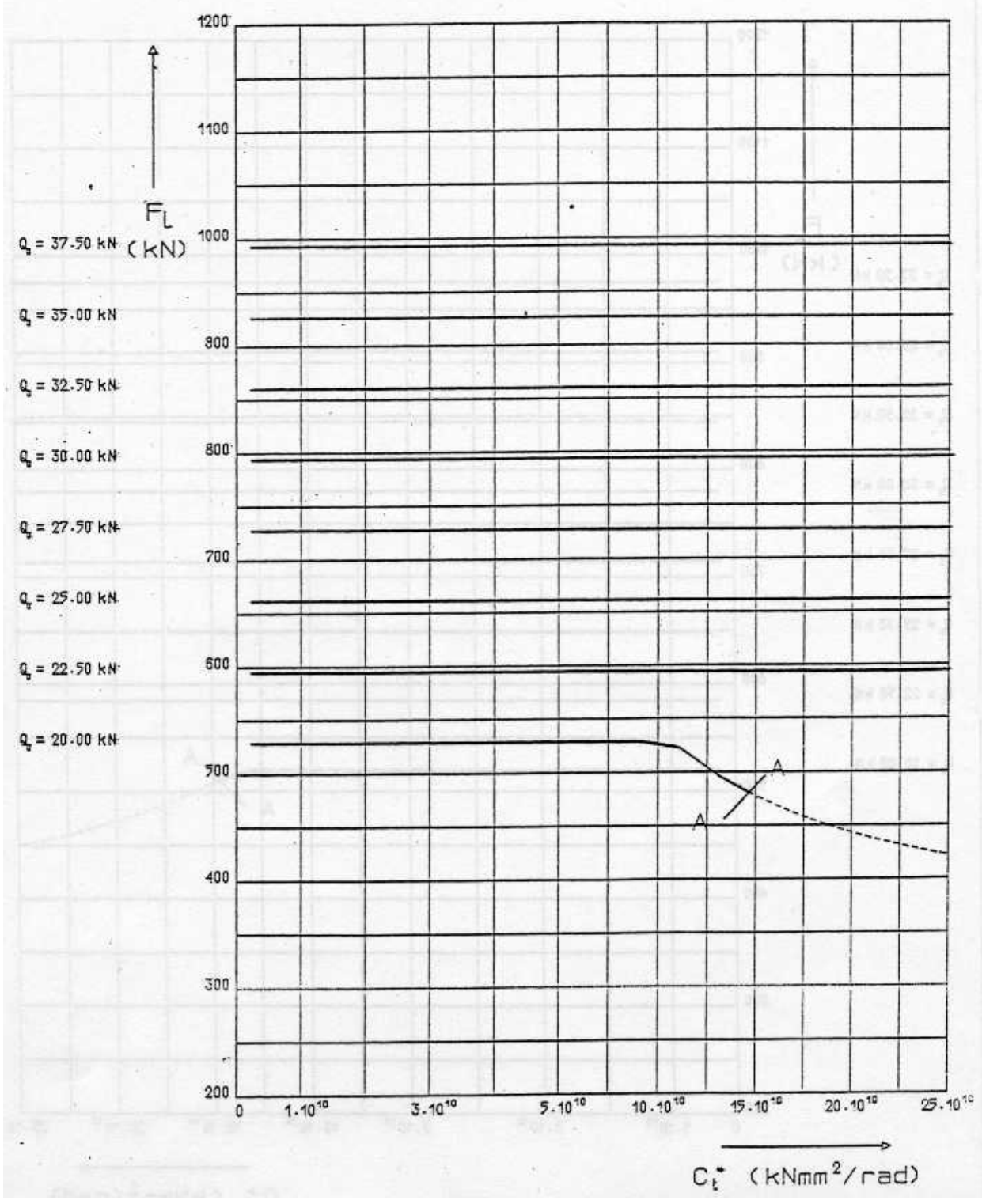


$$\boxed{\quad} = 20040 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

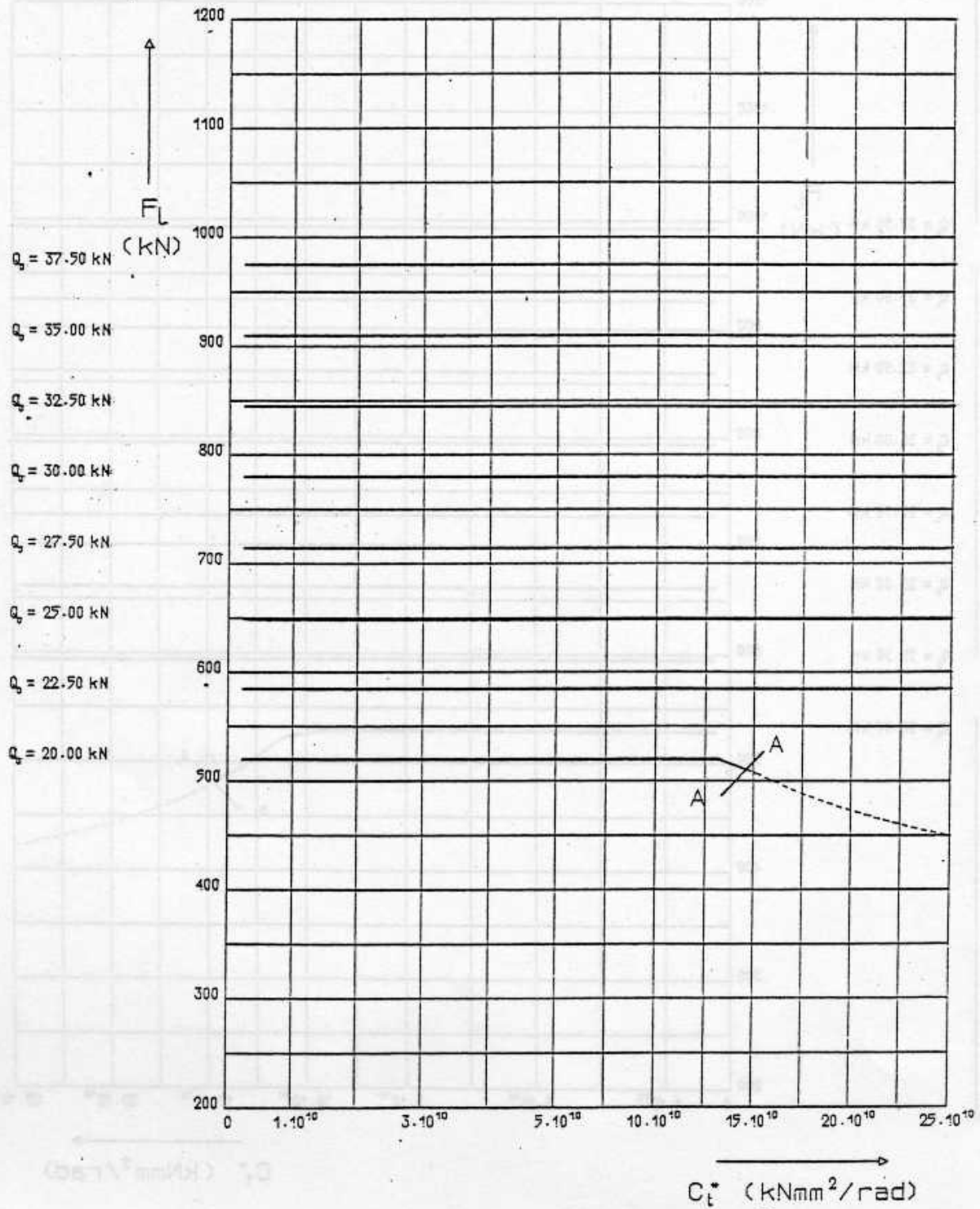


$$\omega = 20540 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

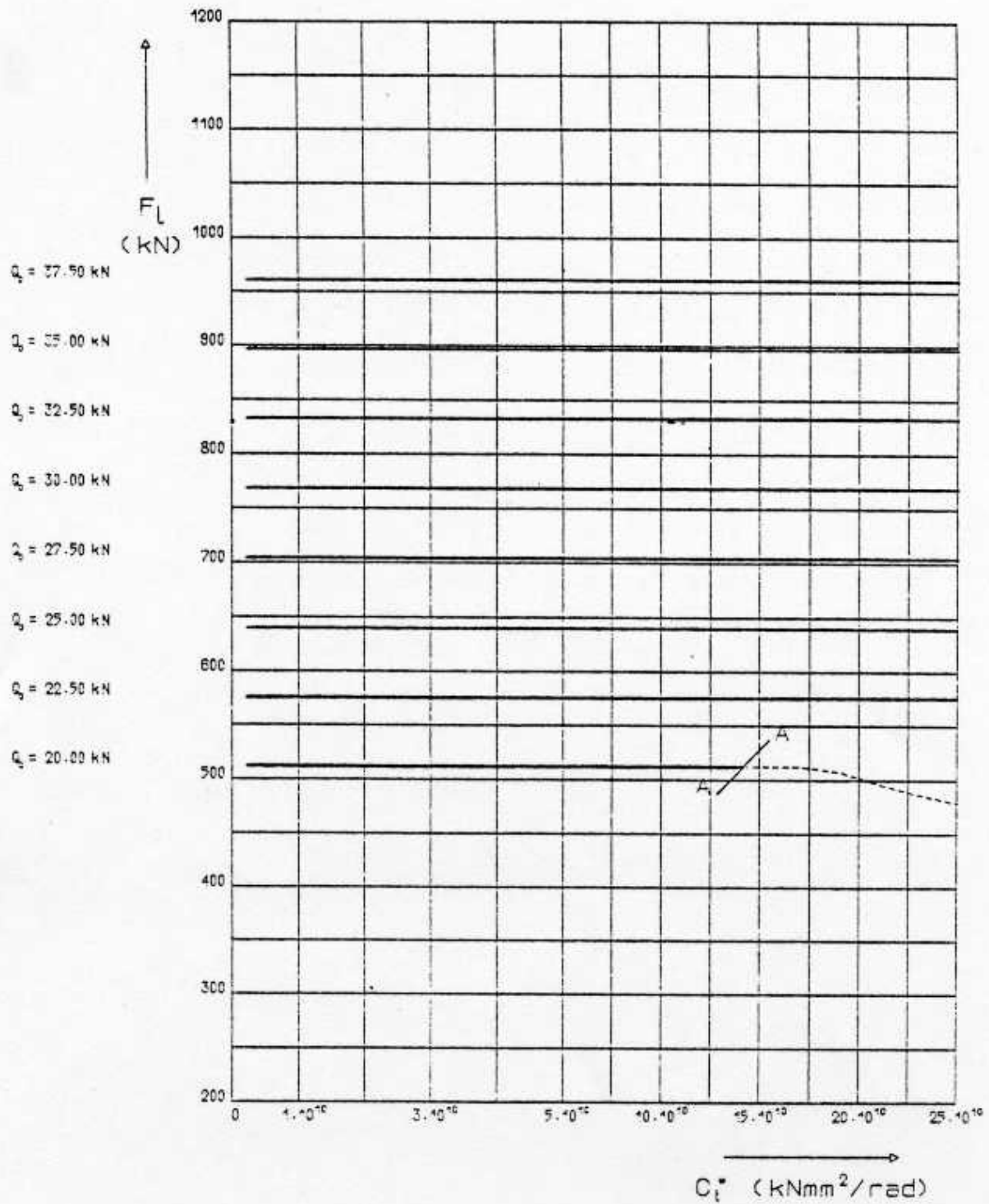


$$\overline{b_0} = 20950 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

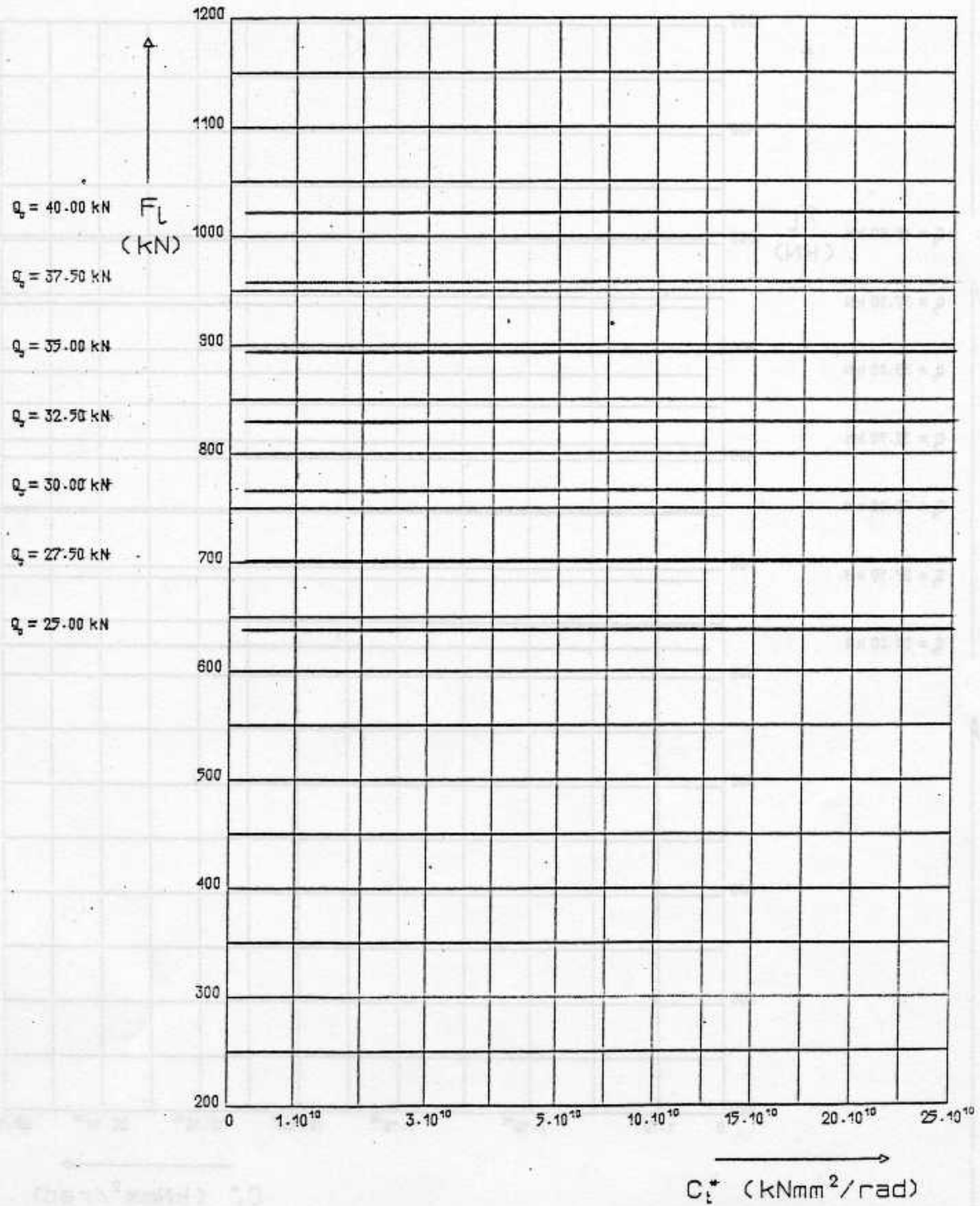


$$\overline{a} = 21040 \cdot \text{mm}$$

$$2\overline{a}^* = 16000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

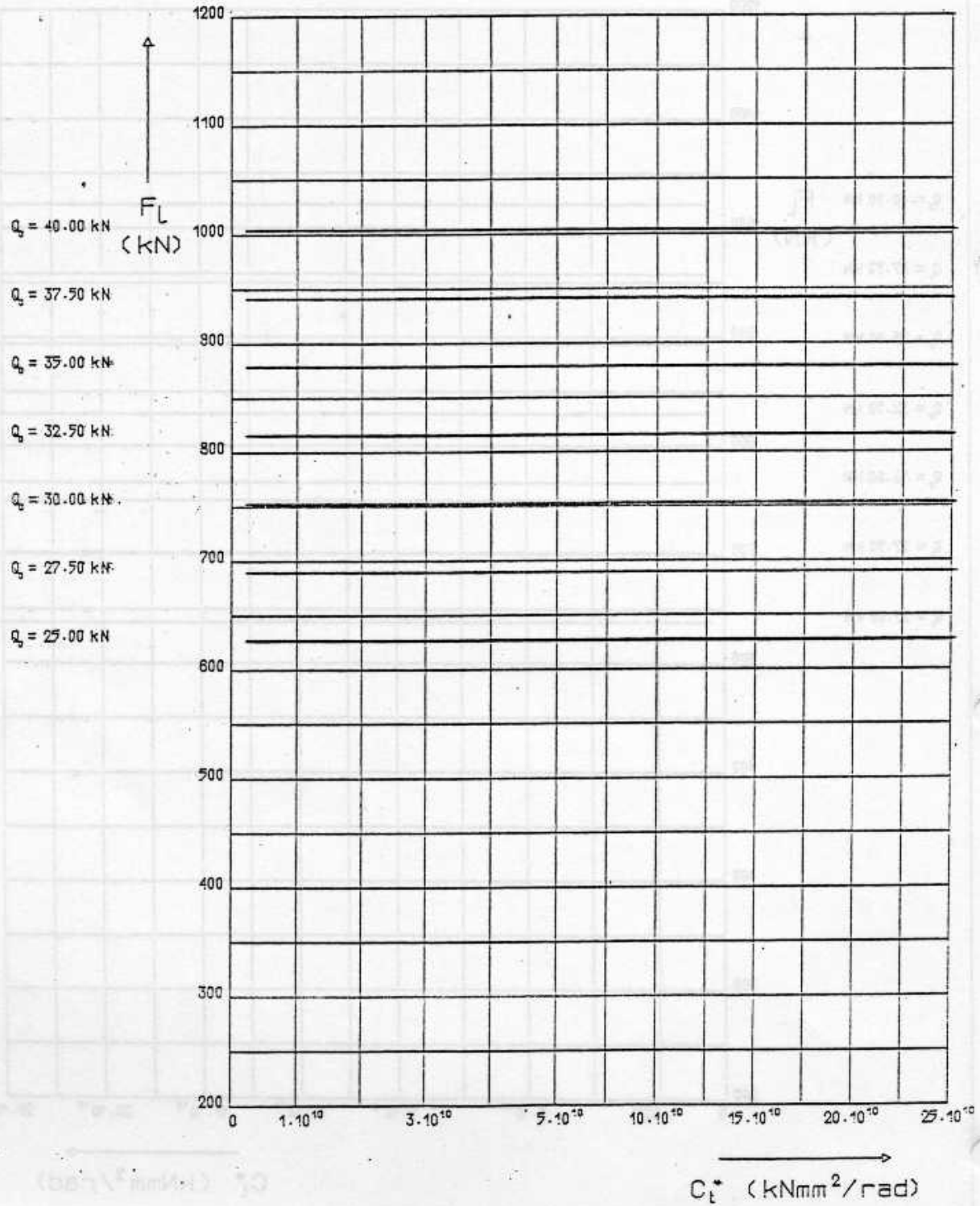


$$\boxed{\quad} = 21540 \cdot \text{mm}$$

$$2a^* = 16000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

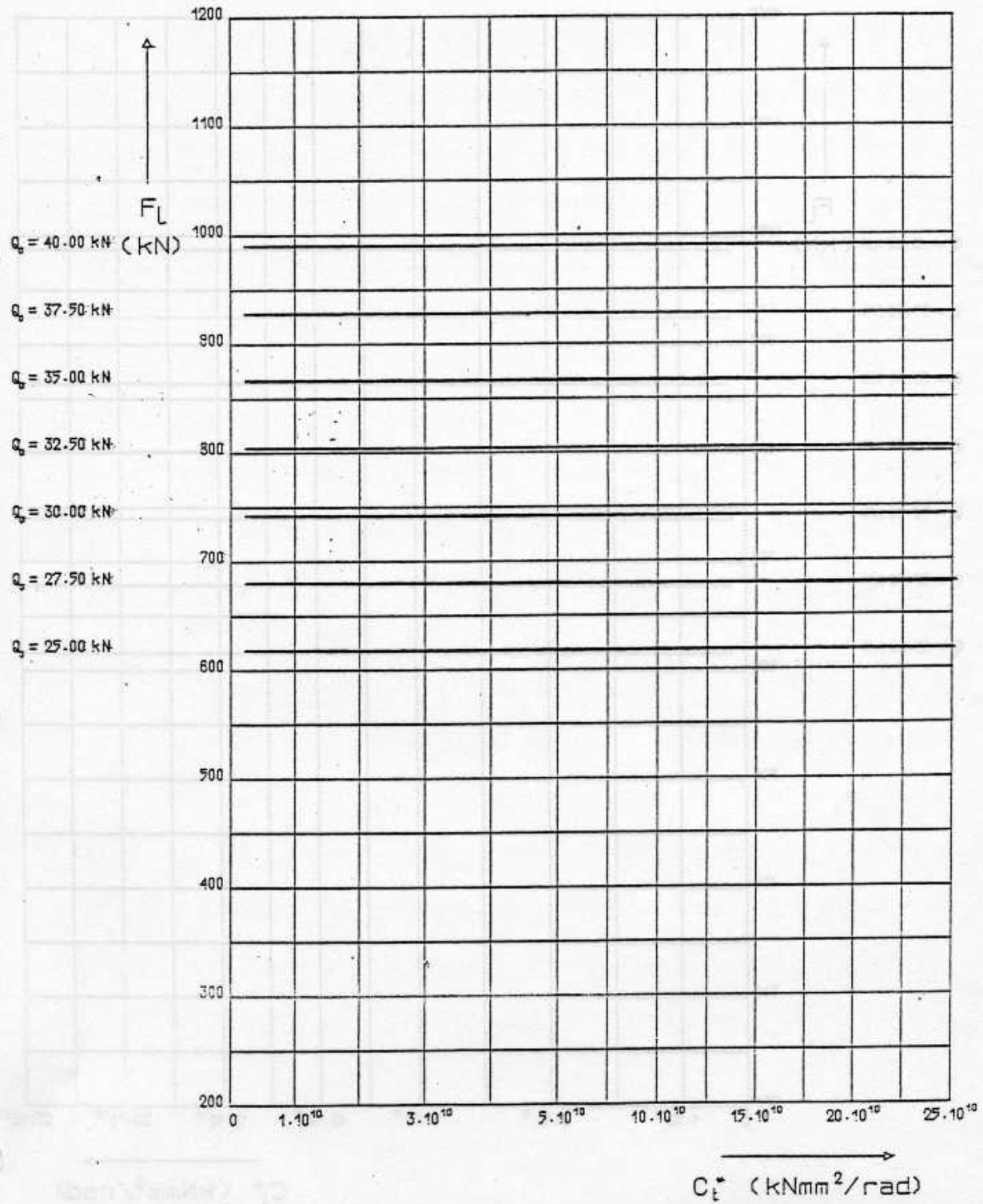


$$\text{---} = 21950 \cdot \text{mm}$$

$$2a^* = 16000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

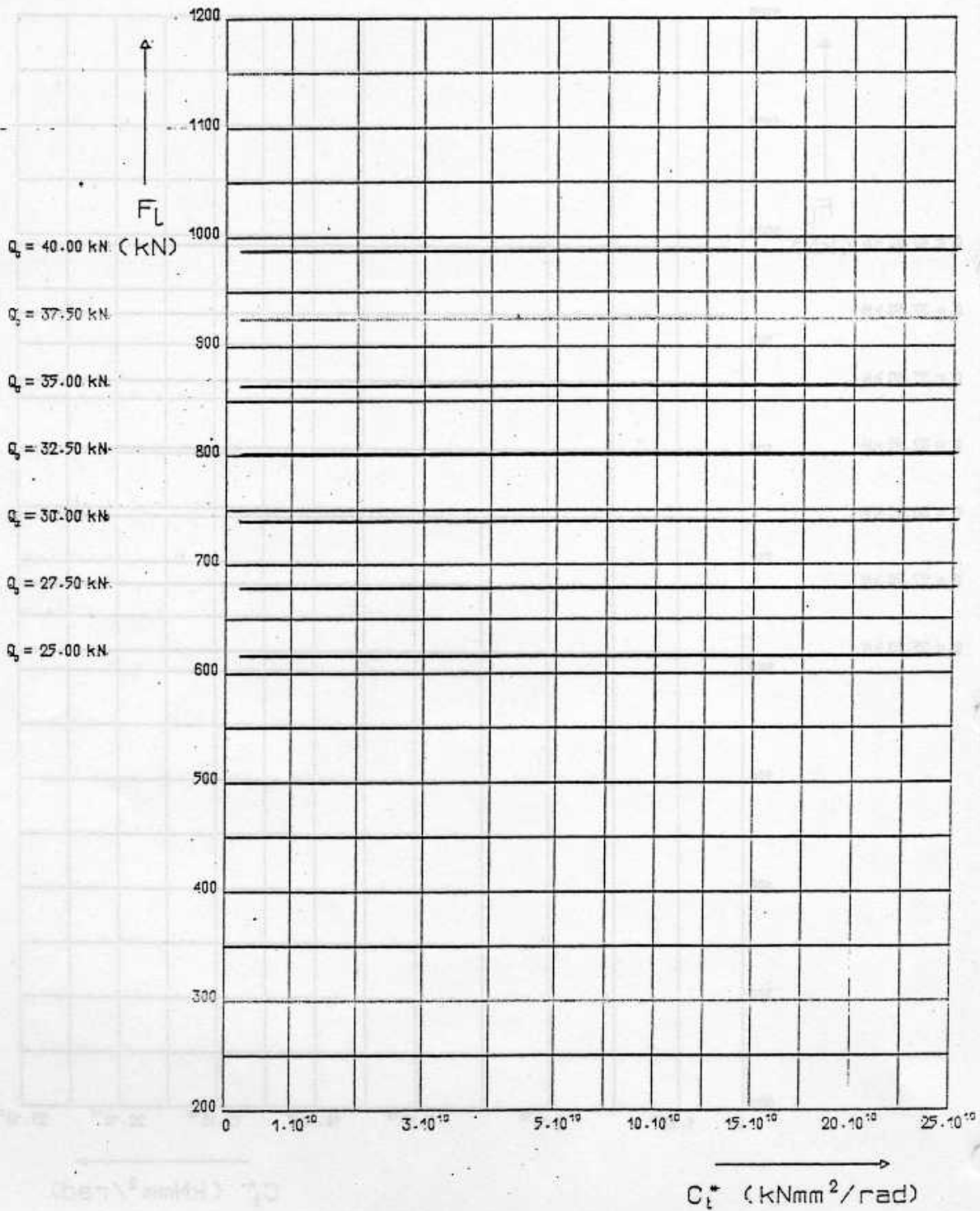


$$\text{---} = 22040 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

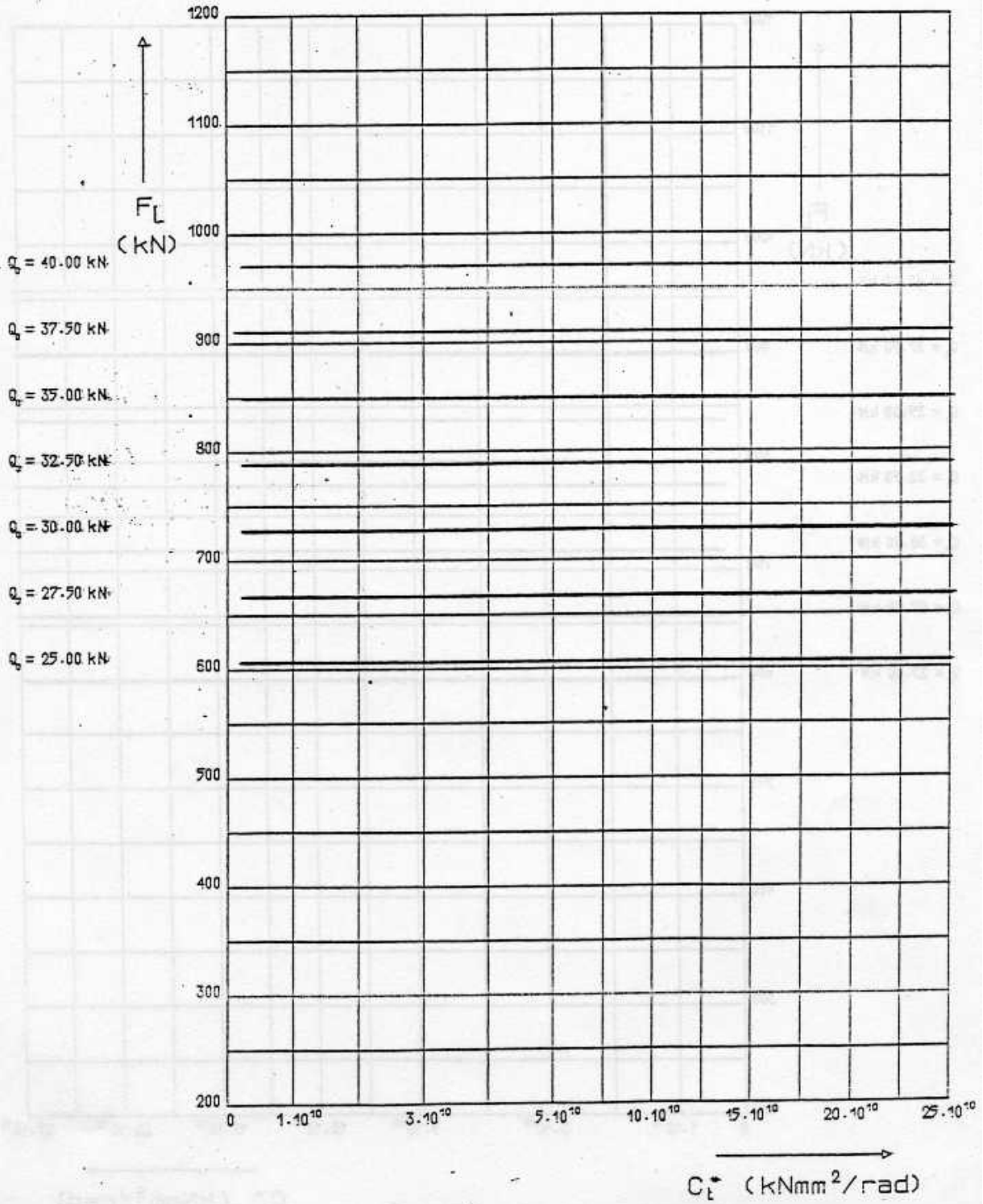


$$\overline{c} = 22540 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

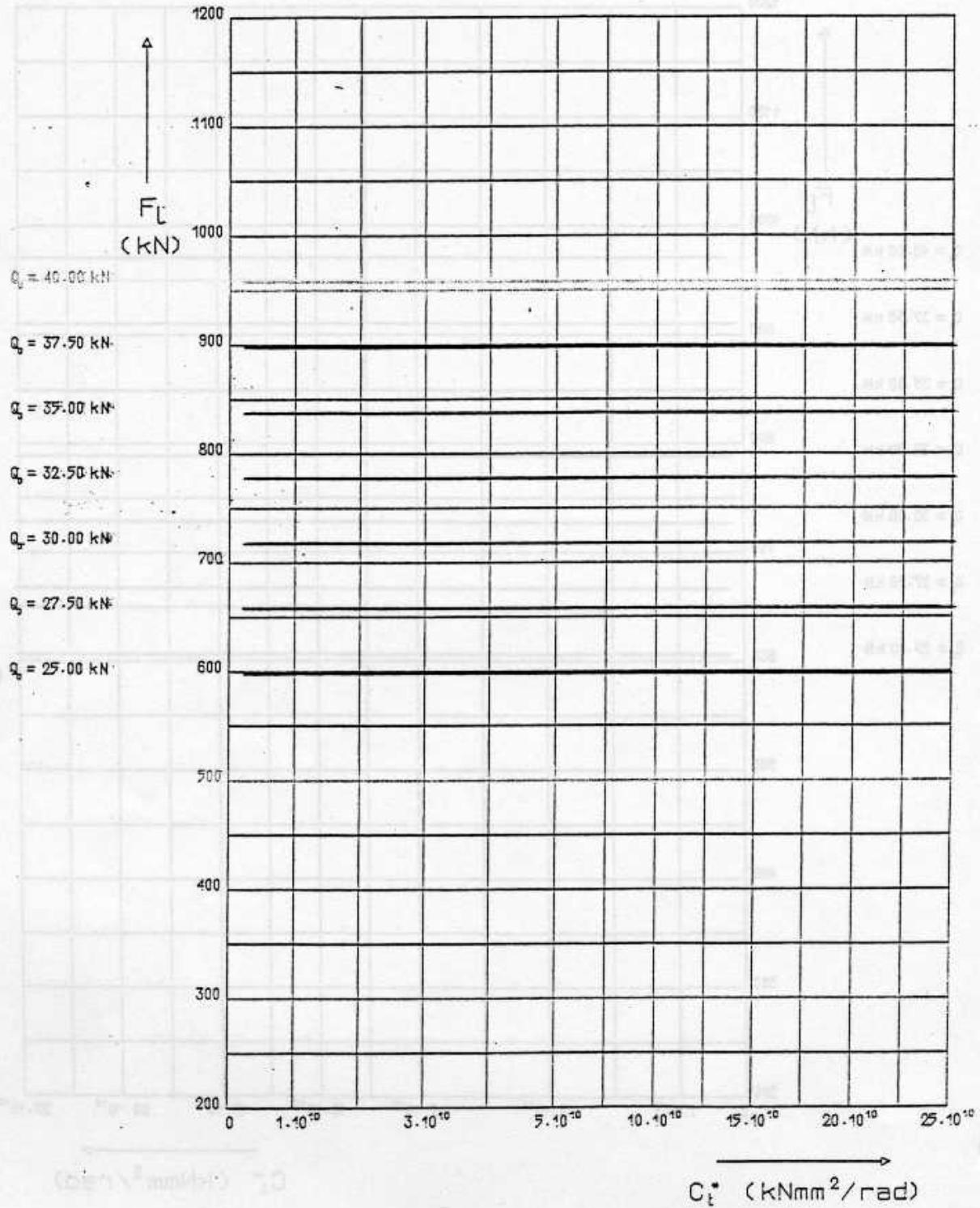


$$\text{---} = 22950 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

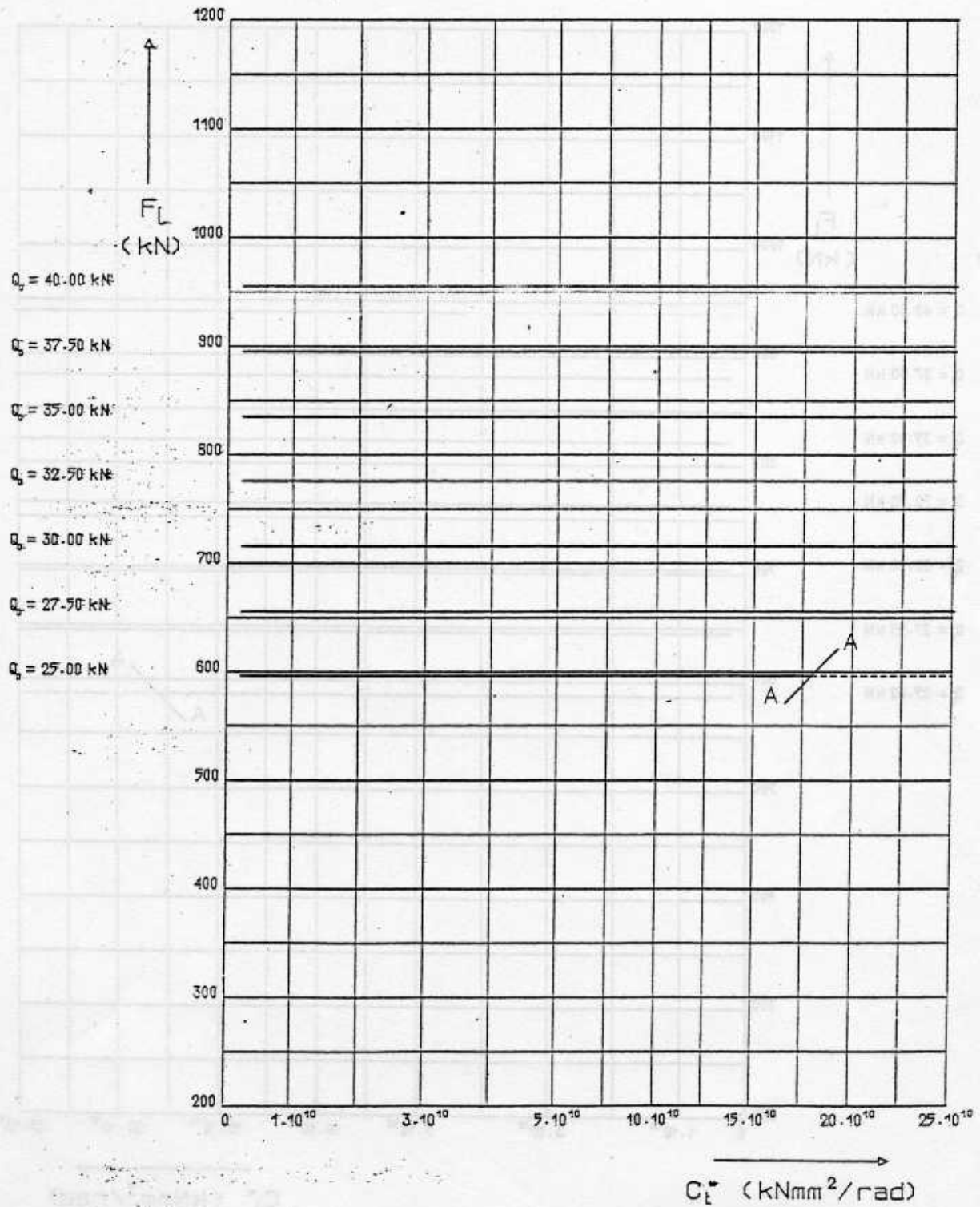


$$\boxed{\quad} = 23040 \cdot \text{mm}$$

$$2a^* = 18000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

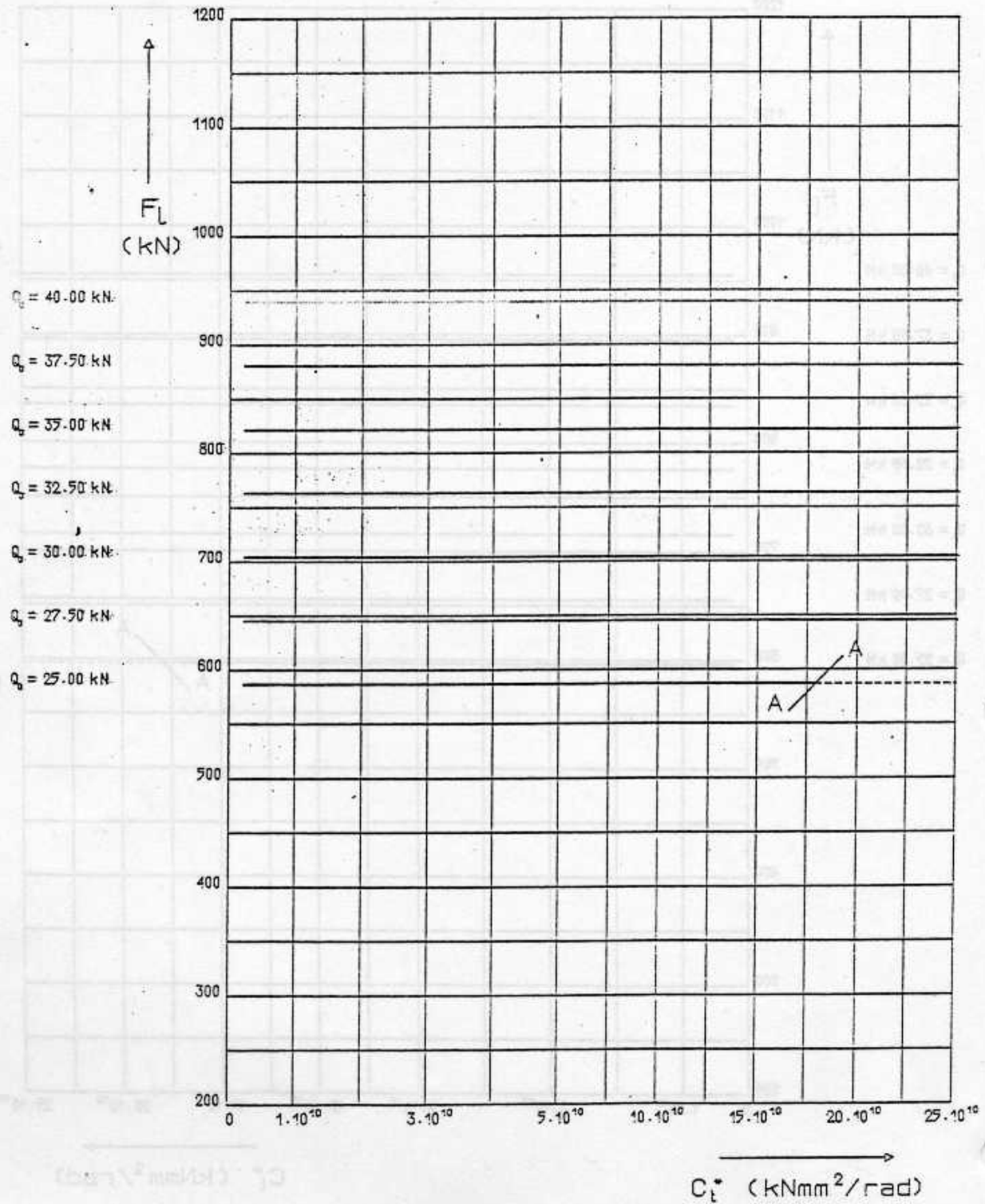


$$\text{Diagram} = 23540 \cdot \text{mm}$$

$$2a^* = 18000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

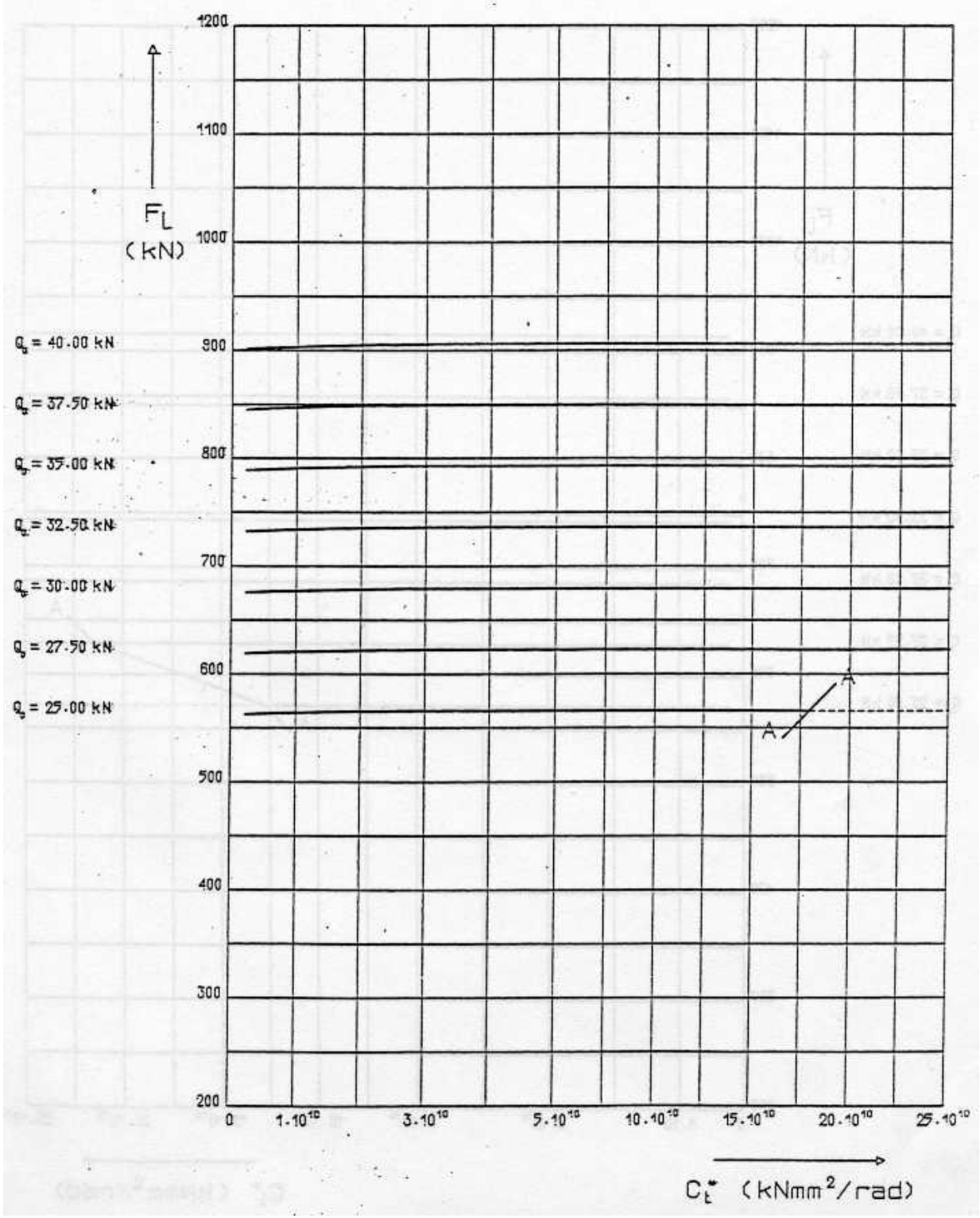


$$\overline{a} = 23950 \cdot \text{mm}$$

$$2a^* = 18000 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

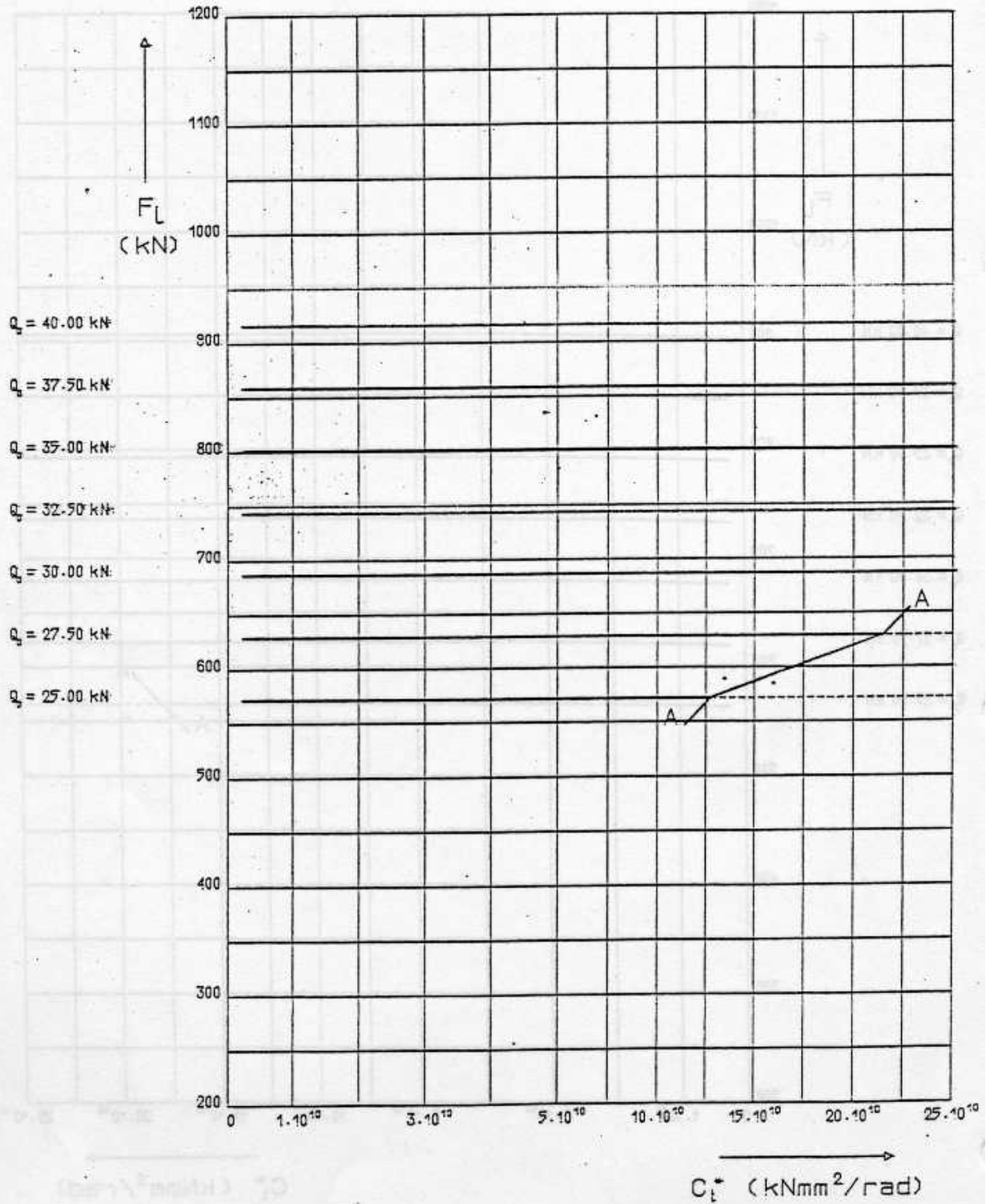


$$\text{---} = 24340 \cdot \text{mm}$$

$$2a^* = 19300 \cdot \text{mm}$$

65

$$\Delta q_0 = 0.15$$

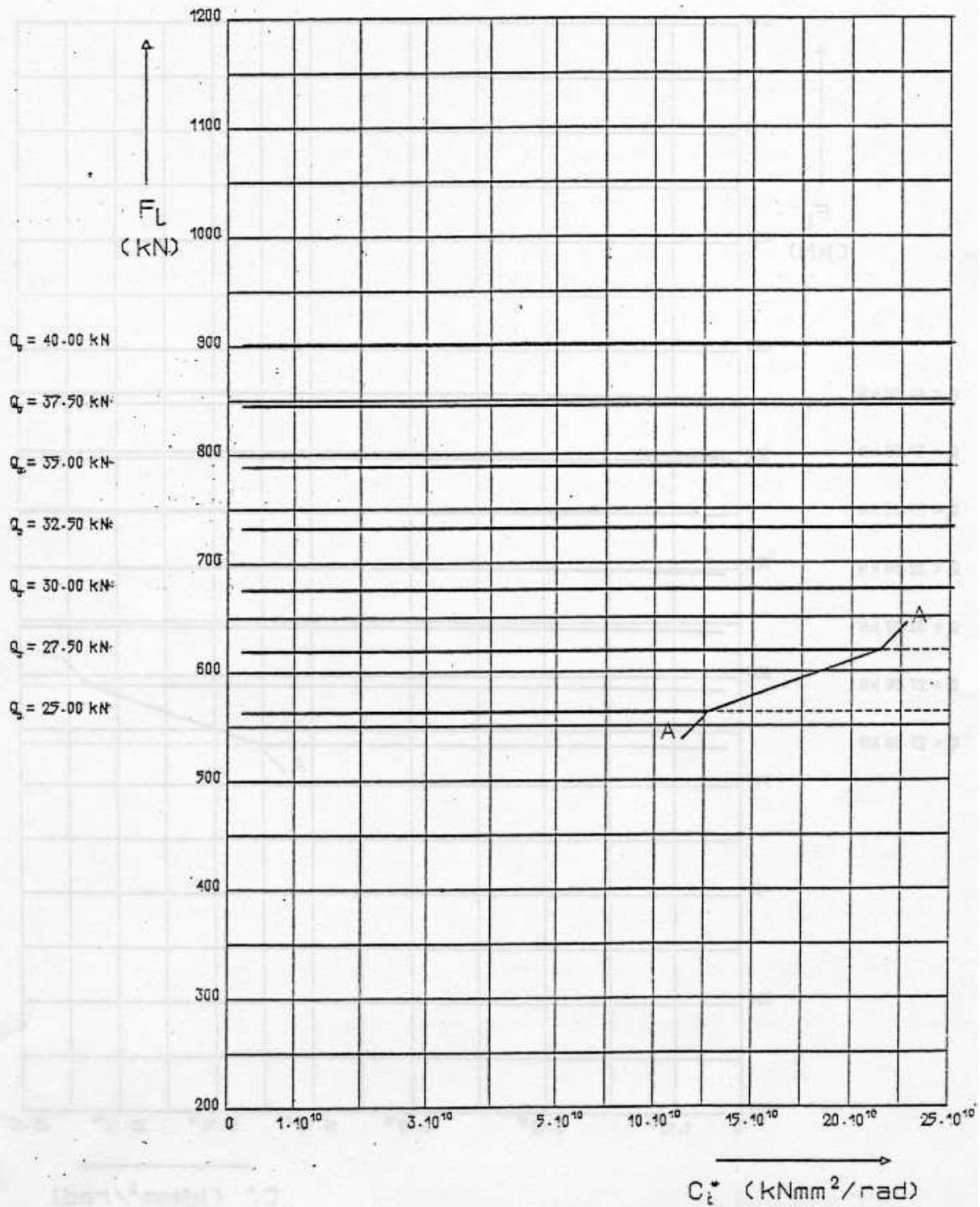


$$2a = 24840 \cdot \text{mm}$$

$$2a^* = 19300 \cdot \text{mm}$$

67

$$\Delta q_0 = 0.15$$

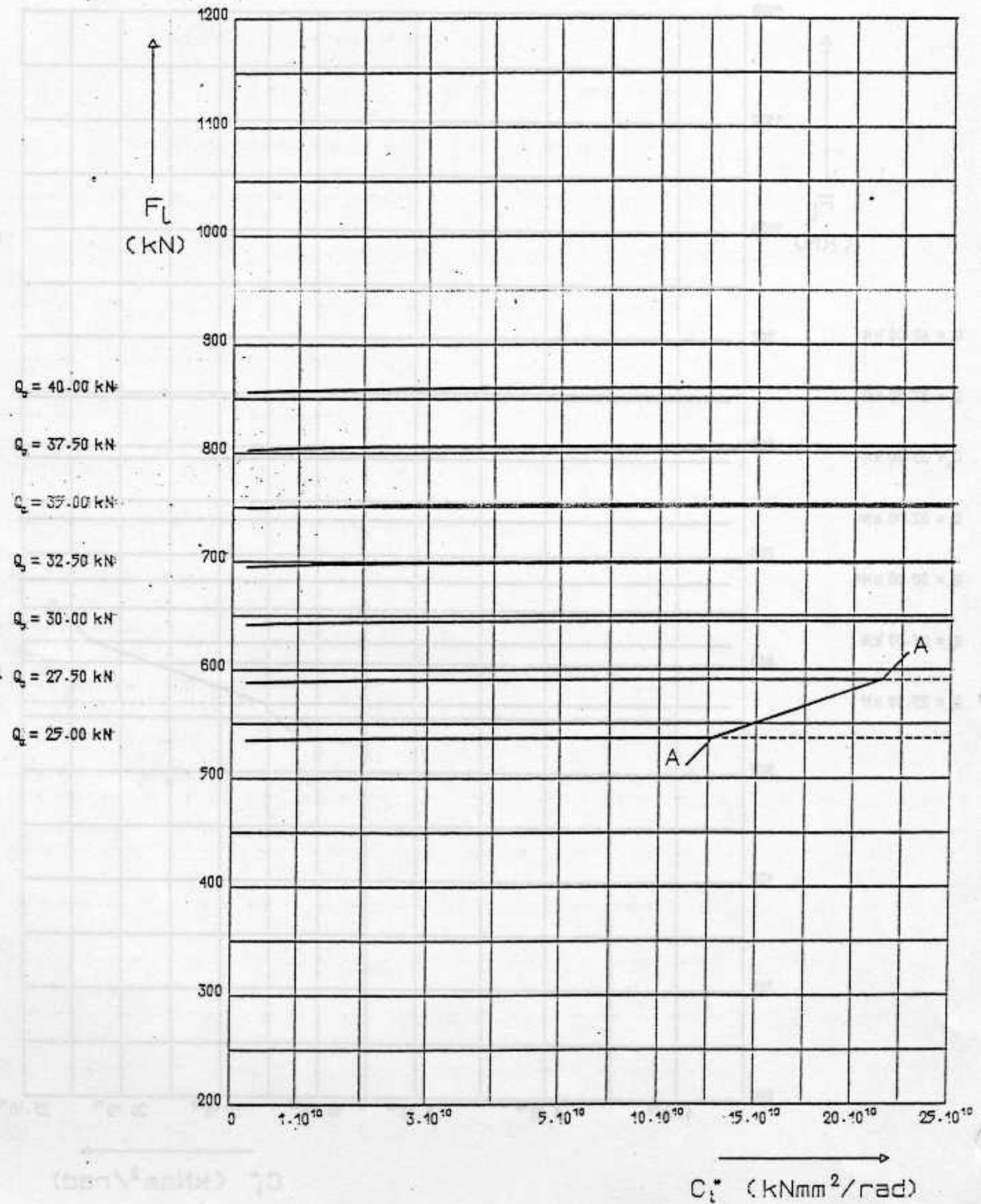


$$\overline{a} = 25250 \cdot \text{mm}$$

$$2a^* = 19300 \cdot \text{mm}$$

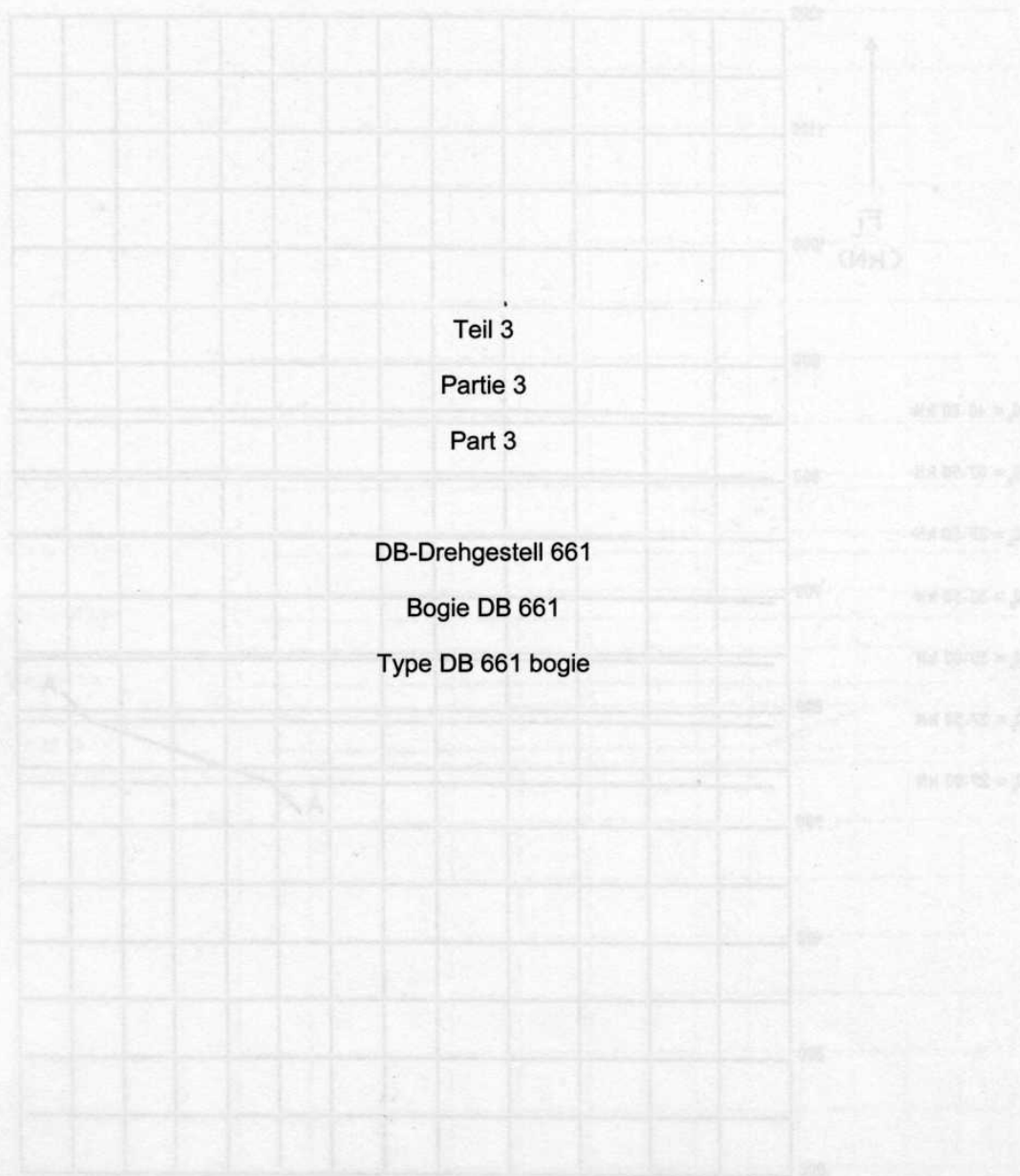
65

$$\Delta q_0 = 0.15 \text{ sPA}$$





Anlage C
Annexe C
Appendix C

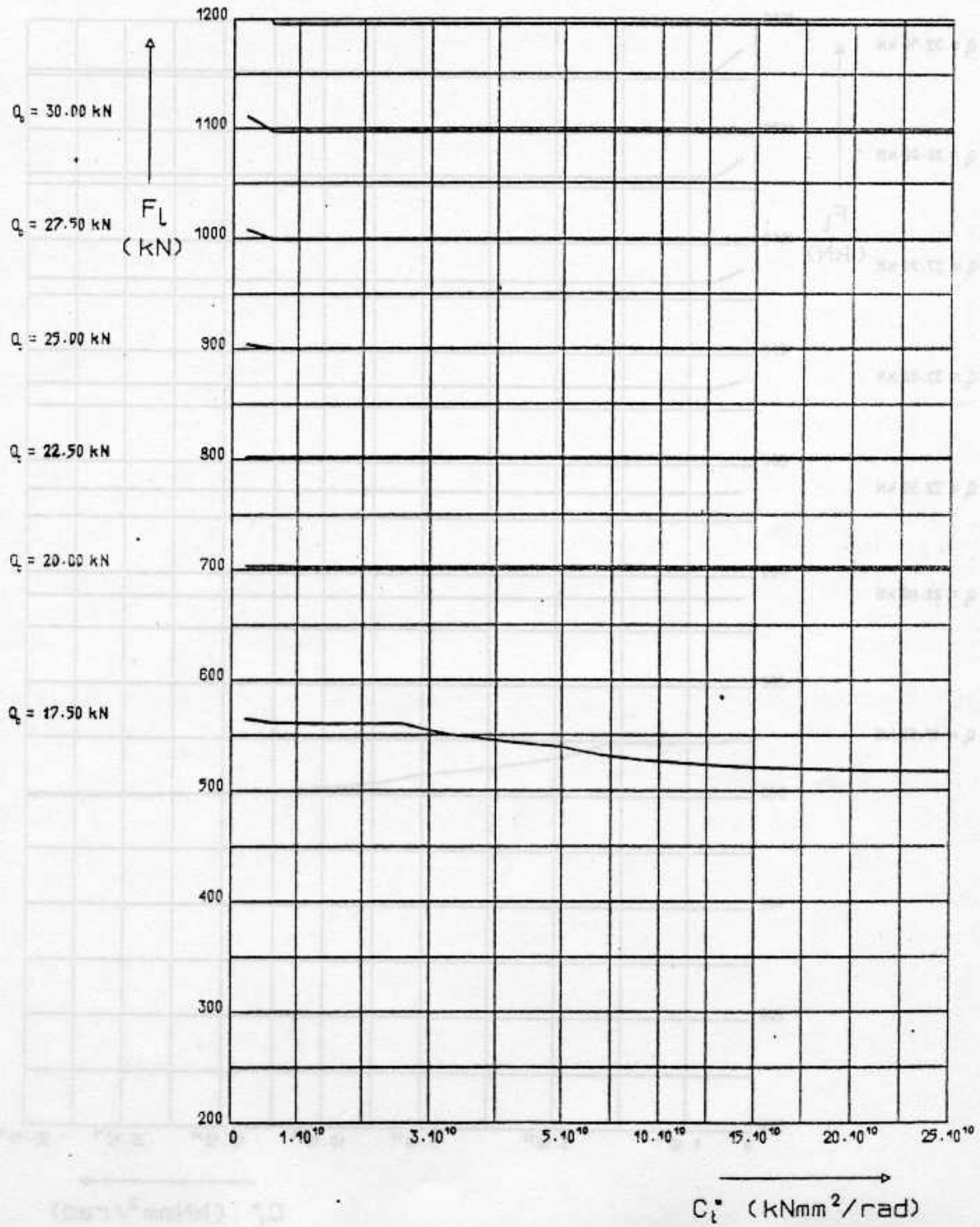


$$\overline{b} = 10040 \cdot \text{mm}$$

$$2a^* = 5000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

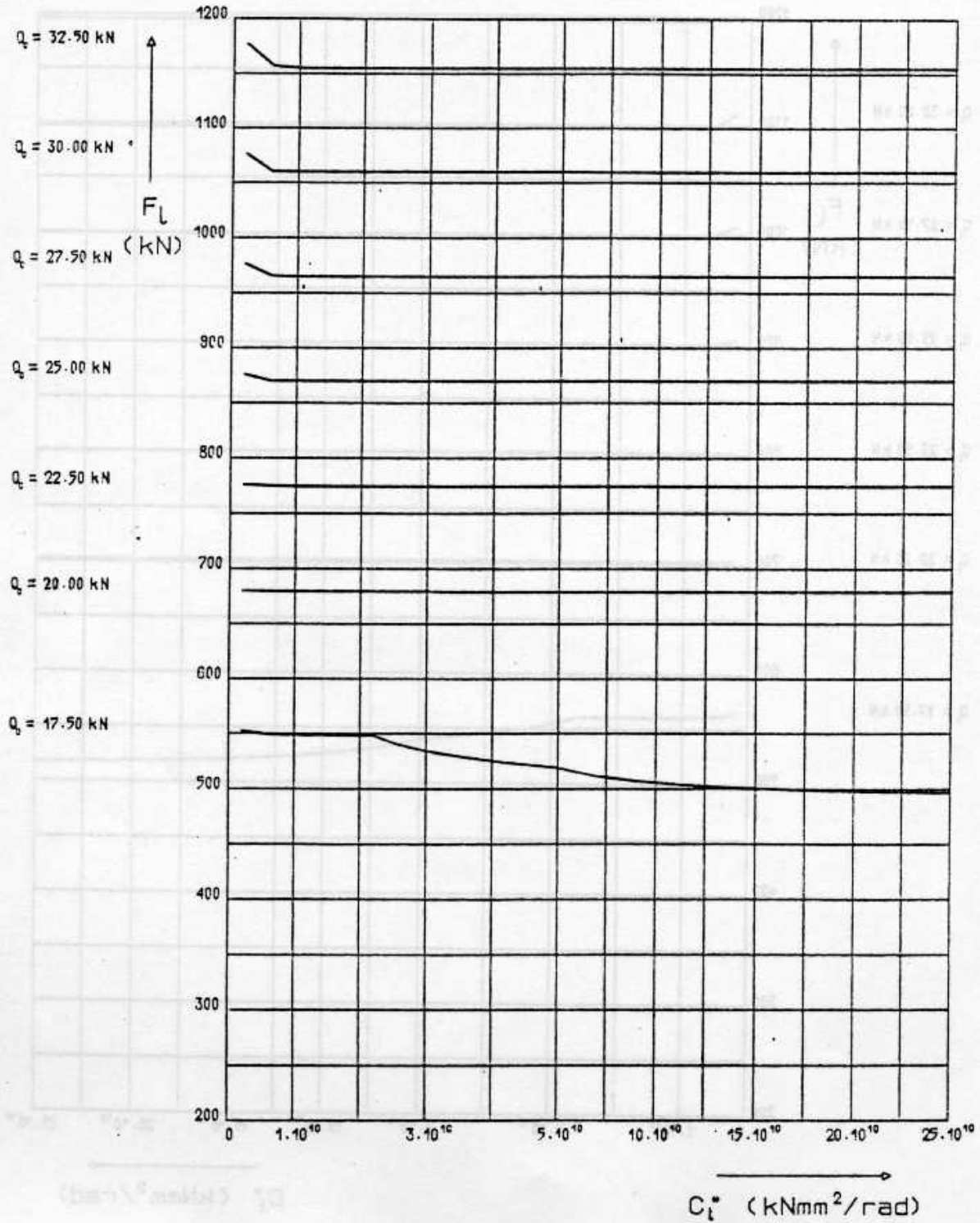


$$b = 10540 \text{ mm}$$

$$2a^* = 5000 \text{ mm}$$

661

$$\Delta q_0 = 0.20$$

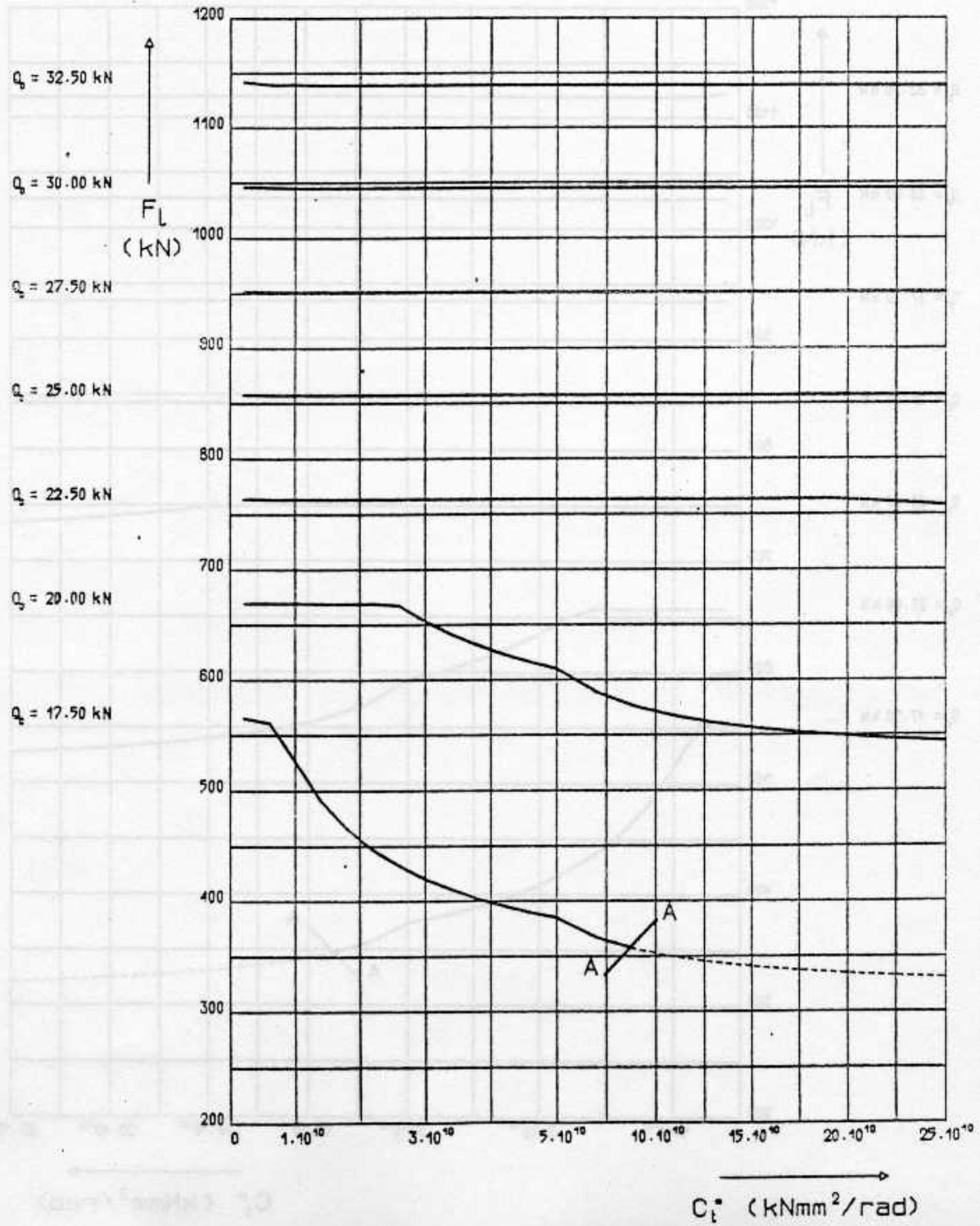


$$\text{---} = 11540 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

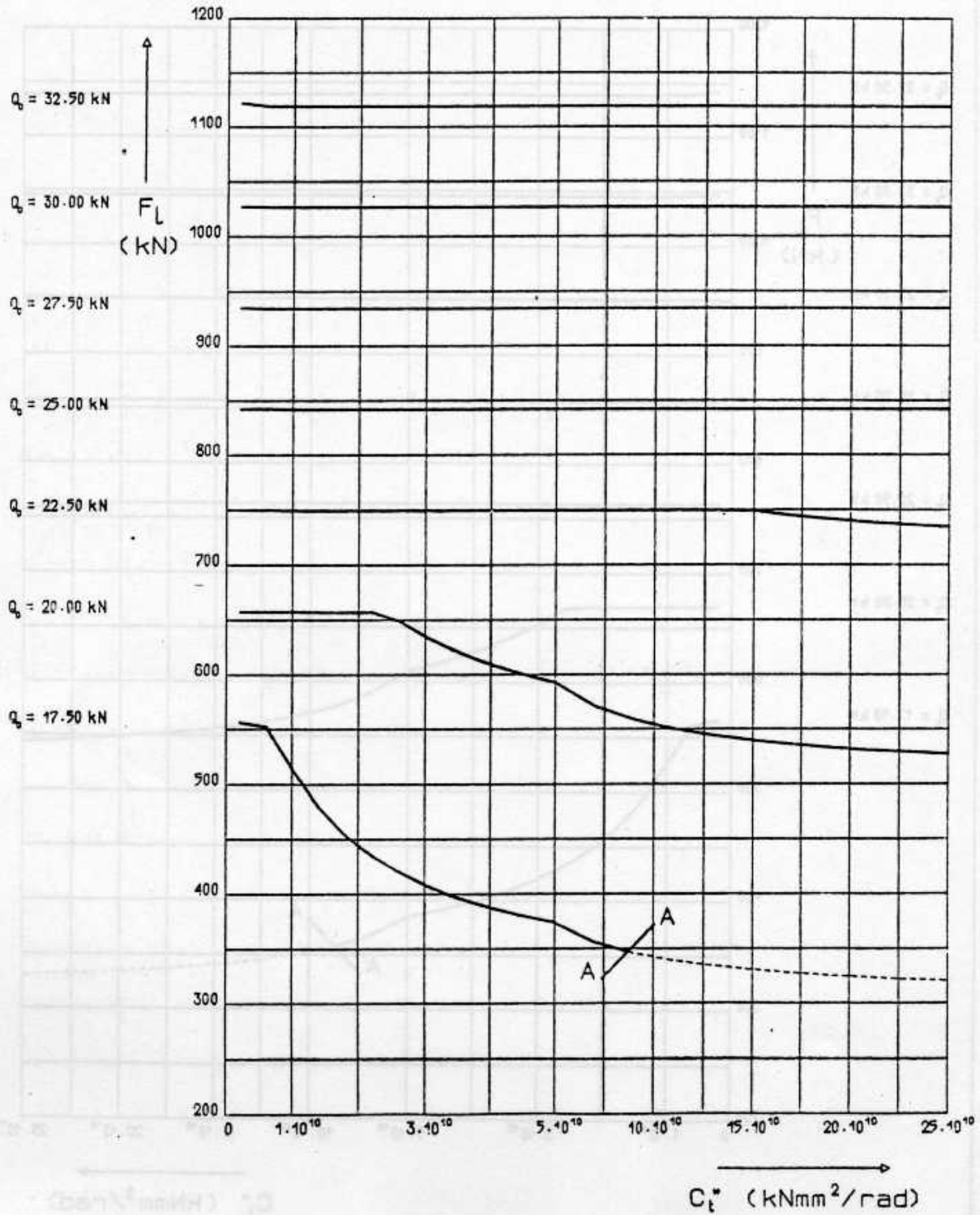


$$\text{---} = 12040 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

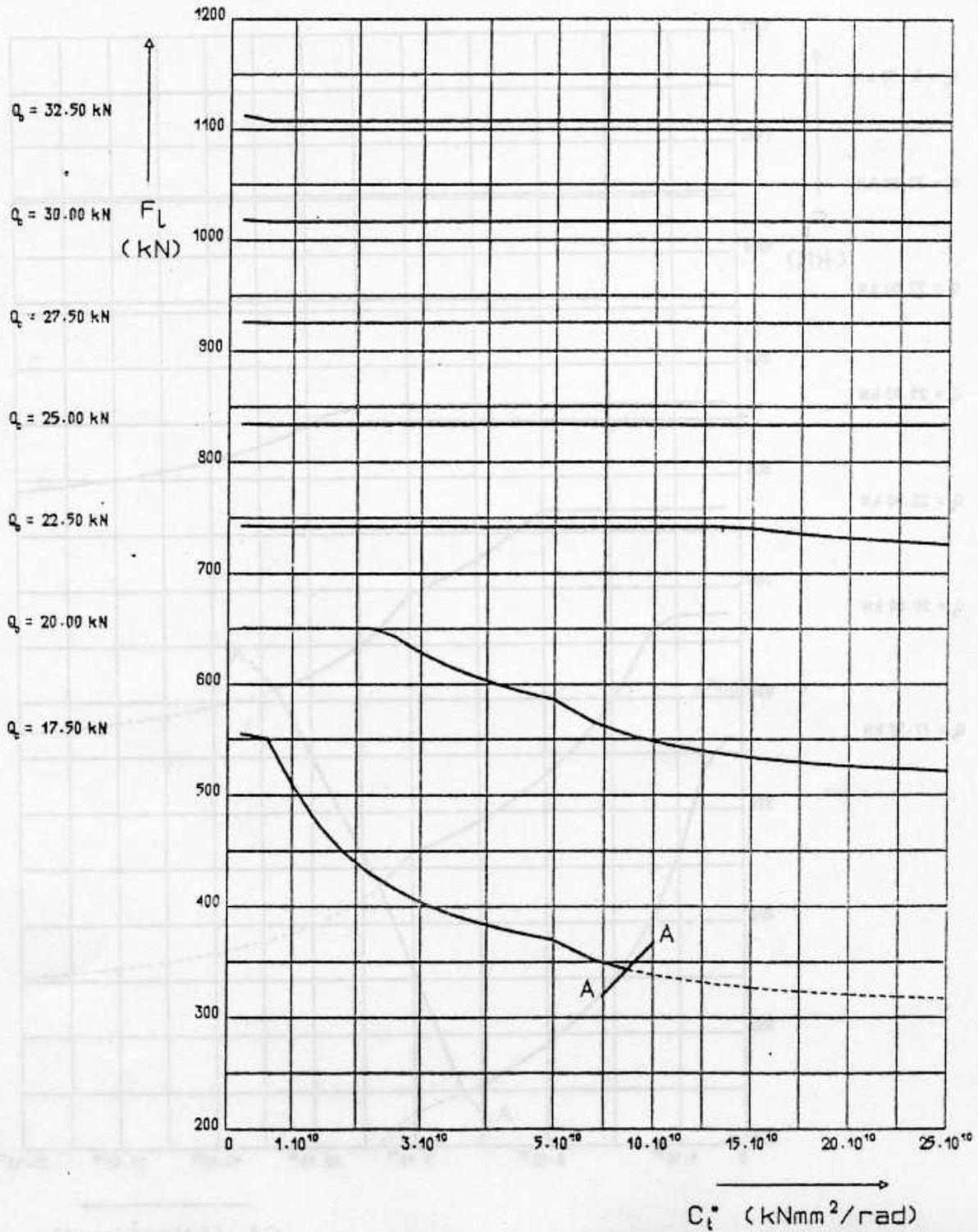


$$\boxed{\quad\quad} = 12450 \cdot \text{mm}$$

$$2a^* = 6500 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

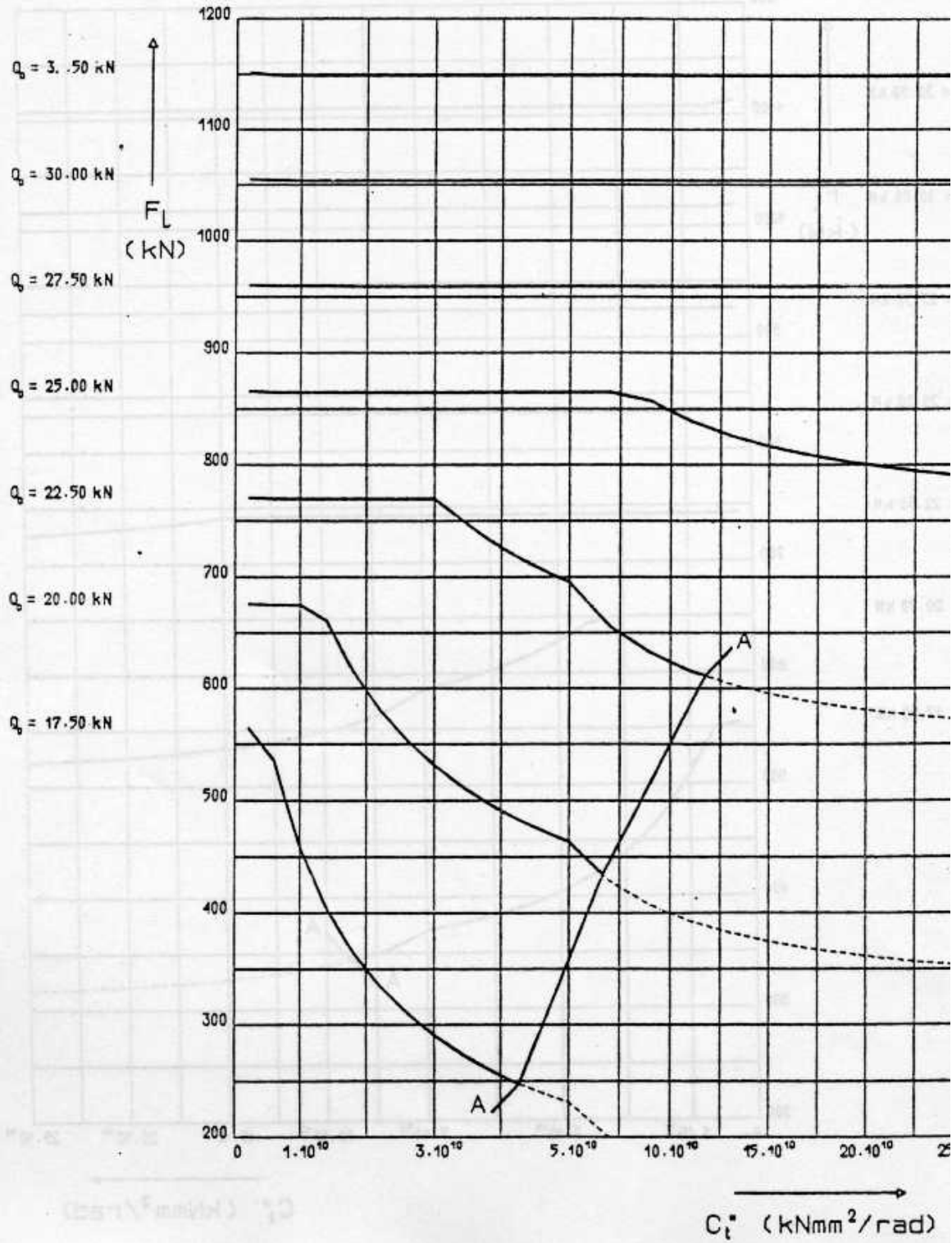


$$\text{---} = 13040 \cdot \text{mm}$$

$$2a^* = 8000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

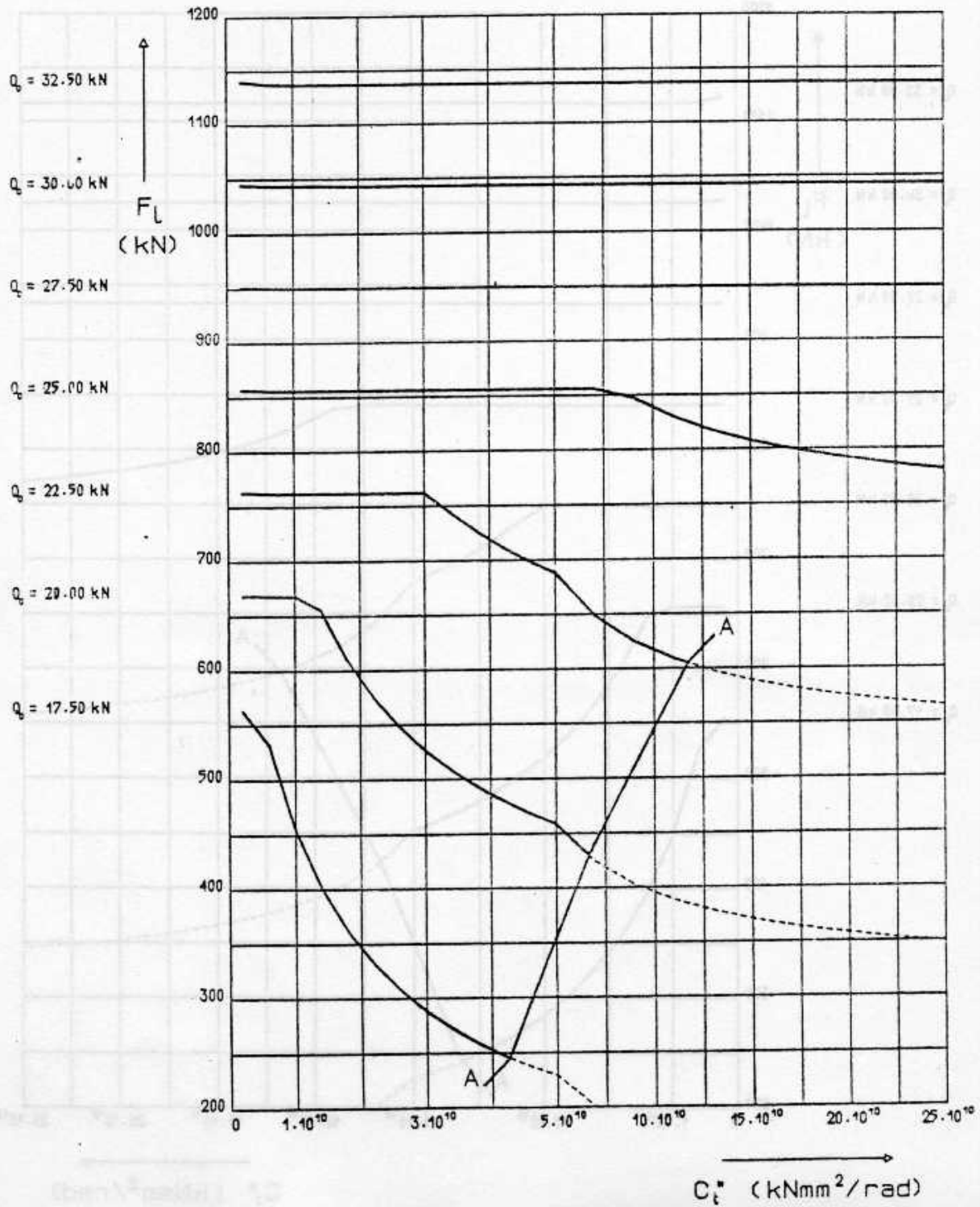


$$l = 13540 \text{ mm}$$

$$2a^* = 8000 \text{ mm}$$

661

$$\Delta q_0 = 0.20$$

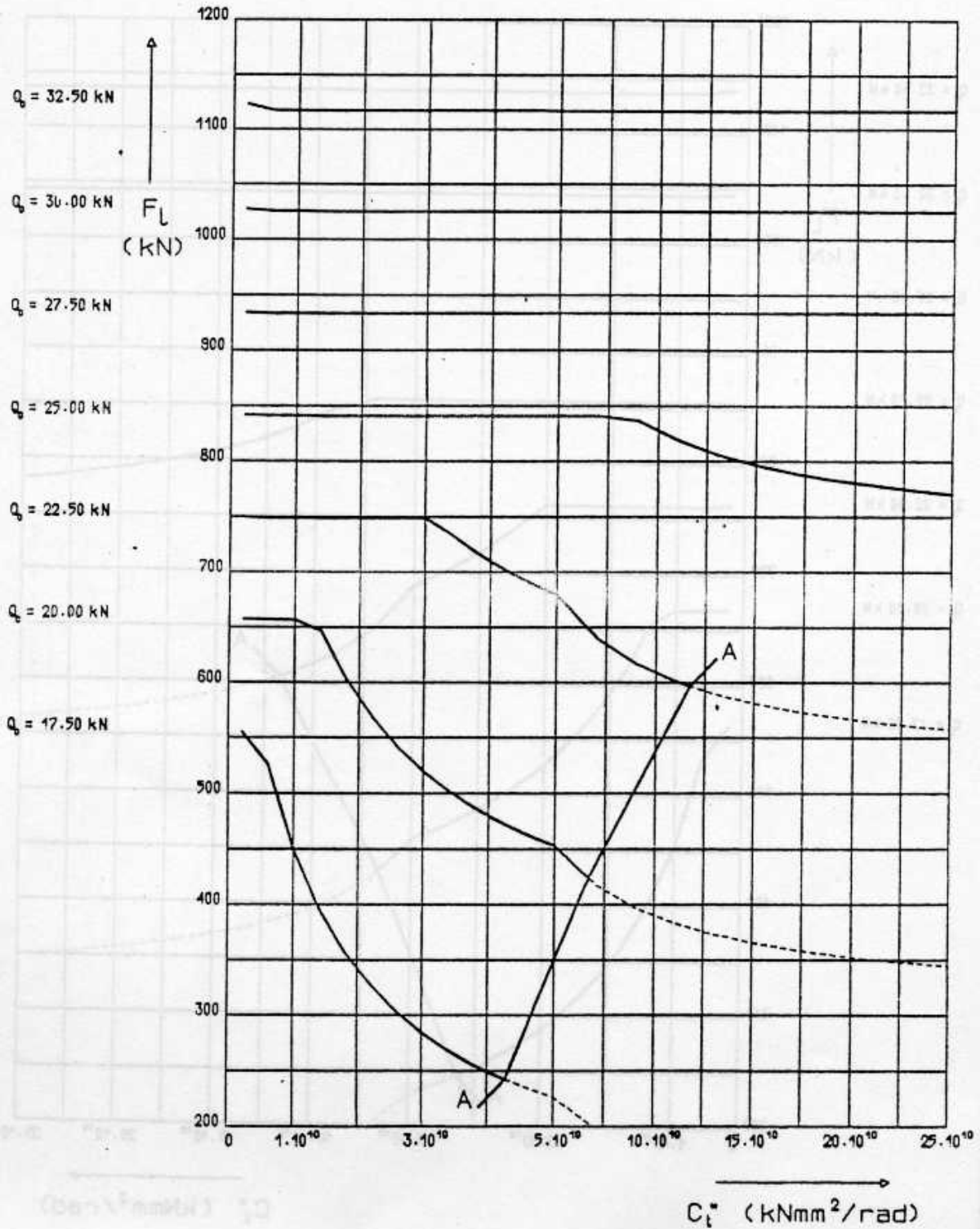


$$\text{---} = 13950 \cdot \text{mm}$$

$$2a^* = 8000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

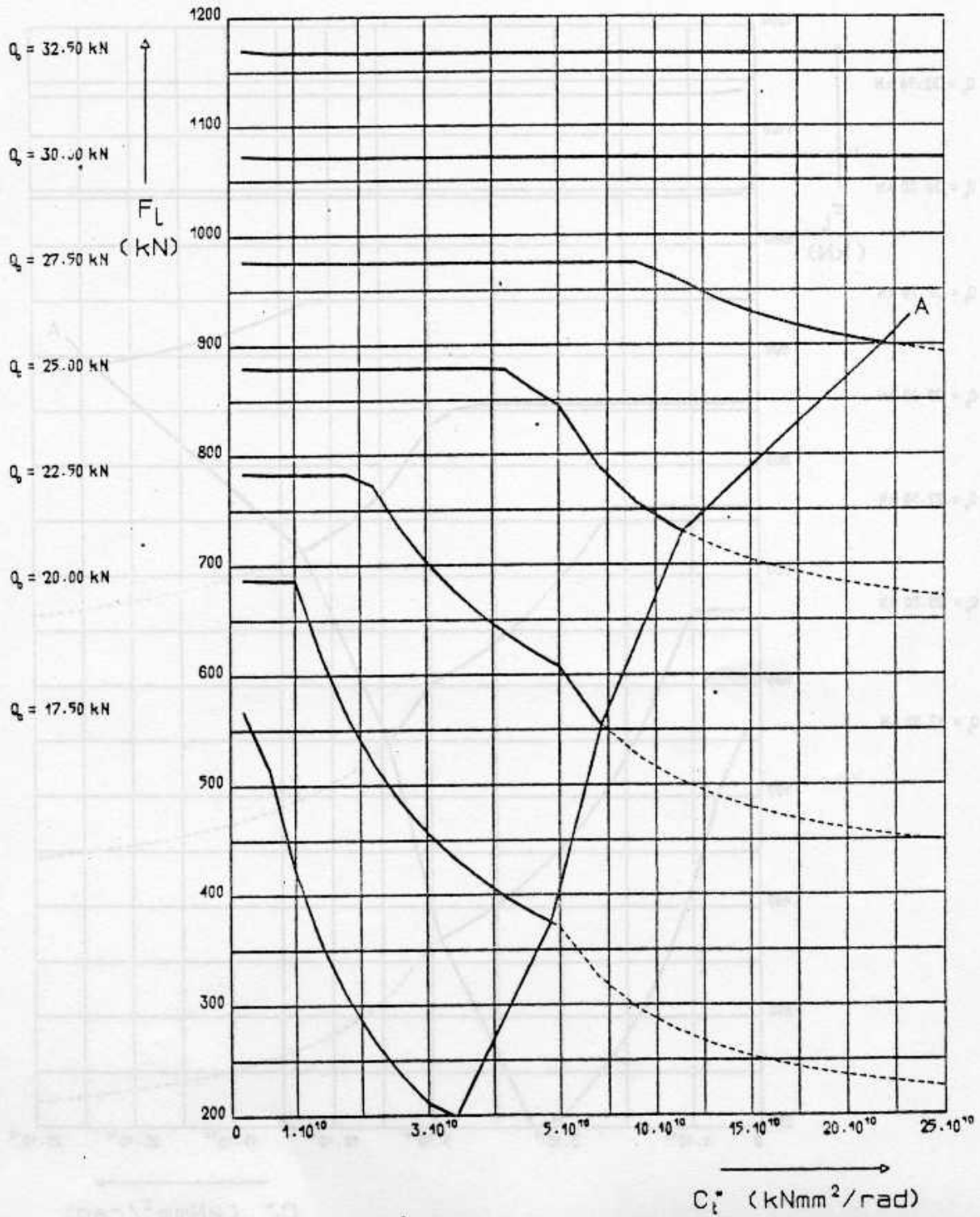


$$\text{---} = 14040 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

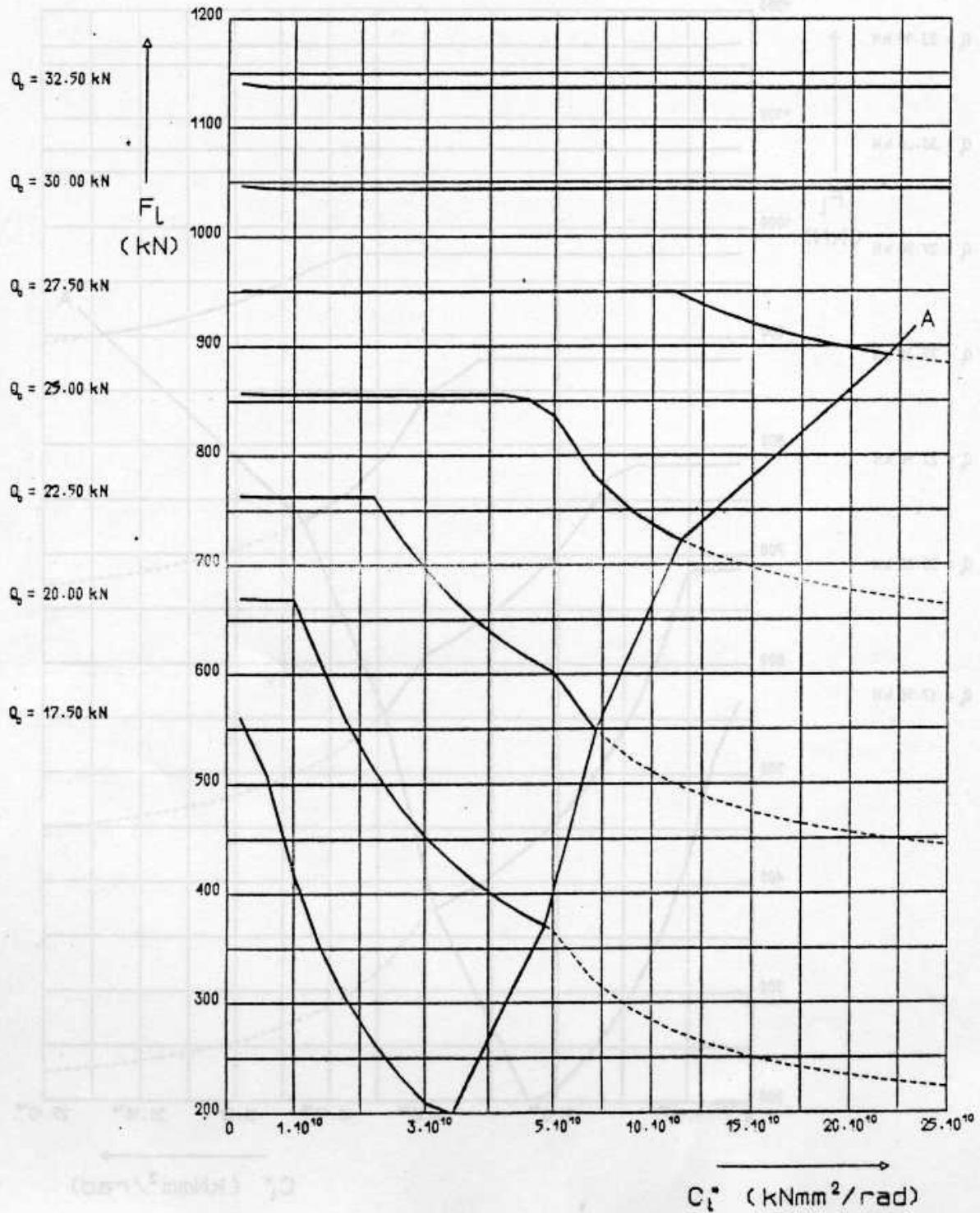


$$\text{---} = 14540 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

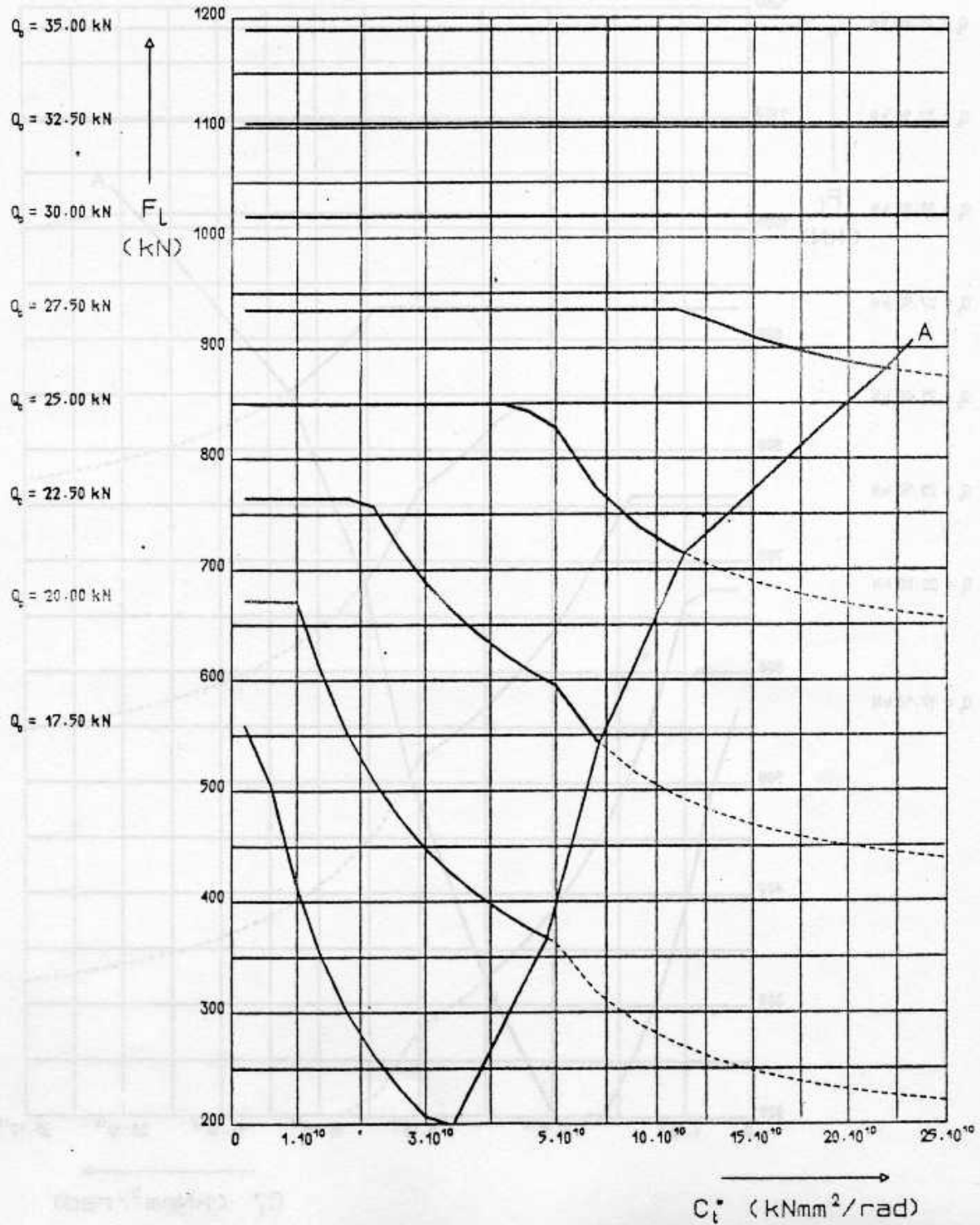


$$\text{---} = 14950 \cdot \text{mm}$$

$$2a^* = 9000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

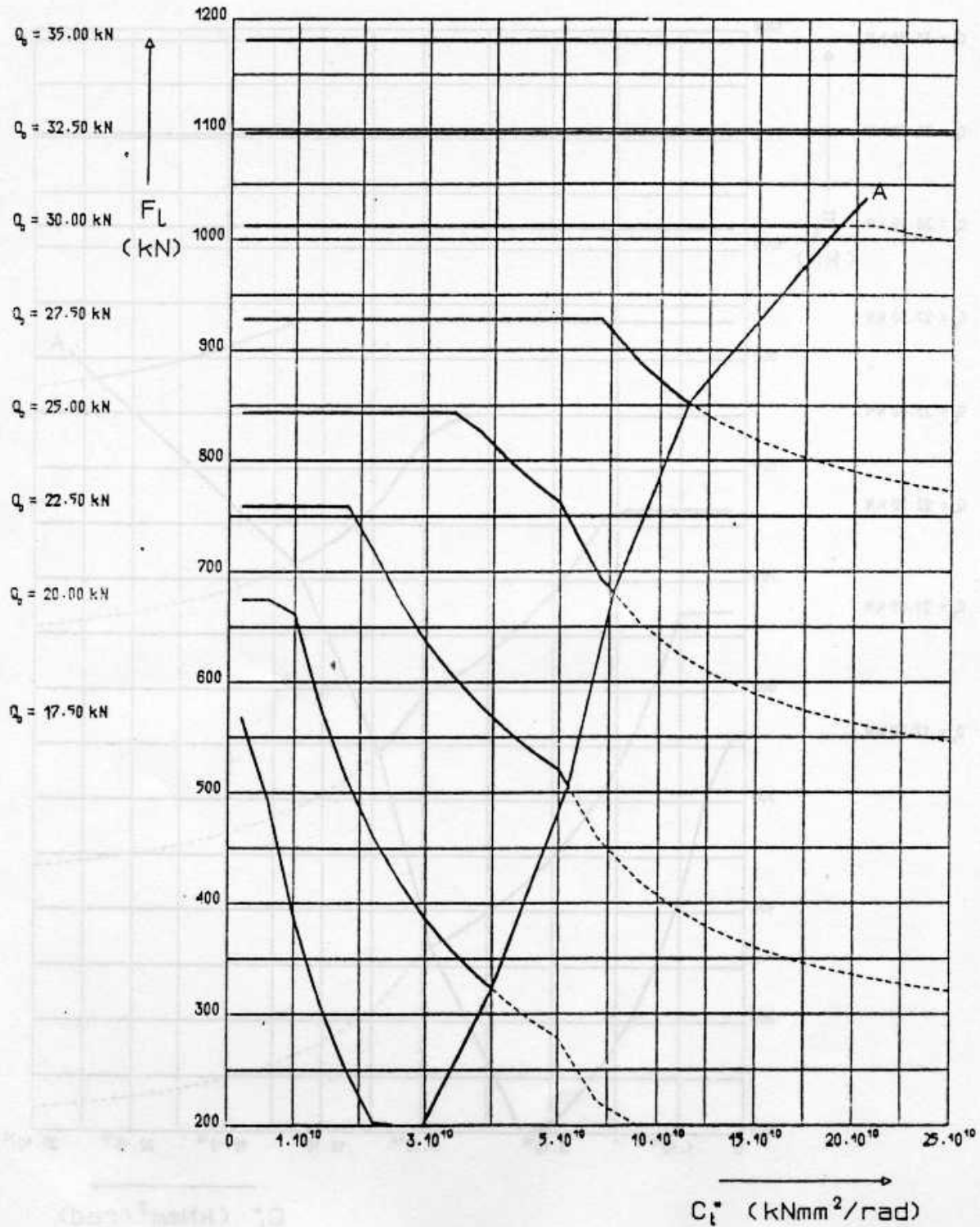


$$\overline{b_0 - b_0} = 15040 \cdot \text{mm}$$

$$2a^* = 10000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

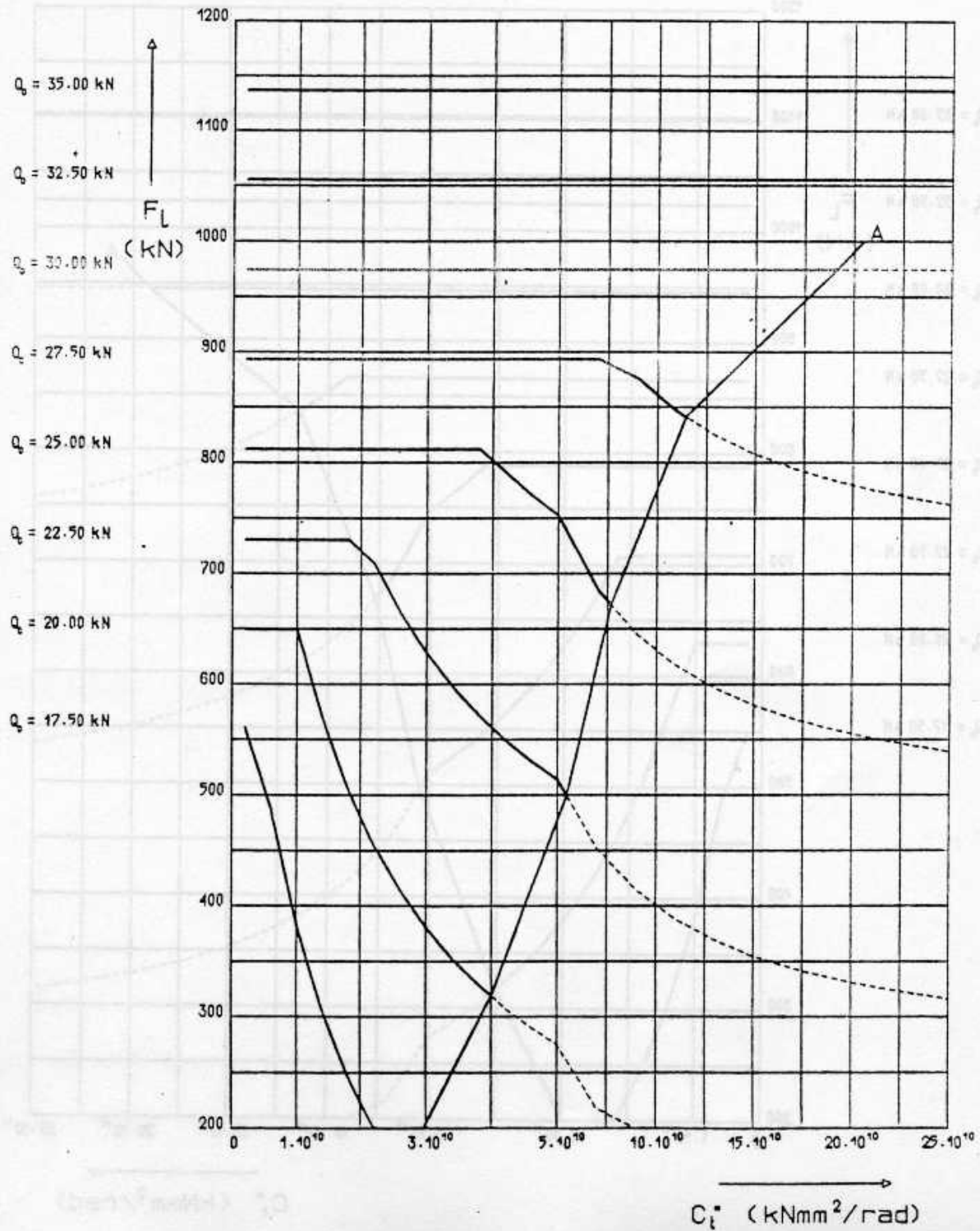


$$\omega \omega = 15540 \text{ . mm}$$

$$2a^* = 10000 \text{ . mm}$$

661

$$\Delta q_0 = 0.20$$

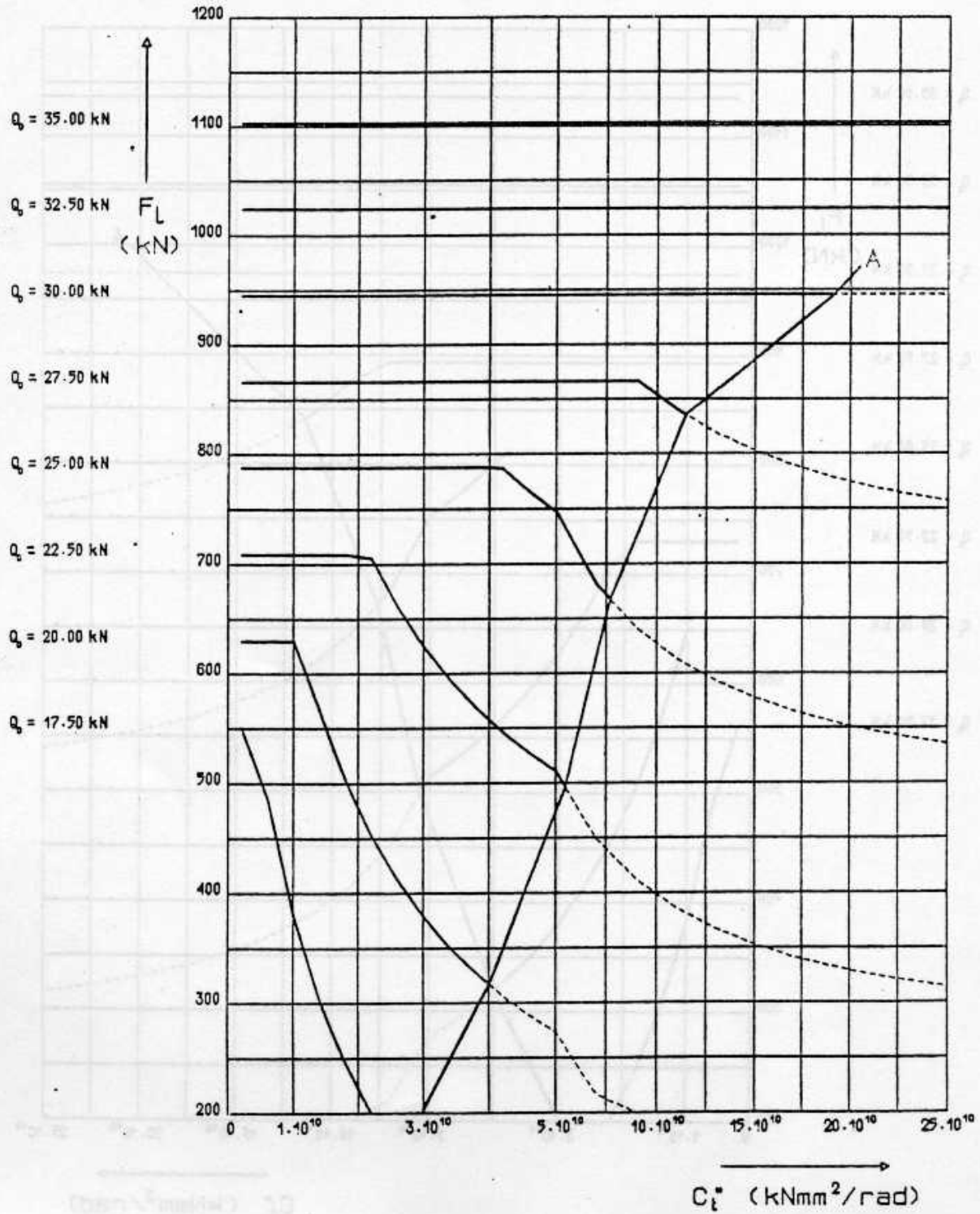


$$\text{---} = 15950 \cdot \text{mm}$$

$$2a^* = 10000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

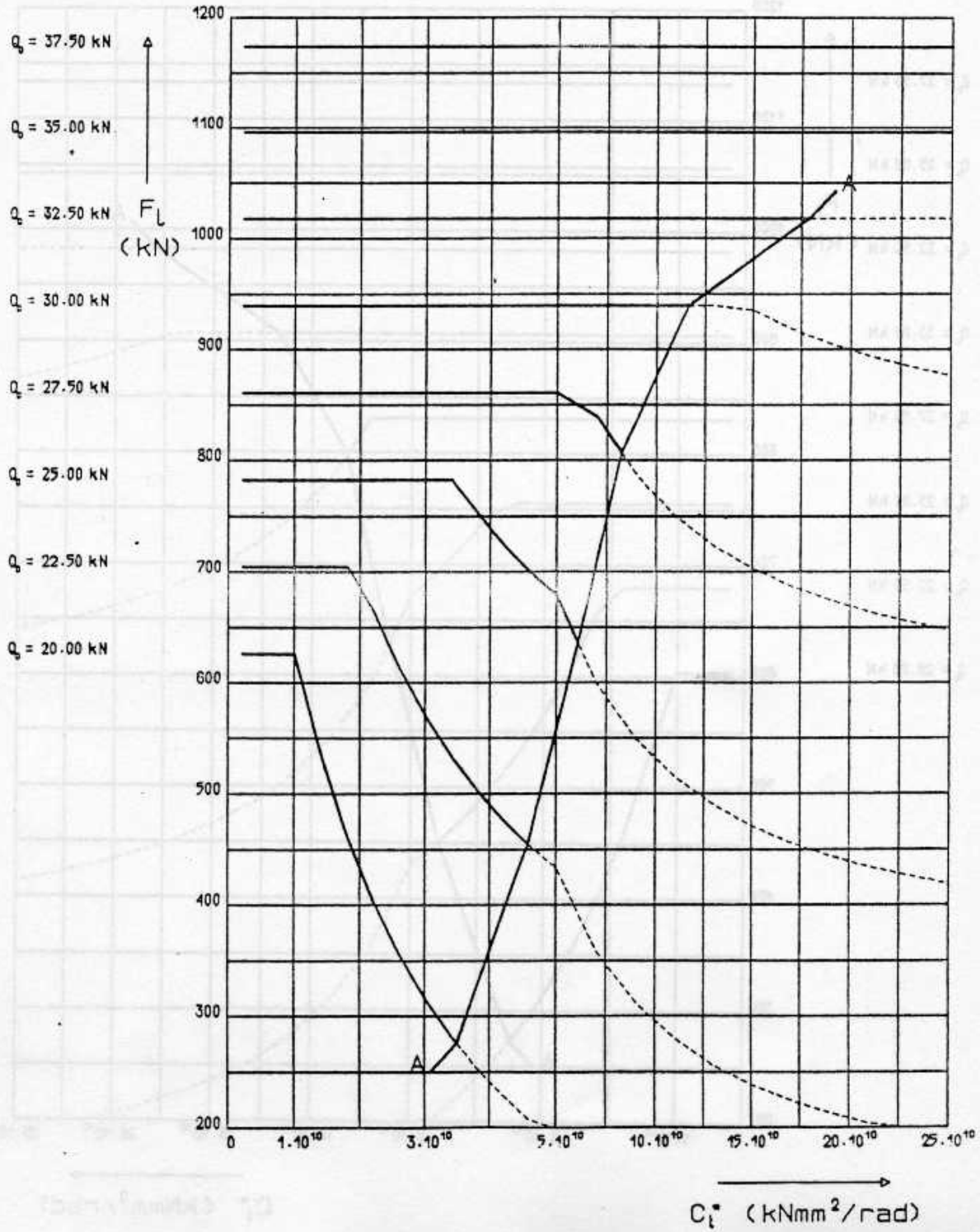


$$\text{---} = 16040 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

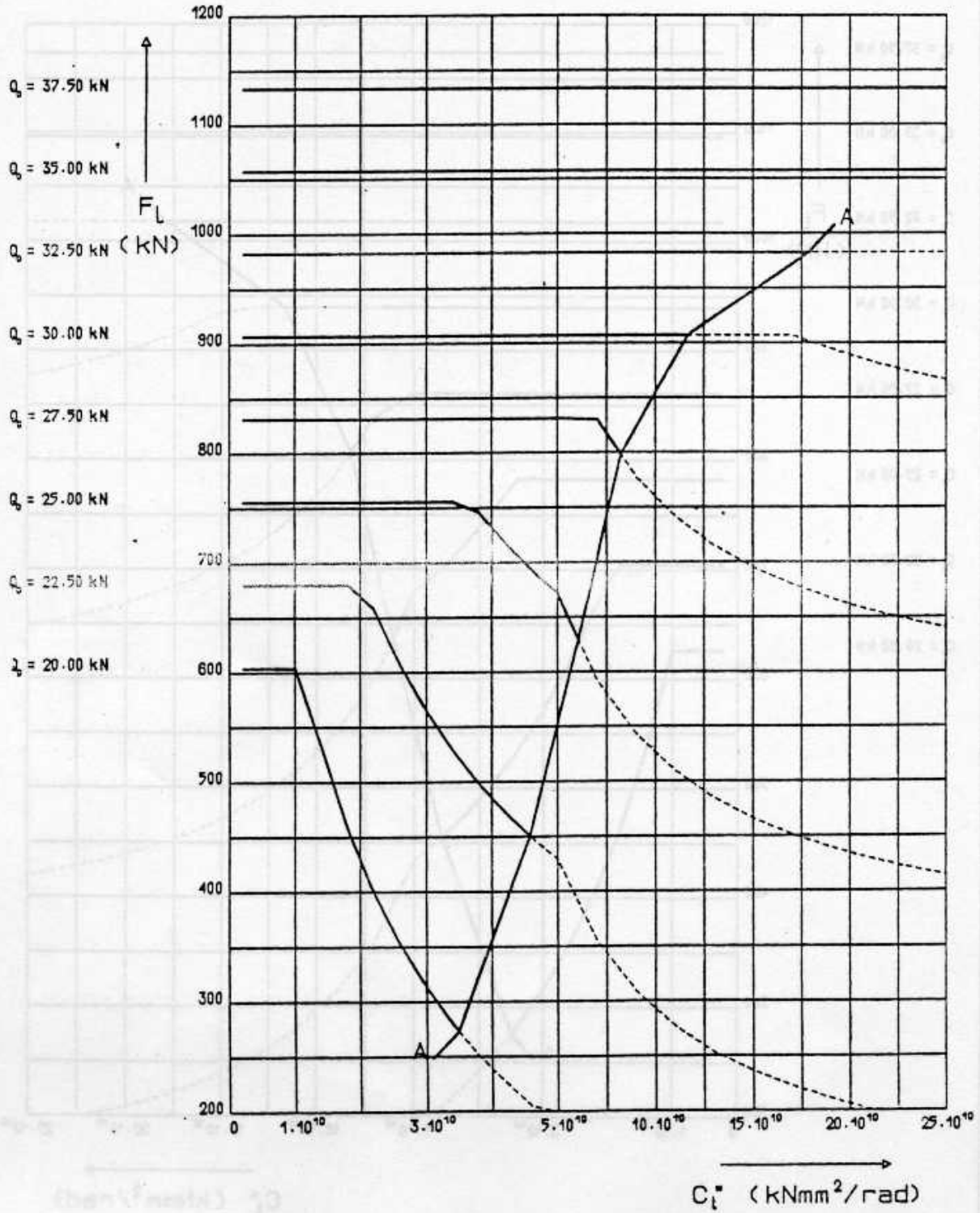


$$\overline{b} = 16540 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

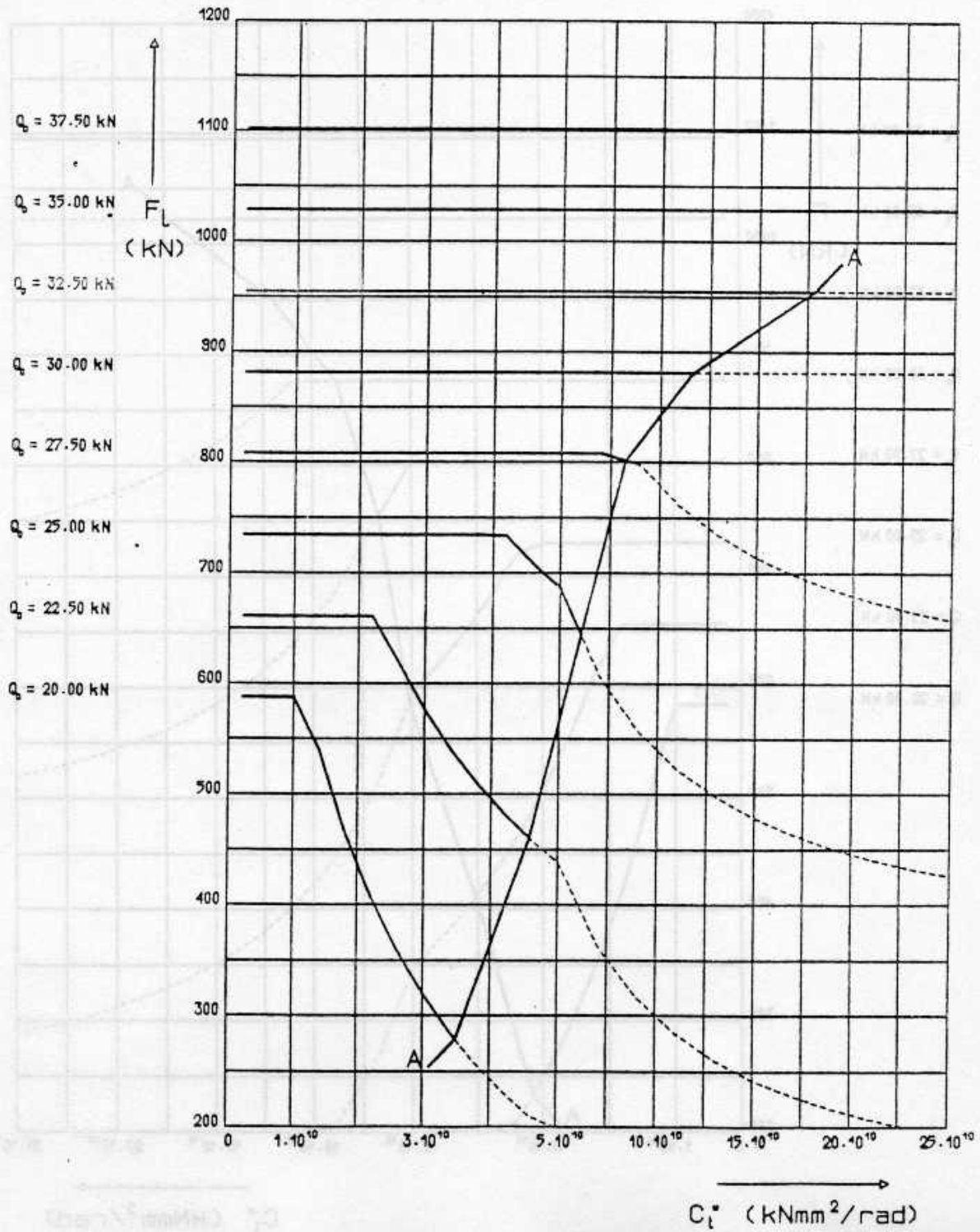


$$\text{---} = 16950 \cdot \text{mm}$$

$$2a^* = 11000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

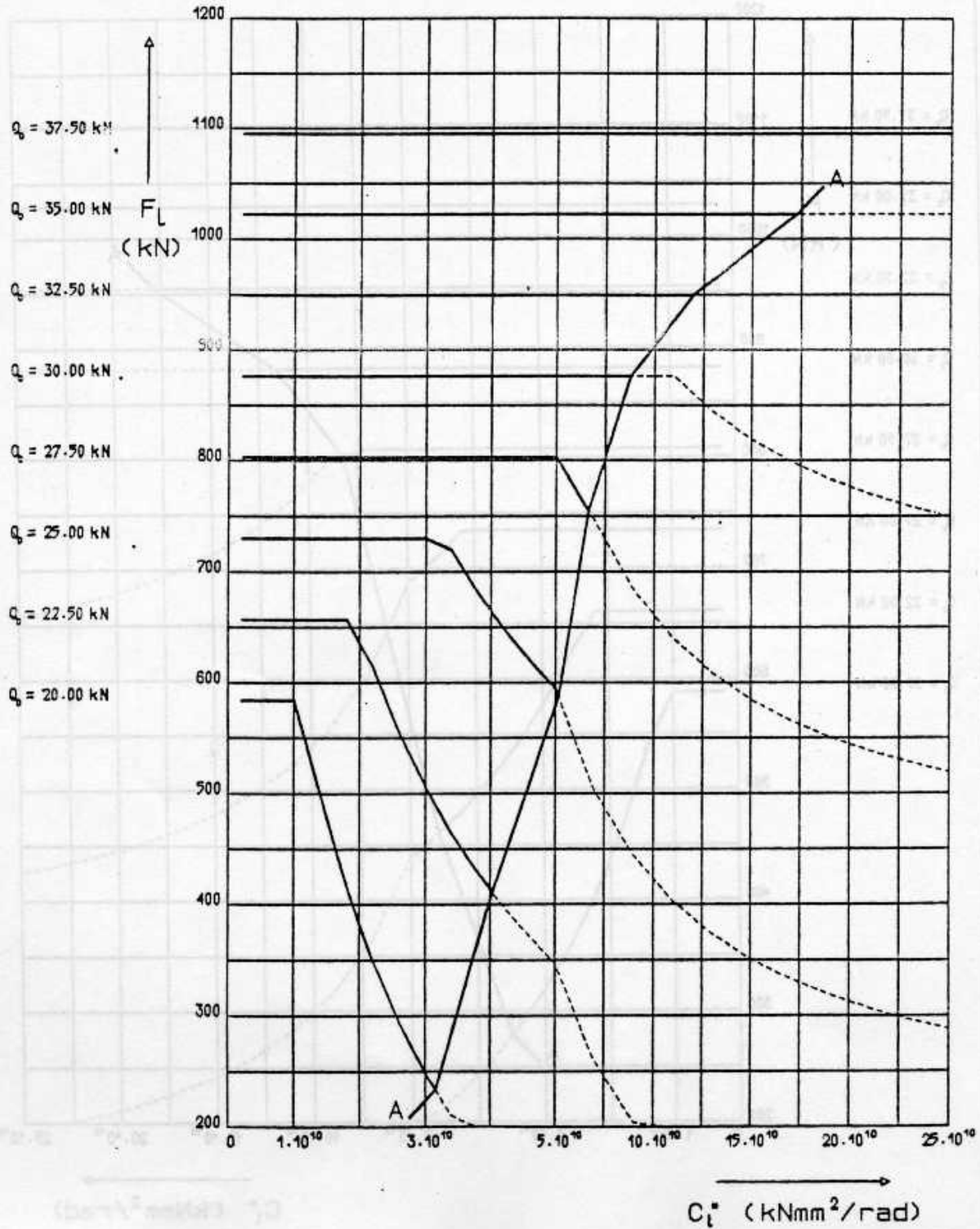


$$\text{[Truck Icon]} = 17040 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

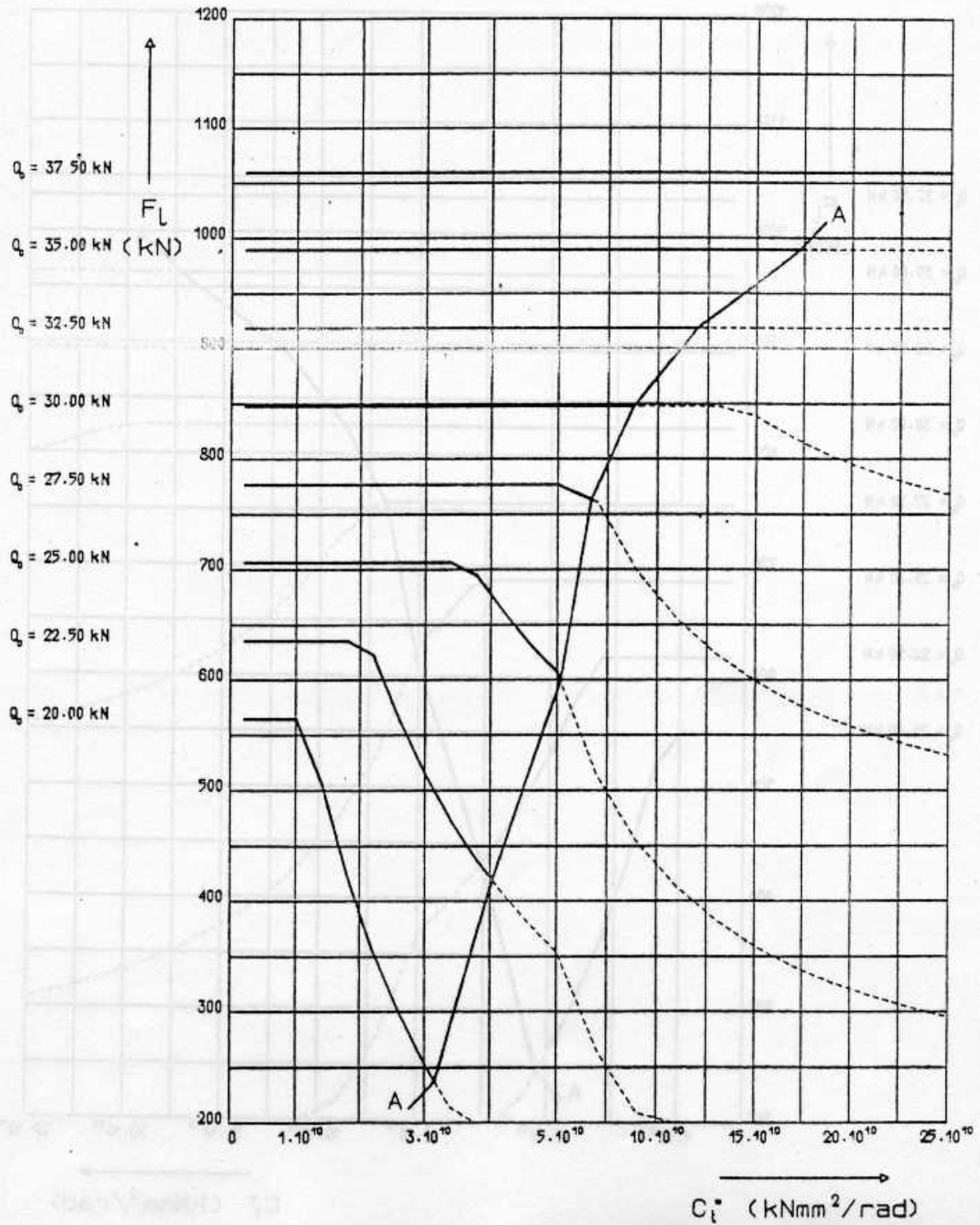


$$\text{---} = 17540 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

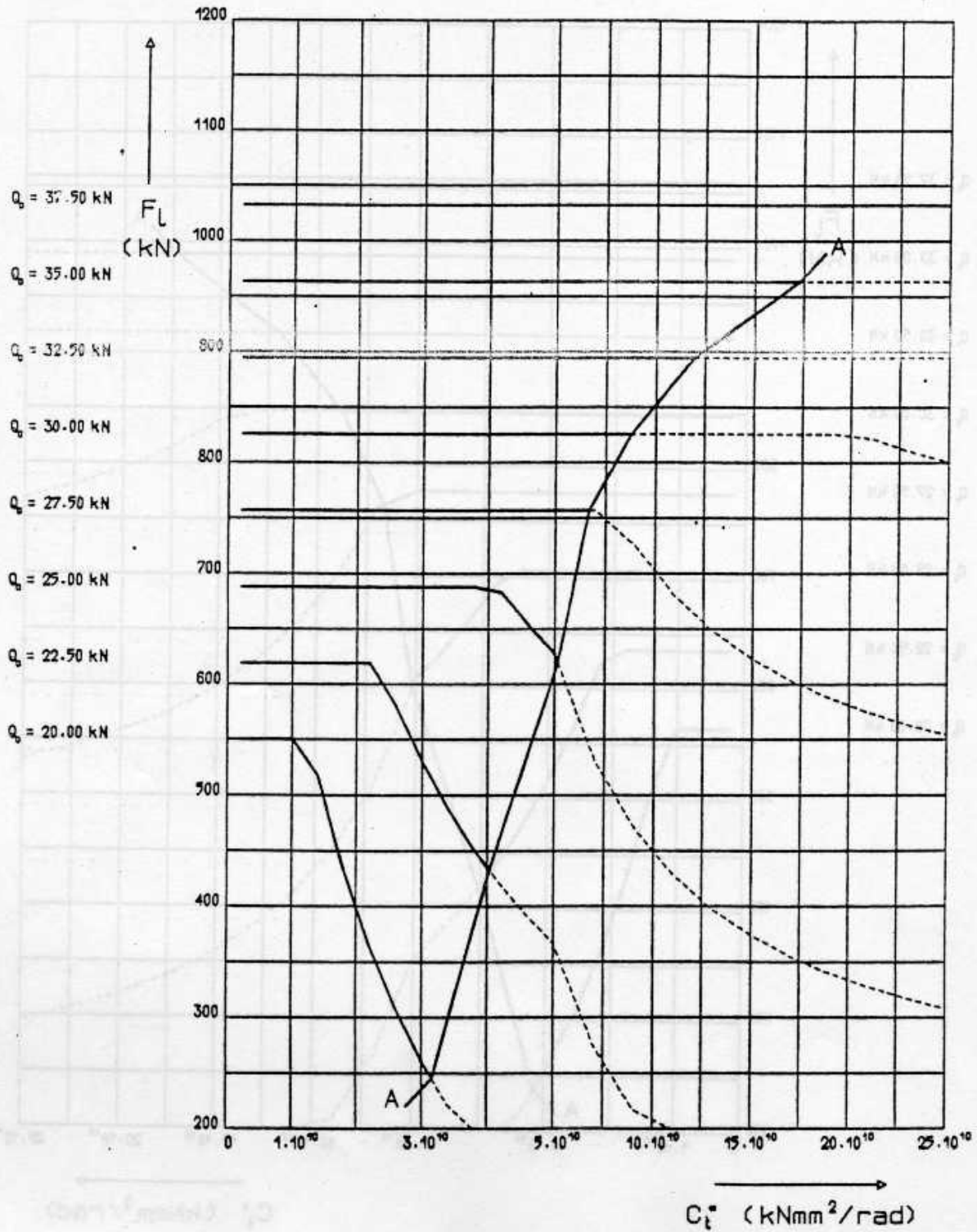


$$b = 17950 \cdot \text{mm}$$

$$2a^* = 12000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

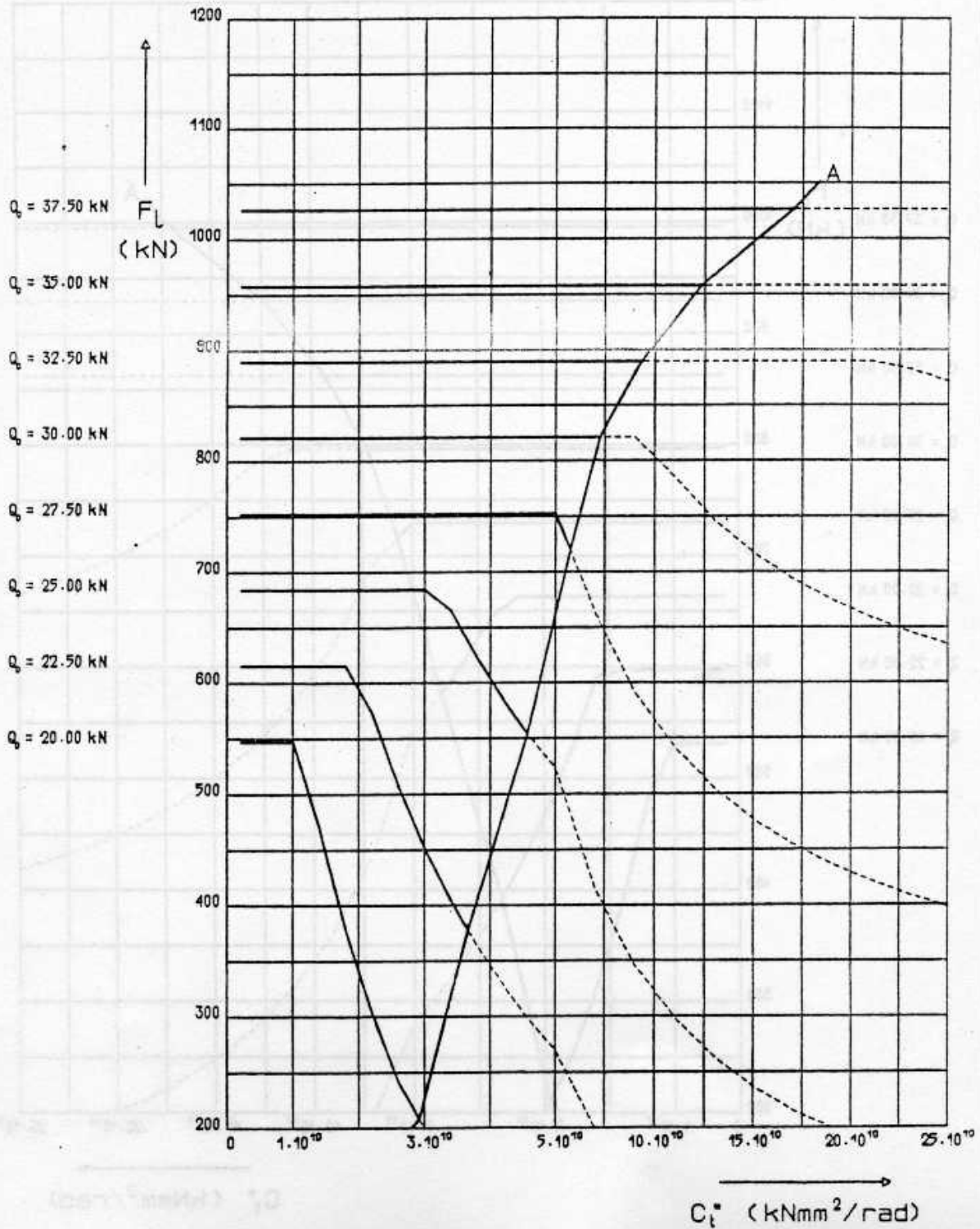


$$\text{Diagram} = 18040 \cdot \text{mm}$$

$$2a^* = 13000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

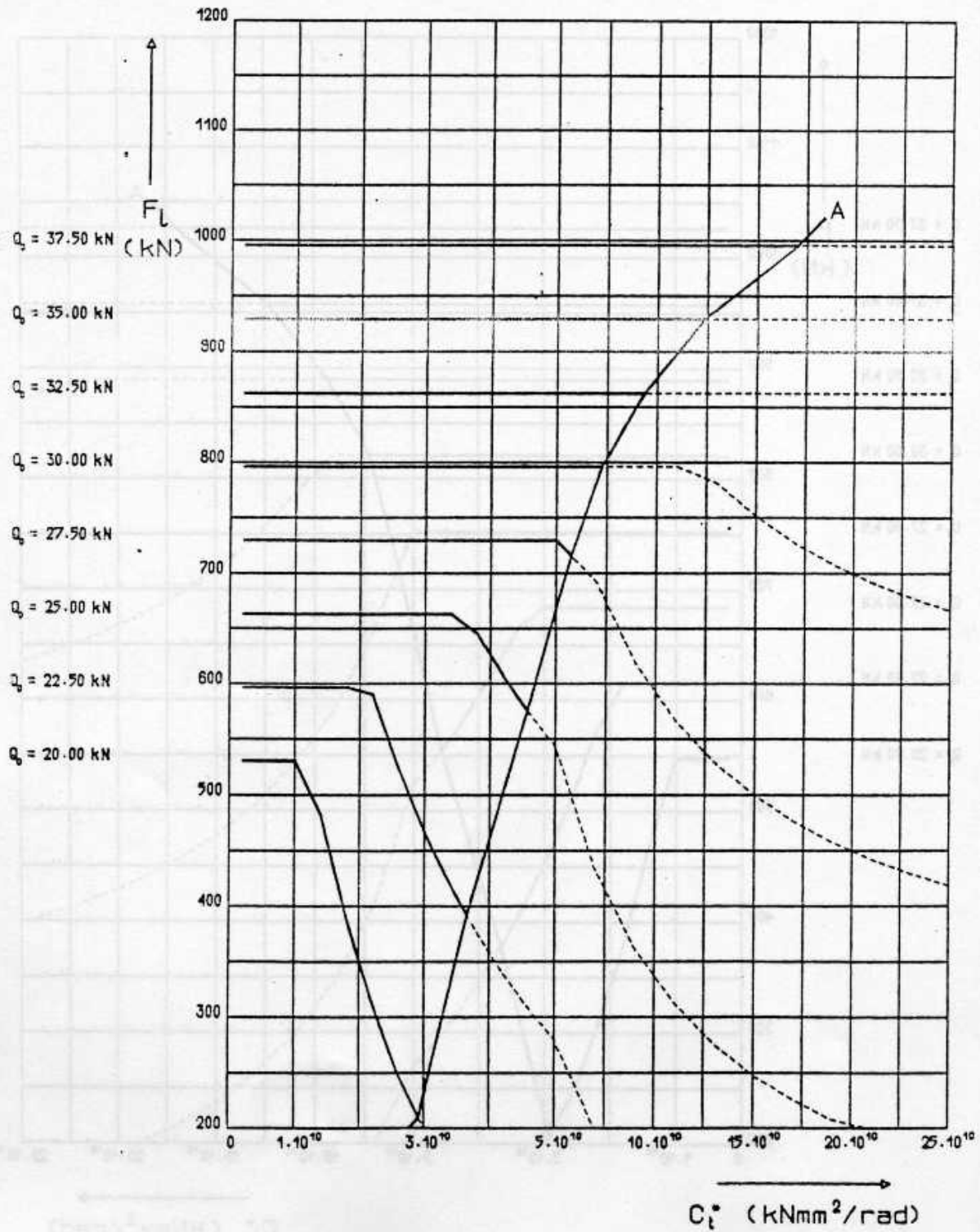


$$\overline{b} = 18540 \cdot \text{mm}$$

$$2a^* = 13000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

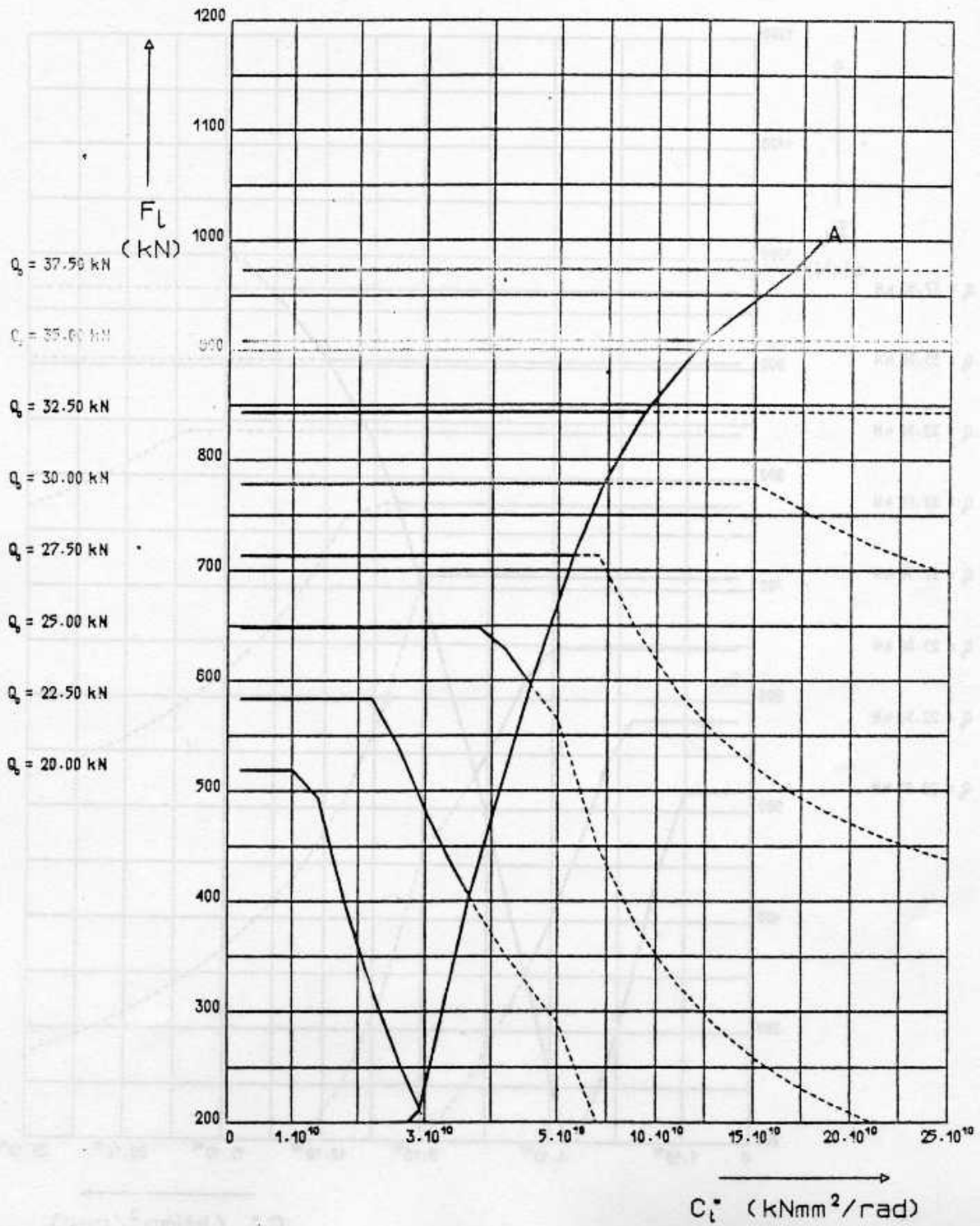


$$\text{---} = 18950 \cdot \text{mm}$$

$$2a^* = 13000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

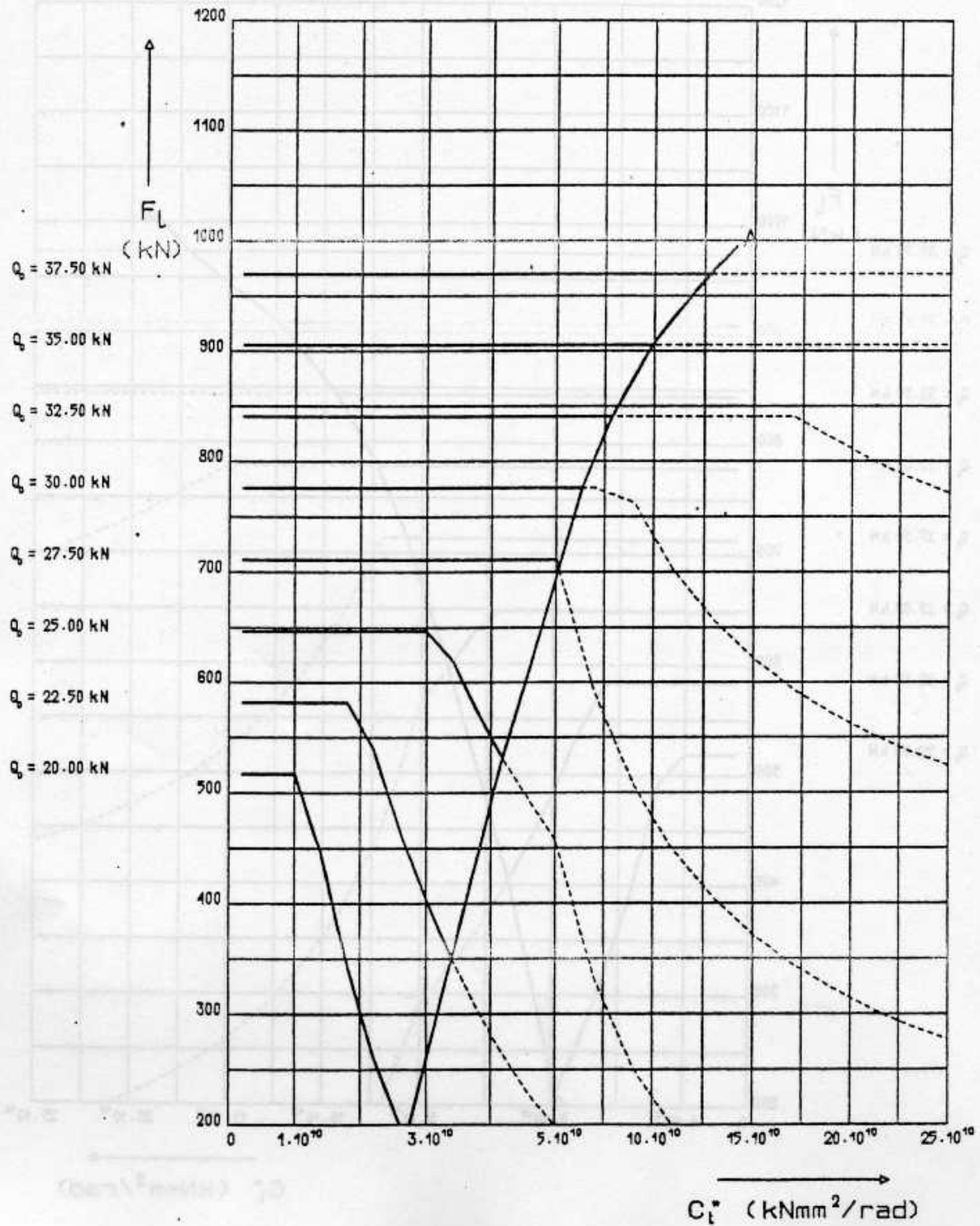


$$\text{Diagram} = 19040 \cdot \text{mm}$$

$$2a^* = 14000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

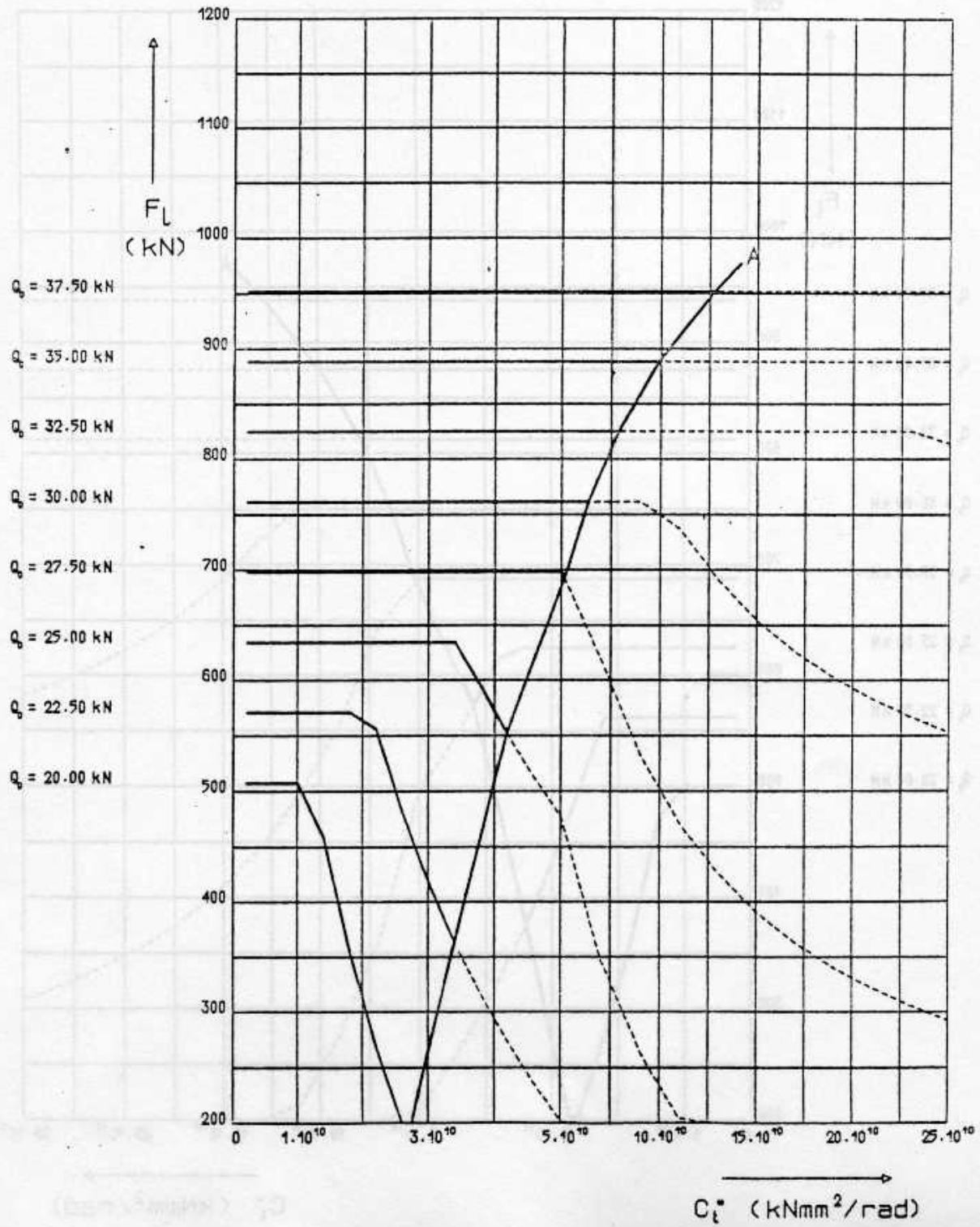


$$\text{---} = 19540 \cdot \text{mm}$$

$$2a^* = 14000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

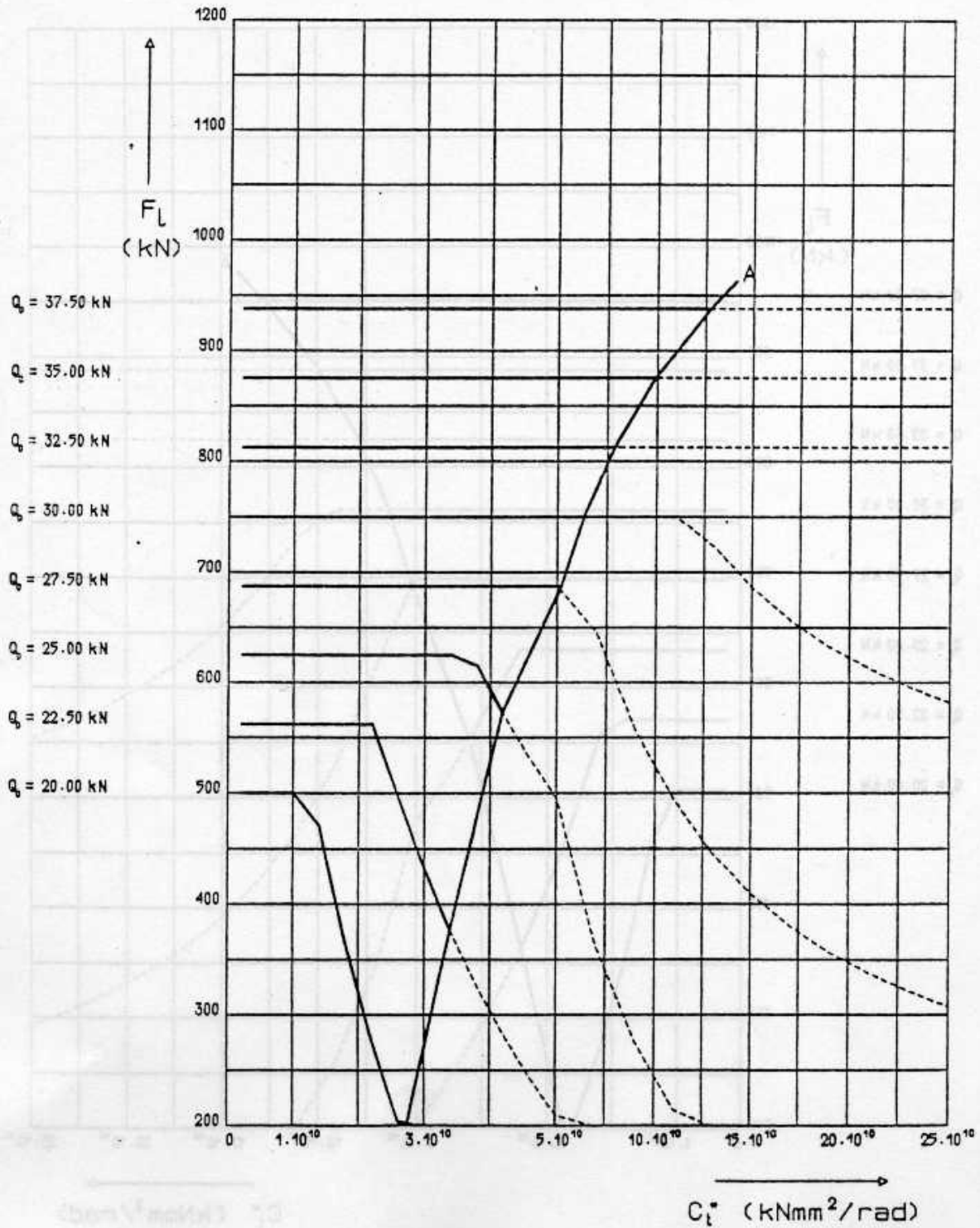


$$\omega = 19950 \cdot \text{mm}$$

$$2a^* = 14000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

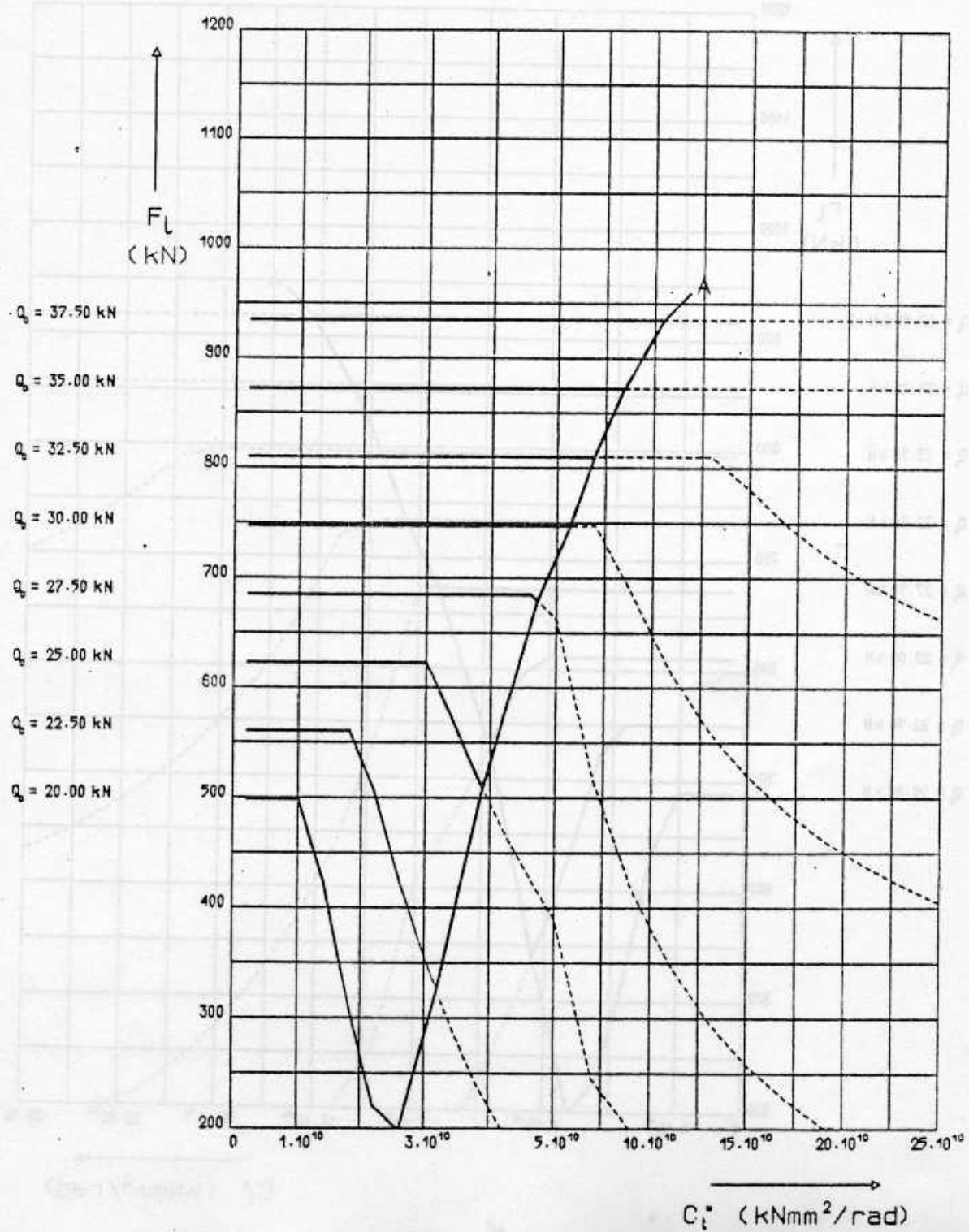


$$\overline{b} = 20040 \text{ mm}$$

$$2a^* = 15000 \text{ mm}$$

661

$$\Delta q_0 = 0.20$$

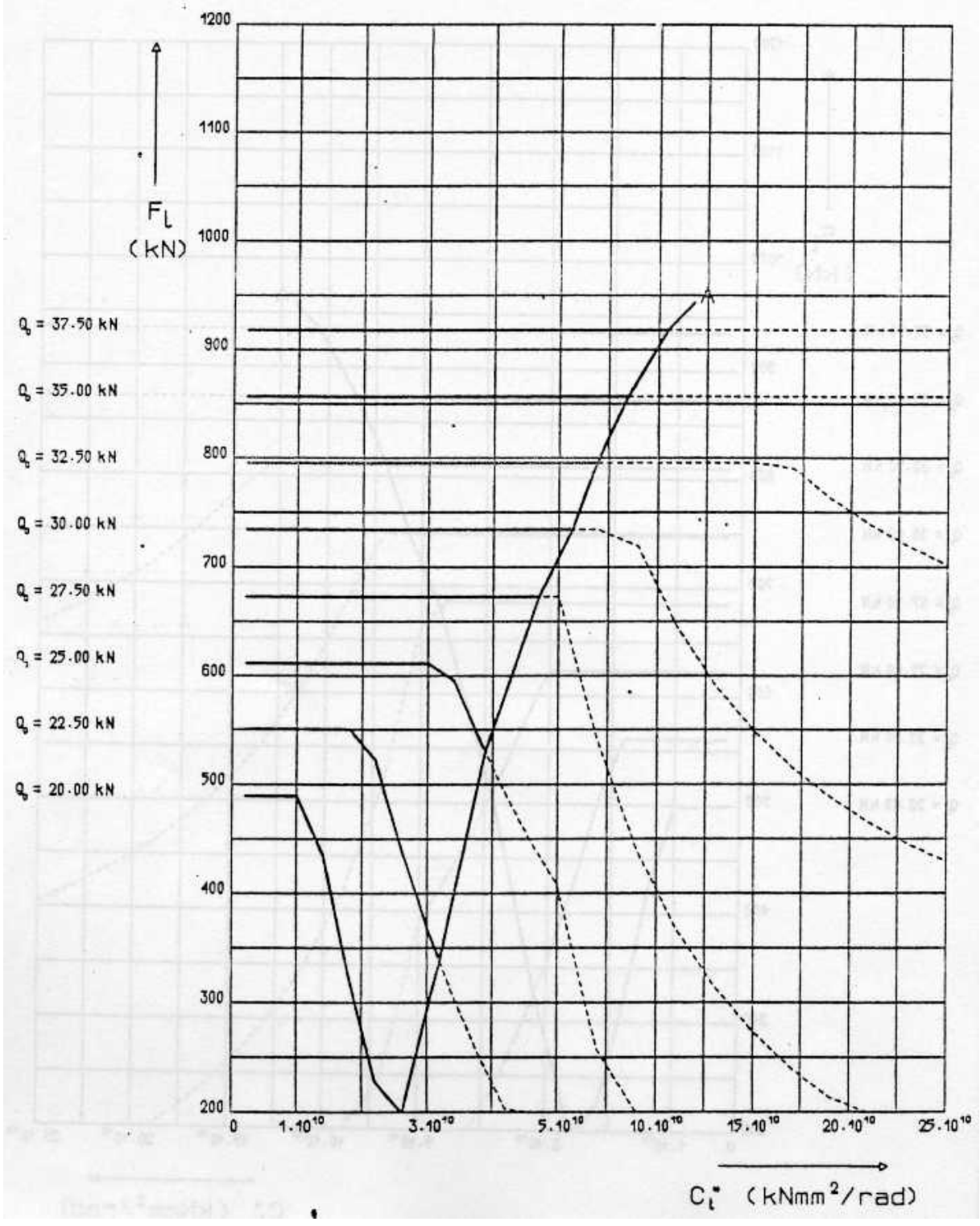


$$\text{---} = 20540 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

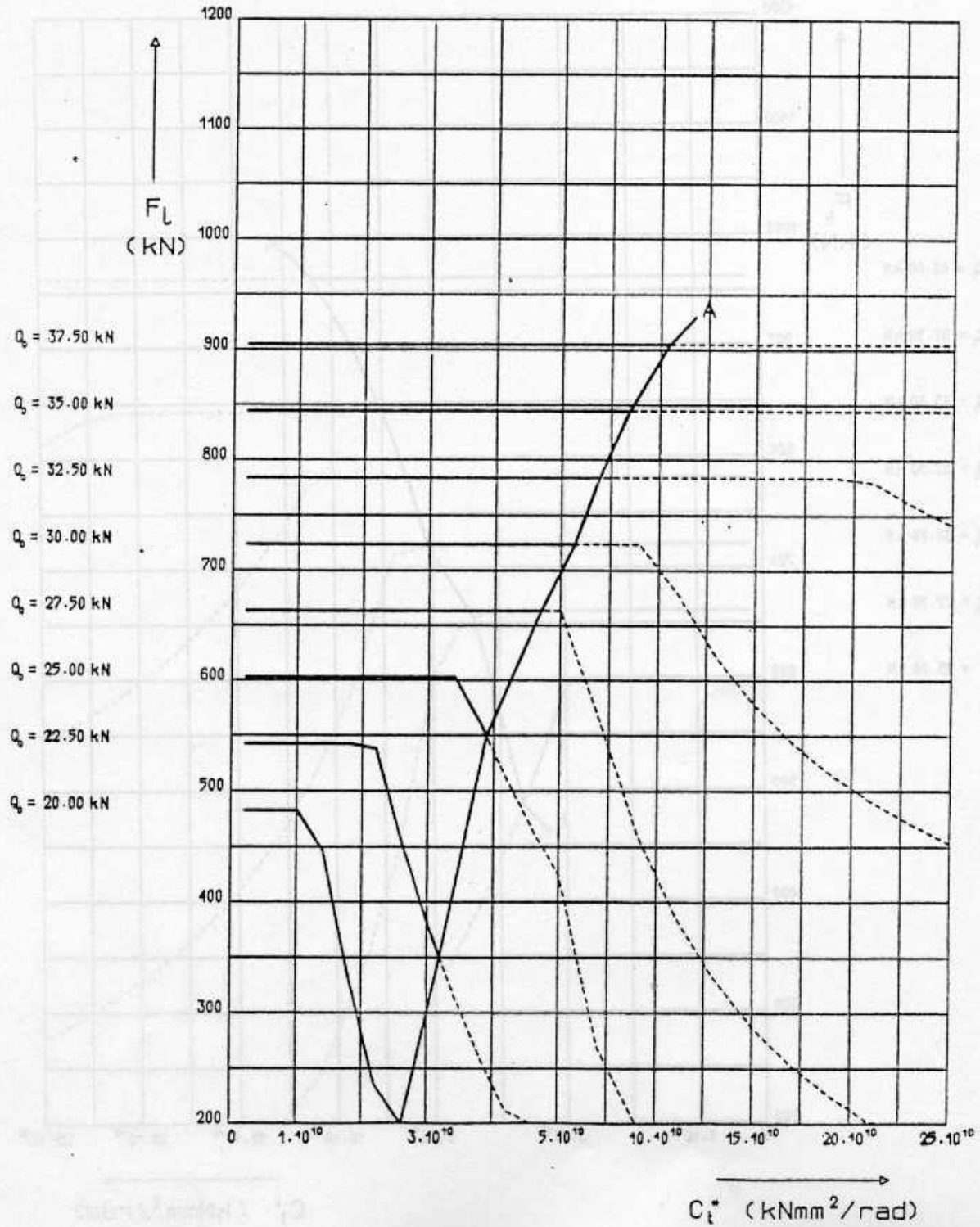


$$\boxed{\quad\quad} = 20950 \cdot \text{mm}$$

$$2a^* = 15000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

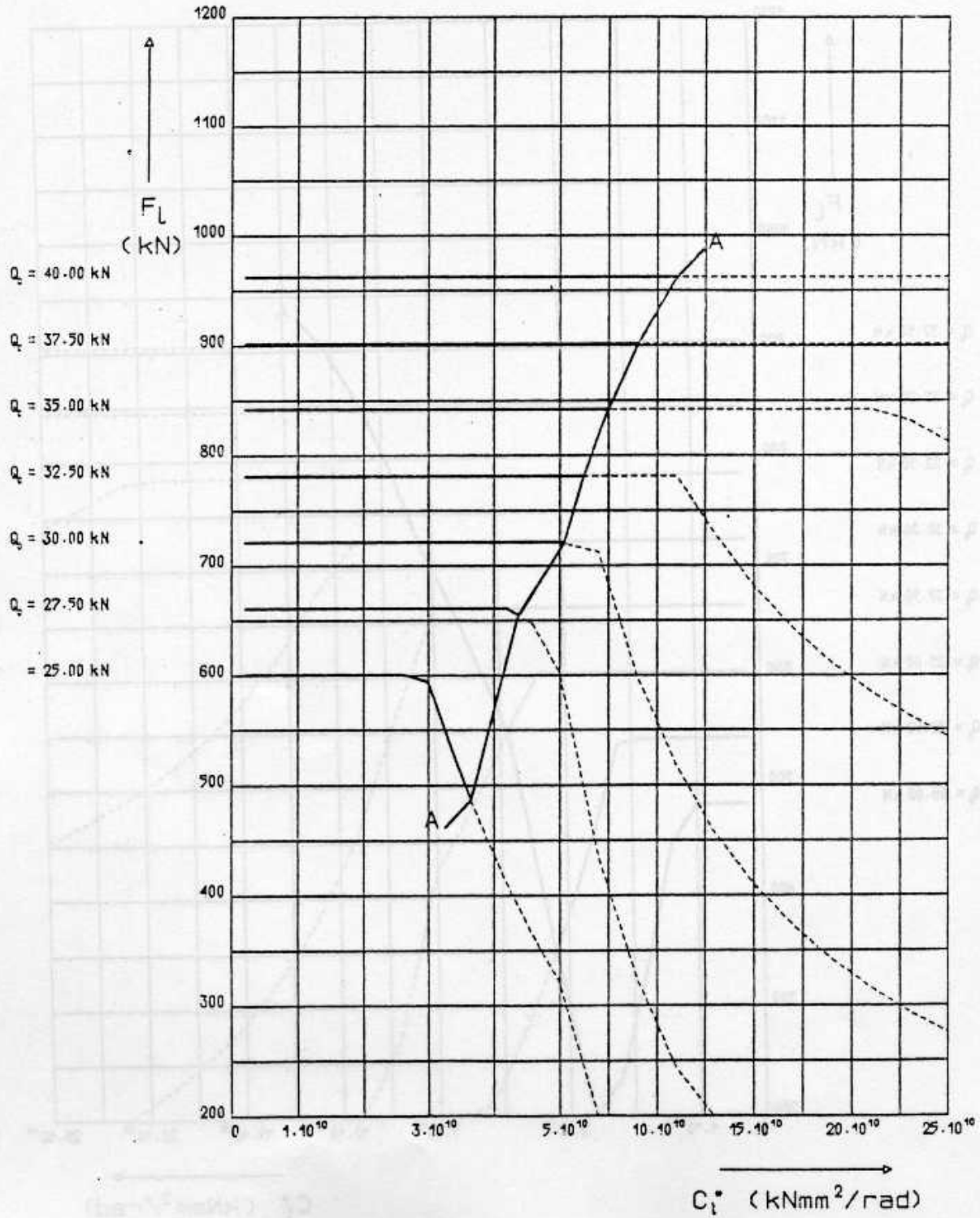


$$\overline{b_0} = 21040 \cdot \text{mm}$$

$$2a^* = 16000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

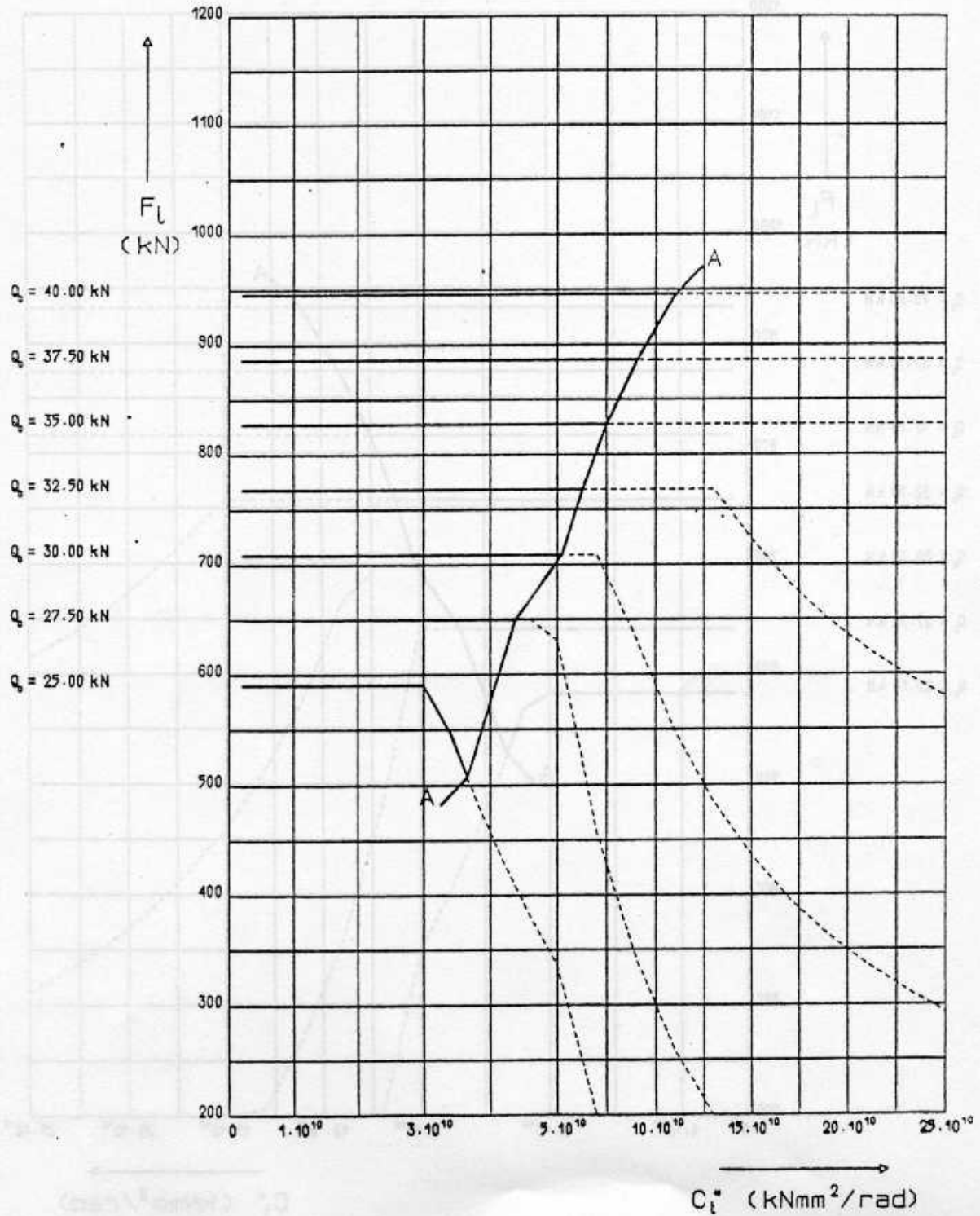


$$\text{---} = 21540 \cdot \text{mm}$$

$$2a^* = 16000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

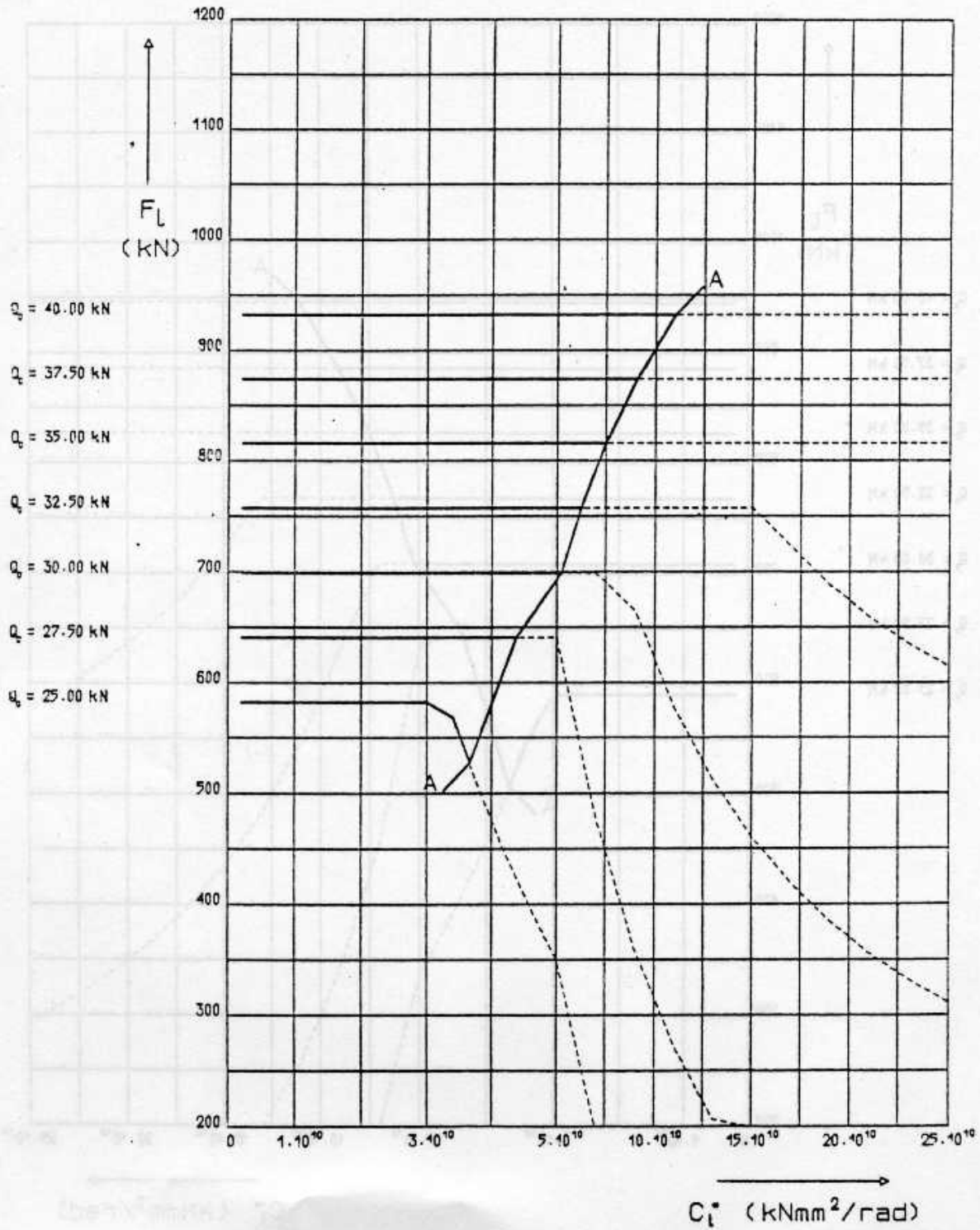


$$\boxed{\quad\quad} = 21950 \cdot \text{mm}$$

$$2a^* = 16000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

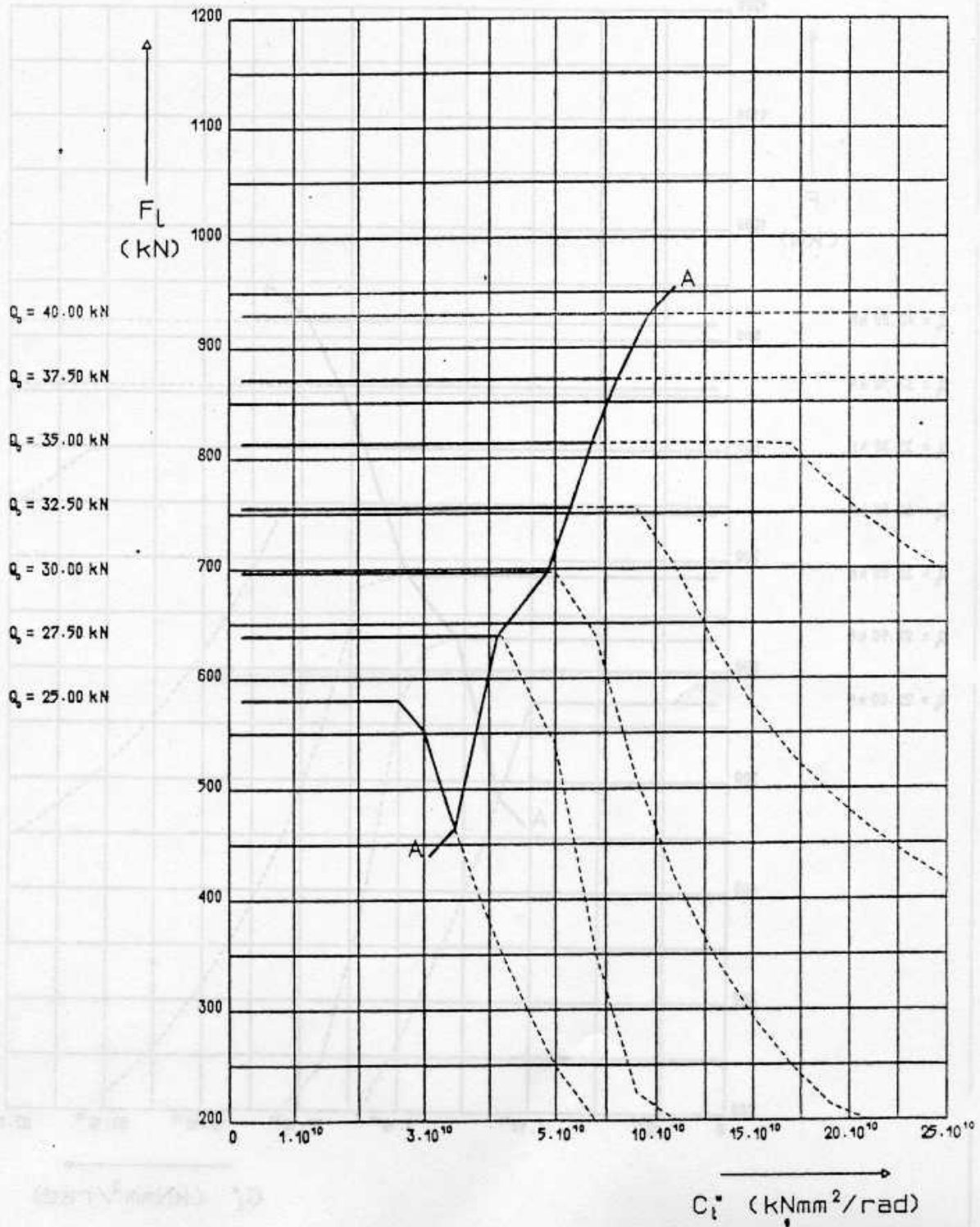


$$\text{[Symbol]} = 22040 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

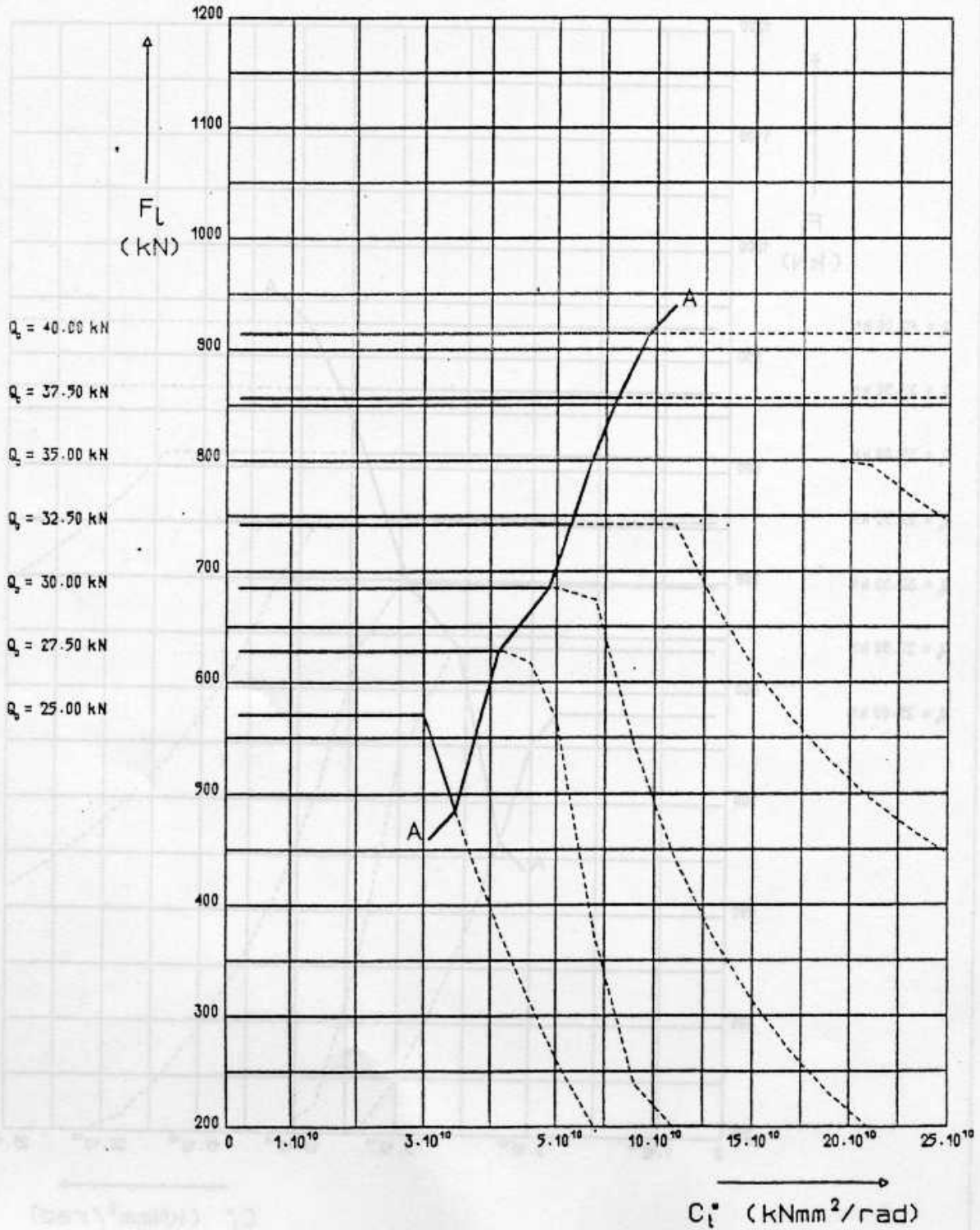


$$\text{[Diagram of a rectangular load with two wheels]} = 22540 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

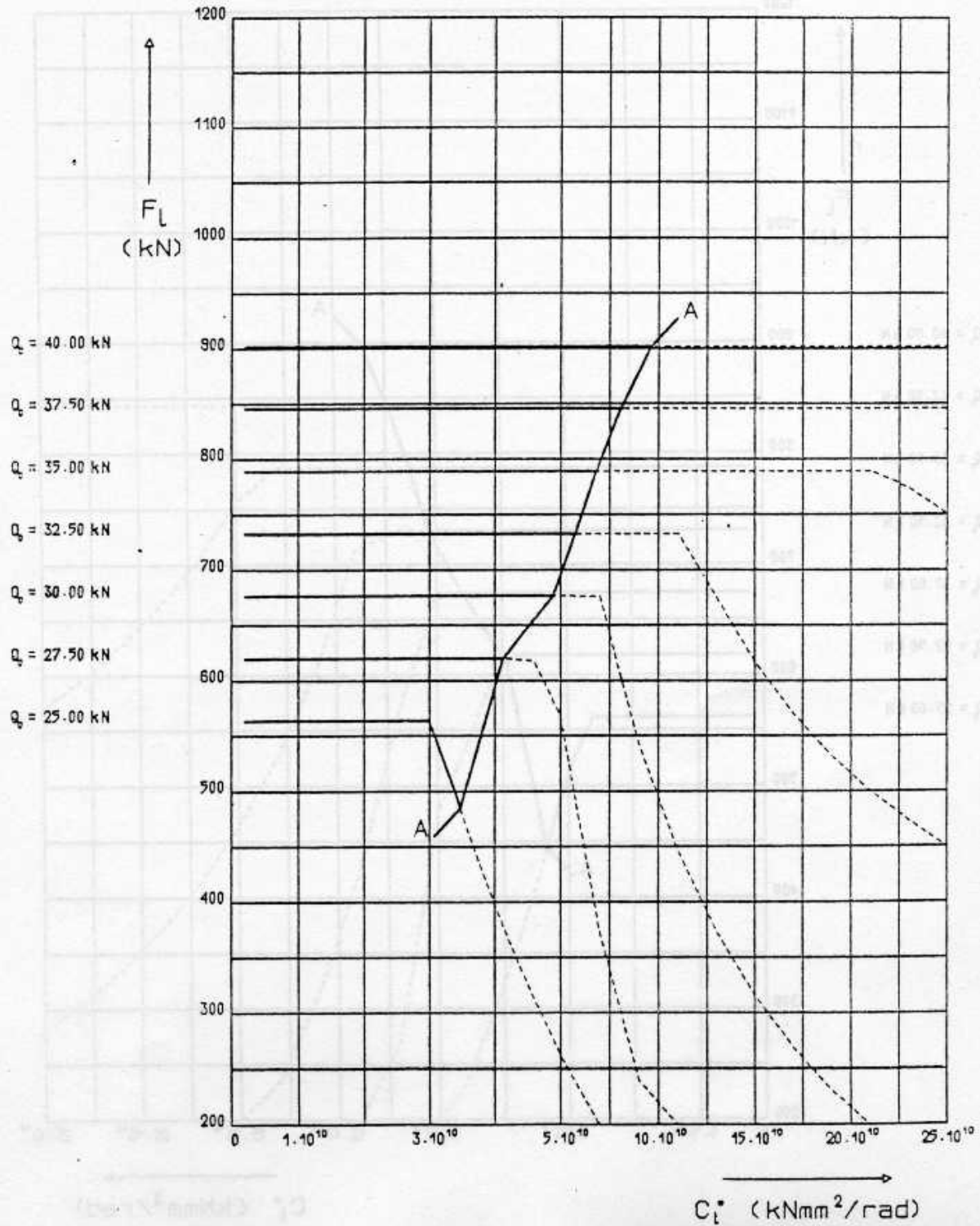


$$\text{---} = 22950 \cdot \text{mm}$$

$$2a^* = 17000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

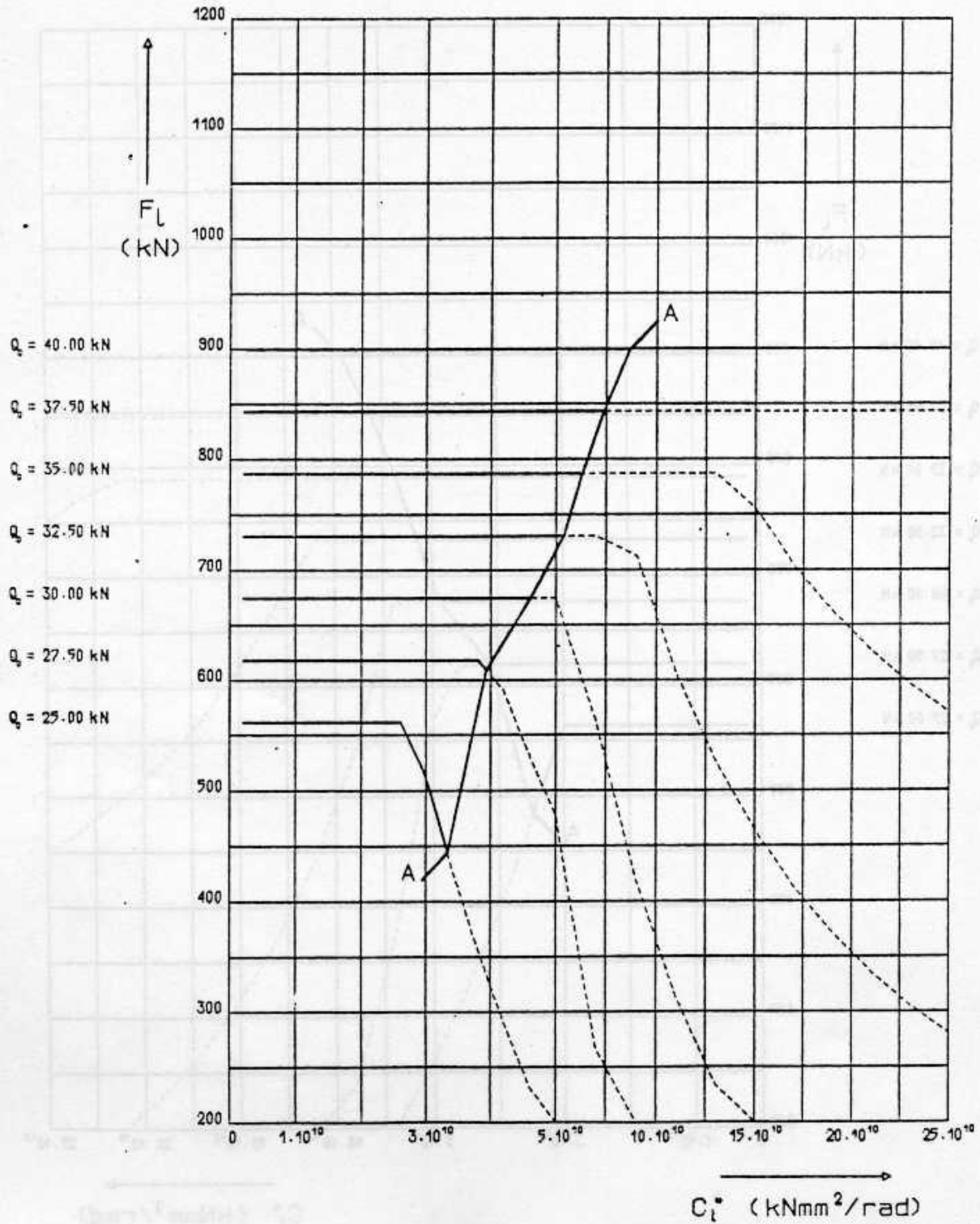


$$\overline{\omega} = 23040 \cdot \text{mm}$$

$$2a^* = 18000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

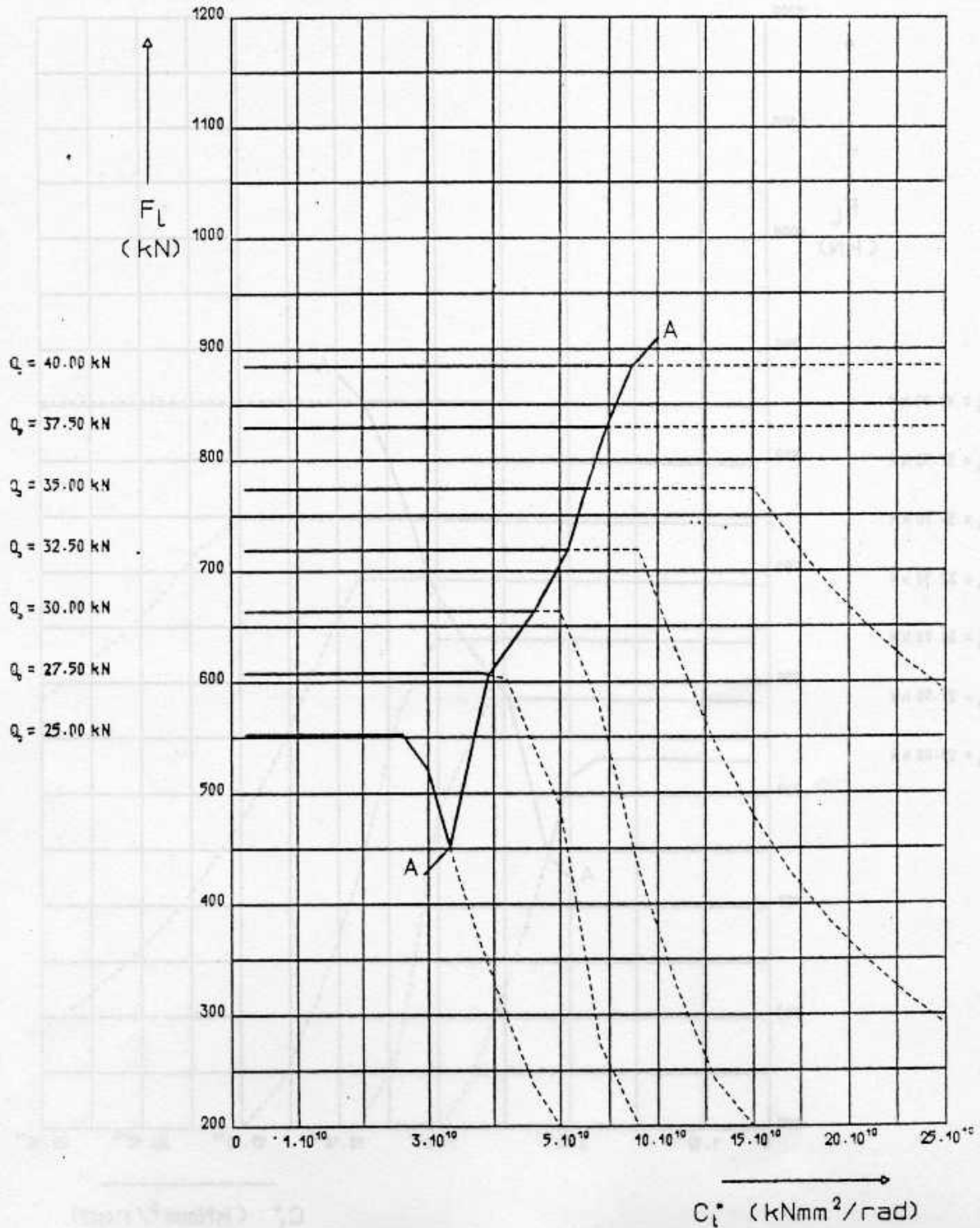


$$\text{---} = 23540 \cdot \text{mm}$$

$$2a^* = 18000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

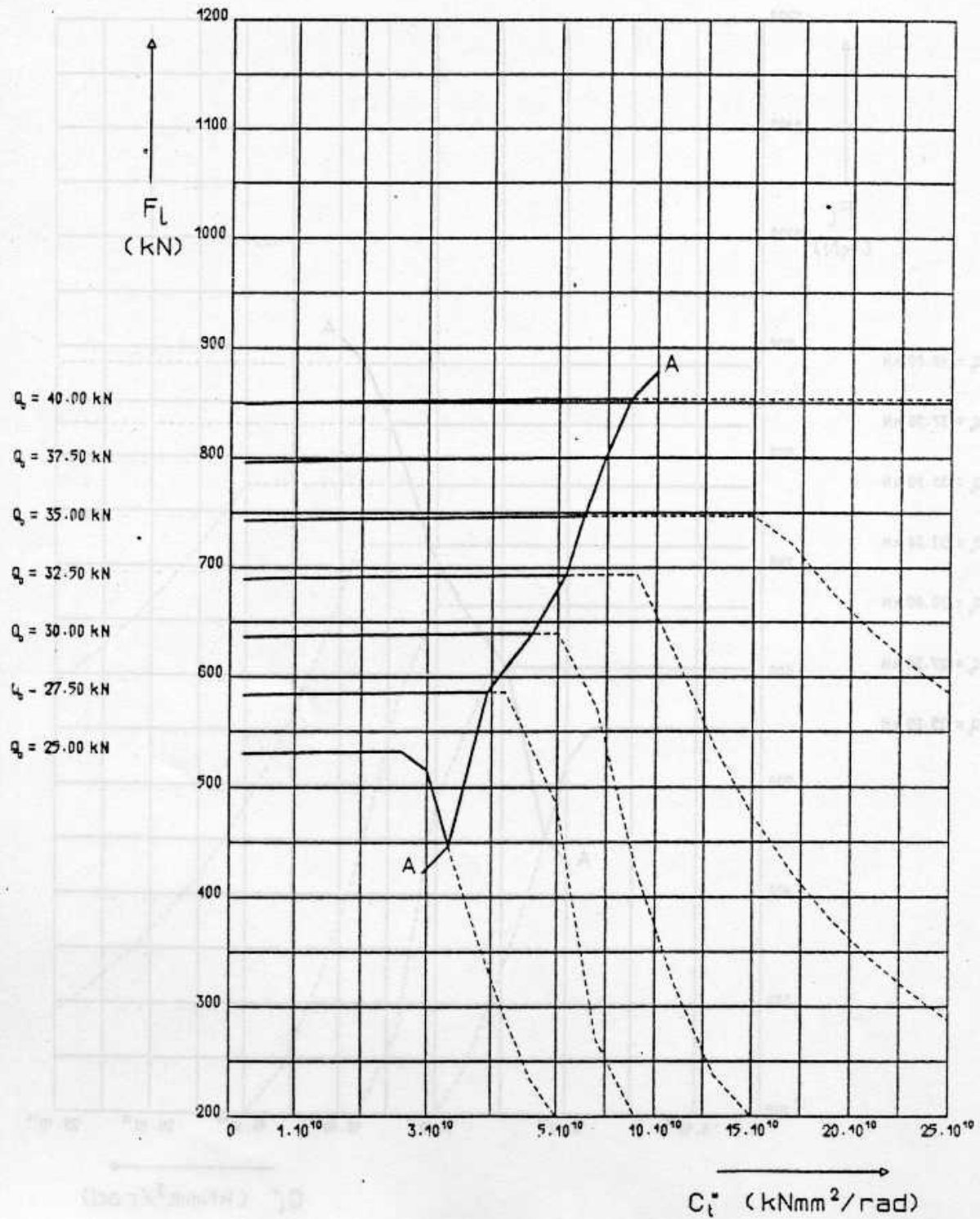


$$\text{---} = 23950 \cdot \text{mm}$$

$$2a^* = 18000 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

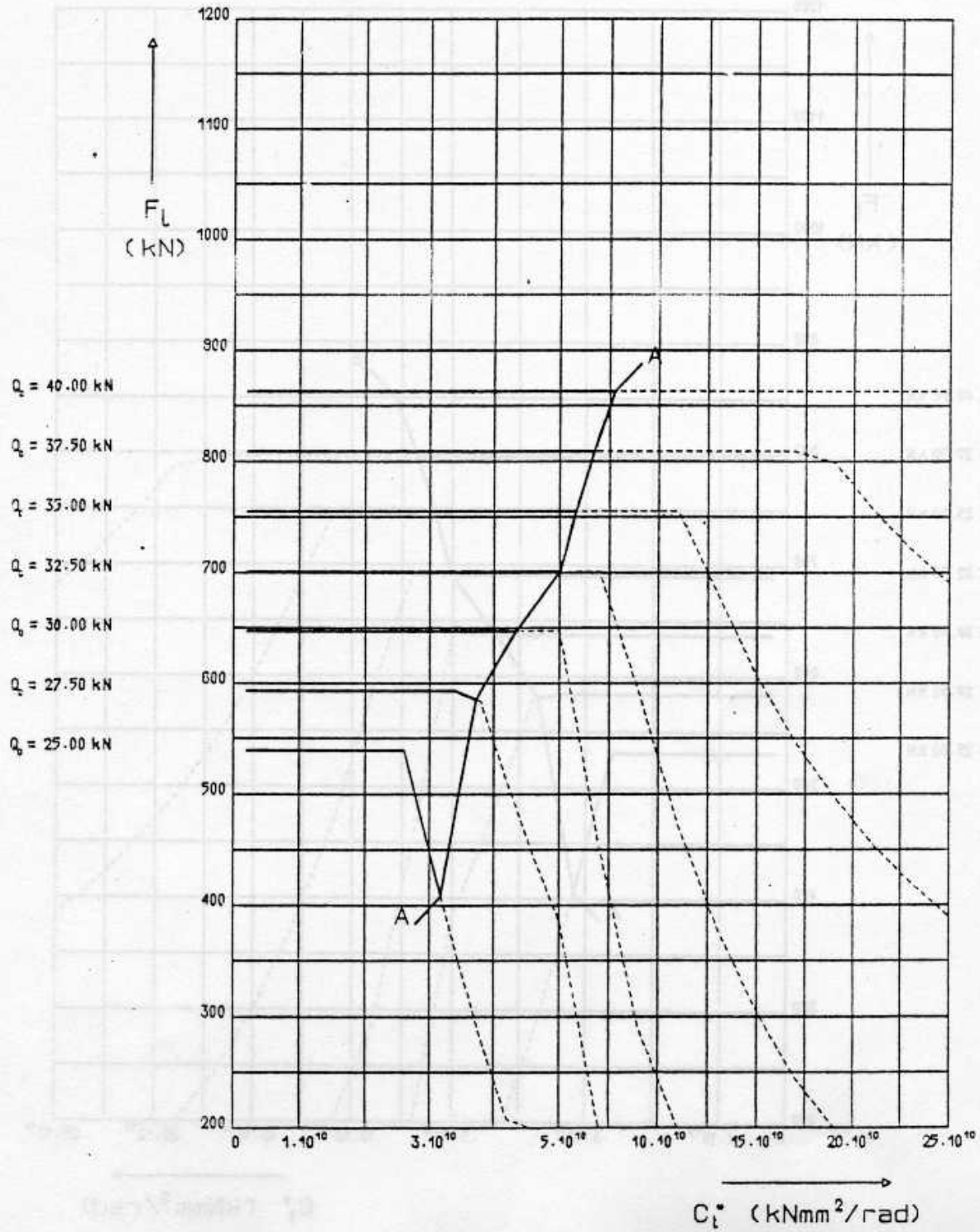


$$\omega = 24340 \cdot \text{mm}$$

$$2a^* = 19300 \cdot \text{mm}$$

661

$$\Delta q_0 = 0.20$$

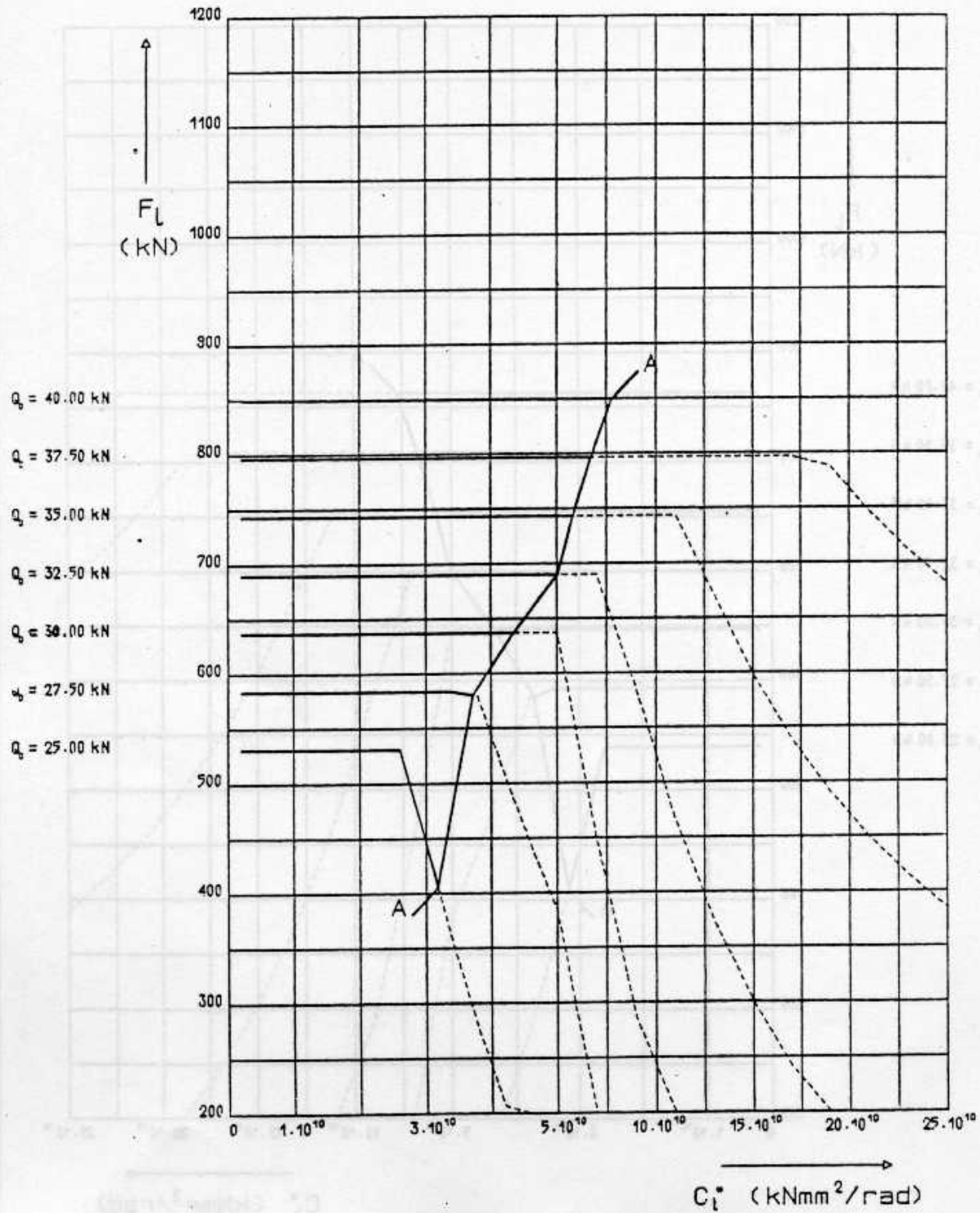


$$b = 24840 \text{ mm}$$

$$2a^* = 19300 \text{ mm}$$

661

$$\Delta q_0 = 0.20$$

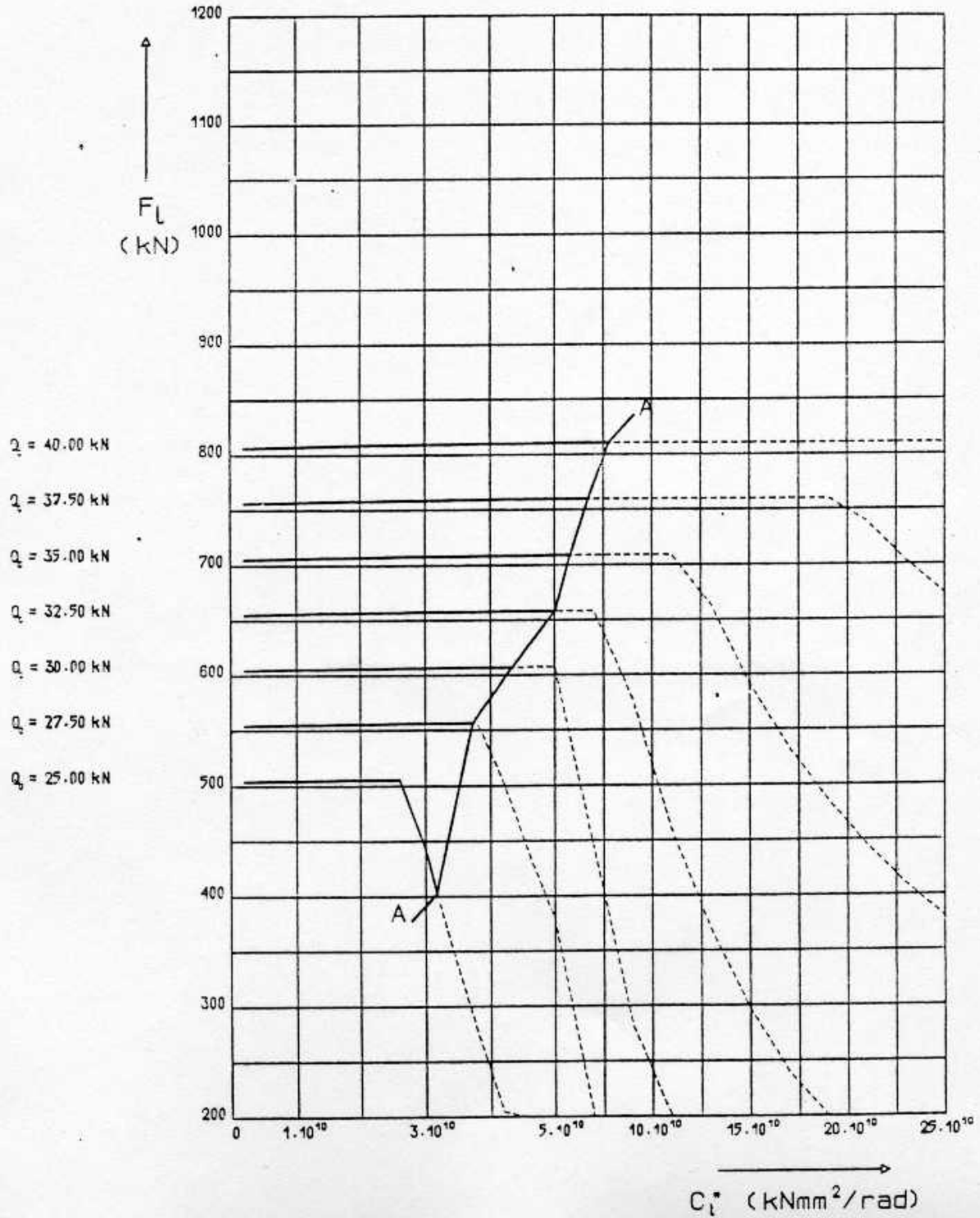


$$\text{---} = 25250 \cdot \text{mm}$$

$$2a^* = 19300 \cdot \text{mm}$$

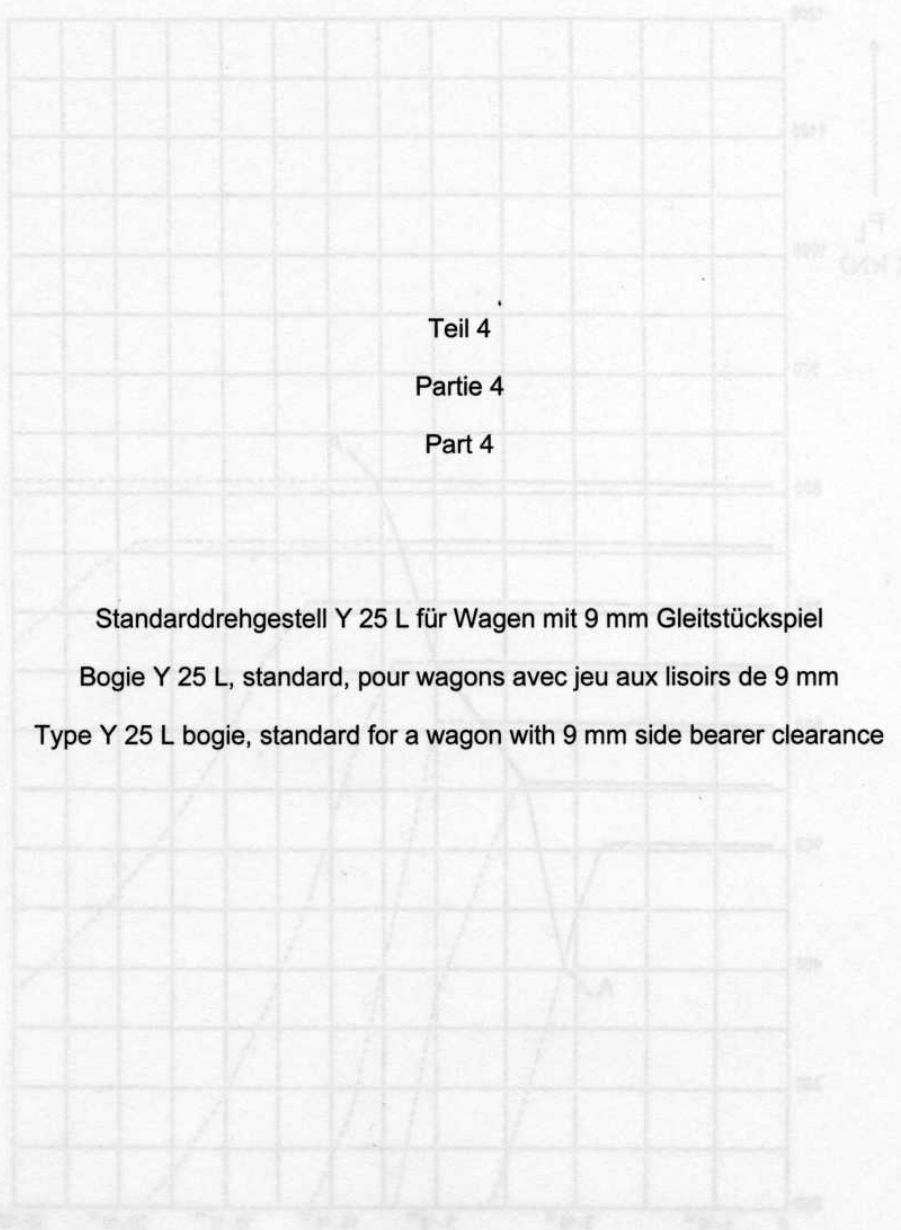
661

$$\Delta q_0 = .0 \cdot 20$$





Anlage C
Annexe C
Appendix C





Anlage	C
Annexe	C
Appendix	C

Anwendungshinweise für die Diagrammblattsammlung:

Bei der Überprüfung der Fahrsicherheit nach ORE B 55/RP 8 muss der für den Drehgestellgüterwagen charakteristische, sich durch die baulichen Merkmale ergebende Punkt in den Diagrammen links von der Linie A-A für die beiden zu betrachtenden Fälle liegen:

- (1) unbeladener Containertragwagen
- (2) beladener Containertragwagen

Im Fall (1) ist die beim Verwinderversuch mit einem leeren Wagen gemessene Verwindesteifigkeit des Wagenkastens (c_t^*) zu berücksichtigen.

Beim Fall (2) ist die Veränderung der Wagenkastentorsionssteifigkeit c_t^* durch Beladung mit leeren, torsionsharten Containern durch einen Verwinderversuch nach ORE-Bericht B55/RP8, Kapitel 7.1.7 oder Anlage E des technischen Dokuments B12/DT 135 zu ermitteln. In Abhängigkeit von der Anordnung der Aufsetzzapfen an der zu prüfenden Wagenbauart sind hierbei zwei Fälle möglich:

- Allgemeiner Fall (2.1): Mittige Beladung mit einem leeren Container mit $c_t^* \geq 8 \times 10^{10} \text{ kNmm}^2/\text{rad}$ und $L \geq 40'$
- Besonderer Fall (2.2): Beladung des Wagens mit 2 leeren Containern mit Verwindungssteifigkeiten $c_t^* \geq 8 \times 10^{10} \text{ kNmm}^2/\text{rad}$; die Länge eines Containers muss mindestens $40'$ betragen

Auf die Verwindungsmessung mit aufgesetzten leeren Containern kann verzichtet werden, wenn anstelle der gemessenen Torsionshärten folgende Werte bei der Überprüfung der Fahrsicherheit berücksichtigt werden:

- $c_t^* = 10 \times 10^{10} \text{ kNmm}^2/\text{rad}$ für den Fall (2.1)
- $c_t^* = 6 \times 10^{10} \text{ kNmm}^2/\text{rad}$ für den Fall (2.2)

Instructions pour l'utilisation du jeu de diagrammes

Lorsque l'on contrôle la sécurité de circulation selon le rapport ORE B 55/RP 8, le point représentatif du wagon à bogies résultant des caractéristiques de construction doit se trouver, sur les diagrammes, à gauche de la ligne A-A, pour les deux cas à considérer:

- (1) wagon porte-conteneurs non chargé
- (2) wagon porte-conteneurs chargé.



Anlage	C
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Dans le cas (1), il y a lieu de considérer la rigidité torsionnelle de la caisse du wagon (c_t^*) mesurée dans le cadre d'un essai de gauchissement avec wagon vide.

Dans le cas (2), il y a lieu de déterminer, par un essai de gauchissement selon le rapport ORE B 55/RP 8, chapitre 7.1.7 ou l'Annexe E du document technique B12/DT 135, la modification de la rigidité torsionnelle de la caisse du wagon c_t^* résultant du chargement de conteneurs vides à rigidité torsionnelle élevée. Deux cas sont possibles suivant la disposition des chevilles sur le type de wagon à contrôler:

- cas général (2.1): chargement, au centre, d'un conteneur vide avec $c_t^* \geq 8 \times 10^{10}$ kNmm²/rad et $L \geq 40'$
- cas spécial (2.2): chargement sur le wagon de 2 conteneurs vides avec rigidité torsionnelle $c_t^* \geq 8 \times 10^{10}$ kNmm²/rad; la longueur d'un conteneur doit être de 40' au moins.

On peut renoncer à la mesure du gauchissement avec conteneurs vides si, à la place des rigidités torsionnelles mesurées, on tient compte des valeurs forfaitaires suivantes pour contrôler la sécurité de circulation:

- $c_t^* = 10 \times 10^{10}$ kNmm²/rad pour le cas (2.1)
- $c_t^* = 6 \times 10^{10}$ kNmm²/rad pour le cas (2.2)

Instructions for using the set of drawings

When conducting running-safety checks in accordance with ORE Report B 55/RP 8, the representative point of the bogie wagon that results from its design characteristics must be located, on the diagrams, to the left of line A-A, for the two cases to be considered:

- (1) unladen container carrier wagons
- (2) laden container carrier wagons

Where case (1) is concerned, account must be taken of the torsional stiffness of the wagon body (c_t^*) as measured during buckling tests on an empty wagon.

Where case (2) is concerned, a buckling test as per ORE Report B 55/RP 8 (point 7.1.7) or Appendix E to Technical Document B12/DT 135 shall be conducted to determine the change in the torsional stiffness of the wagon body c_t^* resulting from the loading of empty containers with high



Anlage C
Annexe C
Appendix C

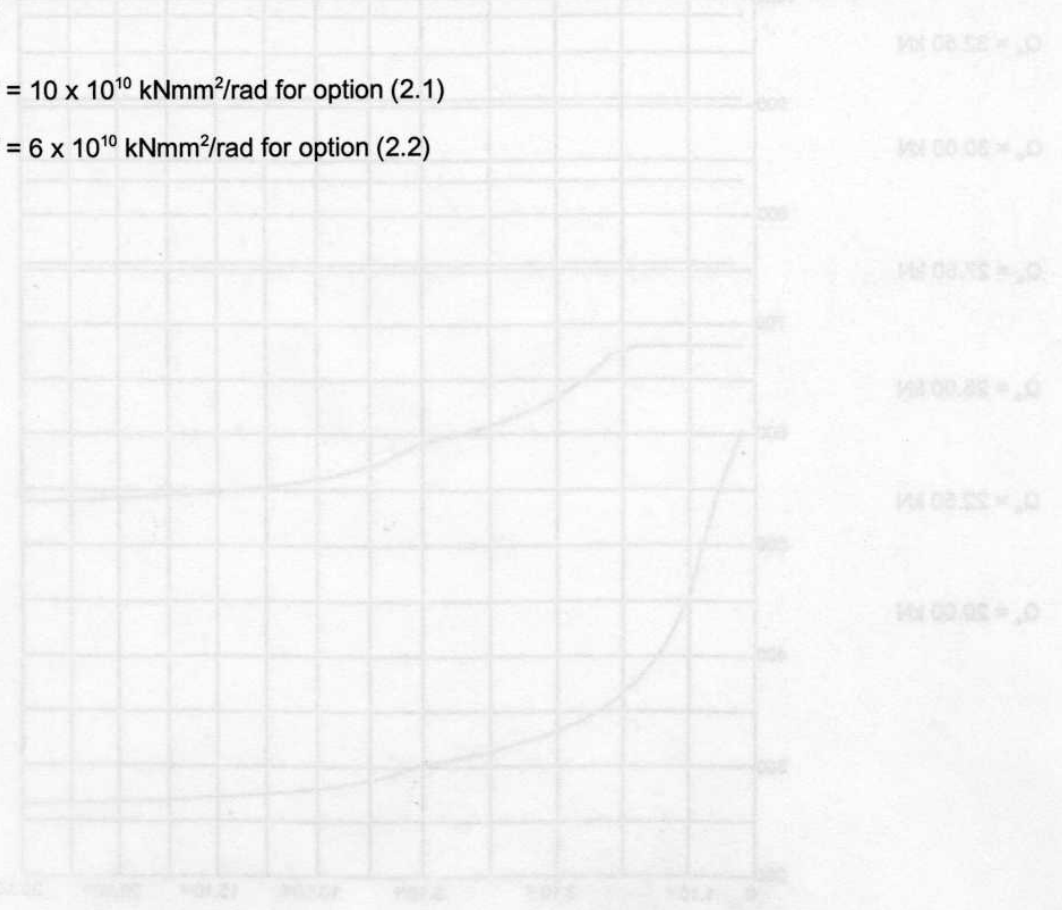


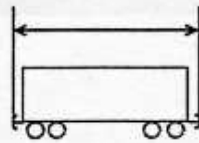
torsional stiffness. Two options are possible, depending on how the spigots are arranged on the particular wagon type to be checked:

- general option (2.1): central loading of an empty container with $c_t^* \geq 8 \times 10^{10} \text{ kNmm}^2/\text{rad}$ and $L \geq 40'$
- special option (2.2): loading on wagon of two empty containers with torsional stiffness $c_t^* \geq 8 \times 10^{10} \text{ kNmm}^2/\text{rad}$; the length of a container must be at least $40'$

Measurement of buckling with empty containers can be waived providing account is taken not of the measured torsional stiffnesses but of the following fixed values when checking running safety:

- $c_t^* = 10 \times 10^{10} \text{ kNmm}^2/\text{rad}$ for option (2.1)
- $c_t^* = 6 \times 10^{10} \text{ kNmm}^2/\text{rad}$ for option (2.2)



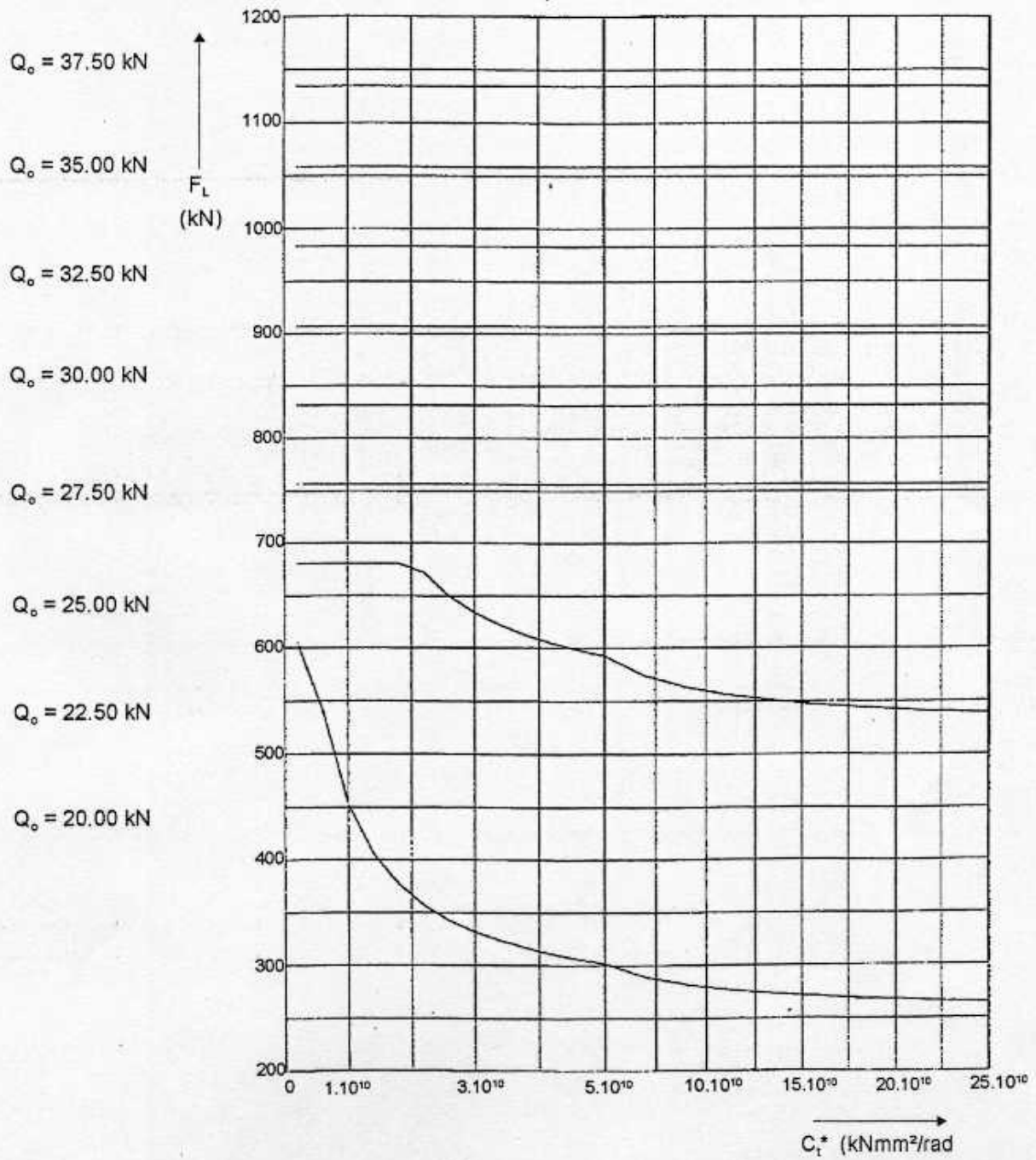


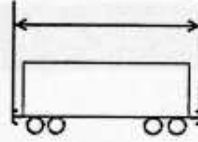
= 16950 mm

$2a^*$ = 11000 mm

Y 25 L J = 9

Δq_0 = 0,20



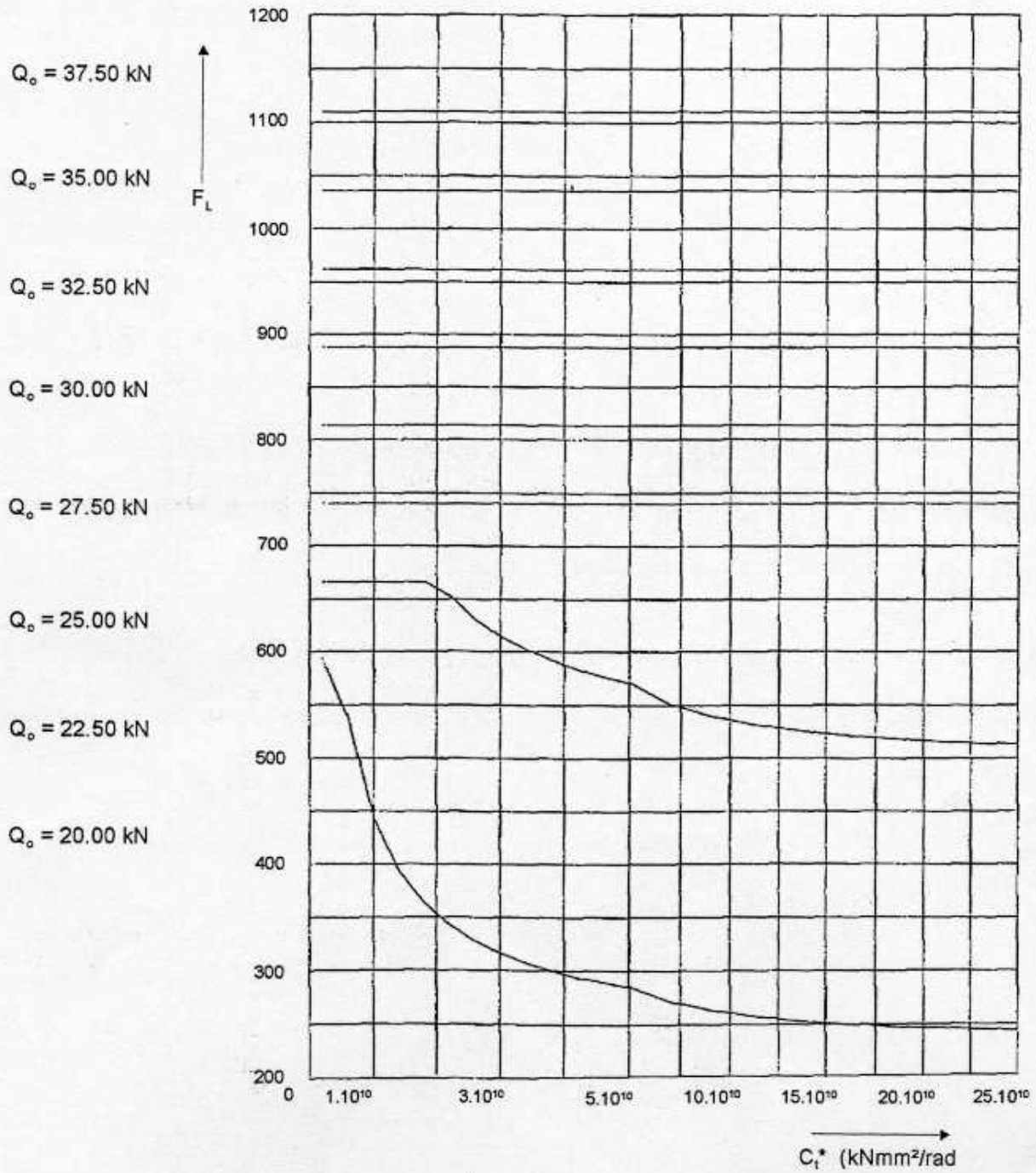


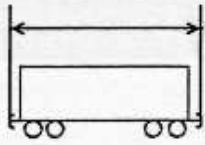
= 17450 mm

$2a^*$ = 15000 mm

Y 25 L J = 9

Δq_0 = 0,20



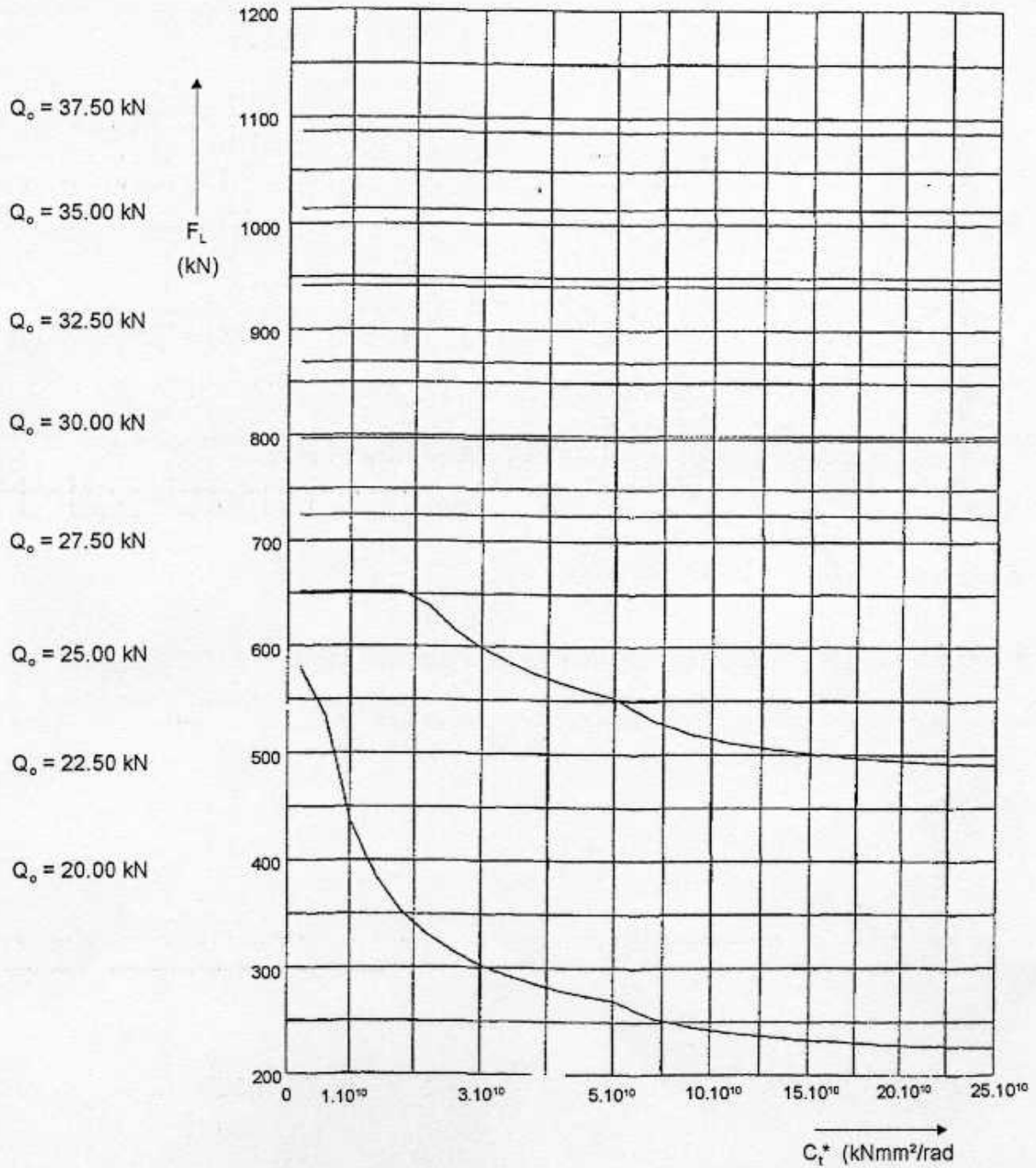


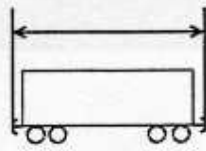
= 17950 mm

$2a^*$ = 12000 mm

Y 25 L J = 9

Δq_0 = 0,20



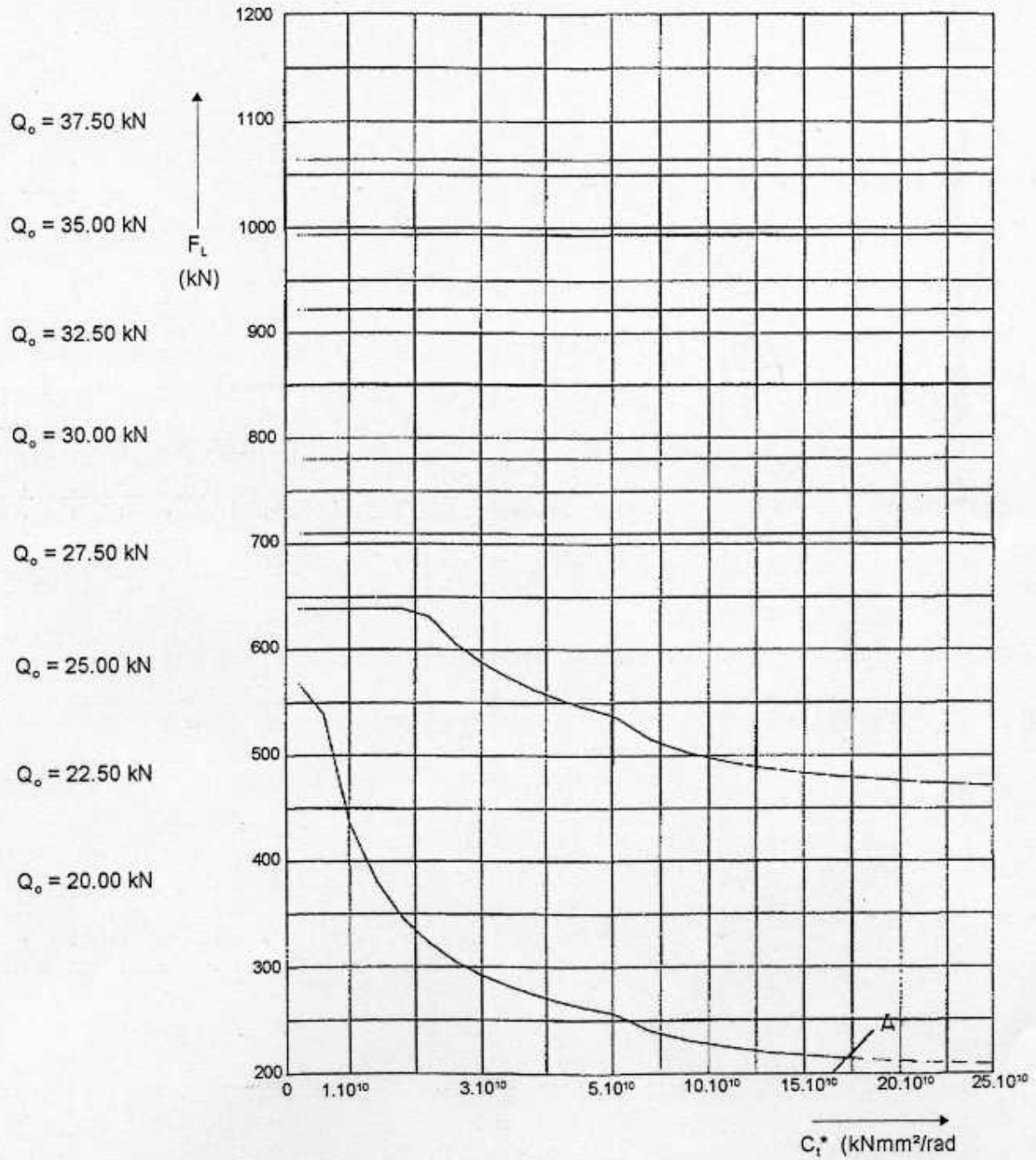


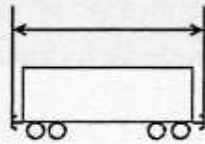
= 18450 mm

$2a^*$ = 12500 mm

Y 25 L J = 9

Δq_0 = 0,20



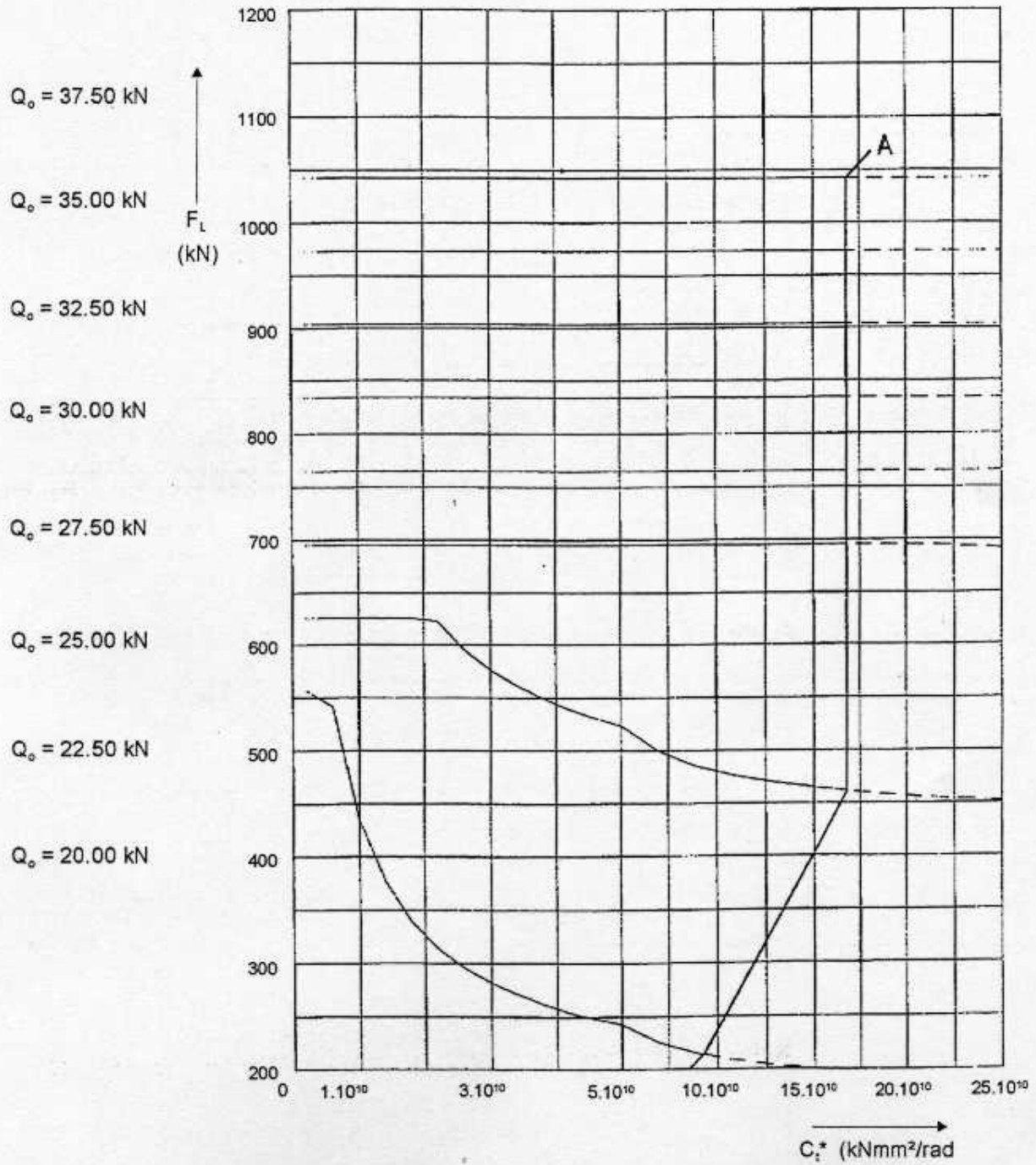


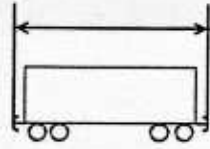
$$= 18950 \text{ mm}$$

$$2a^* = 13000 \text{ mm}$$

$$Y 25 L J = 9$$

$$\Delta q_0 = 0,20$$



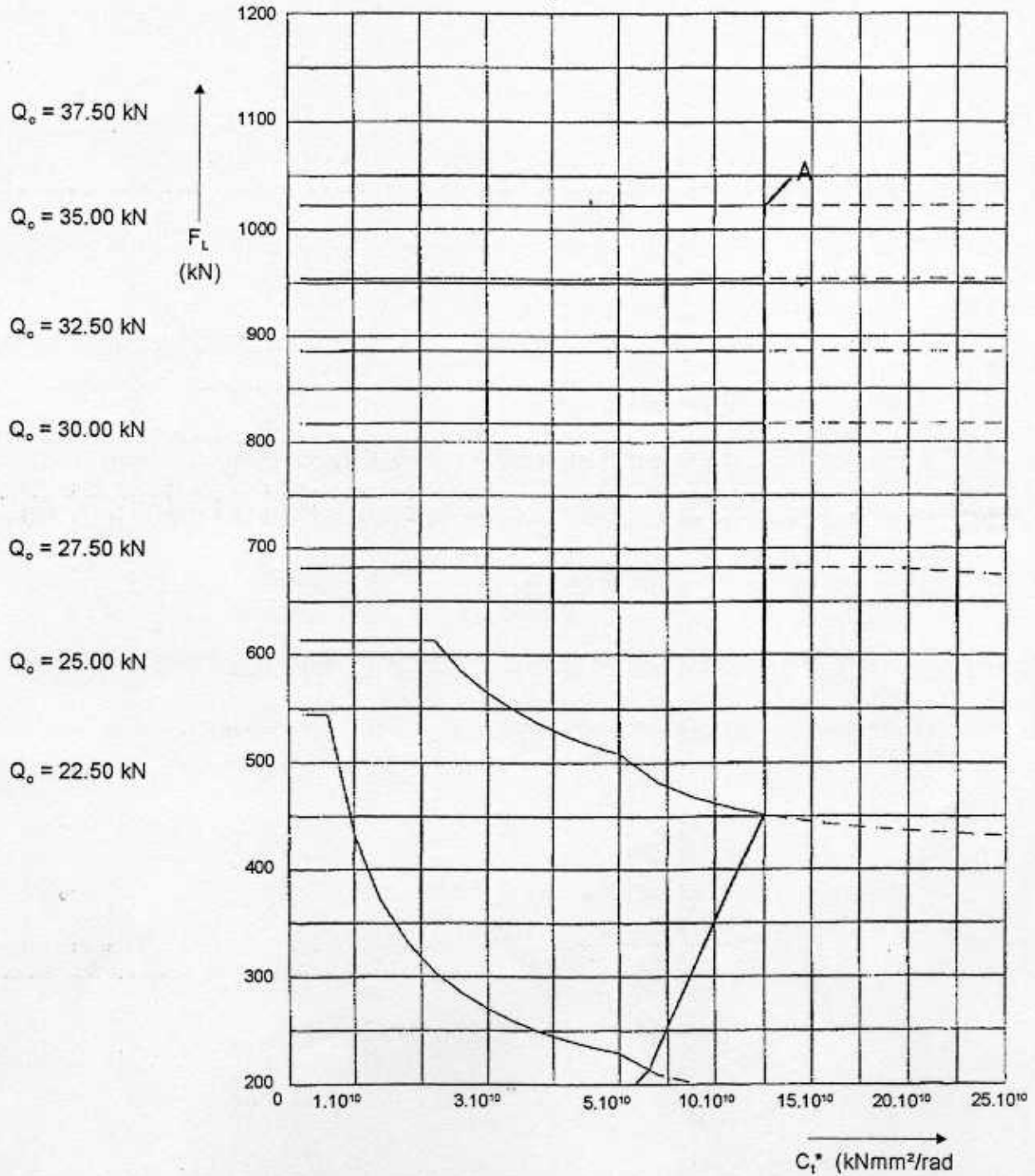


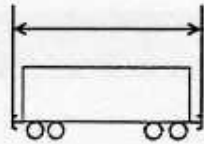
= 19450 mm

$2a^*$ = 13500 mm

Y 25 L J = 9

Δq_0 = 0,20



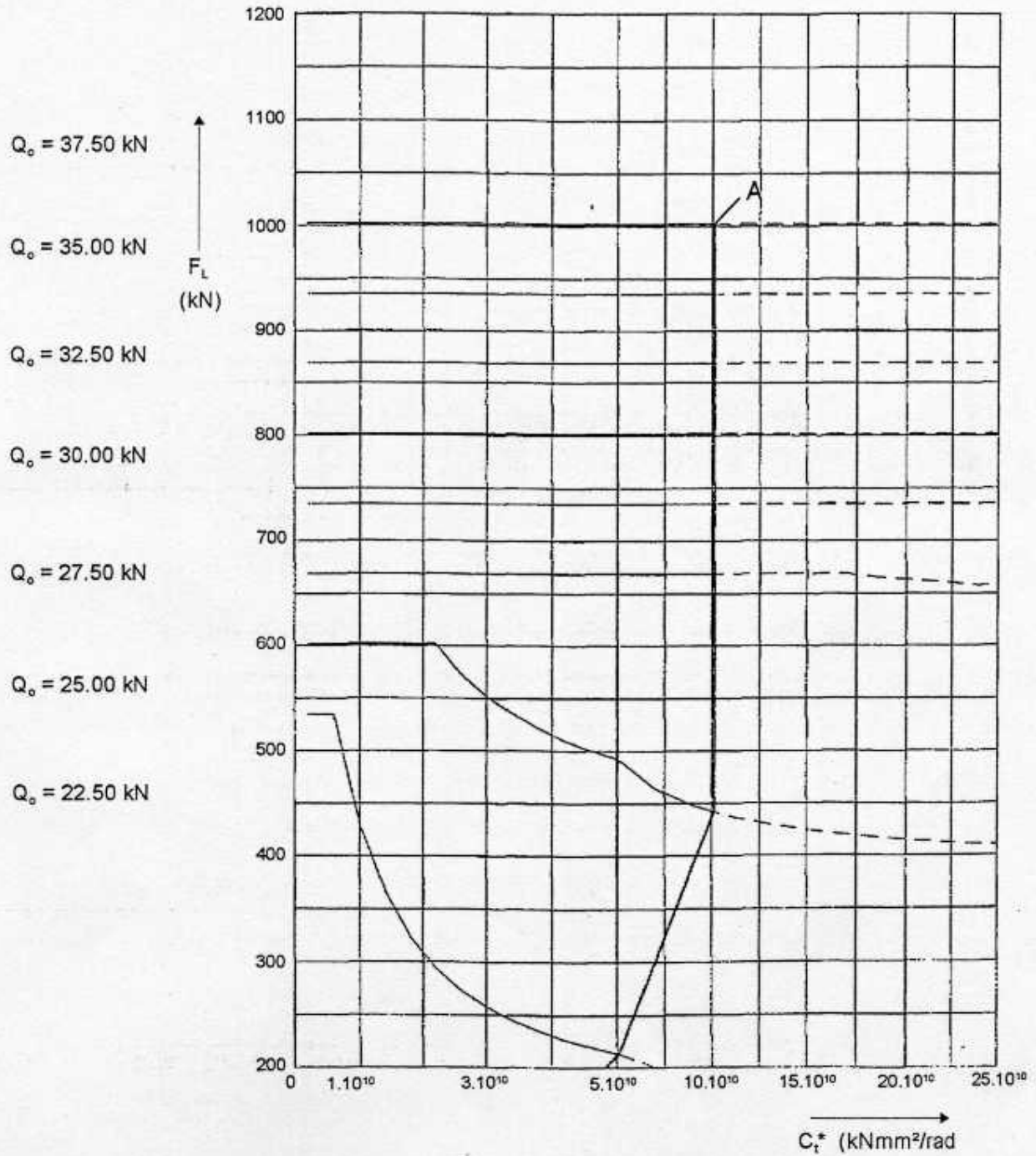


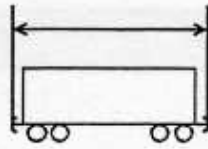
= 19950 mm

$2a^*$ = 14000 mm

Y 25 L J = 9

Δq_0 = 0,20



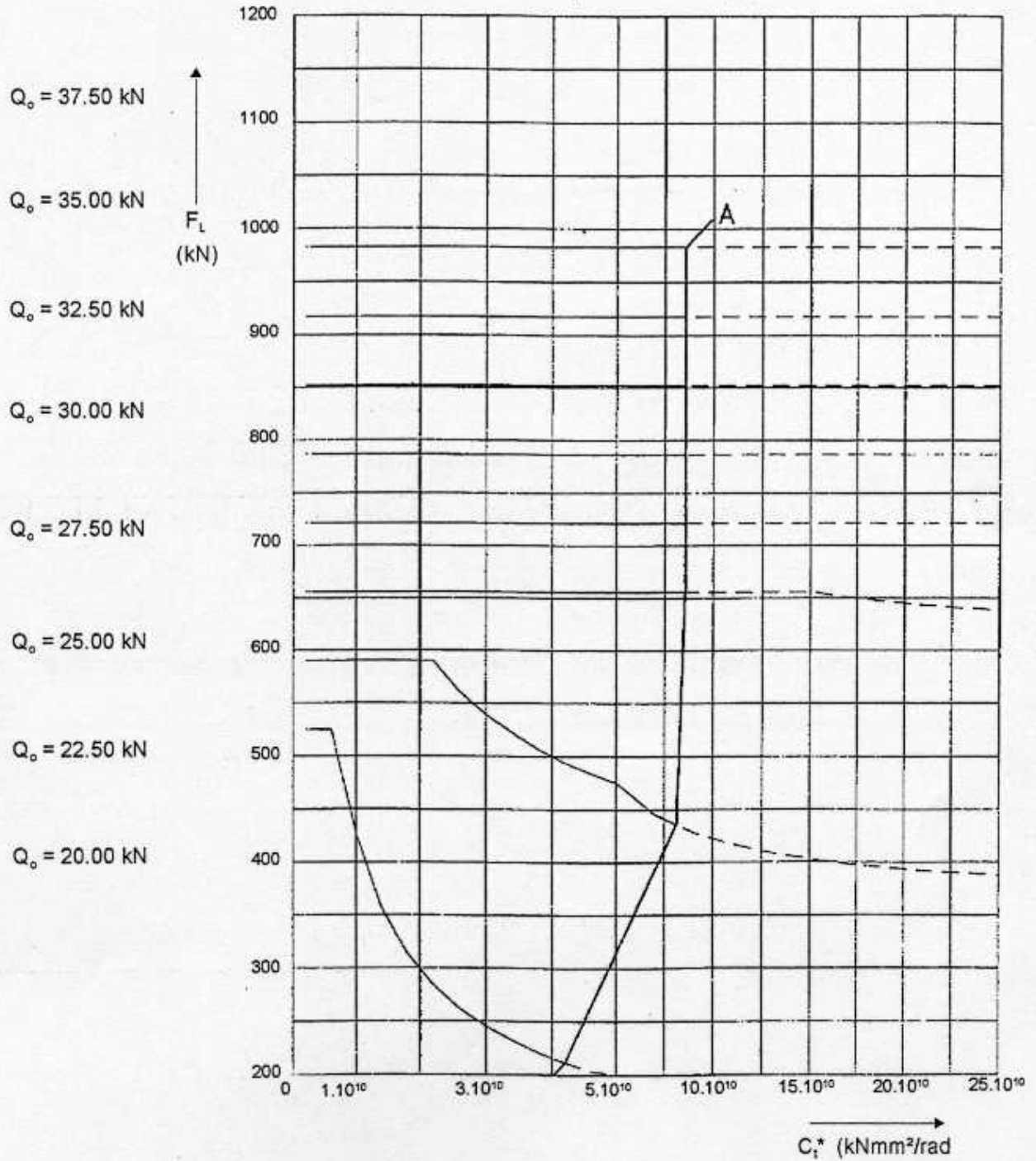


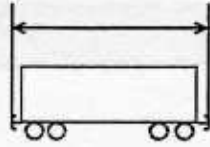
= 20450 mm

$2a^*$ = 14500 mm

Y 25 L J = 9

Δq_0 = 0,20



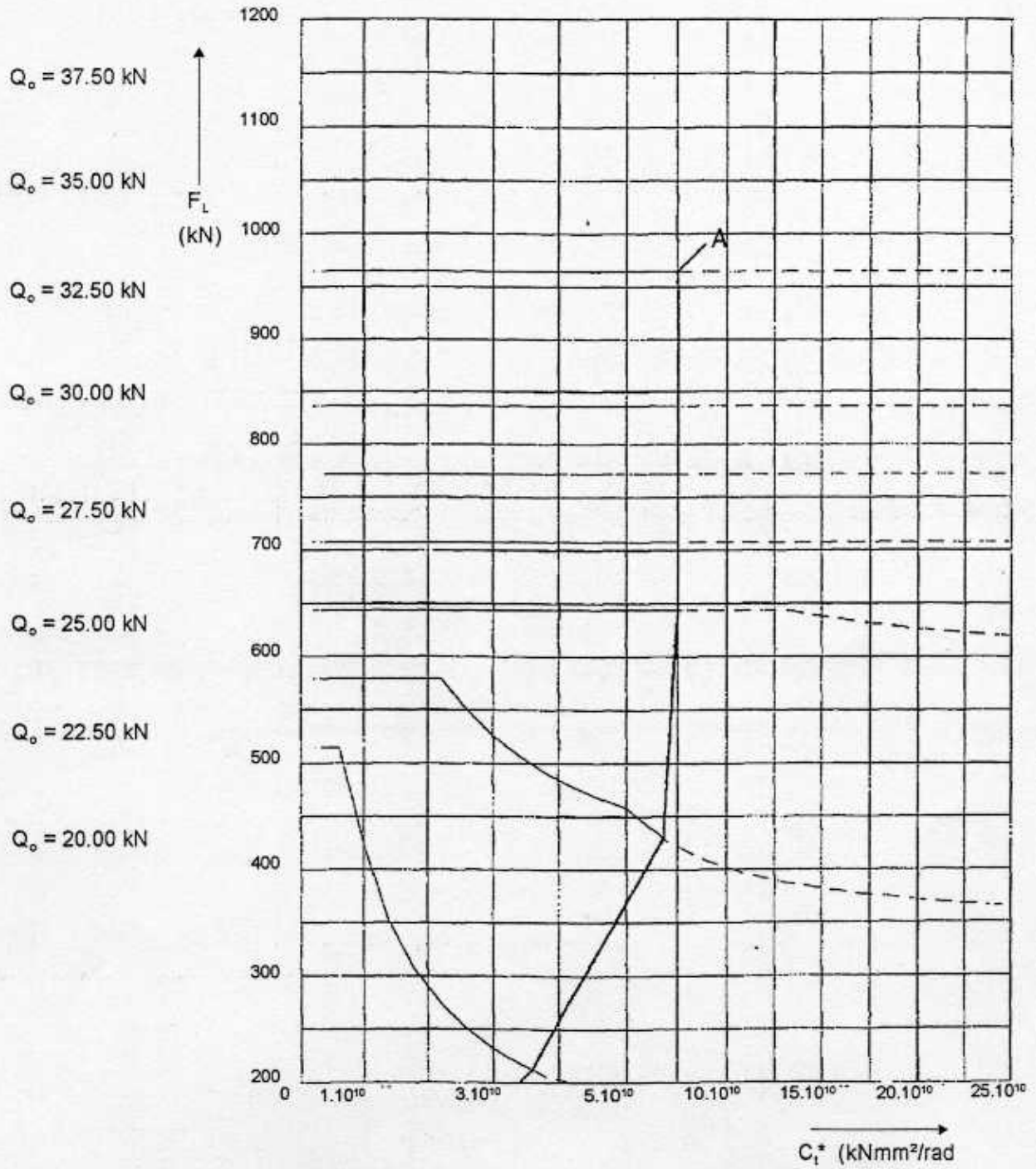


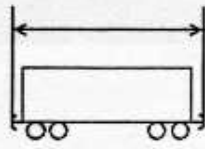
= 20950 mm

$2a^*$ = 15000 mm

Y 25 L J = 9

Δq_0 = 0,20



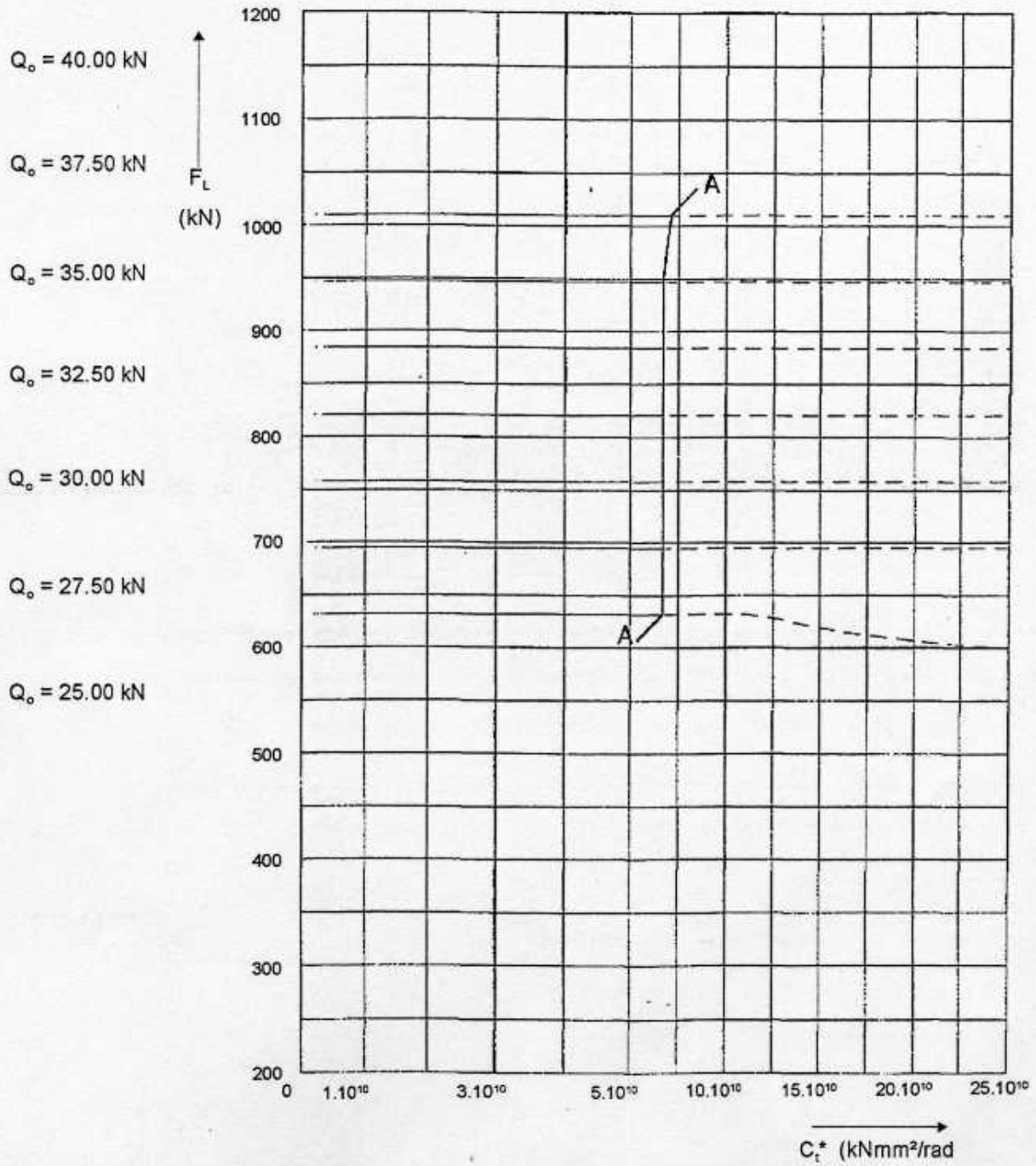


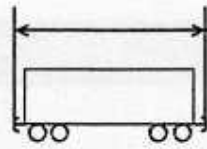
= 21450 mm

$2a^*$ = 15500 mm

Y 25 L J = 9

Δq_0 = 0,20



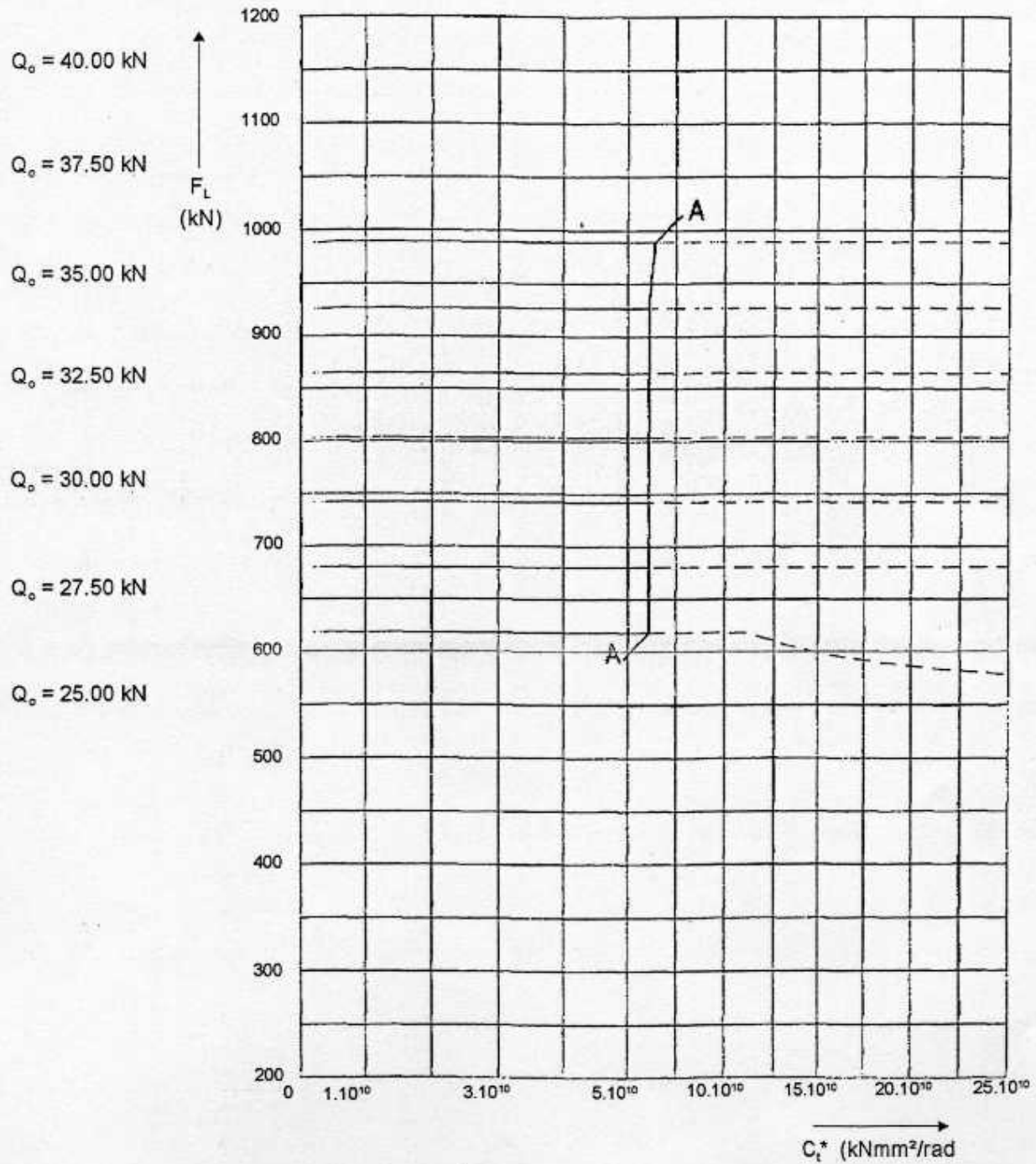


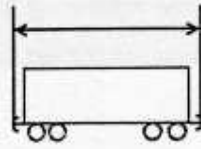
= 21950 mm

$2a^*$ = 16000 mm

Y 25 L J = 9

Δq_0 = 0,20



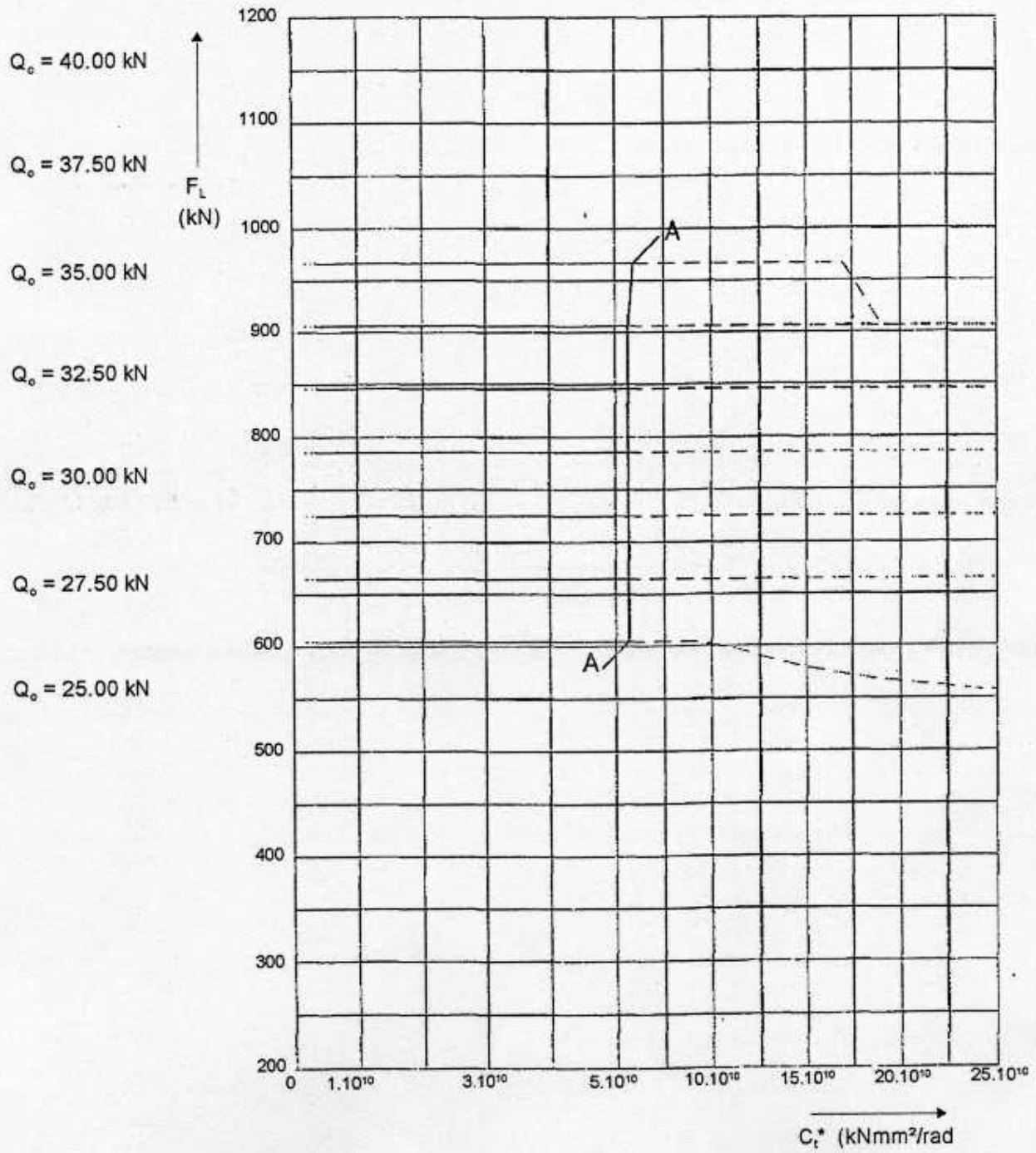


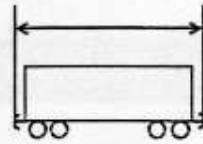
= 22450 mm

$2a^*$ = 16500 mm

Y 25 L J = 9

Δq_0 = 0,20





= 22950 mm

$2a^*$ = 17000 mm

Y 25 L J = 9

Δq_0 = 0,20

