

HIGH-END AUTOMATED PRODUCTION LINE FOR DRYWALL PROFILES (Knauf Type)

Manufacturer: ROLLFEN Mühendislik | **Project Year:** 2024 (Fully CE Compliant)

For sale is a complete, technologically advanced, and high-capacity industrial line for automated sheet metal forming, roll forming, and automated packing and palletizing of steel profiles for drywall construction (gypsum boards). The line covers the entire cycle – from raw material decoiling to fully packed and transport-ready pallets.

1. PRODUCT RANGE (PROFILE TYPES)

The line is equipped with tooling and rollers to manufacture all standard wall and ceiling profiles:

- **Wall profiles:** CW50, CW75, CW100 and UW50, UW75, UW100
- **Ceiling profiles:** CD60 and UD28

2. TECHNICAL SPECIFICATIONS AND CAPACITY

Rollforming Line:

- **Production Speed:**
 - Up to **60 m/min** (without punching)
 - Up to **30 m/min** (with 2 punched holes per profile)
- **Infeed Material & Thickness:** Galvanized sheet metal DX51D+Z (thickness from 0.50 mm to 0.70 mm)
- **Maximum Coil Width:** 197 mm
- **Power Consumption:** Total connected load 14 kW (actual consumption approx. **7 kWh**), power cable 5x10
- **Compressed Air Requirement:** 8 Bar (consumption during operation only 2 l/min, unit capacity 100 l/min)
- **Line Footprint (Layout):** 15 m (length) x 3 m (width) x 3 m (height)

Profile Packing & Palletizing System:

- **Packing Speed:** 2.5 bundles / minute
- **Bundle Dimensions:** Width from 90x15 mm to 275x110 mm | Finished profile length from 2000 mm to 6000 mm
- **Power Consumption:** Total connected load 30 kW (actual consumption approx. **12 kWh**), 3-phase 380 V connection
- **Compressed Air Requirement:** 8 Bar (consumption 7 l/min)

- **Packing Unit Footprint (Layout):** 7.5 m x 16.5 m x 3.5 m
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3. DETAILED COMPONENT OVERVIEW

1. De-Coiler

- Maximum coil width: 197 mm
- Outer coil diameter: up to 1200 mm
- **Loading Capacity:** up to 2500 kg
- Non-motorized (passive) system equipped with an integrated safety wire mesh fence.

2. Rollforming Machine

- Conventional type with manual roller changeover (**14–15 forming stations**).
- Shaft diameter: 40 mm | Maximum width between stands: 197 mm.
- Robust single-piece welded steel base, precision machined and painted in RAL 5012/7035 color combination.
- Roller shafts made of hardened and ground steel, supported on both ends. Top shafts are adjustable according to material thickness using a precise Vernier scale.
- Rollers engineered from high-grade **S 4140** alloy steel, precision machined and heat-treated to a hardness of **55–57 HRC** for an exceptionally long service life.

3. Flying Shear Cutting & Punching Unit

- Flying shear mounted on slides and rails for translational movement, driven by a servo motor and gearbox.
- Blades made of high-quality cold-work alloy steel, hardened to **60–62 HRC** (ensuring extremely clean and precise cuts without edge distortion).
- The entire assembly is protected by a safety fence.

4. Automatic Stacking, Strapping, and Palletizing System (GHT-SIC-V3)

- **Automatic Profile Interlocking:** A conveyor system transfers the profiles to the interlocking unit (setting up bundles of 4 profiles: 2+2). *Note: Smaller profiles (e.g., UD28) that are not suitable for automated stacking are easily discharged manually onto the operator's table.*
- **Automatic Strapping Machine:** High-speed brushless motors, capability of up to **65 strappings per minute**, electronic tension control (1–35 kg), and automated strap welding temperature control (strap widths: 5, 6, or 9 mm).

- **Automatic Electronic Fork Palletizer (Mod. 50kg):** Fully electronically controlled multi-axis movement via electro-brake drive with Inverters (frequency converters). This ensures extremely smooth acceleration/deceleration and gentle bundle handling to eliminate any risk of material damage.

5. Advanced CNC/PLC Control System

- Built with premium components from world-renowned brands (electric motors by **Gamak / Yılmaz Redüktor**, seals by **Kastaš**).
- **Industry 4.0 (IND 4.0 PLC)** controller with user-friendly parameter input (product lengths, quantities) via the central touch terminal.
- Stepless production speed regulation and full synchronization of all machines in the line.
- Integrated safety modules and emergency stop buttons.

BUYER BENEFITS

- **Turn-Key Factory Solution:** You are not just buying a profile machine, but a complete, fully synchronized system with automated packing and robotic palletizing, which drastically reduces labor costs.
- **Zero Lead Time / Instant Setup:** Avoid the long lead times of new machinery (typically 6–12 months) and startup risks. The line is tested, operational, and ready for immediate integration into your production.
- **Complete Documentation:** Included is the full technical documentation, mechanical drawings, electrical schematics, user manuals, and all relevant CE certificates.

CONTACT AND VIEWING

The line is sold exclusively as a **complete, fully operational unit**.

Viewing, detailed technical inspection, and live operational testing are available in production by prior appointment.

☎ **Phone:** +386 31 708 117

✉ **Email:** info@ekopleskar.si

VRHUNSKA AVTOMATIZIRANA PROIZVODNA LINIJA ZA SUHOMONTAŽNE PROFILE (Tip Knauf)

Proizvajalec: ROLLFEN Mühendislik | **Letnik projekta:** 2024 (Popolna skladnost s CE predpisi)

Prodaja se kompletna, tehnološko napredna in izjemno zmogljiva industrijska linija za avtomatsko preoblikovanje pločevine, profiliranje ter avtomatsko pakiranje in paletiranje jeklenih profilov za suhomontažno gradnjo (mavčne plošče). Linija vključuje celoten cikel – od odvijanja surovine do popolnoma zapakiranih in pripravljenih palet za transport.

1. PROIZVODNI ASORTIMAN (TIPI PROFILOV)

Linija je opremljena z orodji in valji za izdelavo vseh standardnih stenskih in stropnih profilov:

- **Stenski profili:** CW50, CW75, CW100 in UW50, UW75, UW100
- **Stropni profili:** CD60 in UD28

2. TEHNIČNE SPECIFIKACIJE IN ZMOGLJIVOST

Proizvodna enota (Rollforming Line):

- **Proizvodna hitrost:**
 - Do **60 m/min** (brez luknjanja)
 - Do **30 m/min** (z izdelavo dveh lukenj v profil)
- **Vhodni material in debelina:** Pocinkana pločevina DX51D+Z (debelina od 0,50 mm do 0,70 mm)
- **Maksimalna širina traku (Coil width):** 197 mm
- **Poraba energije:** Skupna priključna moč 14 kW (dejanska poraba cca. **7 kWh**), napajalni kabel 5x10
- **Potreba po stisnjenem zraku:** 8 Bar (poraba med delovanjem le 2 l/min, kapaciteta enote 100 l/min)
- **Tloris enote (Layout):** 15 m (dolžina) x 3 m (širina) x 3 m (višina)

Enota za avtomatsko pakiranje in paletiranje (Profile Packing System):

- **Hitrost pakiranja:** 2,5 paketa / minuto
- **Dimenzije paketov:** Širina od 90x15 mm do 275x110 mm | Dolžina končnih profilov od 2000 mm do 6000 mm
- **Poraba energije:** Skupna priključna moč 30 kW (dejanska poraba cca. **12 kWh**), 3-fazni priključek 380 V
- **Potreba po stisnjenem zraku:** 8 Bar (poraba 7 l/min)
- **Tloris pakirne enote (Layout):** 7,5 m x 16,5 m x 3,5 m

3. PODROBEN PREGLED SKLOPOV LINIJE

1. Odvijalec (De-Coiler)

- Maksimalna širina koluta: 197 mm
- Zunanji premer koluta: do 1200 mm
- **Nosilnost:** do 2500 kg
- Nemotoriziran (pasivni) sistem z integrirano varovalno žično ograjo.

2. Profilirni stroj (Rollforming Machine)

- Klasični konvencionalni tip z menjavo valjev (**14–15 profilnih postaj**).
- Premer gredi: 40 mm | Maksimalna širina med stojali: 197 mm.
- Robustno enodelno varjeno jekleno podnožje, strojno obdelano in barvano v RAL 5012/7035 kombinaciji.
- Gredi valjev iz kaljenega in brušenega jekla, podprte na obeh koncih. Zgornje gredi so nastavljive glede na debelino pločevine z natančno Vernierjevo skalo.
- Valji iz visokokakovostnega legiranega jekla **S 4140**, precizno obdelani in toplotno obdelani na trdoto **55–57 HRC** za izjemno dolgo življenjsko dobo.

3. Enota za luknjanje in odrez (Flying Shear Cutting & Punching Unit)

- Leteče škarje, nameščene na drisih in tirnicah za translatorsko gibanje, gnane preko servo motorja in reduktorja.
- Rezila iz legiranega jekla za delo v hladnem, kaljena na **60–62 HRC** (zagotavljajo izjemno čist in natančen odrez brez popačenj robov).
- Celoten sklop je zaščiten z varnostno ograjo.

4. Avtomatski sistem za zlaganje, vezanje in paletiranje (GHT-SIC-V3)

- **Avtomatsko spenjanje profilov:** Povezovalni sistem s trakovi prenese profile v skupino za sklapljanje (nastavljanje paketov 4 profilov: 2+2). *Opomba: Manjši profili (npr. UD28), ki niso primerni za strojno zlaganje, se odlagajo ročno na operaterski mizi.*
- **Avtomatski stroj za trakove (Strapping Machine):** Visokohitrostni brezkrtačni (Brushless) motorji, hitrost do **65 vezav na minuto**, elektronska kontrola natezne sile (1–35 kg) in nadzor temperature varjenja traku (širine 5, 6 ali 9 mm).
- **Avtomatski elektronski paletizator z vilicami (Mod. 50kg):** Popolnoma elektronsko voden sistem premikov po vseh oseh preko elektro-zavornega pogona z inverterji (frekvenčnimi pretvorniki). To zagotavlja izjemno mehke pospeške ter nežno manipulacijo s paketi brez tveganja za poškodbe materiala.

5. Napreden CNC/PLC nadzorni sistem

- Vgrajene komponente priznanih svetovnih blagovnih znamk (elektromotorji **Gamak / Yilmaz Redüktor**, tesnila **Kastaš**).
- **Industrija 4.0 (IND 4.0 PLC)** krmilnik z enostavnim vnosom parametrov (dolžine izdelkov, količine) preko osrednjega terminala.
- Brezstopenjska regulacija hitrosti proizvodnje in popolna sinhronizacija vseh strojev v liniji.
- Vgrajeni varnostni moduli in gumbi za zasilni izklop (Emergency stop).

PREDNOSTI ZA KUPCA

- **Celotna tovarniška rešitev (Turn-key):** Ne kupujete le stroja za profile, temveč celoten usklajen sistem z avtomatskim pakiranjem in robotiziranim paletizatorjem, kar drastično zmanjša stroške delovne sile.
- **Takojšnji zagon brez čakanja:** Izognite se dolgim dobavnim rokom novih strojev (6–12 mesecev) ter tveganjem in zamudam ob zagonu. Linija je preizkušena in pripravljena za takojšnjo integracijo v vašo proizvodnjo.
- **Popolna dokumentacija:** Priložena je celotna tehnična dokumentacija, strojni načrti, elektro sheme, navodila za uporabo in vsi pripadajoči CE certifikati.

KONTAKT IN OGLED

Linija se prodaja izključno kot **celovita, delujoča enota**.

Ogled, podroben tehnični pregled in preizkus delovanja v živo so možni v proizvodnji po predhodnem dogovoru.

Za več informacij, ceno in rezervacijo termina nas prosim kontaktirajte