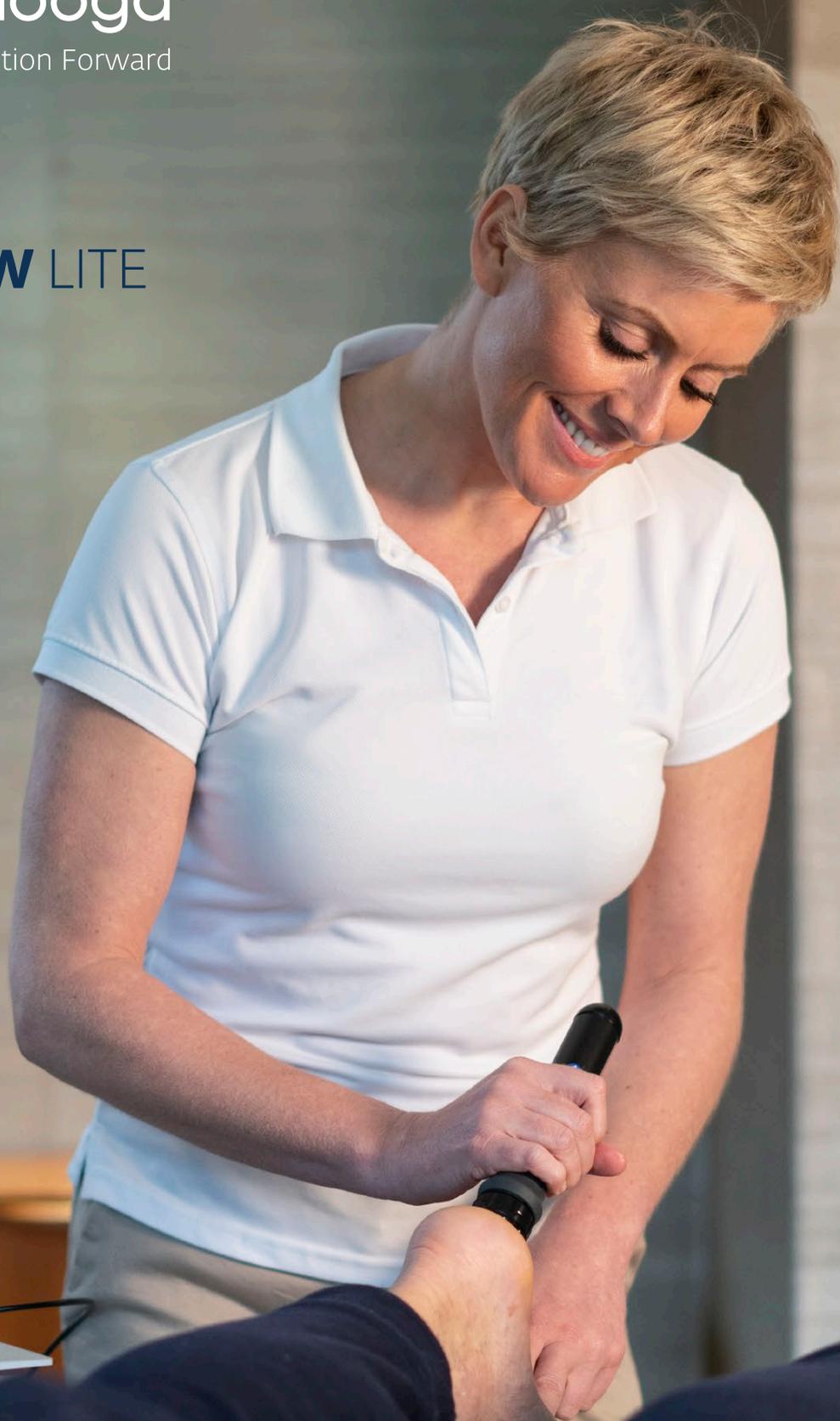




INTELECT® **RPW** LITE

CLINICAL GUIDE



PROTOCOLS

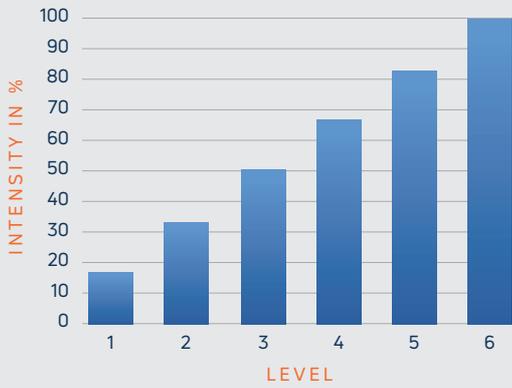
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With this guide we want to offer practical tips and guidelines for the most common indications for RPW Lite treatments. Recommendations in this chapter are based on published scientific literature. The recommended parameter settings refer to the Chattanooga[®] RPW Lite device only. Dosages provided are only a guide and are only applicable to the Chattanooga[®] RPW device. They tend to be on the conservative side but use your judgement and patient tolerance as a determinate.

Accurate diagnosis before starting RPW treatment is important. For insertional tendinopathies, differential diagnosis with acute bursitis is important as RPW is not recommended for acute inflammation.

Individual results may vary. Neither DJO, LLC, Inc. nor any of its subsidiaries dispense medical advice. The contents of this clinical guide do not constitute medical, legal, or any other type of professional advice.



Relationship between intensity and frequency		
INTENSITY	FREQUENCY	PRESSURE
1	18 Hz	0,3 bar _{eff}
2	16 Hz	0,8 bar _{eff}
3	10 Hz	1,2 bar _{eff}
4	9 Hz	1,7 bar _{eff}
5	8 Hz	2,2 bar _{eff}
6	6 Hz	2,7 bar _{eff}

The Intelect® RPW Lite offers an easy way to adjust the intensity level. Starting with a low level (step 1 at 18Hz) up to maximum energy release (step 6 at 6 Hz). The frequency changes automatically based on the intensity.

Bar_{eff} represents the efficient pressure generated in the handpiece. This value can't be compared with the bar pressure generated by the compressor.

SPARROW™ is a registered trade mark of Storz medical AG



D20-S BLACK RPW LITE

Standard Oscillator, 20mm transmitter for muscle and connective tissue.

Penetration depth: 0-50mm
Intensity level: Medium



Ro40 BLACK RPW LITE

15 mm beam transmitter for any type of tendinopathy.

Penetration depth: 0-35mm
Intensity level: Medium



D20-T BLACK RPW LITE

Golden Oscillator 20mm transmitter for professional athletes. High energy application.

Penetration depth: 0-50mm
Intensity level: Very high



C15 CERAmA-x® BLACK RPW LITE

CERAmA-ax® Ceramic Energy 15mm transmitter for any type of tendonopathies.

Penetration depth: 0-35mm
Intensity level: High



DI15 BLACK RPW LITE

Golden Depth, 15mm Deep Impact® transmitter for deep target areas, chronic disorders and local trigger points.

Penetration depth: 0-50mm
Intensity level: High



PLANTAR FASCIITIS

PATIENT POSITION

- Prone position with feet hanging over the end of the table or with feet supported on a roll
- Keep fascia in a slightly stretched position (dorsiflexion and hallux extension)
- You may start with the calf trigger point treatment in order to familiarize the patient with RPW in muscle tissue, before moving to treatment of the painful and sensitive plantar fascia



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	Most painful area (identified with palpation or RPW)	Move RPW head from medial to lateral and vice versa. Repeat until the transmitter moves transversely over the plantar fascia without resistance.	2-3	3000	C15 (without gel) Ro40
PAINFUL SPOTS	On the foot sole from the metatarsal heads to the heel. Most painful spots are often in the lateral and central part of the foot	Small circular movements on pain points	2-3	2000	DI15, Ro40
TRIGGER POINTS	Calf muscle	Calf muscle in a slightly stretched position. From distal to proximal with a slow gliding movement from lateral to medial. Small circular movements on TP until pain relief. Most painful spots are often in the lateral and upper part of the muscles. Take care around the superior tibiofibular joint as this could be uncomfortable	2-3	1000 per TP	Ro40, DI15, D20-S
MUSCLE SMOOTHING	Foot sole Calf	The handpiece is moved slowly along the skin surface in muscle fibre direction, from distal to proximal without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-4	2000	D20-S

ACHILLES TENDINOPATHY

PATIENT POSITION

- Prone position with feet hanging over the end of the table or with feet supported on a roll
- Keep tendon in a slightly stretched position
- You may start with the calf trigger point treatment in order to familiarize the patient with RPW in muscle tissue, before moving to treatment of the painful and sensitive plantar fascia
- Differential diagnosis with acute retrocalcaneal bursitis!



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	Most painful area (midportion or insertion)	Move RPW head from medial to lateral and vice versa in transverse direction over the tendon or tendon insertion, concentrating on the painful areas. Pay attention to patient feedback	3-4	2000	C15 (without gel) Ro40
PAINFUL SPOTS	Applying RPW at medial side of the tendon may help finding the most painful spot in the tendon	Small circular movements on pain points. Hold applicator in pencil grip	3-5	1500-2000	DI15, Ro40
TRIGGER POINTS	Calf muscle	Calf muscle in a slightly stretched position. From distal to proximal with a slow gliding movement from lateral to medial. Small circular movements on TP until pain relief. Most painful spots are often in the lateral and upper part of the muscles	2-3	1000 per TP	Ro40, DI15 (calf)
MUSCLE SMOOTHING	Calf muscle	The handpiece is moved slowly along the skin surface in muscle fibre direction, from distal to proximal without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-4	2000	D20-S

PATELLAR TENDINOPATHY

PATIENT POSITION

- Patient lies supine with a small pillow under the knees
- If the pain is located at the infrapatellar part of the tendon use one hand to tilt patella upwards



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	<ul style="list-style-type: none"> • Inferior patella pole • Tibial insertion 	Lateral/diagonal placement of the RPW transmitter, primarily between "4 o'clock and 8 o'clock". Slow movement from inside to outside and reverse	3-4	1500-2500	C15 (without gel) Ro40
PAINFUL SPOTS	PT pathology typically occurs at the enthesis site	Small circular movements on pain points. Hold applicator in pencil grip for stable application	2-4	1500=2000	Ro40
TRIGGER POINTS	M. quadriceps	Start the treatment at the upper part of m. rectus femoris and move it transversely down with a slow gliding movement towards 3-4 cm proximal to the patella. When you find a painful spot stay there until pain relief with small circulating movements. Also treat the more lateral part of the muscle towards iliotibial band. Most painful spots are often in the distal 1/3 and lateral part of the muscle	2-3	300-1000 per TP	Ro40, DI15
MUSCLE SMOOTHING	M. quadriceps	The handpiece is moved slowly along the skin surface in muscle fibre direction with special attention to the tender and tight spots	4-5	2000-2500	D20-S

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ILIOTIBIAL BAND SYNDROME

PATIENT POSITION

- Patient lies on their side with the treated leg on top. Put a small pillow or towel between the patient's knees in a slightly flexed (30°) position



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	Locate most tender spot by palpation or with RPW	Move RPW head in transverse direction over the tendon or tendon insertion, long pausing on the painful areas. Pay attention to patient feedback	3-4	1500-2500	C15 (without gel) Ro40
PAINFUL SPOTS	Along the ITB Lateral femoral epicondyle (friction syndrome)	Small circular movements on pain points	2-4	1500-2000	Ro40
TRIGGER POINTS	Tensor fascia latae Iliotibial band	Start the treatment to TFL MTPs. As TFL blends with the ITB also treat distal to the greater trochanter and move with a slow gliding movement distally to 5 cm from the knee joint line. When you find a painful spot stay there until pain relief with small circulating movements	2-4	300-1000 per TP	Ro40, D115
MUSCLE SMOOTHING	Tensor fascia latae Iliotibial band	The handpiece is moved slowly along the skin surface in muscle fibre direction with special attention to the tender and tight spots	3-5	2000-2500	D20-S

PES ANSERINUS TENDINOPATHY

PATIENT POSITION

- Patient lies supine with the affected knee in 90° flexion and slight external rotation, keeping the tendons in a slightly stretched position



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
PAINFUL SPOTS	Pes anserinus tendon (combined tendon of m. semitendinosus, m. gracilis, m. sartorius) and insertion area on medial side of proximal tibia	Treat the painful spots in the tendon and tendon insertion with small circular movements	3-5	1500-2500	D115, Ro40
MUSCLE SMOOTHING	M. semitendinosus M. gracilis M. sartorius	The handpiece is moved slowly along the skin surface in muscle fibre direction, from distal to proximal without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	2-4	2000	D20-S

MEDIAL TIBIAL STRESS SYNDROME (SHIN SPLINTS)

PATIENT POSITION

- Patient lies supine with a small pillow under the knees
- Prone position for calf treatment



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
PAINFUL SPOTS	The entire muscle region along the medial tibial border (m. flexor m. digitorum longus, m. soleus, m. tibialis posterior)	Small circular movements on pain points. Keep the handpiece tangentially to the tibial border (in order not to apply shockwaves to the bone as this is very painful)	4-6	1500-2500	DI15, Ro40
TRIGGER POINTS	Calf muscle	Calf muscle in a slightly stretched position. From distal to proximal with a slow gliding movement from lateral to medial. Small circular movements on TP until pain relief. Most painful spots are often in the lateral and upper part of the muscles	2-3	300-1000 per TP	Ro40, DI15 (calf)
MUSCLE SMOOTHING	Calf	The handpiece is moved slowly along the skin surface in muscle fibre direction, from distal to proximal without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	2-4	2000	D20-S

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COCCYDYNIA

PATIENT POSITION

- The patient lies in the prone position with small pillow or towel under the feet



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
PAINFUL SPOTS	Most tender spots located by palpation of tailbone area	Small circular movements on pain points	3-5	2000	Ro40
MUSCLE SMOOTHING	Especially parasacral and paracoccygeal region	The handpiece is moved slowly along the skin surface in muscle fibre direction with special attention to the tender and tight spots	4-6	2000-2500	D20-S

LUMBAGO

PATIENT POSITION

- Lying prone position. If possible, the pelvis should be slightly elevated to reduce the lordosis for a better localization of the facet or the SI joints
- Bilateral treatment is recommended even if only unilateral pain is present
- Do not apply RPW on the inferior costal arch or on the iliac crest



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
PAINFUL SPOTS	Palpate the most tender spots in the joints/ligaments/ muscles in sacro-lumbar area and along the pelvic rim where the gluteal muscles inserts	Apply small circular movements	3-5	2000	DI15, Ro40
TRIGGER POINTS IN M. QUADRATUS LUMBORUM	M. quadratus lumborum bilateral, in the muscle portion between inferior costal arch (cranial) and iliac crest (caudal)	Move RPW head from distal to proximal and from lateral to medial side of the muscle and apply small circular movements on TP until pain relief. You will often find the most painful spots in the medial and lower part of the muscle. Avoid the spinous processes	4-6	300-1000 per TP	Ro40, D20-S
MUSCLE SMOOTHING	Lumbar and gluteal muscles	The handpiece is moved slowly along the skin surface in muscle fibre direction, from distal/caudal to proximal/cranial without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-4	2000	D20-S

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CERVICALGIA - TRIGGER POINTS & MYOFASCIAL PAIN

PATIENT POSITION

- Sitting or lying prone position
- Slightly stretch the muscles e.g. by rotating patient's head away from the treated area
- Bilateral treatment is recommended even if only unilateral pain is present.



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
TRIGGER POINTS TRAPEZIUS	Palpate most painful spots in m. trapezius m. levator scapula m. rhomboideus	<ul style="list-style-type: none"> • Small circular movements on pain points • Treat descending trapezius preferably from dorsal to ventral side through the free muscle margin • Levator scapula insertion at medial sup. angle of scapula: perpendicular direction through trapezius muscle with arm of patient in adduction and internal rotation hand on back • Levator scapula muscle belly : treat ventral side of anterior-margin of trapezius muscle 	3-4	2000-4000	DI15, Ro40
MUSCLE SMOOTHING	M. trapezius , m. levator scapula, m. rhomboideus Paravertebral muscles	The handpiece is moved slowly over the muscles without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-5	2000	D20-S

INFRASPINATUS TENDINOPATHY

PATIENT POSITION

- Sitting or prone lying position
- The arm must be in a position so the tendon can be slightly stretched and brought further laterally from under acromion. In a sitting position ask the patient to move the arm in front of the body e.g. by holding the hand at the other shoulder



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	Infraspinatus tendon insertion on greater tubercle	Move RPW head in transverse direction over the tendon or tendon insertion, concentrating on the painful areas. Pay attention to patient feedback	2-4	2000-4000	C15 (without gel) Ro40
PAINFUL SPOTS	Infraspinatus tendon and insertion on greater tubercle	Small circular movements on pain points	2-5	1500=2000	Ro40, DI15
TRIGGER POINTS	M. infraspinatus	Patient in sitting position. Bring small tension to the muscle by asking the patient to put their hand on their hip With slow gliding movement treat over the palpated MTP	3-6	300-1000 per TP	Ro40
MUSCLE SMOOTHING	M. supraspinatus	The handpiece is moved slowly along the superior border of the scapula without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-4	2000	D20-S

SUPRASPINATUS TENDINOPATHY

PATIENT POSITION

- Sitting or supine lying position
- Bring the treated arm behind the back so that the tendon insertion lies anterior to the acromion



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	Supraspinatus tendon insertion on greater tubercle	Move RPW head in transverse direction over the tendon or tendon insertion, concentrating on the painful areas. Pay attention to patient feedback	3-5	2000-4000	C15 (without gel) Ro40
PAINFUL SPOTS	Supraspinatus tendon and insertion on greater tubercle	Small circular movements on pain points	4-6	1500=2000	Ro40, DI15
TRIGGER POINTS	M. levator scapulae	Patient in sitting position. Bring small tension to the muscle by asking the patient to do a small abduction with scapula on treated side and a small flexion/rotation towards contralateral side. With slow gliding movement treat from the insertion part of m. levator scapulae and move down along the medial border of the scapula over the m. rhomboid	4-6	300-1000 per TP	Ro40
MUSCLE SMOOTHING	M. supraspinatus	The handpiece is moved slowly along the superior border of the scapula without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-5	2000	D20-S

LATERAL EPICONDYLITIS ELBOW

PATIENT POSITION

- Sitting with arm laying on the table or supine lying position
- Elbow flexed 90° and pronated when treating the insertion of m. extensor carpi radialis brevis but more extended when treating the tendon
- Elbow extended and supinated for Medial epicondylitis



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
PAINFUL SPOTS	M. extensor digitorum brevis/longus. Localise painful spots by palpation or with RPW	Small circular movements on pain points	3-4	1500=2000	Ro40, D115
TRIGGER POINTS	M. extensor carpi radialis	Have the elbow in a slightly flexed position. Treat the most painful spots in the muscles until pain relief from the proximal to the distal part of the muscle. You will often find the most painful spots in the proximal part of the muscle	3-4	300-1000 per TP	Ro40, D20
MUSCLE SMOOTHING	M. extensor carpi radialis	The handpiece is moved slowly along the wrist extensors without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-5	2000	D20-S

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MEDIAL EPICONDYLITIS ELBOW

PATIENT POSITION

- Supine lying position
- External rotation and supination of the forearm with elbow flexed 30-40°



TREATMENT MODE	WHERE	HOW	ENERGY	PULSES	TRANSMITTER
CROSS-FRICTIONS	Insertion of involved flexors/pronators (pronator teres, flexor carpi radialis, flexor carpi ulnaris, flexor digitorum superficialis, and palmaris longus) on medial epicondyle	Move RPW head in transverse direction over tendon insertion, pausing for longer on the painful areas. Pay attention to patient feedback	2-3	1800-2500	C15 (without gel) Ro40
PAINFUL SPOTS	M. pronator teres, flexor carpi radialis, flexor carpi ulnaris, flexor digitorum superficialis, and palmaris longus. Localise painful spots by palpation or RPW	Small circular movements on pain points	2-4	1500-2000	D115, R15, Ro40
TRIGGER POINTS	M. pronator teres, flexor carpi radialis, flexor carpi ulnaris, flexor digitorum superficialis, and palmaris longus	Have the elbow in a slightly flexed position. Treat the most painful spots in the muscles until pain relief from the proximal to the distal part of the muscle. You will often find the most painful spots in the proximal part of the muscle	3-5	300-1000 per TP	Ro40
MUSCLE SMOOTHING	M. pronator teres, flexor carpi radialis, flexor carpi ulnaris, flexor digitorum superficialis, and palmaris longus	The handpiece is moved slowly along the wrist extensors without exerting any pressure, but with uninterrupted transmitter coupling (gel) until relaxation in the tissue	3-5	2000	D20-S

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CLINICAL INFORMATION

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