

PH FITNESS

V-Frame Smith Machine

Smith Machine • Dual Cable • Pull-Up Bar • Dip Station • Low Row • Landmine
USER MANUAL & ASSEMBLY GUIDE | Model: V-Frame Smith



Your gym. Your performance. Your pace.

Model
V Frame Rack with Smith Machine

Document Type
User Manual

Version
1.0 — 2025

1. Safety Instructions

Read all safety instructions before assembling or using this equipment. Keep this manual in a safe place for future reference. Failure to comply may result in serious injury or death.

⚠ WARNING: Assembly requires a MINIMUM of 2 persons at all times. The machine weighs 230 kg gross. Never attempt solo assembly.

⚠ WARNING: Inspect all cables, pulleys, J-hooks and bolts before EVERY use. Do not use the machine if any component shows wear, damage or looseness.

⚠ WARNING: Never exceed: 300 kg maximum barbell load on Smith machine.

1.1 General Safety

- For persons in good physical health only. Consult your physician before starting any training programme.
- Ensure all bolts are tightened to specification before every session.
- Keep children and pets away from the machine at all times.
- Wear closed-toe athletic footwear and appropriate clothing. No loose clothing near moving parts or cables.
- Never insert hands, fingers or objects into pulleys, cable channels or guide rods.
- Stop immediately if you feel dizziness, nausea, chest pain or unusual discomfort.
- Maintain minimum 150 cm of free training space in front of the machine.
- Do not modify any structural component — this voids the warranty and creates safety risks.

1.2 Smith Machine Safety

- Always engage J-hook safety locks before loading weight onto the bar.
- Maximum barbell load: 300 kg. Never exceed this limit under any circumstances.
- Set safety spotter arms 5–10 cm BELOW your lowest point of movement before every set.
- Never adjust barbell J-hook position while weight plates are loaded.
- The Smith machine bar moves on a fixed vertical path — train accordingly.
- Always rack the bar fully before dismounting weight plates.

1.3 Cable System Safety

- Inspect cables for fraying, kinking or corrosion before each session. Replace immediately if damage is found.
- Stacks are expandable — never overload beyond rated capacity.
- Both cable stacks are fully independent — always lower weight slowly and under control.
- Always confirm pulley carriage locking knob is fully engaged before applying load.
- Never release a loaded cable handle without maintaining full control.

1.4 Assembly Safety

- Two persons required for assembly at all times. Never attempt solo assembly.
- Fully torque all bolts before applying any load. Re-check after the first 2 weeks of use and every 3 months thereafter.
- Required assembly area: minimum 3.5 m × 3.0 m clear floor space.

2. Product Overview

The PH Fitness V-Frame Smith Machine is a complete corner-station combining a guided Smith machine, dual 80 kg cable system, multi-grip pull-up bar, adjustable dip station, low row with foot plate and integrated landmine base — all within a 122 cm depth footprint designed for corner or wall placement.



2.1 Integrated Stations at a Glance

Smith Machine	Rail-guided barbell system, J-hook safety locks at all positions, max 300 kg
Dual Cable System	2 × 80 kg independent stacks, 180° rotating + height-adjustable pulleys
Pull-Up Bar	Multi-grip: wide, close and neutral grip positions
Dip Station	Adjustable height dip handles on both uprights
Low Row Station	Low pulley with diamond-plate non-slip foot plate
Landmine Base	Integrated barbell pivot for rotational & functional exercises
Safety Spotter Arms	Adjustable spotter arms for Smith machine safety catches
J-Hook System	Multiple height positions on both uprights for bar racking

3. Technical Specifications

3.1 Frame & Construction

Model	V-Frame Smith Machine
Frame Material	High-grade steel, black powder coating
Machine Design	Corner/wall V-frame — 74 cm depth footprint
Machine Weight	230 kg (gross)
Maximum Load	300 kg (Smith machine barbell)
Surface Finish	Industrial black powder coating

3.2 Dimensions

Length (Width)	190 cm (including Smith bar extensions: 190 cm)
Depth	122 cm — optimised for corner placement
Height	210 cm
Training Clearance	Minimum 210 cm in front required
Min. Ceiling Height	240 cm recommended
Bar Travel Width	130 cm between uprights

3.3 Cable & Weight System

Cable Stacks	2 × 80 kg, fully independent
Total Stack	160 kg (expandable)
Pulley System	Dual adjustable cable system
Pulley Rotation	180° rotating pulley heads
Pulley Adjustment	Full column height range
Cable Type	High-tensile steel wire rope

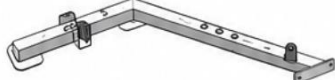
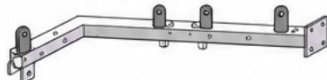
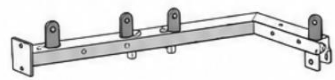
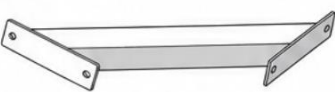
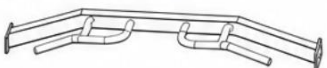
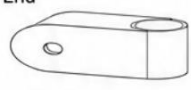
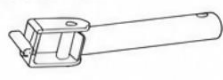
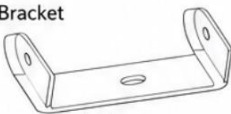
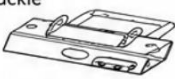
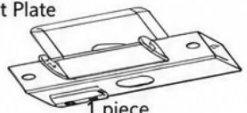
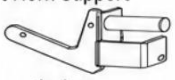
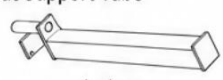
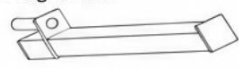
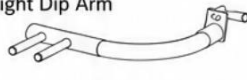
3.4 Warranty & Delivery

Warranty	2 years from date of purchase
Delivery	Free home delivery
Assembly	Self-assembly — minimum 2 persons required
Intended Use	Home gym & semi-commercial use
Support	Dutch-language customer support — phfitness.nl

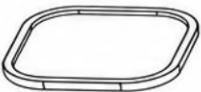
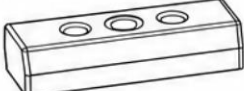
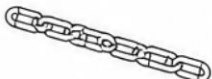
NOTE: FID bench, Olympic barbell, bumper plates, and lat pulldown seat are NOT included and are sold separately. See phfitness.nl for compatible accessories.

4. Parts Identification

Before starting assembly, unpack all components onto a clean protected surface and verify each item against the diagrams below. Contact PH Fitness immediately if any part is missing or damaged.

PART LIST		
1 Left Top Support  1 piece	2 Left Side Rail  1 piece	3 Right Side Rail  1 piece
4 Left Weight Support  1 piece	5 Right Weight Support  1 piece	6 Top Cross Beam  1 piece
7 Brand Plate  1 piece	8 Multi Grip Chin Bar  1 piece	9 Lat Bar  1 piece
10 Adjustable Spacer  1 piece	11 Adjustable Bar  1 piece	12 Sleeve Tube  2 pieces
13 Handle Assembly  2 pieces	14 Cable End  2 pieces	15 Lock Latch  2 pieces
16 Guide Rod  4 pieces	17 Hole Bar  2 pieces	18 Cable End (Threaded)  2 pieces
19 Seat / Back Cushion  1 piece	20 Selector Pin  1 piece	21 U-Bracket  1 piece
22 Belt Buckle  1 piece	23 Belt Plate  1 piece	24 Backrest Plate  2 pieces
25 Foot Plate Bracket  1 piece	26 Weight Horn Support  1 piece	27 Seat Support Tube  1 piece
28 Weight Horn  1 piece	29 Left Dip Arm  1 piece	30 Right Dip Arm  1 piece
 NOTE: Tighten all bolts and nuts securely after assembly.		

PART LIST

31  5 pieces	32  6 pieces	33  2 pieces
34  18 pieces	35  2 pieces	36  20 pieces
37  Steel wire rope 2 pieces	38  Martinscrew M10x70 20 pieces	39  M10 x 45 18 pieces
40  M10x70 4 pieces	41  M10x55 2 pieces	42  M10x110 4 pieces
43  M8 x 35 4 pieces	44  M8 x 20 4 pieces	45  2 pieces
46  1 piece	47  M10 46 pieces	48  Ø10 washer 74 pieces
49  17-19 wrench 1 piece	50  6MM hex wrench 1 pieces	51  1 piece
52  4MM hex wrench 1 piece	53  2 pieces	54  4 pieces
55  2 pieces	56  2 pieces	57  2 pieces



NOTE: Tighten all bolts and nuts securely after assembly.

5. Assembly Instructions

⚠ WARNING: MINIMUM 2 PERSONS REQUIRED. Do not fully tighten any bolt until all parts in each step are in position. Estimated assembly time: 90–120 minutes.

i NOTE: Tools required: 17–19 mm wrench (#49), 6 mm hex wrench (#50), 4 mm hex wrench (#52). All included in hardware bag.

5.1 Before You Begin

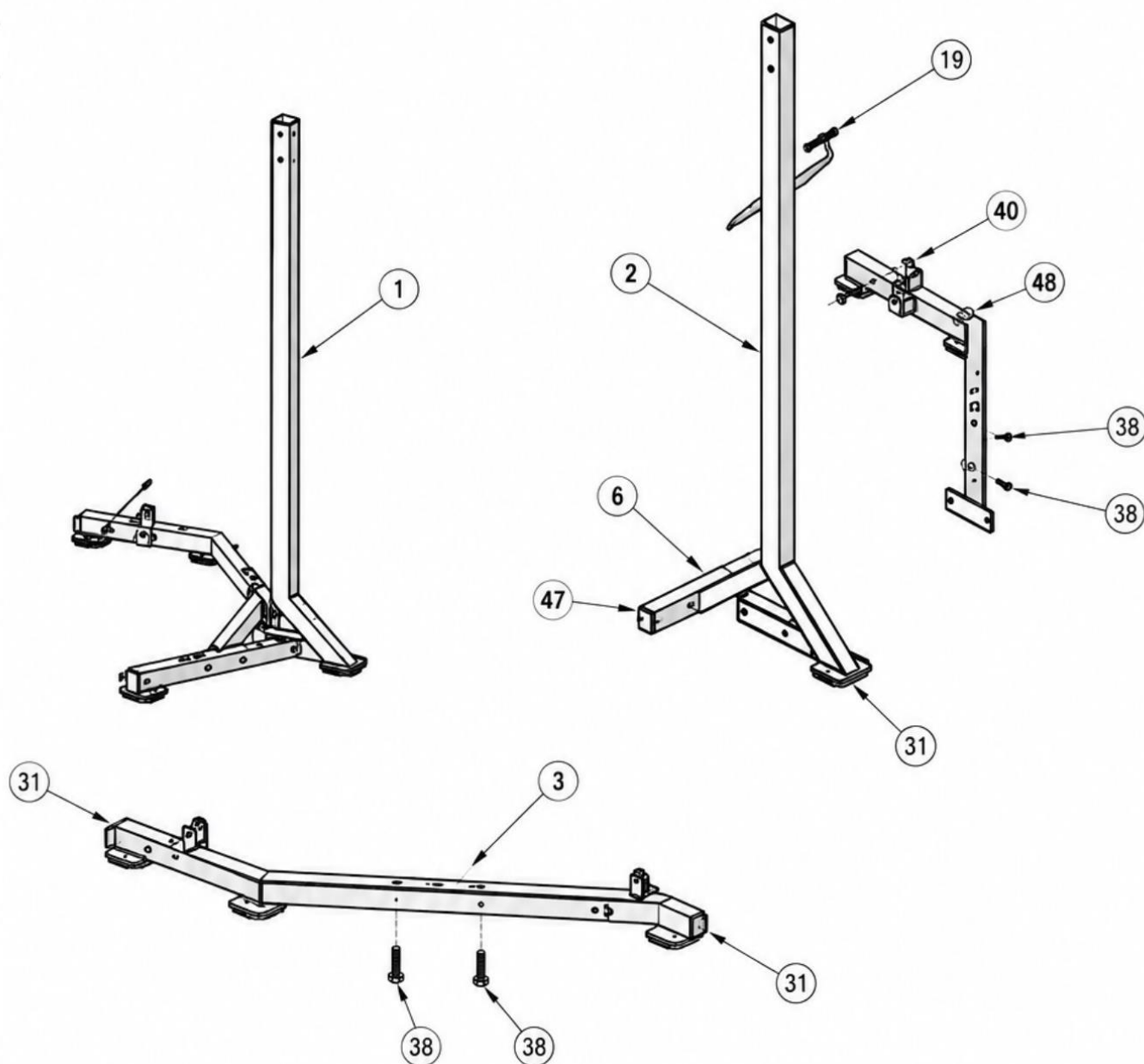
1. Clear an area of at least 3.5 m × 3.0 m for safe assembly access.
2. Verify floor is level using a spirit level.
3. Rubber gym flooring (minimum 15 mm) is strongly recommended.
4. Verify ceiling height is minimum 240 cm (machine stands 210 cm).
5. Lay all parts out and cross-reference against the parts list before starting.
6. Remove all protective tapes and packaging from every component.
7. Sort all fasteners by size into separate containers before starting.

Troubleshooting

Problem	Likely Cause	Solution
Smith bar binds or sticks	Rails dry; carriage bearing dirty	Clean rails; apply light machine oil; inspect carriage bearings
J-hook slips out of position	Lock not fully engaged in hole notch	Rotate bar until hook seats fully; check J-hook condition
Cable feels jerky or uneven	Cable off pulley groove; routed incorrectly	Unload stack; re-seat cable in all pulley grooves per Fig. 8
Weight stack rattles noisily	Guide rods need lubrication; plates misaligned	Oil guide rods; realign all plates; check selector pin
Machine rocks or vibrates	Uneven floor; base bolts loose; rubber feet worn	Re-level machine; tighten base bolts; replace worn feet
Pulley carriage slips down	Locking knob not fully engaged	Turn knob clockwise with firm force until it positively stops
Cable grinding noise	Pulley wheel dry or debris in groove	Clean pulley grooves; apply dry silicone lubricant
Smith bar rattles in carriage	Carriage bolts loose; bearing worn	Tighten carriage bolts; contact PH Fitness if bearing worn
Pull-up bar creaks	Mounting bolts have loosened with use	Re-tighten M10×45 bolts (#39) at all bar connection points
Frame vibrates under heavy loads	Structural bolt loosening over time	Full torque check all M10/M8 bolts — do not train until done

1**Assemble the Base Frame and Uprights**

Attach the left and right upright frames to the base assembly. Install the side adjustment brackets and support components onto the uprights. Ensure all frame sections are aligned correctly before fully tightening the hardware.



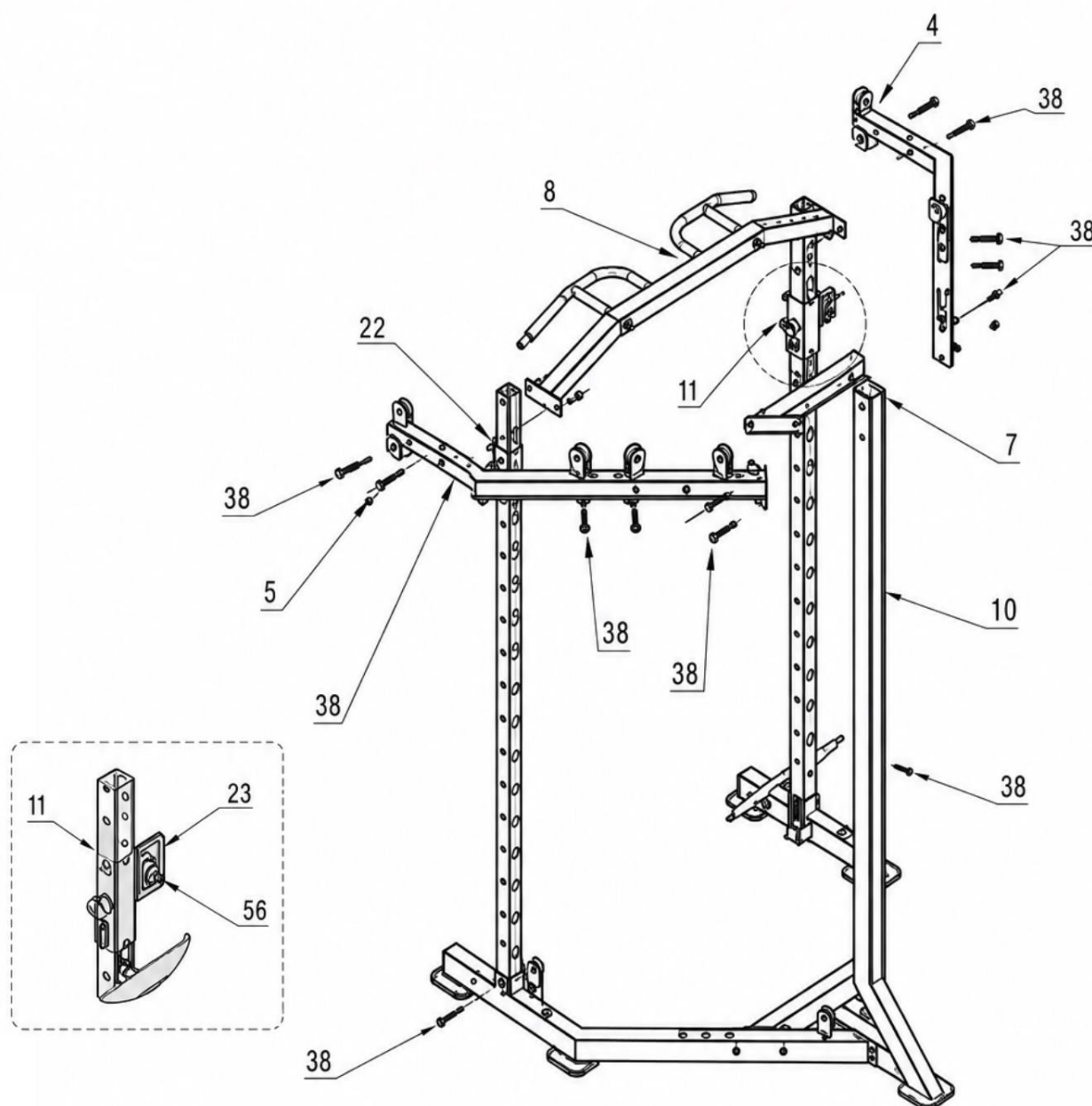
No.	Part	Qty
1	Left Upright Assembly	1 PC
2	Right Upright Assembly	1 PC
3	Rear Base Frame	1 PC
6	Center Base Support	1 PC
19	Safety Hook	1 PC

No.	Part	Qty
31	End Cap	4 PCS
38	Hex Bolt M10 × 70	4 PCS
40	Hex Bolt M10 × 45	1 PC
47	Hex Bolt M10 × 110	2 PCS
48	Spacer Ø10 × Ø20 × 10	1 PC

2

Install the Upper Frame Assembly

Attach the upper crossmembers and pull-up frame to connect both uprights. Install the guide rails and upper support brackets in the correct orientation as shown. Leave all bolts slightly loose until the complete upper structure is assembled and aligned.

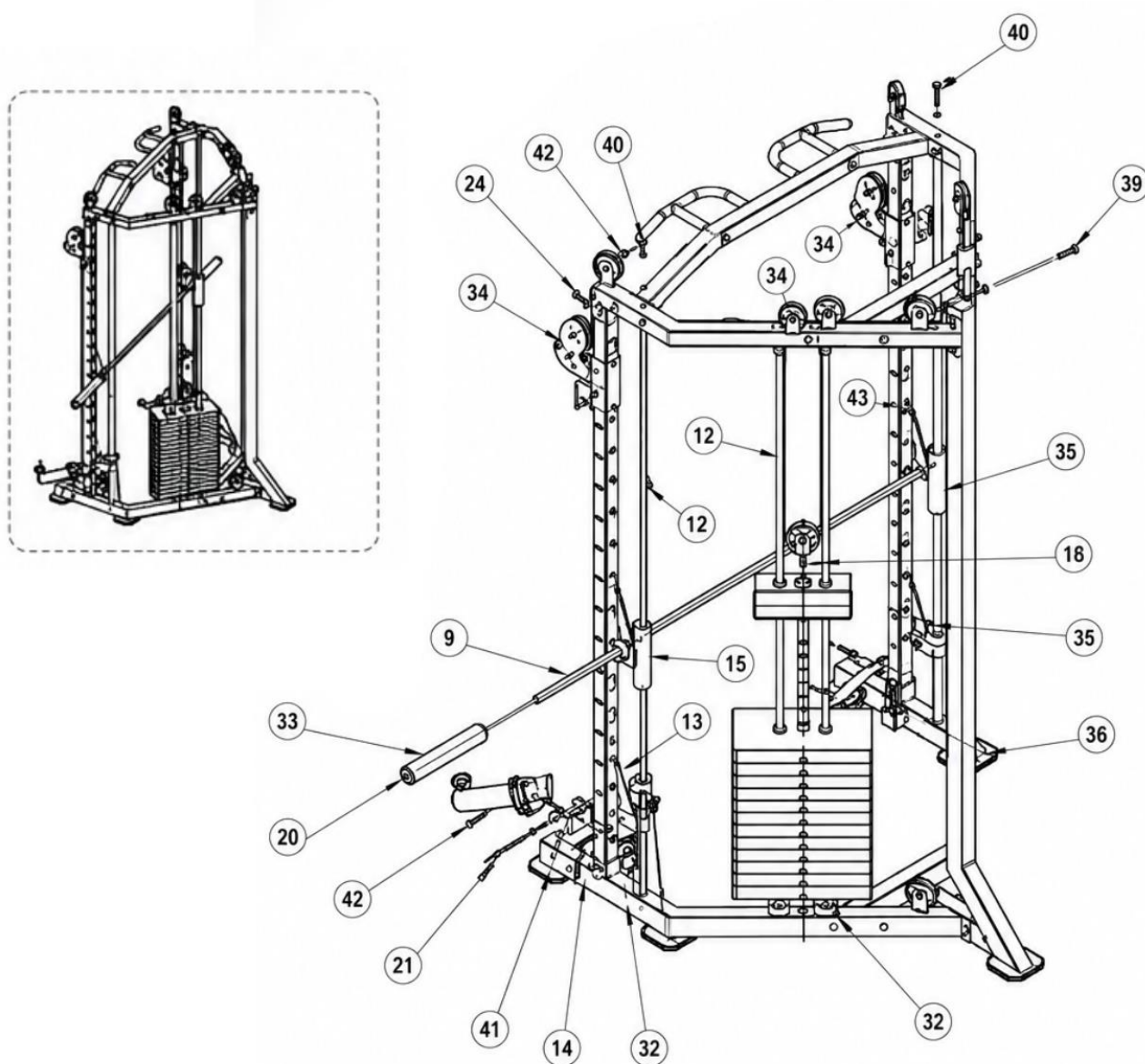


No.	Part	Qty
4	Right Upper Bracket	1 PC
5	Left Upper Bracket	1 PC
7	Right Upright Assembly	1 PC
8	Multi Grip Chin Bar	1 PC
10	Left Upright Assembly	1 PC

No.	Part	Qty
11	Left Pulley Support	1 PC
22	Right Pulley Support	1 PC
23	Cable Guide Bracket	1 PC
56	Adjustable Hook	1 PC
38	Hex Bolt M10 x 70	12 PCS

3**Install the Weight Stack and Pulley System**

Insert the guide rods and slide the weight plates into position. Install the selector rod, top plate assembly, pulleys, and cable support components. Secure all pulley brackets and verify that the weight stacks move smoothly along the guide rods before tightening all hardware.



No.	Part	Qty
9	Lat Bar	1 PC
12	Guide Rod	2 PCS
13	Selector Pin	1 PC
14	Cable End (Threaded)	1 PC
15	Handle Assembly	1 PC
16	Weight Stack Rod	2 PCS
17	Weight Stack	1 PC
18	Cable	1 PC

No.	Part	Qty
20	Foot Plate Bracket	1 PC
21	Weight Horn Support	1 PC
24	Left Cable Pulley	1 PC
32	End Cap	4 PCS
33	Sleeve	2 PCS
34	Pulley Ø90	4 PCS
35	Cable Guide	1 PC
36	Right Upright Assembly	1 PC

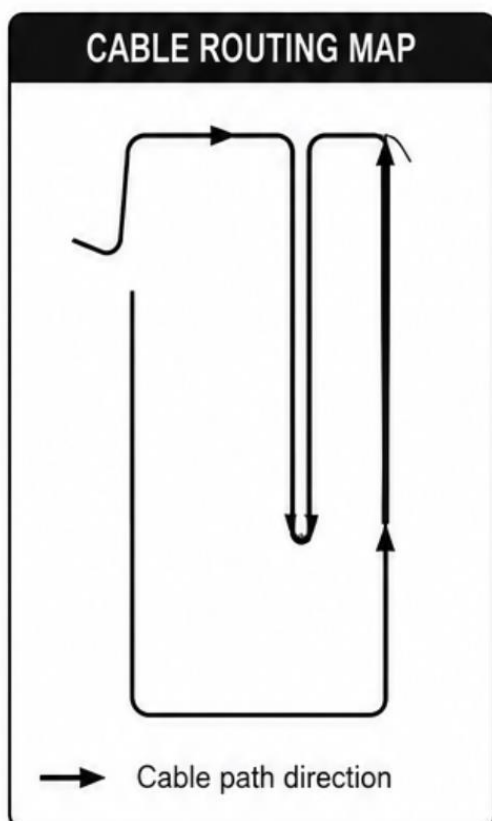
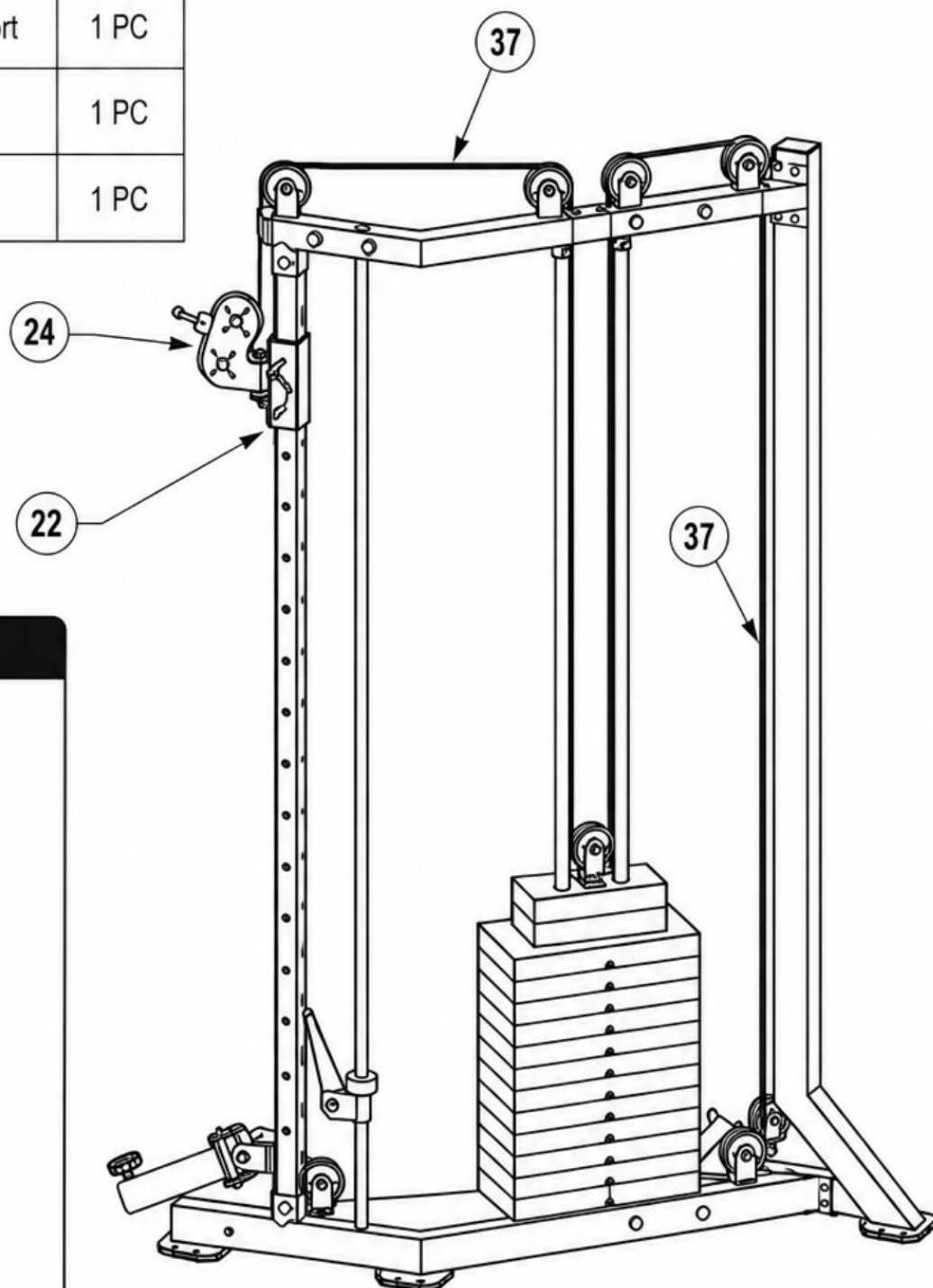
No.	Part	Qty
39	Hex Bolt M10 × 70	4 PCS
40	Hex Bolt M10 × 45	4 PCS
41	Hex Bolt M10 × 55	1 PC
42	Washer Ø10	6 PCS
43	Bushing	1 PC
45	Lock Latch	1 PC

4

Route and Secure the Cables

Route each cable through the pulleys following the cable path shown in the diagram. Ensure the cables sit correctly in every pulley groove and remain free from twists. Secure the cable ends and adjust the tension as required. Check that the pulley system operates smoothly through the full range of motion.

No.	Part	Qty
22	Right Pulley Support	1 PC
24	Left Pulley	1 PC
37	Cable	1 PC



7. Station Operating Instructions

7.1 Smith Machine Station

The Smith machine uses chrome guide rails with a carriage system for smooth, controlled barbell travel. The bar is locked and unlocked by rotating it clockwise to engage / anti-clockwise to release from J-hook positions.

8. Set J-hook height: position both hooks at equal height, appropriate for the exercise.
9. Load weight plates onto the bar. Grip bar and rotate ANTI-CLOCKWISE to release from hooks.
10. Perform exercise. To rack, guide bar to hooks and rotate CLOCKWISE to lock.
11. Verify hooks are fully engaged before releasing — bar must not move when pushed up.
12. Set safety spotter arms 5–10 cm BELOW lowest travel point before every set.

7.2 Dual Cable System — Pulley Height Adjustment

13. Turn locking knob (#45) ANTI-CLOCKWISE to release pulley carriage.
14. Slide carriage to desired height position along the column.
15. Turn locking knob CLOCKWISE firmly until it stops — must not be able to move.
16. Tug carabiner firmly to confirm carriage is locked before loading weight.
17. Select weight by inserting selector pin through desired numbered plate.

7.3 Pull-Up Bar Station

- Wide overhand grip (outer sections): targets latissimus dorsi.
- Close neutral grip (inner arch sections): targets lats and brachialis.
- Chin-up grip (underhand on straight bar): biceps and lats.
- Hanging knee / leg raises: core and hip flexors.

7.4 Dip Station

Dip handles (#25, #26) mount on the outer uprights and are height-adjustable. Set handles at equal height. Grip firmly, lower body until elbows reach 90°, then push back to start.

18. Set both dip handles to the same height position on the uprights.
19. Grip handles firmly, mount with arms fully extended.
20. Lower body with elbows tracking rearward until 90° elbow flexion.
21. Push back to full extension. For chest-focused dips, lean slightly forward.

7.5 Low Row Station

The low row station uses the low cable pulley with the diamond-plate foot pad. Sit facing the machine, feet on the pad, slight knee bend. Row the cable attachment to the lower abdomen.

7.6 Landmine Base

Insert a standard Olympic barbell sleeve into the landmine pivot base (#30) at the front of the frame. Load weight plates and secure with collar. The pivot allows rotational and pressing movements.

i NOTE: FID bench, Olympic barbell, bumper plates and weight plates for the Smith machine bar are NOT included and are sold separately. Visit phfitness.nl for compatible accessories.

8. Exercise Guide (80+ Exercises)

The V-Frame Smith Machine supports 80+ exercise variations across all major muscle groups. Always warm up thoroughly and use controlled movements. Set Smith machine J-hooks and spotter arms before every set.

8.1 Chest

Exercise	Station	Primary Muscles
Smith Machine Bench Press (Flat)	Smith Machine	Pectoralis Major, Triceps, Anterior Delt
Smith Machine Incline Press	Smith Machine (incline bench)	Upper Pectorals, Anterior Deltoid
Smith Machine Decline Press	Smith Machine (decline bench)	Lower Pectorals, Triceps
Cable Chest Fly	Dual Cable (high)	Pectoralis Major (stretch/contraction)
Cable Crossover	Dual Cable (both)	Pectoralis Major, Serratus Anterior
Incline Cable Press	Dual Cable (low)	Upper Pectorals, Anterior Deltoid
Landmine Chest Press	Landmine Base	Pectorals, Triceps, Anterior Deltoid

8.2 Shoulders

Exercise	Station	Primary Muscles
Smith Machine Shoulder Press	Smith Machine	Anterior & Medial Deltoid, Triceps
Cable Lateral Raise	Dual Cable (low)	Medial Deltoid
Cable Front Raise	Dual Cable (low)	Anterior Deltoid
Cable Rear Delt Fly	Dual Cable (both, cross-body)	Posterior Deltoid, Rhomboids
Upright Row (Cable or Smith)	Cable low / Smith Machine	Medial Deltoid, Upper Trapezius
Landmine Shoulder Press	Landmine Base	Anterior Deltoid, Triceps

8.3 Back

Exercise	Station	Primary Muscles
Lat Pulldown (Wide/Narrow/Reverse)	High Cable + Pull-Up Bar	Latissimus Dorsi, Biceps, Rear Delt
Seated Cable Row (Low Pulley)	Low Row Station	Rhomboids, Mid Trapezius, Biceps
Smith Machine Bent-Over Row	Smith Machine	Latissimus Dorsi, Rear Deltoid
Straight Arm Pulldown	High Cable	Latissimus Dorsi, Teres Major
Cable Face Pull	High Cable	Rear Deltoid, External Rotators
Pull-Ups (Wide/Neutral/Chin-up)	Pull-Up Bar	Latissimus Dorsi, Biceps
Landmine Row	Landmine Base	Lats, Rhomboids, Erector Spinae

8.4 Biceps & Triceps

Exercise	Station	Primary Muscles
Cable Bicep Curl	Low Cable	Biceps Brachii, Brachialis
Low Pulley Curl	Low Row Station	Biceps Brachii, Brachioradialis

Preacher Curl	Low Cable (seated)	Biceps peak contraction
Landmine Curl	Landmine Base	Brachialis, Brachioradialis
Concentration Curl	Low Cable	Biceps Brachii (isolation)
Tricep Pushdown	High Cable	Triceps Brachii (all 3 heads)
Overhead Cable Extension	High Cable (behind head)	Triceps Long Head
Tricep Kickbacks	Mid Cable	Triceps Lateral Head
Dips	Dip Station	Triceps, Lower Chest, Anterior Delt

8.5 Legs & Glutes

Exercise	Station	Primary Muscles
Smith Machine Squats	Smith Machine	Quadriceps, Glutes, Hamstrings
Smith Machine Front Squats	Smith Machine	Quadriceps, Core
Romanian Deadlifts	Smith Machine	Hamstrings, Glutes, Erector Spinae
Landmine Deadlift	Landmine Base	Posterior Chain, Core
Lunges	Smith Machine	Quadriceps, Glutes, Balance
Hip Thrust	Smith Machine (low bar)	Gluteus Maximus, Hamstrings
Cable Glute Kickbacks	Low Cable + ankle strap	Gluteus Maximus
Cable Hip Abduction/Adduction	Low Cable	Gluteus Medius / Adductors
Calf Raises	Smith Machine	Gastrocnemius, Soleus

8.6 Core & Functional

Exercise	Station	Primary Muscles
Cable Woodchoppers (High to Low)	High Cable	Obliques, Core, Shoulders
Cable Crunches	High Cable (kneeling)	Rectus Abdominis, Obliques
Landmine Russian Twists	Landmine Base	Obliques, Transverse Abdominis
Landmine Rotations	Landmine Base	Core, Obliques, Anti-Rotation
Hanging Leg Raises	Pull-Up Bar	Core, Hip Flexors
Plank Rows	Low Cable / Landmine	Core, Anti-Rotation, Lats
Oblique Side Bends	Low Cable	Obliques, Quadratus Lumborum

8.7 Bodyweight & Accessory

Exercise	Station	Primary Muscles
Pull-Ups (Wide/Neutral/Chin-up)	Pull-Up Bar	Latissimus Dorsi, Biceps
Hanging Knee Raises	Pull-Up Bar	Lower Abdominals, Hip Flexors
Landmine Thrusters	Landmine Base	Full Body, Shoulders, Quads
Squat to Press (Landmine)	Landmine Base	Full Body, Functional Strength
Resistance Band Workouts	Frame anchor points	Various muscle groups

9. Maintenance Schedule

i NOTE: Regular maintenance ensures safe operation and extends machine lifespan. Never use flammable substances or harsh solvents for cleaning. Sweat is highly corrosive — wipe down after every use.

Frequency	Component	Task	Standard
After every use	Contact surfaces	Wipe bar, handles, pads with damp microfibre cloth	Clean and dry
After every use	Cables	Visual check full cable length for damage	No fraying or kinks
After every use	Smith bar	Wipe chrome rails, check bar travel is smooth	No sticking
After every use	Selector pins	Confirm pin fully seated through plate	Both sides
Weekly	All bolts	Hand torque check — tighten any loose bolts	No movement
Weekly	Smith rails	Wipe rails, apply light machine oil	Smooth travel
Weekly	Guide rods	Wipe and apply light oil to guide rods	No corrosion
Weekly	Cable pulleys	Inspect all pulleys, clean debris from grooves	Free rotation
Monthly	All fasteners	Full torque wrench check — all structural M10/M8	55-60/28-32 Nm
Monthly	Cable crimp ends	Inspect terminations for fraying or spreading	Replace if damaged
Monthly	J-hooks	Check hook engagement in all positions	Secure lock
Monthly	Pulley carriages	Lubricate column rails with dry silicone spray	Free sliding
3 Monthly	Full frame	Structural inspection — welds, all connections	No cracks or bends
3 Monthly	Cable replacement	Replace at any sign of damage	PH Fitness parts only
Annually	Professional service	Full service for semi-commercial use	All stations

⚠ WARNING: CABLE REPLACEMENT: Replace steel cables at the FIRST sign of fraying, kinking, corrosion or strand breakage. Use only PH Fitness approved replacement cables. Contact phfitness.nl for parts.

11. Warranty & Customer Support

2-Year Warranty

The PH Fitness V Frame Cable Crossover is covered by a 2-year manufacturer warranty from the date of original purchase, covering structural frame defects, mechanical component defects, and factory assembly defects.

Warranty Period	2 years from date of original purchase
Frame	Covered against manufacturing defects and weld failures
Weight Stacks	Covered against manufacturing defects
Smith Machine	Covered — rails, carriage, J-hooks (manufacturing defects)
Cables & Pulleys	Covered against manufacturing defects (normal wear excluded)
Accessories	Covered against manufacturing defects
NOT Covered	Misuse, overloading beyond rated limits, modifications, normal wear, cosmetic damage

Warranty Exclusions

- Damage from improper assembly or use outside this manual
- Exceeding stated limits: 300 kg barbell / 80 kg per cable stack
- Normal wear items: cables, rubber feet, arm pads, seat cushion
- Cosmetic damage from misuse or environmental exposure
- Damage from unauthorised modifications

Requesting Assistance

Before contacting support, do NOT attempt any repairs. Have the following information ready:

- Your name, address, and telephone number
- Model name: V-Frame Smith Machine
- Tax receipt or purchase invoice (if under warranty)
- Clear description and photograph of the problem

Making a Warranty Claim

- Retain your original proof of purchase — required for all warranty claims.
- Photograph the defect clearly from multiple angles.
- Contact PH Fitness customer support via the website or email.
- Provide model (V Frame Cable Crossover), date of purchase, and description of defect.
- PH Fitness will advise on repair, replacement, or return procedure within 5 business days.

PH FITNESS

Website: phfitness.nl

Mail: support@phfitness.nl

Your gym. Your performance. Your pace.

PH FITNESS

V Frame Cable Crossover with Smith Machine

Your gym. Your performance. Your pace.

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