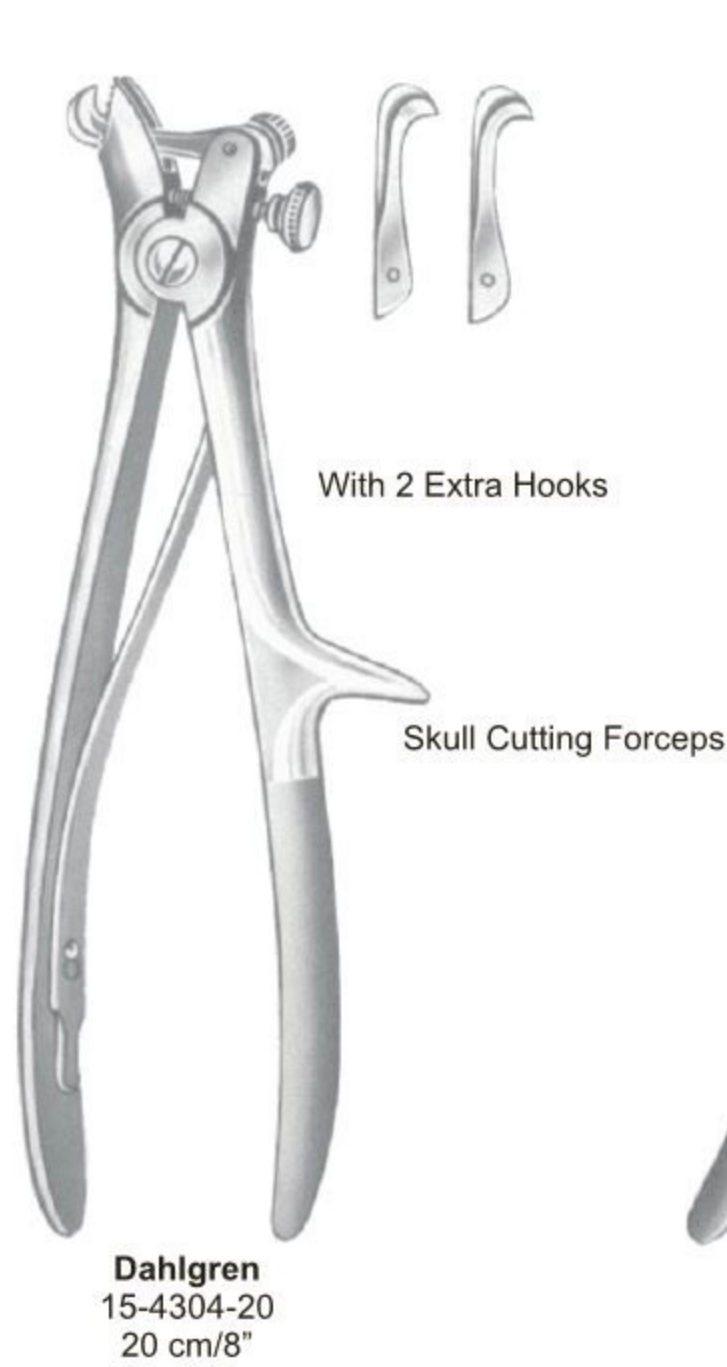




- EN** Neurosurgery
- DE** Neurochirurgie
- ES** Neuro Cirugía

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Cervical Traction Tongs ● EN
 Schädelhalter ● DE
 Pinzas de tracción craneal ● ES



Crutchfield
15-4306-00



Crutchfield
15-4307-00



15-4308-00

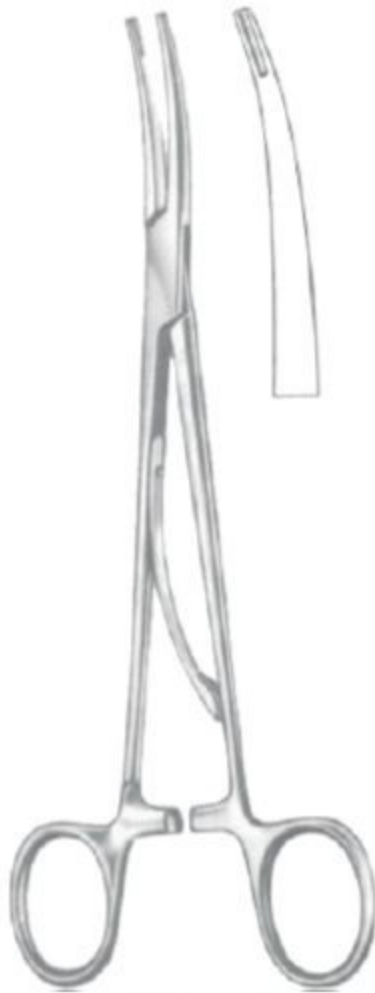


Crutchfield
15-4309-00
Complete With 2 Drills

Applying and Removing Forceps



Raney
 15-4310-00
 16 cm/6¼"



McKenzie
 15-4311-15 15 cm/6"
 15-4311-19 19 cm/7½"



Olivecrona-Tonnis
 15-4312-14



Retractor Only
 15-4313-01
 15 cm/6"

Caspar
 15-4313-00

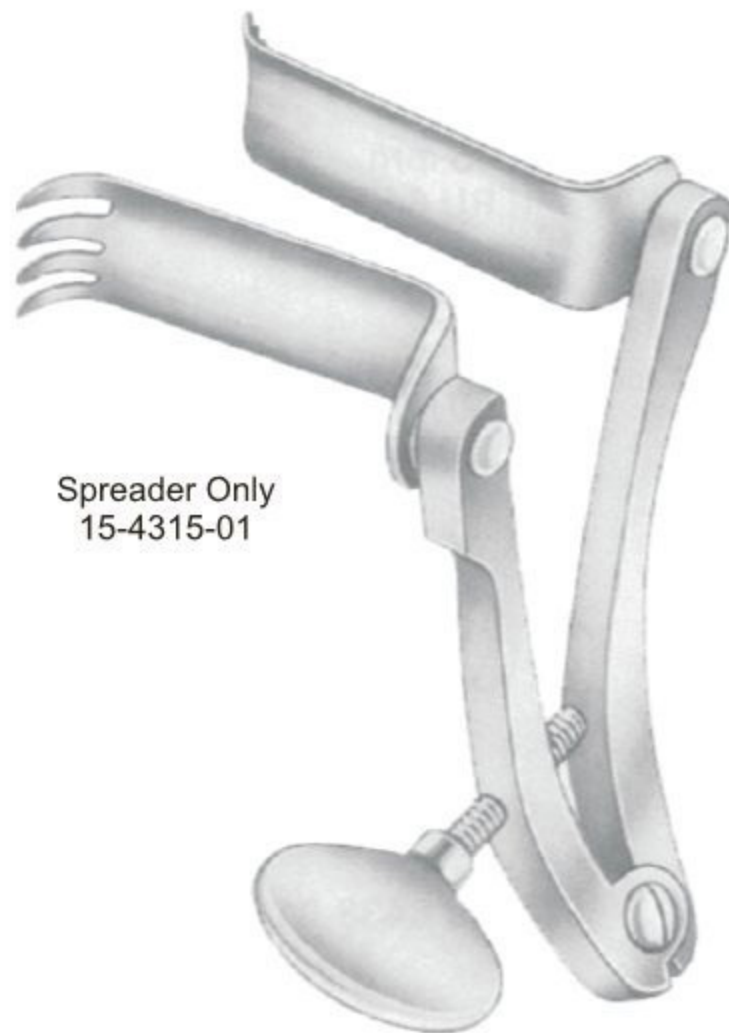
Retractor Complete With
 1 Blade Each
 15-4313-40
 15-4313-50



Retractor Only
 15-4314-01
 12 cm/4³/₄"

Caspar
 15-4314-00

Retractor Complete With
 1 Blade Each
 15-4314-40
 15-4314-50



Spreader Only
 15-4315-01

Caspar
 15-4315-00
 Retractors Only
 Spreader Complete With
 1 Blade Each
 15-4315-45
 15-4315-60



Spreader Only
 15-4316-01

Caspar
 15-4316-00
 Spreader Only
 Retractor Complete With
 1 Blade Each
 15-4316-40
 15-4316-60

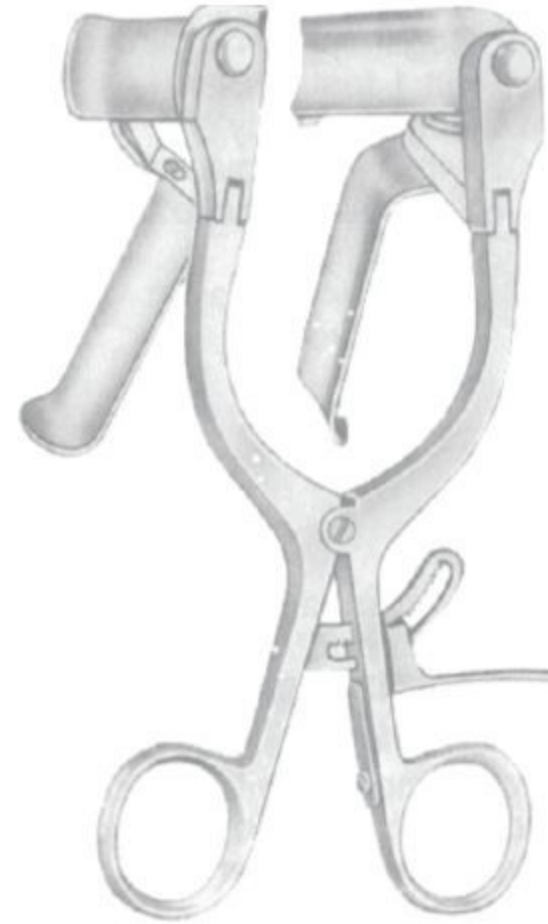
15-4317-01
 15 cm/6"
 Retractor only

Caspar
 15-4317-00
 15-4317-45
 15-4317-65
 Retractor complete with
 1 blade each



15-4318-01
 15 cm/6"
 Retractor only

Caspar
 15-4318-00
 15-4318-45
 15-4318-65
 Retractor adjustable, con
 1 blade each



15-4319-01
 Retractor only
 with 1 fixed blade

Caspar
 15-4319-00
 Retractor complete,
 eith 5 blades

15-4319-40
 40 mm



15-4319-45
 45 mm



15-4319-50
 50 mm



15-4319-55
 55 mm



15-4319-60
 60 mm





15-4320-01
Retractor only

Cloward
 15-4320-00
 25 cm/10"
 complete with 5 blades



15-4320-40
15x40 mm



15-4320-45
15x45 mm



15-4320-50
15x50 mm



15-4320-55
15x55 mm



15-4320-60
15x60 mm



15-4321-01
Retractor only

Cloward
 15-4321-00
 15 cm/6"
 complete with 5 blades



15-4321-40
15x40 mm



15-4321-45
15x45 mm



15-4321-50
15x50 mm



15-4321-55
15x55 mm



15-4321-60
15x60 mm



Inge
15-4322-16
16 cm/6 1/4"



Inge
15-4323-25
27 cm/10 3/4"



Cloward
15-4324-15
15 cm/6"



Cloward
15-4325-16
16 cm/6 1/4"



Frame
15-4326-01

Hey
15-4327-00
15-4328-00
23 cm/9"

Muscle blades

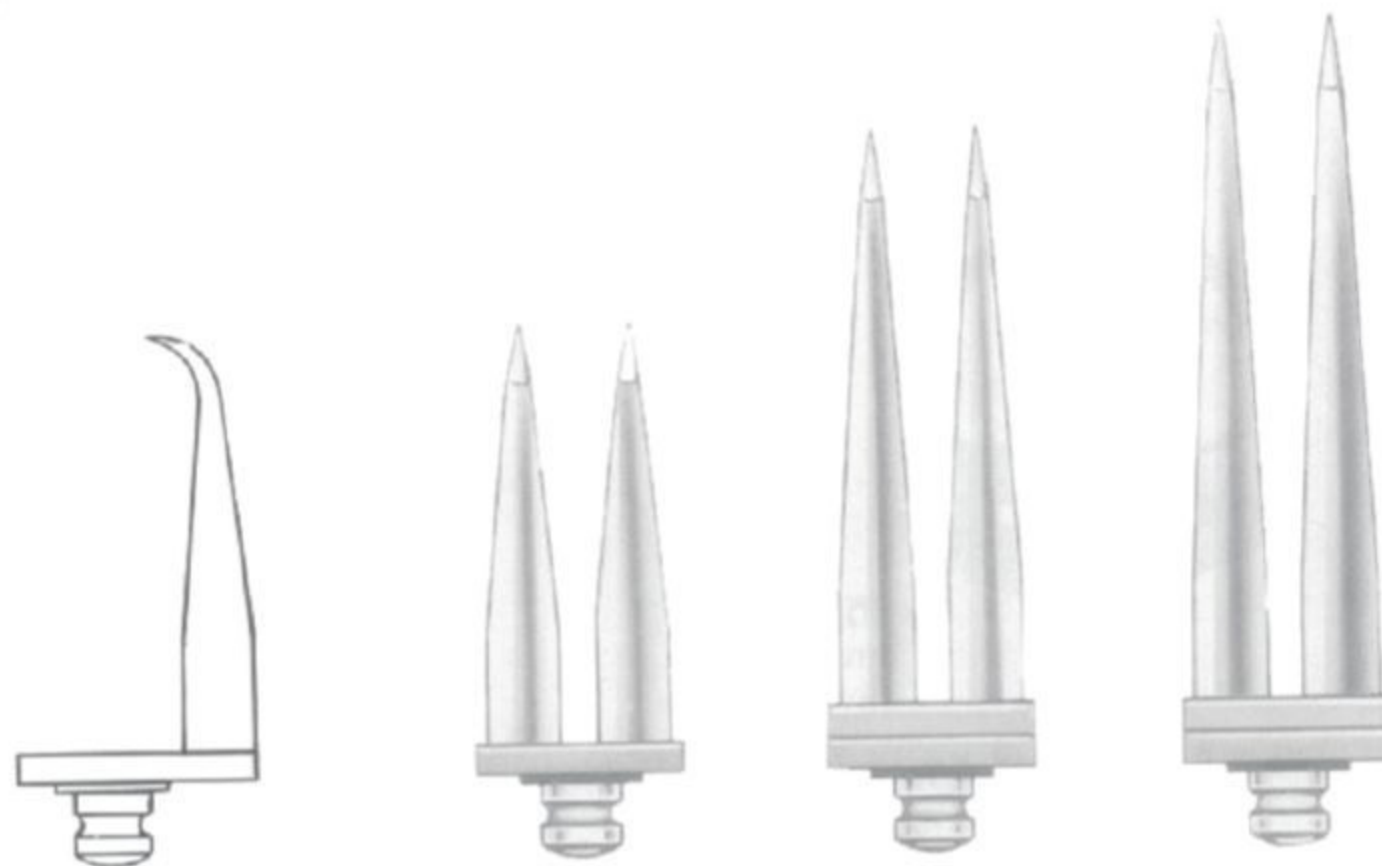


15-4329-50
20x50 mm

15-4329-60
20x60 mm

15-4329-70
20x70 mm

Vertebra-pins



15-4330-50
50 mm

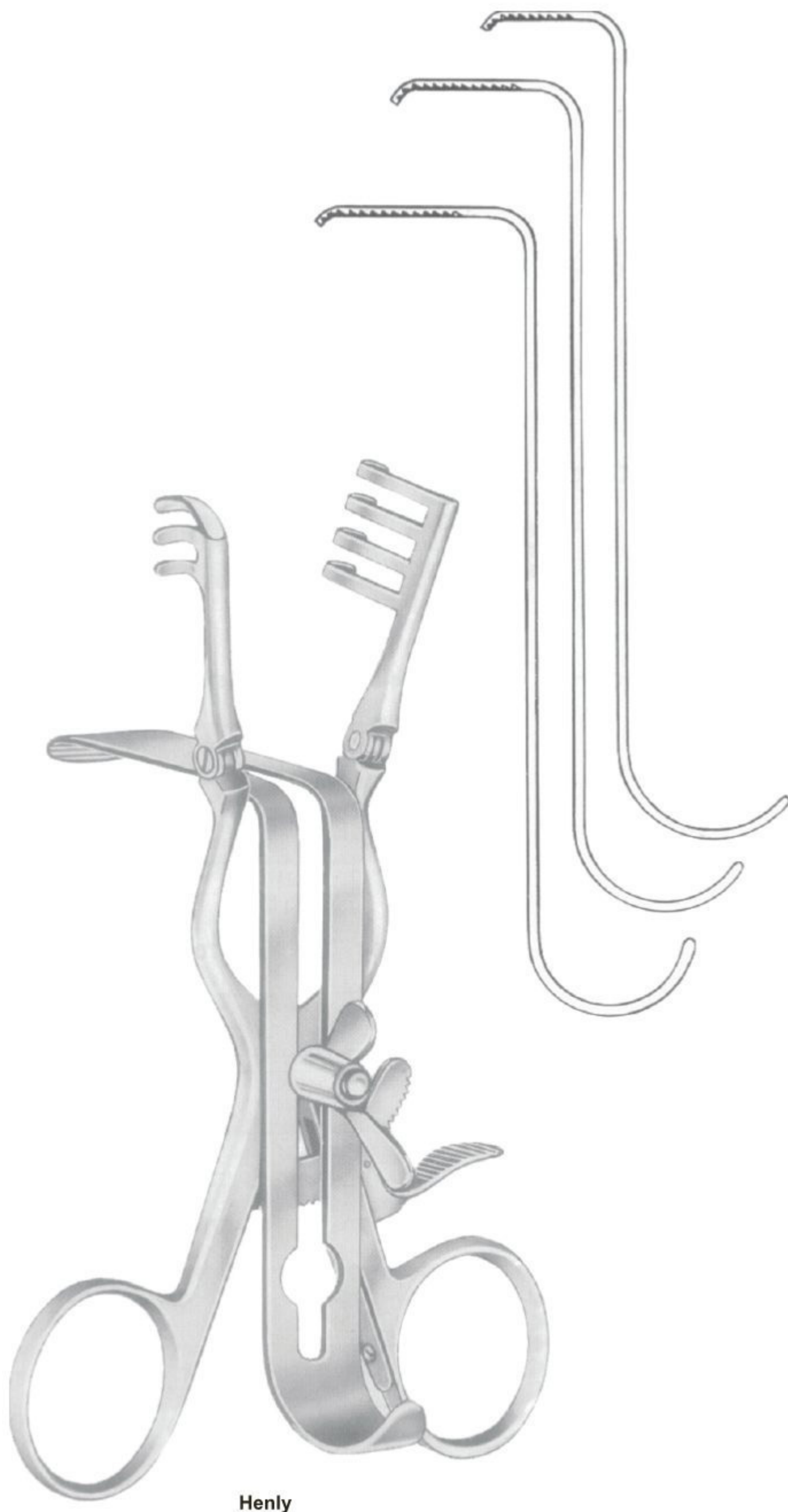
15-4330-60
60 mm

15-4330-70
70 mm

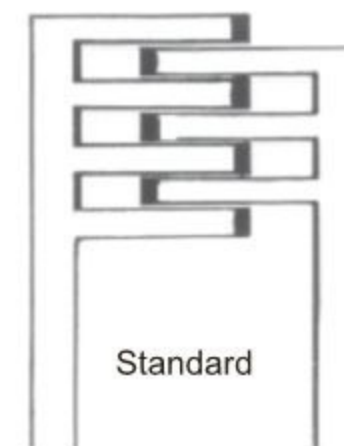


	Left-type	Right-type
50x10 mm	15-4331-01	15-4332-01
60x10 mm	15-4331-02	15-4332-02
70x10 mm	15-4331-03	15-4332-03
50x20 mm	15-4333-01	15-4334-01
60x20 mm	15-4333-02	15-4334-02
70x20 mm	15-4333-03	15-4334-03

Muscle Retractors ●— EN
 Muscle Retraktoren ●— DE
 Los retractoros del músculo ●— ES



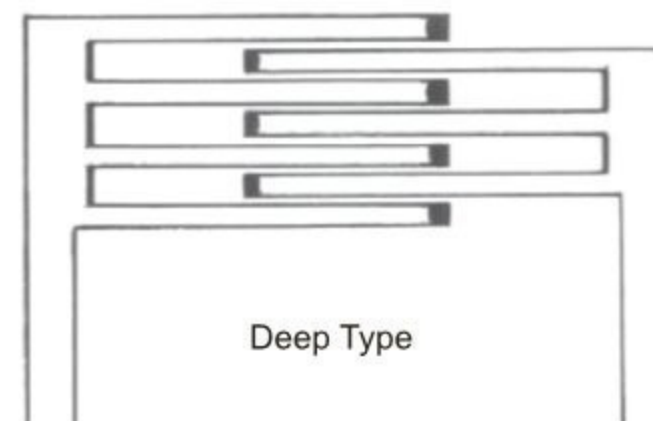
Henly



Standard

15-4335-00 Complete 15-4336-00
 14.5 cm/5¾" Consisting of 17 cm/6¾"

15-4335-01 Frame 15-4336-01
 15-4335-21 Centre Blades 15-4336-21
 15-4335-22 15-4336-22
 15-4335-23 15-4336-23



Deep Type

15-4337-00 Complete 15-4338-00
 14.5 cm/5¾" Consisting of 17 cm/6¾"

15-4337-01 Centre Blades 15-4338-01
 15-4337-21 15-4338-21
 15-4337-22 15-4338-22
 15-4337-23 15-4338-23

EN —● Dura Dissectors and Elevators
 DE —● Dura-Dissektoren, Elevatoren
 ES —● Disecadores para dura-madre, Elevadores



Davis
15-4339-24
24.5 cm/9 3/4"



Toennis
15-4340-25
25 cm/10"



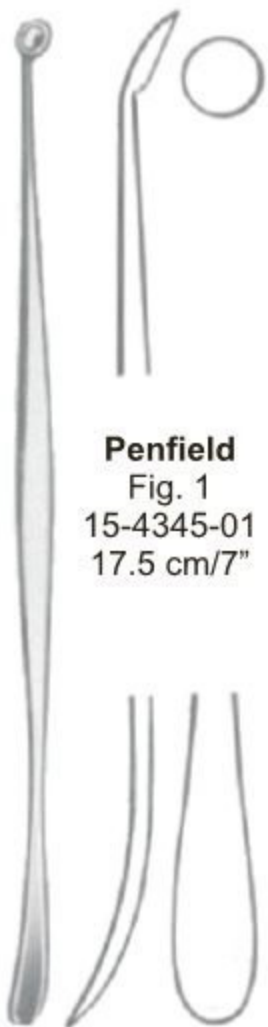
Frazier
15-4341-15

Hoer
15-4342-15

15 cm/6"



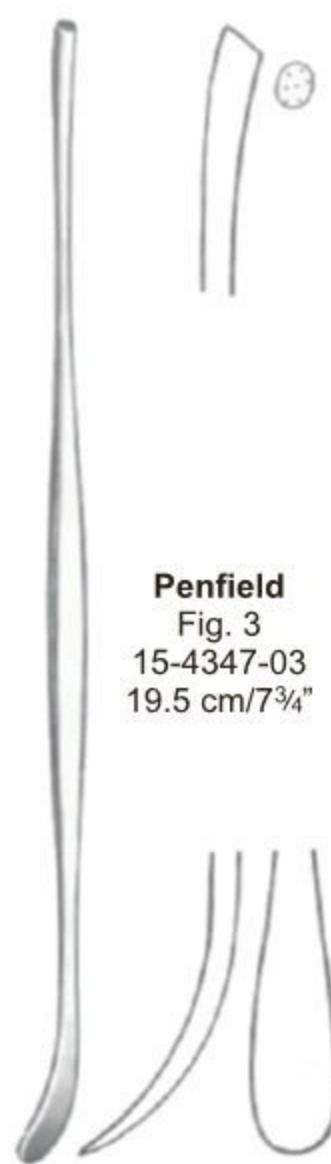
Love-Adson
15-4344-16
16 cm/6 1/2"



Penfield
Fig. 1
15-4345-01
17.5 cm/7"



Penfield
Fig. 2
15-4346-02
19.5 cm/7 3/4"



Penfield
Fig. 3
15-4347-03
19.5 cm/7 3/4"



Penfield
Fig. 4
15-4348-04
21.5 cm/8 1/2"

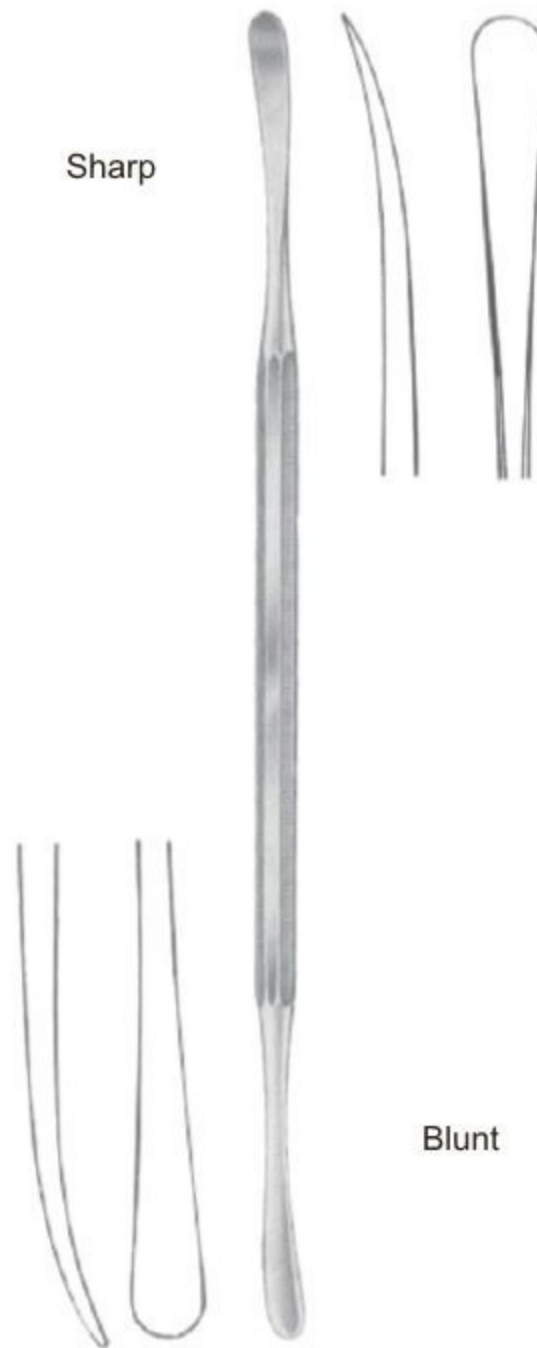


Penfield
Fig. 5
15-4349-05
29 cm/11 1/2"

Dura Dissectors and Elevators ●— EN
 Dura-Dissektoren, Elevatoren ●— DE
 Disecadores para dura-madre, Elevadores ●— ES



Sachs
 15-4350-21
 21 cm/8¼"



Sharp

Blunt

15-4351-22
 22 cm/8¼"



Woodsen
 15-4352-25
 25 cm/10"



Frager
 15-4353-20
 20 cm/8"



Frager
 15-4354-20
 20 cm/8"



Sachs
 15-4355-21
 21 cm/8¼"



Milligan
 15-4356-21 21 cm/8¼"



Olivecrona
 15-4357-18 18 cm/7"
 15-4357-24 24 cm/9½"



Olivecrona
 15-4358-19 19.5 cm/7¾"
 15-4358-24 24 cm/9½"



Horsley
 15-4359-20 20 cm/8"



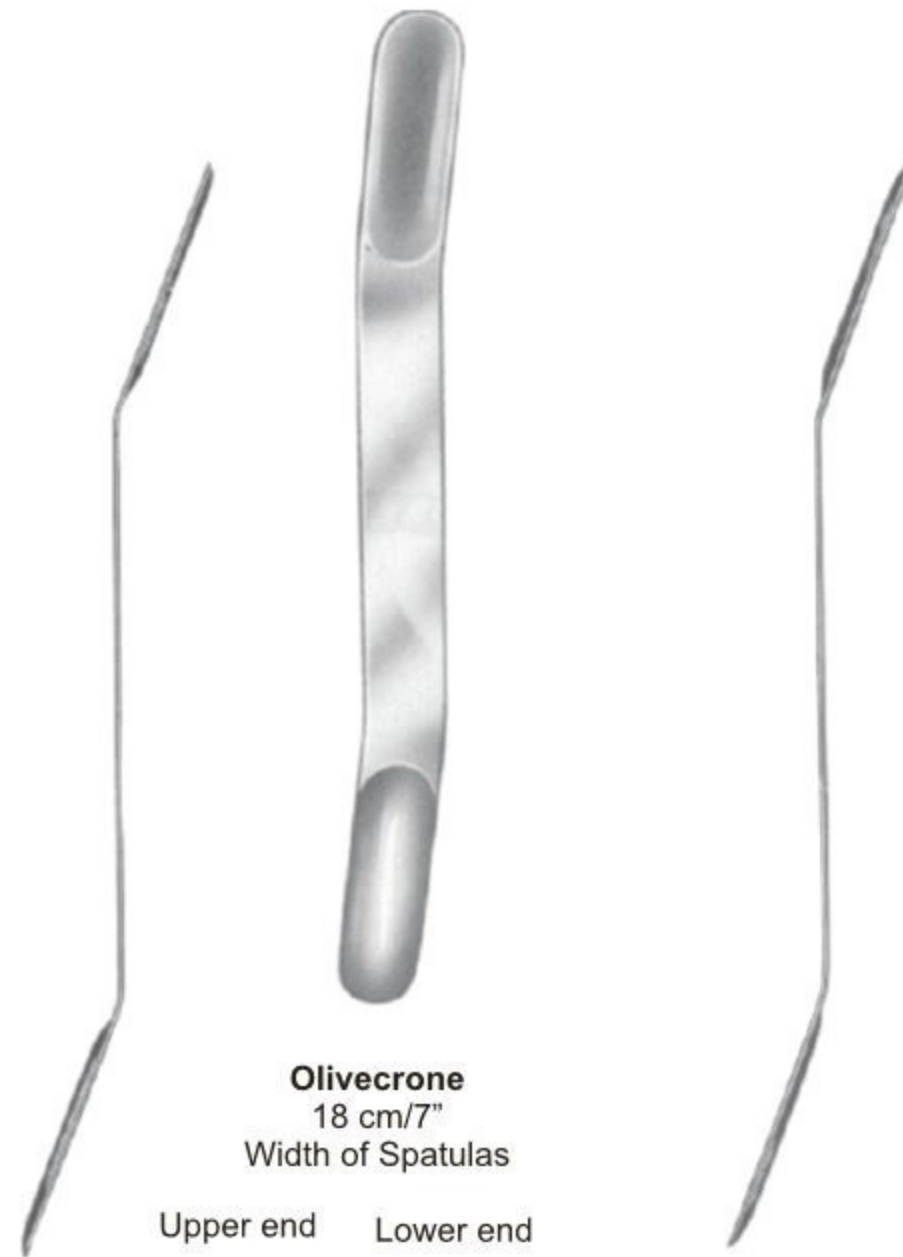
Sachs
 15-4360-21 21 cm/8¼"

Brain Spatulas, Malleable Spatulas ●— EN
 Hirnspatel, Temperguss Spatel ●— DE
 Espátulas cerebrales, Espátulas maleable ●— ES



Cushing
 17 cm/6¾"
 20 cm/8"
 28 cm/11"

15-4361-17
 15-4361-20
 15-4361-28



Olivecrona
 18 cm/7"
 Width of Spatulas

	Upper end	Lower end	
Concave	mm	mm	Convex
15-4362-01	7	9	15-4363-01
15-4362-02	11	13	15-4363-02
15-4362-03	15	18	15-4363-03
15-4362-04	18	22	15-4363-04



Heifetz
 20 cm/8"

Width of Spatulas

Upper end		Lower end
mm		mm
7	15-4364-08	8
10	15-4364-11	11
13	15-4364-13	14
16	15-4364-17	17
19	15-4364-20	20
22	15-4364-25	22



Heifetz
 15.5 cm/6"

Width of Spatulas

15-4365-08	8
15-4365-11	11
15-4365-13	14
15-4365-17	17

Length of Spatulas



18 cm/7"

Width of spatulas

Upper end	Lower end	
mm	mm	
7	9	15-4366-09
11	13	15-4366-13
15	18	15-4366-18
18	22	15-4366-22



20 cm/8"
12 mm 15-4367-12
17 mm 15-4367-17



20 cm/8"
14 mm 15-4368-14
17 mm 15-4368-17
20 mm 15-4368-20



15-4369-01
19cm/7½"



Love
15-4370-02
19 cm/7½"



15-4371-03



Love
15-4372-21
21 cm/8¼"

Length of spatulas



70 mm
3 mm 15-4373-03

100 mm
15-4374-03



5 mm 15-4373-05

15-4374-05



7 mm 15-4373-07

15-4374-07



Love



Scoville
23 cm/9"

7 mm 15-4375-07
9 mm 15-4375-09



Holsher
7mm 15-4376-07
9mm 15-4376-09
24 cm/9½"



8 mm 15-4377-08
13 mm 15-4377-13



Taylor
 30x 70 mm 15-4378-07 17 cm/6¾"
 30x100 mm 15-4378-10 17 cm/6¾"



Oldberg
 21 cm/8¼"



15-4379-01



15-4379-02



15-4379-03



15-4379-04



Cushing
 15-4380-19 19 cm/7¾"
 15-4380-28 28 cm/11"



Smithwick
 15-4381-17 17 cm/6½"
 15-4381-21 21 cm/8¼"



Cushnig
 15-4382-14
 14 cm/5½"



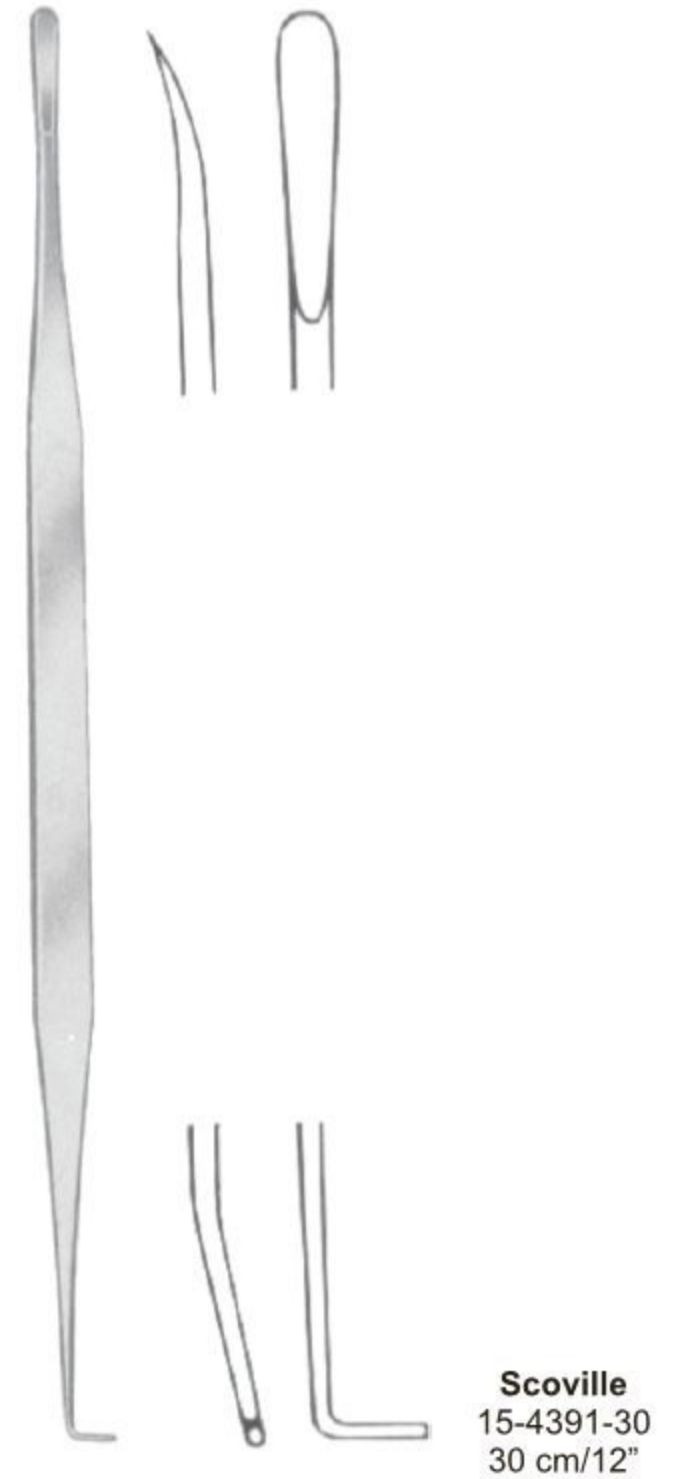
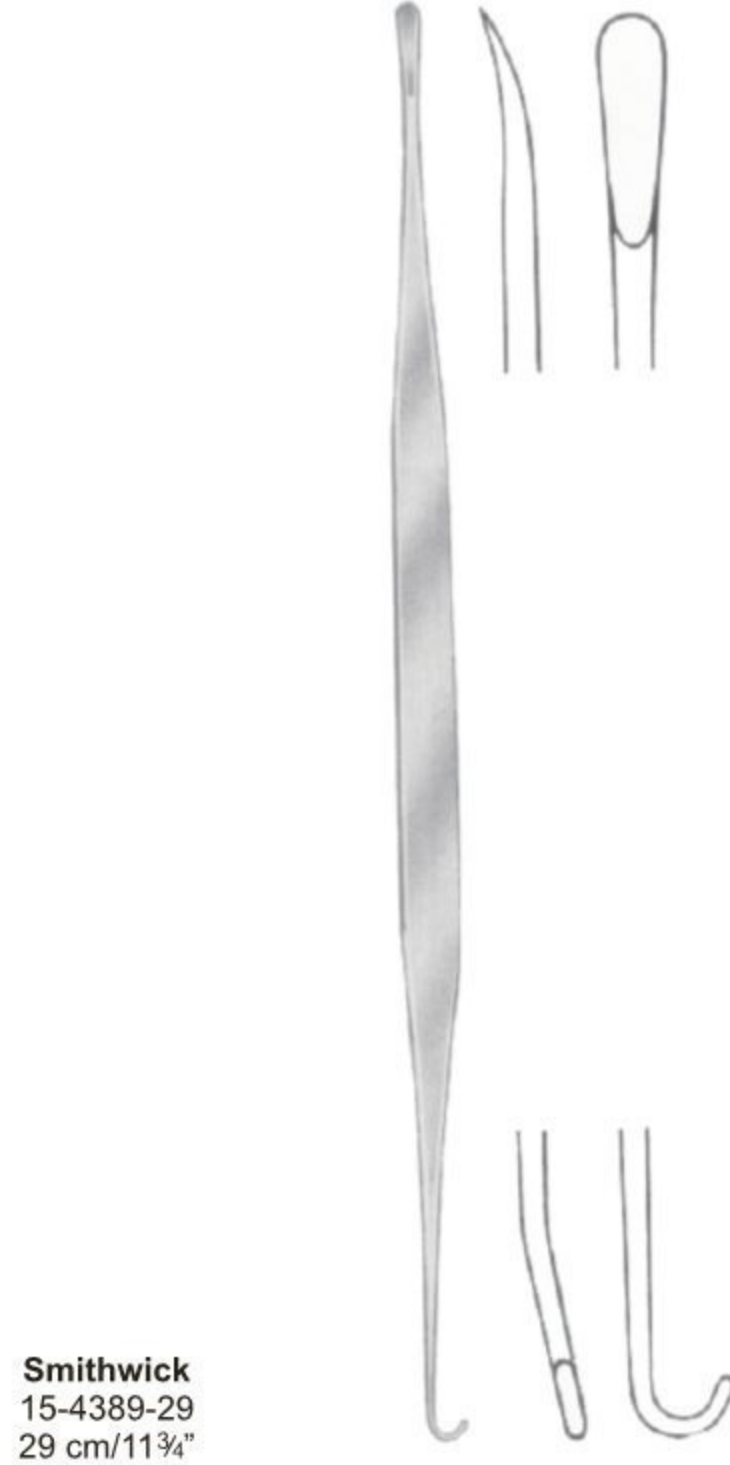
Adson
 20 cm/8"



15-4383-01



15-4383-02



Nerve Retractors and Knives ●— EN
 Nerve Retraktoren und Messer ●— DE
 Retractores del nervio y Cuchillos ●— ES



Graham
 15-4392-16
 16.5 cm/6½"



Toennis
 15-4393-15
 15 cm/6"



Frazier
 15-4394-13 13 cm/5"
 15-4394-18 18 cm/7"



Toennis
 15-4395-13 13 cm/5"
 15-4395-18 18 cm/7"






Olivecrona
 15-4396-23
 23 cm/9"



Olivecrona
 15-4397-20
 20.5 cm/8"






Ferris-Smith-Kerrison

		Width of Bite	Length of Shaft		
			15 cm/6"	20 cm/8"	18 cm/7"
Cutting Upward		0.6 mm			15-4404-00
		1 mm			15-4404-01
		2 mm			15-4404-02
		3 mm	15-4398-03	15-4401-03	15-4404-03
		4 mm			15-4404-04
		5 mm	15-4398-05	15-4401-05	15-4404-05
Cutting Upward 40°		0.6 mm			15-4405-00
		1 mm			15-4405-01
		2 mm			15-4405-02
		3 mm	15-4399-03	15-4402-03	15-4405-03
		4 mm			15-4405-04
		5 mm	15-4399-05	15-4402-05	15-4405-05
Cutting Downwards		0.6 mm			15-4406-00
		1 mm			15-4406-01
		2 mm			15-4406-02
		3 mm	15-4400-03	15-4403-03	15-4406-03
		4 mm			15-4406-04
		5 mm	15-4400-05	15-4403-05	15-4406-05







Ferris-Smith-Kerrison

		Width of Bite		Length of Shaft	
Cutting Upward			15 cm/6"	20 cm/8"	18 cm/7"
		3 mm	15-4407-03	15-4410-03	15-4413-03
Cutting Upward 40°		5 mm	15-4407-05	15-4410-05	15-4413-05
		3 mm	15-4408-03	15-4411-03	
Cutting Downward		5 mm	15-4408-05	15-4411-05	
		3 mm	15-4409-03	15-4412-03	15-4414-03
		5 mm	15-4409-05	15-4412-05	15-4414-05

- EN —● Intervertebral Disc Rongeurs
- DE —● Bandscheibenstanzen
- ES —● Pinzas cortantes para discos intervertebrales






Love-Kerrison

		Width of Bite		Length of Shaft	
			15 cm/6"	20 cm/8"	18 cm/7"
Cutting Upward		2 mm			15-4419-02
		3 mm	15-4415-03	15-4417-03	15-4419-03
		4 mm	15-4415-04	15-4417-04	15-4419-04
		5 mm	15-4415-05	15-4417-05	15-4419-05
		6 mm			15-4419-06
Cutting Upward 40°		2 mm			15-4420-02
		3 mm			15-4420-03
		4 mm			15-4420-04
		5 mm			15-4420-05
		6 mm			15-4420-06
Cutting Downward		2 mm			15-4421-02
		3 mm	15-4416-03	15-4418-03	15-4421-03
		4 mm	15-4416-04	15-4418-04	15-4421-04
		5 mm	15-4416-05	15-4418-05	15-4421-05
		6 mm			15-4421-06
Cutting Upward 40°		2 mm			15-4422-02
		3 mm			15-4422-03
		4 mm			15-4422-04
		5 mm			15-4422-05
		6 mm			15-4422-06



Colclough

		Width of Bite	Length of Shaft	
Cutting Upward		3 mm	15 cm/6"	20 cm/8"
		5 mm	15-4423-03	15-4426-03
Cutting Upward 40°		3 mm	15-4424-03	15-4427-03
		5 mm	15-4424-05	15-4427-05
Cutting Downward		3 mm	15-4425-03	15-4428-03
		5 mm	15-4425-05	15-4428-05

- EN —● Laminectomy Rongeurs
- DE —● Laminektomie-Zangen
- ES —● Pinzas cortantes para laminectomía



	Length Of Shaft			
Cushing 2 x 10 cm	5"/13 cm	15-4429-01	15-4430-02	15-4431-03
	6"/15 cm	15-4429-01	15-4430-02	15-4431-03
	7"/18 cm	15-4429-01	15-4430-02	15-4431-03
Love-Grunwald 3 x 10 cm	5"/13 cm	15-4429-01	15-4430-02	15-4431-03
	6"/15 cm	15-4429-01	15-4430-02	15-4431-03
	7"/18 cm	15-4429-01	15-4430-02	15-4431-03
Spurling 4 x 10 cm	5"/13 cm	15-4429-01	15-4430-02	15-4431-03
	6"/15 cm	15-4429-01	15-4430-02	15-4431-03
	7"/18 cm	15-4429-01	15-4430-02	15-4431-03

Laminectomy Rongeurs ● EN
 Laminektomie-Zangen ● DE
 Pinzas cortantes para laminectomía ● ES



With Suction/Irrigation Device

	Length Of Shaft			
Cushing 2 x 10 cm	5"/13 cm	15-4432-01	15-4433-02	15-4434-03
	6"/15 cm	15-4432-01	15-4433-02	15-4434-03
	7"/18 cm	15-4432-01	15-4433-02	15-4434-03
Love-Grunwald 3 x 10 cm	5"/13 cm	15-4432-01	15-4433-02	15-4434-03
	6"/15 cm	15-4432-01	15-4433-02	15-4434-03
	7"/18 cm	15-4432-01	15-4433-02	15-4434-03
Spurling 4 x 10 cm	5"/13 cm	15-4432-01	15-4433-02	15-4434-03
	6"/15 cm	15-4432-01	15-4433-02	15-4434-03
	7"/18 cm	15-4432-01	15-4433-02	15-4434-03

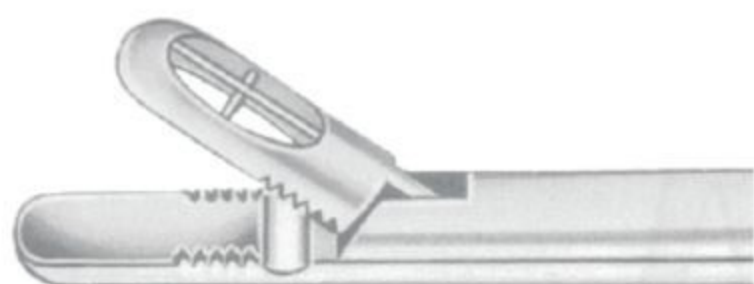


Ferris-Smith

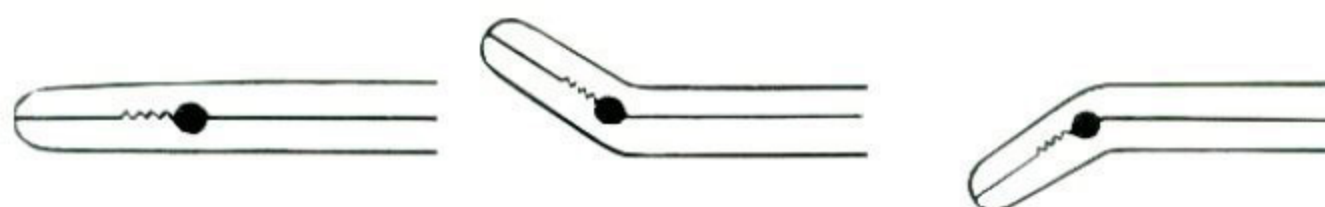
Width Of Jaw



2 x 10 mm	15-4435-01	15-4436-02	15-4437-03
3 x 10 mm	15-4435-01	15-4436-02	15-4437-03
4 x 10 mm	15-4435-01	15-4436-02	15-4437-03



Serrated and Fenestrated Jaws



Widh Of Jaw	Length Of Shaft			
mm	14 cm/5 1/2"	15-4438-01	15-4438-02	15-4438-03
	16 cm/6 1/4"	15-4439-01	15-4439-02	15-4439-03
2 x 12	14 cm/5 1/2"	15-4440-01	15-4440-02	15-4440-03
	16 cm/6 1/4"	15-4441-01	15-4441-02	15-4441-03
3 x 12	14 cm/5 1/2"	15-4442-01	15-4442-02	15-4442-03
	16 cm/6 1/4"	15-4443-01	15-4443-02	15-4443-03
4 x 14	14 cm/5 1/2"	15-4444-01	15-4444-02	15-4444-03
	16 cm/6 1/4"	15-4445-01	15-4445-02	15-4445-03
5 x 14	14 cm/5 1/2"	15-4446-01	15-4446-02	15-4446-03
	16 cm/6 1/4"	15-4447-01	15-4447-02	15-4447-03
6 x 16	14 cm/5 1/2"			
	16 cm/6 1/4"			



Yasargil
 15-4448-35
 19.5 cm/7¾"



Oldberg
 15-4449-65
 18 cm/7"



Landolt
 15-4450-90
 21 cm/8¼"
 Tumor Grasping Forceps Blunt

Laminectomy Rongeurs ● EN

Laminektomie-Zangen ● DE

Pinzas cortantes para laminectomía ● ES



Weil-Blakesley



15-4451-01



15-4451-02



15-4451-03



15-4451-04



15-4451-05



15-4452-01

15-4452-02

15-4452-03

15-4452-04

15-4452-05



15-4453-01

15-4453-02

15-4453-03

15-4453-04

15-4453-05



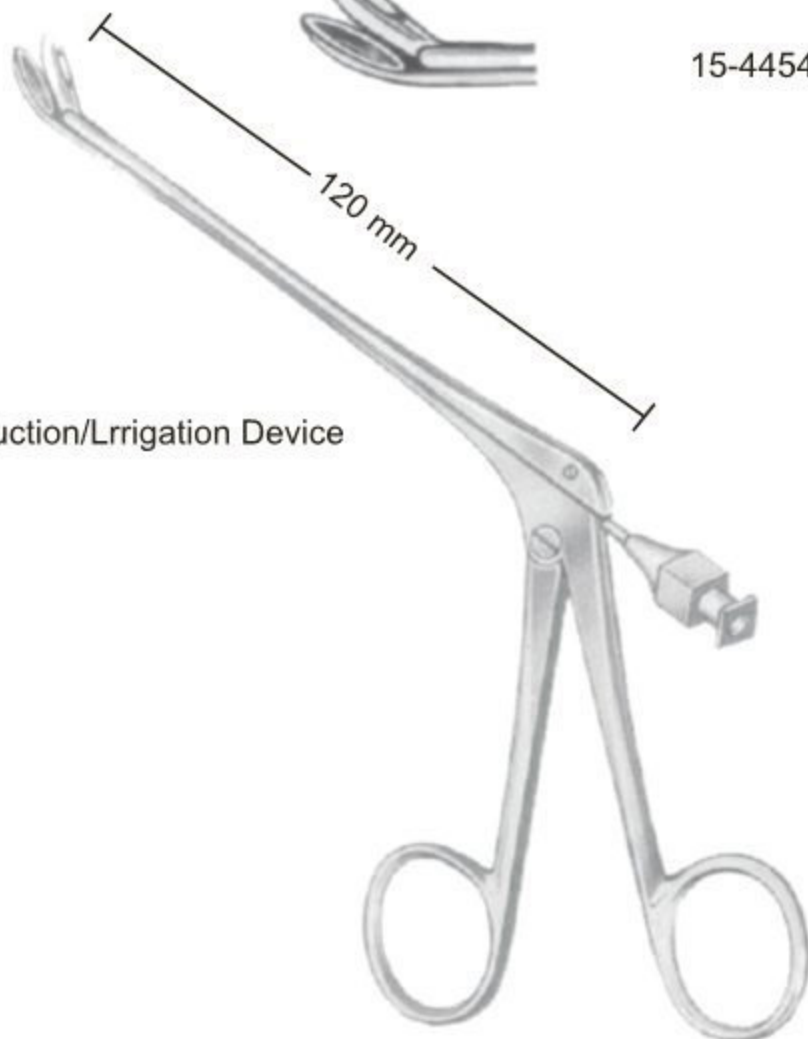
15-4454-01

15-4454-02

15-4454-03

15-4454-04





15-4454-05



With Suction/Irrigation Device

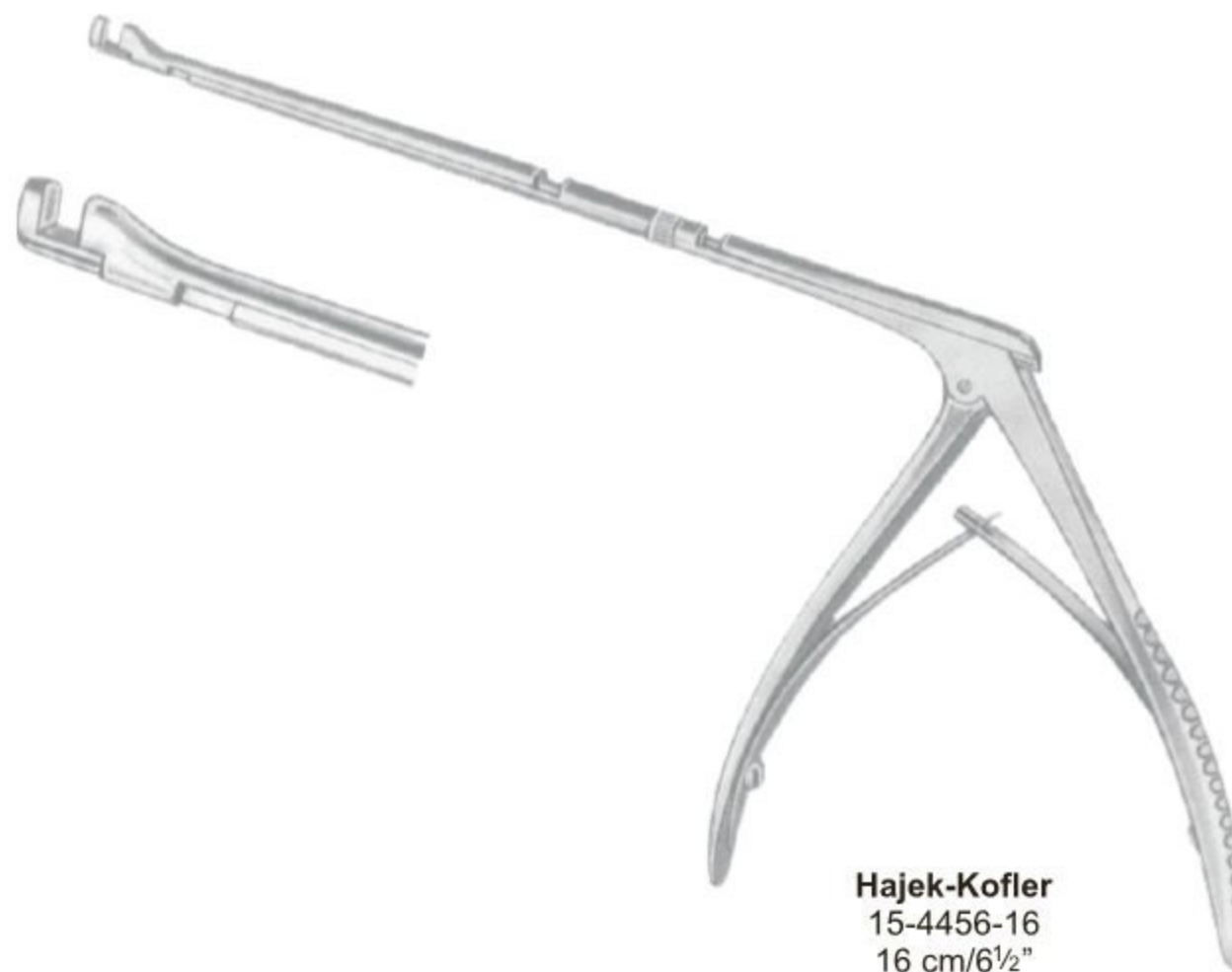
Weil-Blakesley



-  15-4455-01
5 x 4 mm
-  15-4455-02
5 x 4 mm
-  15-4455-03
5 x 3.5 mm
-  15-4455-04
5 x 3.5 mm

Hajek
(Hajek-Kofler)
14 cm/5½"

360° Turnable



Hajek-Kofler
15-4456-16
16 cm/6½"